

|  |
| --- |
| Perinatal deaths |
| Victoria’s Mothers, Babies and Children 2016 |

# 6. Perinatal deaths

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## **Table 6.1: Perinatal mortality rates (PMR) in Victoria 2016**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specified birth weight /gestation | Total births | Live births | Stillbirths | | Neonatal deaths (0-27 days) | | Perinatal deaths | |
| Number | Rate | Number | Rate | Number | Rate |
| **PMR Crude**  ≥ 20 weeks or ≥ 400 g if gestation unknown | 80,859 (Q) | 80,233 (C) | 626 (G) | 7.7 | 213 (Ui) | 2.7 | 839 (Vi) | 10.4 |
| **PMR Adjusted** ≥ 20 weeks or ≥ 400 g if gestation unknown (excluding TOP for MPI)a | 80,734 (S) | 80,233 (D) | 501 (H) | 6.2 | 213 (Uii) | 2.7 | 714 (Vii) | 8.8 |
| **PMR 500** b ≥ 500 g or ≥ 22 weeks if birthweight unknown | 80,501 | 80,158 | 343 | 4.3 | 144 | 1.8 | 487 | 6.0 |
| **PMR 1000** c ≥ 1,000 g or ≥ 28 weeks if birthweight unknown | 80,041 | 79,862 | 179 | 2.2 | 59 | 0.7 | 238 | 3.0 |

The letters in parentheses refer to the totals in Appendix 3 in the report.

Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths) as the denominator and are reported as rate per 1,000 total births.

Neonatal death rates were calculated using live births as the denominator and are reported as rate per 1,000 live births.

Neonatal deaths are those which occur prior to 28 days of age.

TOP - Termination of pregnancy

MPI - Maternal psychosocial indications

a  Births, deaths and rates are adjusted for terminations of pregnancy for maternal psychosocial indications.

b This category is for international comparison, and only includes babies with a minimum weight of 500 gm, or if birthweight unknown, a minimum gestational age of

22wks. It includes all perinatal deaths, including terminations of pregnancy.

c This category is for international comparison, and only includes early neonatal deaths (0-6 days) not all neonatal deaths (0-27 days). It only includes babies with a

minimum weight of 1000 gm, or if birthweight unknown, a minimum gestational age of 28 w. It includes all perinatal deaths, including terminations of pregnancy.

## Table 6.2: Perinatal deaths and crude and adjusted perinatal mortality rates in Victoria 2000 - 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Number |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Livebirthsa | 62,146 | 61,705 | 62,688 | 63,028 | 63,082 | 66,041 | 69,229 | 71,780 | 71,843 | 72,474 | 73,755 | 73,389 | 77,712 | 77,609 | 78,438 | 78,637 | 80,233 |
| Stillbirths | 416 | 444 | 445 | 521 | 610 | 599 | 607 | 672 | 682 | 767 | 738 | 705 | 659 | 712 | 672 | 633 | 626 |
| Neonatal deaths | 182 | 204 | 227 | 237 | 207 | 247 | 227 | 241 | 215 | 226 | 235 | 223 | 210 | 241 | 231 | 189 | 213 |
| Perinatal deaths | 598 | 648 | 672 | 758 | 817 | 846 | 834 | 913 | 897 | 993 | 973 | 928 | 869 | 953 | 903 | 822 | 839 |
| PMR Crude (per 1,000 birthsb,c) | | | | | | | | | | | | | |  |  |  |  |
| Stillbirth | 6.6 | 7.1 | 7.0 | 8.2 | 9.6 | 9.0 | 8.7 | 9.3 | 9.4 | 10.5 | 9.9 | 9.5 | 8.4 | 9.1 | 8.5 | 8.0 | 7.7 |
| Neonatal | 2.9 | 3.3 | 3.6 | 3.8 | 3.3 | 3.7 | 3.3 | 3.4 | 3.0 | 3.1 | 3.2 | 3.0 | 2.7 | 3.1 | 2.9 | 2.4 | 2.7 |
| Perinatal | 9.6 | 10.4 | 10.6 | 11.9 | 12.8 | 12.7 | 11.9 | 12.6 | 12.4 | 13.6 | 13.1 | 12.5 | 11.1 | 12.2 | 11.4 | 10.4 | 10.4 |
| Number adjustedd | | | | | | | | | | | | | |  |  |  |  |
| Live births | 62,146 | 61,705 | 62,688 | 63,028 | 63,082 | 66,039 | 69,229 | 71,780 | 71,843 | 72,474 | 73,755 | 73,389 | 77,712 | 77,609 | 78,437 | 78,637 | 80,233 |
| Stillbirths | 402 | 399 | 385 | 418 | 413 | 421 | 457 | 508 | 504 | 553 | 547 | 522 | 527 | 533 | 526 | 526 | 501 |
| Neonatal deaths | 182 | 204 | 227 | 237 | 207 | 245 | 227 | 241 | 215 | 226 | 235 | 223 | 210 | 241 | 230 | 189 | 213 |
| Perinatal deaths | 584 | 603 | 612 | 655 | 620 | 666 | 684 | 749 | 719 | 779 | 782 | 745 | 737 | 774 | 756 | 715 | 714 |
| PMR Adjusted (per 1,000 birthsb,c) | | | | | | | | | | | | | |  |  |  |  |
| Stillbirth | 6.4 | 6.4 | 6.1 | 6.6 | 6.5 | 6.3 | 6.6 | 7.0 | 7.0 | 7.6 | 7.4 | 7.1 | 6.7 | 6.8 | 6.7 | 6.6 | 6.2 |
| Neonatal | 2.9 | 3.3 | 3.6 | 3.8 | 3.3 | 3.7 | 3.3 | 3.4 | 3.0 | 3.1 | 3.2 | 3.0 | 2.7 | 3.1 | 2.9 | 2.4 | 2.7 |
| Perinatal | 9.3 | 9.7 | 9.7 | 10.3 | 9.8 | 10.0 | 9.8 | 10.4 | 9.9 | 10.7 | 10.5 | 10.1 | 9.4 | 9.9 | 9.6 | 9.0 | 8.8 |

a Live births include babies born alive who died soon after, following induction of labour for congenital anomalies and other fetal conditions.

b Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths) as the denominator.

c Neonatal death rates were calculated using live births as the denominator.

d Births and deaths excluding those arising from termination of pregnancy for maternal psychosocial indications (MPI).

From 2000 onwards CCOPMM commenced reporting in the ≥ 400 gm / ≥20 w range: prior to this time (1980 -1999) CCOPMM reported only on ≥500 gm / ≥ 22 w.

## Table 6.3: Perinatal mortality rates in Victoria 2000-2016 (crude and adjusted)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| PMR | 9.6 | 10.4 | 10.6 | 11.9 | 12.8 | 12.7 | 11.9 | 12.6 | 12.4 | 13.6 | 13.1 | 12.5 | 11.1 | 12.2 | 11.4 | 10.4 | 10.4 |
| PMR adjusted | 9.3 | 9.7 | 9.7 | 10.3 | 9.8 | 10.0 | 9.8 | 10.4 | 9.9 | 10.7 | 10.5 | 10.1 | 9.4 | 9.9 | 9.6 | 9.0 | 8.8 |
| Stillbirth rate | 6.6 | 7.1 | 7.0 | 8.2 | 9.6 | 9.0 | 8.7 | 9.3 | 9.4 | 10.5 | 9.9 | 9.5 | 8.4 | 9.1 | 8.5 | 8.0 | 7.7 |
| Stillbirth adjusted | 6.4 | 6.4 | 6.1 | 6.6 | 6.5 | 6.3 | 6.6 | 7.0 | 7.0 | 7.6 | 7.4 | 7.1 | 6.7 | 6.8 | 6.7 | 6.6 | 6.2 |
| Neonatal mortality rate | 2.9 | 3.3 | 3.6 | 3.8 | 3.3 | 3.7 | 3.3 | 3.4 | 3.0 | 3.1 | 3.2 | 3.0 | 2.7 | 3.1 | 2.9 | 2.4 | 2.7 |

PMR - Perinatal mortality rate

Adjusted rates are those following removal of terminations of pregnancy for maternal psychosocial indications.

Data presented in Figure 6.3

## Figure 6.3: Perinatal mortality rates in Victoria 2000-2016 (crude and adjusted)

Data taken from Table 6.3

## Table 6.4: Different definitions of perinatal mortality

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Perinatal death definitions | | | |  | Perinatal mortality rate (PMR), Victoria | |
|  | Criteria 1 | Condition | Criteria 2 | Inclusions | Impact on PMR compared with CCOPMM results | PMR 2016 | PMR Adjustedc 2016 |
| CCOPMM (Victoria) | ≥ 20 weeks' gestationa | or, where gestation is unknown | Birth weight of ≥ 400 g | Includes deaths of *babies born in Victoria*, even if mother not usually resident in Victoria |  | **10.4** | **8.8** |
| ABS | Birth weight of ≥ 400 g | or, where birth weight is unknown | ≥ 20 weeks' gestation | Includes deaths of babies born only to mothers *usually resident in the jurisdiction (Victoria)* | Results in fewer deaths included in the PMR and therefore lower PMR than CCOPMM | **7.5** | **7.0** |
| NPDC 1b | Birth weight of ≥ 400 g | or | ≥ 20 weeks' gestation | Includes deaths of *babies occurring in Victoria* even if mother not usually resident in the jurisdiction, or infant not born in Victoria | Results in more deaths included in the PMR than CCOPMM | **10.9** | **9.4** |
| NPDC 2b | Birth weight of ≥ 400 g | or | ≥ 20 weeks' gestation | Adjusted to include only *mothers usually resident in the jurisdiction (Victoria)* | Results in fewer deaths included in the PMR and therefore lower PMR than CCOPMM or NPDC1 | **7.5** | **7.0** |

a  Where a perinatal death is diagnosed unexpectedly ≥ 20 weeks' gestation (with no prior ultrasound or clinical evidence of definite heartbeat ≥ 20 w), a minimum

birth weight of 150 gm applies.

b Calculated according to National Perinatal Data Collection (NPDC) definitions, using data from the VPDC.

c Adjusted for terminations of pregnancy for maternal psychosocial indications.

## Table 6.5a: Perinatal mortality rate by maternal state or territory of usual residence, ABS 2007-2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Usual residence of mother | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| New South Wales | 8.1 | 7.8 | 7.9 | 7.6 | 8.0 | 7.5 | 8.1 | 7.0 | 7.8 | 6.8 |
| **Victoria** | **8.6** | **7.9** | **8.9** | **8.0** | **8.1** | **7.7** | **8.2** | **7.4** | **6.4** | **7.4** |
| Queensland | 10.6 | 9.9 | 10.4 | 10.5 | 9.1 | 10.0 | 9.1 | 9.8 | 9.5 | 9.5 |
| South Australia | 6.7 | 6.5 | 6.2 | 6.1 | 6.0 | 5.9 | 6.1 | 5.9 | 6.5 | 5.5 |
| Western Australia | 6.9 | 8.1 | 8.8 | 8.0 | 9.7 | 8.4 | 7.5 | 8.1 | 8.4 | 8.2 |
| Tasmania | 9.2 | 9.1 | 10.6 | 10.9 | 10.1 | 10.1 | 9.5 | 15.5 | 9.6 | 11.5 |
| Northern Territory | 12.7 | 7.8 | 14.8 | 12.5 | 12.8 | 9.4 | 14.4 | 11.3 | 14.1 | 11.4 |
| Australian Capital Territory | 9.4 | 6.4 | 7.0 | 16.7 | 7.2 | 10.0 | 7.0 | 9.7 | 7.5 | 6.6 |

ABS: Australian Bureau of Statistics

References:

ABS Cat No 3303.0 Causes of death, Australia, 2016, released 27 September 2017 ; Table 14.4 - Perinatal deaths by state or territory of usual residence of mother 2007-2016 (http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3303.02016?OpenDocument), accessed October 11 2017.

The published PMR in this table may differ from that previously published for CCOPMM Annual Reports, due to the ongoing revisions at ABS and CCOPMM.

The ABS definition of a perinatal death is ≥ 400 g, or if birthweight unknown, ≥20 w gestation (see Table 6.4).

This table represents PMR based on place of residence of mother, compared with what CCOPMM reports, which is based on state or territory where the birth occurred. The PMR reported by CCOPMM is higher in Victoria as the majority of late terminations of pregnancy for psychosocial indications performed in Australia are undertaken in Victoria, and many women travel from interstate (and overseas) to have the termination undertaken. As a result, removing these interstate and overseas residents from the PMR, Victoria's PMR decreases significantly. See Tables 6. 4 and 6.25

## Table 6.5b: Perinatal mortality rate by maternal state or territory of usual residence, AIHW 2007-2015

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Usual residence of mother | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| New South Wales | 9.5 | 9.2 | 9.0 | 8.9 | 9.1 | 8.4 | 8.5 | 8.2 | 8.4 |
| **Victoria** | **11.2** | **11.1** | **NA** | **NA** | **10.3** | **10.6** | **11.2** | **10.7** | **10.1** |
| Queensland | 10.6 | 9.9 | 11.5 | 10.8 | 10.1 | 10.4 | 9.9 | 10.0 | 9.5 |
| South Australia | 9.4 | 10.2 | 9.6 | 8.6 | 9.7 | 8.8 | 9.0 | 8.8 | 9.4 |
| Western Australia | 9.0 | 9.5 | 10.6 | 9.5 | 10.7 | 8.8 | 8.5 | 8.8 | 8.1 |
| Tasmania | 10.0 | 11.3 | 11.4 | 10.4 | 8.5 | 11.4 | 10.1 | 13.7 | 10.3 |
| Northern Territory | 13.3 | 12.5 | 14.9 | 13.7 | 14.6 | 11.2 | 19.3 | 13.8 | 13.4 |
| Australian Capital Territory | 10.0 | 12.2 | 12.5 | 12.9 | 9.1 | 11.1 | 7.8 | 11.3 | 9.6 |
| Australia | 10.2 | 10.0 | 10.2 | 9.7 | 9.8 | 9.6 | 9.6 | 9.5 | 9.2 |

AIHW: Australian Institute of Health and Welfare

This table represents PMR based on place of residence of mother, compared with what CCOPMM reports, which is based on state or territory where the birth occurred. The PMR reported by CCOPMM is higher in Victoria as the majority of late terminations of pregnancy for psychosocial indications performed in Australia are undertaken in Victoria, and many women travel from interstate (and overseas) to have the termination undertaken. As a result, removing these interstate and overseas residents from the PMR, Victoria's PMR decreases significantly. See Tables 6. 4 and 6.25

The AIHW uses the NPDC definition of a perinatal death : ≥ 400 g or ≥20 w gestation (see Table 6.4).

At the time of publication of the CCOPMM report, there was no updated data for 2016.

References:

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2008 Laws PJ, Li Z & Sullivan EA 2010. Australia’s mothers and babies 2008. Perinatal statistics series no. 24. Cat. no. PER 50. Canberra: AIHW.

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## 

## Table 6.6: Perinatal mortality rate by state or territory of death, AIHWa and ABSb 2007-2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| State or territory reporting the death | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| New South Wales | 9.0 | 8.7 | 8.6 | 8.2 | 8.5 | 8.1 | 8.0 | 7.7 | 8.1 |  |
| **Victoria** | **12.9** | **12.7** | **13.8** | **13.3** | **11.9** | **11.5** | **12.5** | **11.7** | **10.7** |  |
| Queensland | 10.3 | 9.6 | 11.0 | 10.4 | 9.7 | 10.1 | 9.5 | 9.7 | 9.4 |  |
| South Australia | 9.2 | 10.1 | 9.3 | 8.1 | 9.5 | 8.9 | 9.0 | 8.9 | 9.3 |  |
| Western Australia | 8.2 | 9.2 | 10.0 | 9.1 | 10.3 | 8.4 | 7.8 | 8.5 | 7.9 |  |
| Tasmania | 9.7 | 10.8 | 10.7 | 10.1 | 8.2 | 10.8 | 9.8 | 12.2 | 9.8 |  |
| Northern Territory | 12.6 | 11.2 | 15.1 | 12.9 | 13.0 | 9.2 | 18.2 | 12.8 | 13.7 |  |
| Australian Capital Territory | 11.6 | 14.0 | 14.0 | 15.3 | 11.2 | 11.2 | 9.1 | 12.6 | 10.0 |  |
| **Australia AIHWa** | **10.3** | **10.2** | **9.8** | **9.3** | **9.9** | **9.6** | **9.7** | **9.6** | **9.2** |  |
| **Australia ABSb** | **8.6** | **8.2** | **8.8** | **8.6** | **8.4** | **8.2** | **8.2** | **8** | **7.9** | **7.7** |

AIHW: Australian Institute of Health and Welfare

ABS: Australian Bureau of Statistics

Notes: This table has been updated since previous reports to correct transposed figures, and has added the comparative ABS figures for comparison.

At the time of publication of the CCOPMM report, there was no published AIHW data for 2016.

Perinatal mortality rates are higher in Victoria as the majority of late terminations of pregnancy for psychosocial indications performed in Australia are undertaken in Victoria, and many women travel from interstate (and overseas) to have the termination undertaken. As these data are reported by the state or territory where the death occurred, Victoria has a higher rate. See Tables 6.4 and 6.25

a The AIHW uses PDC definition of a perinatal death : ≥ 400 g or ≥20 w gestation (see Table 6.4)

b The ABS definition of a perinatal death is ≥ 400 g, or if birthweight unknown, ≥20 w gestation (see Table 6.4)

## Table 6.7: PMR500 in Victoria, 2005-2016a

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Number | | | | | | | | | |  |  |  |
| Total births (birth weight ≥ 500g) | 66,226 | 69,421 | 71,981 | 72,100 | 72,706 | 74,000 | 73,628 | 78,000 | 77,906 | 78,729 | 78,867 | 80,501 |
| Live births | 65,948 | 69,155 | 71,677 | 71,774 | 72,360 | 73,641 | 73,273 | 77,618 | 77,505 | 78,338 | 78,515 | 80,158 |
| Stillbirths | 278 | 266 | 304 | 326 | 346 | 359 | 355 | 382 | 401 | 391 | 352 | 343 |
| Neonatal deaths | 159 | 157 | 148 | 149 | 143 | 152 | 143 | 121 | 156 | 142 | 129 | 144 |
| Total Perinatal deaths | 437 | 423 | 452 | 475 | 489 | 511 | 498 | 503 | 557 | 533 | 481 | 487 |
| Rate per 1,000 birthsb,c | | | | | | | | | |  |  |  |
| Stillbirths | 4.2 | 3.8 | 4.2 | 4.5 | 4.8 | 4.9 | 4.8 | 4.9 | 5.1 | 5.0 | 4.5 | 4.3 |
| Neonatal | 2.4 | 2.3 | 2.1 | 2.1 | 2.0 | 2.1 | 2.0 | 1.6 | 2.0 | 1.8 | 1.6 | 1.8 |
| Perinatal | 6.6 | 6.1 | 6.3 | 6.6 | 6.7 | 6.9 | 6.8 | 6.4 | 7.1 | 6.8 | 6.1 | 6.0 |

a PMR 500 – perinatal mortality rate per 1,000 births where birth weight ≥ 500 g or, if birth weight unknown, gestation ≥ 22 weeks. The PMR 500 is often used for

international comparison.

b Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths) as the denominator.

c Neonatal death rates were calculated using live births as the denominator.

Data is presented in Figure 6.2

## Figure 6.2: PMR500 in Victoria, 2005-2016

PMR 500 – perinatal mortality rate per 1,000 births where birth weight ≥ 500 g or, if birth weight unknown, gestation ≥ 22 weeks

Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths) as the denominator.

Neonatal death rates were calculated using live births as the denominator.

Data taken from Table 6.7

## Table 6.8: PMR1000a in Victoria, 2000 – 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Stillbirth rateb | 2.9 | 3.1 | 2.4 | 3.0 | 2.6 | 2.8 | 2.5 | 2.6 | 3.0 | 2.8 | 3.2 | 2.8 | 2.8 | 2.7 | 2.7 | 2.2 | 2.2 |
| Early neonatal mortality ratec | 0.9 | 1.0 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 1.1 | 0.9 | 0.8 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 |
| Perinatal mortality rateb | 3.8 | 4.1 | 3.2 | 3.9 | 3.3 | 3.6 | 3.3 | 3.4 | 3.7 | 3.9 | 4.0 | 3.6 | 3.4 | 3.3 | 3.3 | 2.9 | 3.0 |

a Rate per 1,000 births (birth weight ≥ 1,000 g or, if birth weight unknown, gestation ≥ 28 weeks). The PMR1,000 is often used for international comparison.

b Stillbirth and perinatal death rates were calculated using all births (live births and stillbirths) as the denominator.

c Neonatal death rates were calculated using live births as the denominator. This category is for international comparision, and only includes early neonatal deaths

(0-6 days) not all neonatal deaths (0-27 days).

The figure for the 2008 PMR has been updated since previous reports.

## Figure 6.3: Trends in PMR1,000 Victoria, 1975 to 2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2016 |
| Stillbirth rate | 7.6 | 5.3 | 4.3 | 3.9 | 3.6 | 2.9 | 2.8 | 3.2 | 2.2 | 2.2 |
| Early neonatal mortality rate | 4.6 | 3.1 | 2.6 | 1.9 | 1.4 | 0.9 | 0.8 | 0.9 | 0.7 | 0.7 |
| Perinatal mortality rate | 12.3 | 8.4 | 6.9 | 5.8 | 5.0 | 3.8 | 3.6 | 4.0 | 2.9 | 3.0 |
|  |  |  |  |  |  |  |  |  |  |  |

PMR - perinatal mortality rate

Rate per 1,000 births (birth weight ≥ 1,000 g or, if birth weight unknown, gestation ≥ 28 weeks).

Stillbirth and perinatal death rates were calculated using all births (live births and stillbirths) as the denominator.

Neonatal death rates were calculated using live births as the denominator. This category is for international comparison, and only includes early neonatal deaths (0-6 days) not all neonatal deaths (0-27 days).

Perinatal mortality rates are calculated using live births and stillbirths, with the livebirths and neonatal deaths limited to those born with a birth weight ≥ 1,000g.

## Table 6.9a: PMRAdjusteda by gestational age, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gestational age | Adjusted total births b | | Adjusted stillbirths | | | | Live birthsc | | Neonatal deaths | | | Adjusted perinatal deaths | | | Live births surviving beyond neonatal period at each gestation | |
| n | % | n | % | rated | riske | n | % | n | % | ratef | n | % | rate g | n | % |
| 20-21 weeks | 169 | 0.2 | 123 | 24.6 | 727.8 | 1.5 | 46 | 0.1 | 46 | 21.6 | 1,000.0 | 169 | 23.7 | 1,000.0 | 0 | 0.0 |
| 22-23 weeks | 171 | 0.2 | 97 | 19.4 | 567.3 | 1.2 | 74 | 0.1 | 64 | 30.0 | 864.9 | 161 | 22.5 | 941.5 | 10 | 13.5 |
| 24-25 weeks | 146 | 0.2 | 45 | 9.0 | 308.2 | 0.6 | 101 | 0.1 | 17 | 8.0 | 168.3 | 62 | 8.7 | 424.7 | 84 | 83.2 |
| 26-27 weeks | 197 | 0.2 | 48 | 9.6 | 243.7 | 0.6 | 149 | 0.2 | 7 | 3.3 | 47.0 | 55 | 7.7 | 279.2 | 142 | 95.3 |
| 28-31 weeks | 578 | 0.7 | 49 | 9.8 | 84.8 | 0.6 | 529 | 0.7 | 11 | 5.2 | 20.8 | 60 | 8.4 | 103.8 | 518 | 97.9 |
| 32-36 weeks | 5,581 | 6.9 | 66 | 13.2 | 11.8 | 0.8 | 5,515 | 6.9 | 23 | 10.8 | 4.2 | 89 | 12.5 | 15.9 | 5,492 | 99.6 |
| 37-41 weeks | 73,595 | 91.2 | 73 | 14.6 | 1.0 | 1.0 | 73,522 | 91.6 | 45 | 21.1 | 0.6 | 118 | 16.5 | 1.6 | 73,477 | 99.9 |
| >41 weeks | 288 | 0.4 | 0 | 0.0 | 0.0 | 0.0 | 288 | 0.4 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 288 | 100.0 |
| Not known | 9 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 9 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 9 | 100.0 |
| Total | 80,734 | 100.0 | 501 | 100.0 | 6.2 | N/A | 80,233 | 100.0 | 213 | 100.0 | 2.7 | 714 | 100.0 | 8.8 | 80,020 | 99.7 |
|  | (S) |  | (H) |  |  |  | (D) |  | (Uii) |  |  | (Vii) |  |  | (W) |  |

a The figures and calculations in this table exclude 125 stillbirths from terminations of pregnancy (TOP) for maternal psychosocial indications (MPI).

b Total births includes live births and stillbirths, (live birth data obtained from VPDC).

c Live births includes those babies who later died during the neonatal period (babies born alive who died within 28 days of birth).

d Stillbirth rate is calculated using total births as the denominator and is expressed as deaths per 1000 total births at that gestation.

e Stillbirth risk is calculated using total births (still in utero at that gestation) as the denominator, and is expressed as deaths per 1000 total births at or beyond that gestation.

f Neonatal mortality rate is calculated using live births as the denominator, and is expressed as deaths per 1000 live births at that gestation.

g Perinatal mortality rate (PMR) is calculated using total births as the denominator, and is expressed as deaths per 1000 total births at that gestation.

N/A not applicable

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.9b: PMRAdjusteda by gestational age (detailed), Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gestational age (weeks) | Adjusted total births b | | Adjusted stillbirths | | | | Live birthsc | | Neonatal deaths | | | Adjusted perinatal deaths | | | Live births surviving beyond neonatal period at each gestation | |
|  | n | % | n | % | rated | riske | n | % | n | % | ratef | n | % | rate g | n | % |
| 20 | 77 | 0.1 | 58 | 11.6 | 753.2 | 0.7 | 19 | 0.02 | 19 | 8.9 | 1,000.0 | 77 | 10.8 | 1,000.0 | 0 | 0.0 |
| 21 | 92 | 0.1 | 65 | 13.0 | 706.5 | 0.8 | 27 | 0.03 | 27 | 12.7 | 1,000.0 | 92 | 12.9 | 1,000.0 | 0 | 0.0 |
| 22 | 94 | 0.1 | 60 | 12.0 | 638.3 | 0.7 | 34 | 0.04 | 34 | 16.0 | 1,000.0 | 94 | 13.2 | 1,000.0 | 0 | 0.0 |
| 23 | 77 | 0.1 | 37 | 7.4 | 480.5 | 0.5 | 40 | 0.05 | 30 | 14.1 | 750.0 | 67 | 9.4 | 870.1 | 10 | 25.0 |
| 24 | 64 | 0.1 | 22 | 4.4 | 343.8 | 0.3 | 42 | 0.1 | 13 | 6.1 | 309.5 | 35 | 4.9 | 546.9 | 29 | 69.0 |
| 25 | 82 | 0.1 | 23 | 4.6 | 280.5 | 0.3 | 59 | 0.1 | 4 | 1.9 | 67.8 | 27 | 3.8 | 329.3 | 55 | 93.2 |
| 26 | 97 | 0.1 | 32 | 6.4 | 329.9 | 0.4 | 65 | 0.1 | 5 | 2.3 | 76.9 | 37 | 5.2 | 381.4 | 60 | 92.3 |
| 27 | 100 | 0.1 | 16 | 3.2 | 160.0 | 0.2 | 84 | 0.1 | 2 | 0.9 | 23.8 | 18 | 2.5 | 180.0 | 82 | 97.6 |
| 28 | 98 | 0.1 | 11 | 2.2 | 112.2 | 0.1 | 87 | 0.1 | 4 | 1.9 | 46.0 | 15 | 2.1 | 153.1 | 83 | 95.4 |
| 29 | 95 | 0.1 | 12 | 2.4 | 126.3 | 0.2 | 83 | 0.1 | 3 | 1.4 | 36.1 | 15 | 2.1 | 157.9 | 80 | 96.4 |
| 30 | 182 | 0.2 | 17 | 3.4 | 93.4 | 0.2 | 165 | 0.2 | 2 | 0.9 | 12.1 | 19 | 2.7 | 104.4 | 163 | 98.8 |
| 31 | 203 | 0.3 | 9 | 1.8 | 44.3 | 0.1 | 194 | 0.2 | 2 | 0.9 | 10.3 | 11 | 1.5 | 54.2 | 192 | 99.0 |
| 32 | 364 | 0.5 | 16 | 3.2 | 44.0 | 0.2 | 348 | 0.4 | 6 | 2.8 | 17.2 | 22 | 3.1 | 60.4 | 342 | 98.3 |
| 33 | 479 | 0.6 | 16 | 3.2 | 33.4 | 0.2 | 463 | 0.6 | 1 | 0.5 | 2.2 | 17 | 2.4 | 35.5 | 462 | 99.8 |
| 34 | 818 | 1.0 | 8 | 1.6 | 9.8 | 0.1 | 810 | 1.0 | 7 | 3.3 | 8.6 | 15 | 2.1 | 18.3 | 803 | 99.1 |
| 35 | 1,184 | 1.5 | 14 | 2.8 | 11.8 | 0.2 | 1,170 | 1.5 | 4 | 1.9 | 3.4 | 18 | 2.5 | 15.2 | 1,166 | 99.7 |
| 36 | 2,745 | 3.4 | 12 | 2.4 | 4.4 | 0.2 | 2,733 | 3.4 | 5 | 2.3 | 1.8 | 17 | 2.4 | 6.2 | 2,728 | 99.8 |
| 37 | 7,216 | 8.9 | 21 | 4.2 | 2.9 | 0.3 | 7,195 | 9.0 | 8 | 3.8 | 1.1 | 29 | 4.1 | 4.0 | 7,187 | 99.9 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gestational age (weeks) | Adjusted total births b | | Adjusted stillbirths | | | | Live birthsc | | Neonatal deaths | | | Adjusted perinatal deaths | | | Live births surviving beyond neonatal period at each gestation | |
|  | n | % | n | % | rated | riske | n | % | n | % | ratef | n | % | rate g | n | % |
| 38 | 17,841 | 22.1 | 18 | 3.6 | 1.0 | 0.3 | 17,823 | 22.2 | 11 | 5.2 | 0.6 | 29 | 4.1 | 1.6 | 17,812 | 99.9 |
| 39 | 22,025 | 27.3 | 12 | 2.4 | 0.5 | 0.2 | 22,013 | 27.4 | 11 | 5.2 | 0.5 | 23 | 3.2 | 1.0 | 22,002 | 100.0 |
| 40 | 18,865 | 23.4 | 14 | 2.8 | 0.7 | 0.5 | 18,851 | 23.5 | 11 | 5.2 | 0.6 | 25 | 3.5 | 1.3 | 18,840 | 99.9 |
| 41 | 7,648 | 9.5 | 8 | 1.6 | 1.0 | 1.0 | 7,640 | 9.5 | 4 | 1.9 | 0.5 | 12 | 1.7 | 1.6 | 7,636 | 99.9 |
| 42 | 266 | 0.3 | 0 | 0.0 | 0.0 | 0.0 | 266 | 0.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 266 | 100.0 |
| >/= 43 | 22 | 0.03 | 0 | 0.0 | 0.0 | 0.0 | 22 | 0.03 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 22 | 100.0 |
| Total | 80,734 | 100.0 | 501 | 100.0 | 6.2 | NA | 80,233 | 100.0 | 213 | 100.0 | 2.7 | 714 | 100.0 | 8.8 | 80,020 | 99.7 |
|  | (S) |  | (H) |  |  |  | (D) |  | (Uii) |  |  | (Vii) |  |  | (W) |  |

a The figures and calculations in this table exclude 125 stillbirths from terminations of pregnancy (TOP) for maternal psychosocial indications (MPI).

b Total births includes live births and stillbirths, (live birth data obtained from VPDC).

c Live births includes those babies who later died during the neonatal period (babies born alive who died within 28 days of birth).

d Stillbirth rate is calculated using total births as the denominator and is expressed as deaths per 1000 total births at that gestation.

e Stillbirth risk is calculated using total births (still in utero at that gestation) as the denominator, and is expressed as deaths per 1000 total births at or beyond that

gestation.

f Neonatal mortality rate is calculated using live births as the denominator, and is expressed as deaths per 1000 live births at that gestation.

g Perinatal mortality rate (PMR) is calculated using total births as the denominator, and is expressed as deaths per 1000 total births at that gestation.

N/A not applicable

The letters in parentheses under the totals refer to the totals in Appendix 3

## Table 6.10: PMRAdjusteda by birth weight, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Adjusted total births b | | Adjusted stillbirths | | | Live birthsc | | Neonatal deaths | | | Adjusted perinatal deaths | | | Live births surviving beyond neonatal period at each weight category | |
| n | % | n | % | rated | n | % | n | % | rate e | n | % | rate f | n | % |
| <500 g | 271 | 0.3 | 196 | 39.1 | 723.2 | 75 | 0.1 | 69 | 32.4 | 920.0 | 265 | 37.1 | 977.9 | 6 | 8.0 |
| 500–999 g | 421 | 0.5 | 125 | 25.0 | 296.9 | 296 | 0.4 | 61 | 28.6 | 206.1 | 186 | 26.1 | 441.8 | 235 | 79.4 |
| 1,000–1,499 g | 498 | 0.6 | 38 | 7.6 | 76.3 | 460 | 0.6 | 16 | 7.5 | 34.8 | 54 | 7.6 | 108.4 | 444 | 96.5 |
| 1,500–1,999 g | 1,068 | 1.3 | 39 | 7.8 | 36.5 | 1,029 | 1.3 | 10 | 4.7 | 9.7 | 49 | 6.9 | 45.9 | 1,019 | 99.0 |
| 2,000–2,499 g | 3,434 | 4.3 | 27 | 5.4 | 7.9 | 3,407 | 4.2 | 8 | 3.8 | 2.3 | 35 | 4.9 | 10.2 | 3,399 | 99.8 |
| 2,500–2,999 g | 13,036 | 16.1 | 33 | 6.6 | 2.5 | 13,003 | 16.2 | 18 | 8.5 | 1.4 | 51 | 7.1 | 3.9 | 12,985 | 99.9 |
| 3,000–3,499 g | 30,126 | 37.3 | 25 | 5.0 | 0.8 | 30,101 | 37.5 | 15 | 7.0 | 0.5 | 40 | 5.6 | 1.3 | 30,086 | 100.0 |
| 3,500–3,999 g | 23,732 | 29.4 | 12 | 2.4 | 0.5 | 23,720 | 29.6 | 13 | 6.1 | 0.5 | 25 | 3.5 | 1.1 | 23,707 | 99.9 |
| >4,000 g | 8,115 | 10.1 | 3 | 0.6 | 0.4 | 8,112 | 10.1 | 3 | 1.4 | 0.4 | 6 | 0.8 | 0.7 | 8,109 | 100.0 |
| Not known | 33 | 0.0 | 3 | 0.6 | 90.9 | 30 | 0.0 | 0 | 0.0 | 0.0 | 3 | 0.4 | 90.9 | 30 | 100.0 |
| Total | 80,734 | 100.0 | 501 | 100.0 | 6.2 | 80,233 | 100.0 | 213 | 100.0 | 2.7 | 714 | 100.0 | 8.8 | 80,020 | 99.7 |
|  | (S) |  | (H) |  |  | (D) |  | (Uii) |  |  | (Vii) |  |  | (W) |  |

a The figures and calculations in this table exclude 125 stillbirths from terminations of pregnancy (TOP) for maternal psychosocial indications (MPI).

b  Total births includes live births and stillbirths, (live birth data obtained from VPDC).

c Live births includes those babies who later died during the neonatal period (babies born alive who died within 28 days of birth).

d Stillbirth rate is calculated using total births as the denominator and is expressed as deaths per 1000 total births of that birthweight category.

e  Neonatal mortality rate is calculated using live births as the denominator, and is expressed as deaths per 1000 total births of that birthweight category.

d Perinatal mortality rate (PMR) is calculated using total births as the denominator, and is expressed as deaths per 1000 total births of that birthweight category.

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.11 PMRAdjusteda in singleton and multiple births, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Adjusted total births b | | Adjusted stillbirths | | | Live births c | | Neonatal deaths | | | Adjusted perinatal deaths | | | Live births surviving beyond neonatal period at each plurality category | |
|  | n | % | n | % | rated | n | % | n | % | rate e | n | % | ratef | n | % |
| Singleton births | 78,370 | 97.1 | 443 | 88.4 | 5.7 | 77,927 | 97.1 | 172 | 80.8 | 2.2 | 615 | 86.1 | 7.8 | 77,755 | 99.8 |
| Twin births | 2,230 | 2.8 | 56 | 11.2 | 25.1 | 2,174 | 2.7 | 38 | 17.8 | 17.5 | 94 | 13.2 | 42.2 | 2,136 | 98.3 |
| Triplet births | 77 | 0.1 | 2 | 0.4 | 26.0 | 75 | 0.1 | 3 | 1.4 | 40.0 | 5 | 0.7 | 64.9 | 72 | 96.0 |
| Quadruplets | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 |
| *(Multiples beyond twin)* | *77* | *0.1* | *2* | *0.4* | *26.0* | *75* | *0.1* | *3* | *1.4* | *40.0* | *5* | *0.7* | *64.9* | *72* | *96.0* |
| *(All multiple births)* | *2,307* | *2.9* | *58* | *11.6* | *25.1* | *2,249* | *2.8* | *41* | *19.2* | *18.2* | *99* | *13.9* | *42.9* | *2,208* | *98.2* |
| Unknown | 57 | 0.1 | 0 | 0.0 | *0.0* | 57 | 0.1 | 0 | 0.0 | *0.0* | 0 | 0.0 | *0.0* | 57 | *100.0* |
| Total births | 80,734 | 100.0 | 501 | 100.0 | 6.2 | 80,233 | 100.0 | 213 | 100.0 | 2.7 | 714 | 100.0 | 8.8 | 80,020 | 99.7 |
|  | (S) |  | (H) |  |  | (D) |  | (Uii) |  |  | (Vii) |  |  | (W) |  |

a The figures and calculations in this table exclude 125 stillbirths from terminations of pregnancy (TOP) for maternal psychosocial indications (MPI). This table does

not exclude stillbirths or neonatal deaths from TOP for congenital anomaly, and therefore gives slightly different figures to Tables 5.45 and 5.46 (Births in Victoria)

b Total births includes live births and stillbirths, (live birth data obtained from VPDC).

c Live births includes those babies who later died during the neonatal period (babies born alive who died within 28 days of birth).

d Stillbirth rate is calculated using total births as the denominator, and expressed as deaths per 1000 total births of that plurality.

e Neonatal mortality rate is calculated using live births as the denominator, and is expressed as deaths per 1000 live births of that plurality.

f Perinatal mortality rate (PMR) is calculated using total births as the denominator, and is expressed as deaths per 1000 total births of that plurality.

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.12: PMR Adjusteda in singleton and multiple births, Victoria 2007 – 2016

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Singletons | | Twins | | Other multiple births | | Total | |
| n | Rate | n | Rate | n | Rate | n | Rate |
| Stillbirths | | | | | | | | |
| 2007 | 462 | 6.6 | 44 | 18.0 | 2 | 40.8 | 508 | 7.0 |
| 2008 | 454 | 6.5 | 48 | 20.1 | 2 | 47.6 | 504 | 7.0 |
| 2009 | 496 | 7.0 | 57 | 23.8 | 0 | NA | 553 | 7.6 |
| 2010 | 499 | 7.0 | 45 | 19.6 | 3 | 55.6 | 547 | 7.4 |
| 2011 | 471 | 6.6 | 46 | 19.6 | 5 | 172.4 | 522 | 7.1 |
| 2012 | 479 | 6.3 | 45 | 18.9 | 3 | 73.2 | 527 | 6.7 |
| 2013 | 490 | 6.5 | 38 | 16.0 | 5 | 89.3 | 533 | 6.8 |
| 2014 | 470 | 6.1 | 54 | 22.8 | 2 | 35.1 | 526 | 6.7 |
| 2015 | 482 | 6.3 | 40 | 17.9 | 4 | 63.5 | 526 | 6.6 |
| 2016 | 443 | 5.7 | 56 | 25.1 | 2 | 26.0 | 501 | 6.2 |
| Neonatal deaths | | | | | | | | |
| 2007 | 196 | 2.8 | 43 | 17.6 | 2 | 42.6 | 241 | 3.4 |
| 2008 | 173 | 2.5 | 42 | 18.0 | 0 | NA | 215 | 3.0 |
| 2009 | 185 | 2.6 | 41 | 17.0 | 0 | NA | 226 | 3.1 |
| 2010 | 194 | 2.7 | 36 | 16.0 | 5 | 686.3 | 235 | 3.2 |
| 2011 | 184 | 2.6 | 39 | 17.6 | 0 | NA | 223 | 3.1 |
| 2012 | 180 | 2.4 | 29 | 12.4 | 1 | 26.3 | 210 | 2.7 |
| 2013 | 193 | 2.6 | 45 | 19.3 | 3 | 58.8 | 241 | 3.1 |
| 2014 | 176 | 2.3 | 45 | 19.5 | 9 | 163.6 | 230 | 2.9 |
| 2015 | 162 | 2.1 | 26 | 11.9 | 1 | 16.9 | 189 | 2.4 |
| 2016 | 172 | 2.2 | 38 | 17.5 | 3 | 40.0 | 213 | 2.7 |
| Perinatal deaths | | | | | | | | |
| 2007 | 658 | 9.4 | 87 | 35.0 | 4 | 81.6 | 749 | 10.4 |
| 2008 | 627 | 9.0 | 90 | 37.8 | 2 | 47.6 | 719 | 9.9 |
| 2009 | 681 | 9.7 | 98 | 40.9 | 0 | NA | 779 | 10.7 |
| 2010 | 693 | 9.7 | 81 | 35.2 | 8 | 740.7 | 782 | 10.6 |
| 2011 | 655 | 9.2 | 85 | 37.6 | 5 | 172.4 | 745 | 10.2 |
| 2012 | 659 | 8.7 | 74 | 31.1 | 4 | 97.6 | 737 | 9.4 |
| 2013 | 683 | 9.0 | 83 | 35.0 | 8 | 142.9 | 774 | 9.9 |
| 2014 | 646 | 8.4 | 99 | 41.9 | 11 | 193.0 | 756 | 9.6 |
| 2015 | 644 | 8.4 | 66 | 29.6 | 5 | 79.4 | 715 | 9.0 |
| 2016 | 615 | 7.8 | 94 | 42.2 | 5 | 64.9 | 714 | 8.8 |

a The figures and calculations in this table exclude terminations of pregnancy (TOP) for maternal psychosocial indications (MPI) resulting in stillbirth or neonatal death

Source of adjusted total births denominator data: VPDC

Stillbirth and perinatal mortality rates were calculated using adjusted total births (live births and adjusted stillbirths) as the denominator. Neonatal mortality rates were calculated using live births as the denominator.

PMR - perinatal mortality rate

## Table 6.13: PMRAdjusteda by maternal place of birth, Victoria 2016

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Adjusted total births | Live births b | Adjusted stillbirths | Neonatal deaths | Adjusted perinatal deaths | % of all Perinatal deaths | PMR Adjusted by maternal place of birth |
| NORTH-EAST ASIA | 4,591 | 4,571 | 20 | 5 | 25 | 3.5 | 5.4 |
| NORTH-WEST EUROPE | 2,374 | 2,365 | 9 | 5 | 14 | 2.0 | 5.9 |
| OCEANIA AND ANTARCTICA (excl Australia) | 2,249 | 2,238 | 11 | 7 | 18 | 2.5 | 8.0 |
| SOUTH-EAST ASIA | 5,162 | 5,138 | 24 | 18 | 42 | 5.9 | 8.1 |
| AUSTRALIA | 49,772 | 49,457 | 315 | 119 | 434 | 60.8 | 8.7 |
| NORTH AFRICA AND THE MIDDLE EAST | 2,878 | 2,861 | 17 | 10 | 27 | 3.8 | 9.4 |
| SOUTHERN AND CENTRAL ASIA | 8,793 | 8,729 | 64 | 21 | 85 | 11.9 | 9.7 |
| AMERICAS | 1,089 | 1,081 | 8 | 5 | 13 | 1.8 | 11.9 |
| SUB-SAHARAN AFRICA | 1,830 | 1,816 | 14 | 8 | 22 | 3.1 | 12.0 |
| SOUTHERN AND EASTERN EUROPE | 1,473 | 1,463 | 10 | 10 | 20 | 2.8 | 13.6 |
| *Missing* | *523* | *514* | *9* | *5* | *14* | *2.0* | *26.8* |
| Total | 80,734 | 80,233 | 501 | 213 | 714 | 100.0 | 8.8 |
|  | (S) | (D) | (H) | (Uii) | (Vii) |  |  |

a The figures and calculations in this table exclude 125 stillbirths from terminations of pregnancy (TOP) for maternal psychosocial indications (MPI).

b Live births include all livebirths, including those who later die as neonatal deaths

This table is ranked by PMR (excluding missing data)

PMR - perinatal mortality rate

The letters in parentheses under the totals refer to the totals in Appendix 3

## Table 6.14a: Births, deaths and PMRAdjusteda by Aboriginal status of mother, by rolling triennia, Victoria 2001-2016

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Adjusted total births | | | | Live births | | | Adjusted stillbirths | |
| All births | Non- Aboriginal mother | Aboriginal mother | % of all births whose mothers are Aboriginal | All live births | Non- Aboriginal mother | Aboriginal mother | Non- Aboriginal mother | Aboriginal mother |
| 2001-2003 | 188,625 | 187,413 | 1,212 | 0.64 | 187,390 | 186,196 | 1,194 | 1,217 | 18 |
| 2002-2004 | 189,996 | 188,768 | 1,228 | 0.65 | 188,780 | 187,565 | 1,215 | 1,203 | 13 |
| 2003-2005 | 193,381 | 192,039 | 1,342 | 0.69 | 192,138 | 190,807 | 1,331 | 1,232 | 11 |
| 2004-2006 | 199,615 | 198,076 | 1,539 | 0.77 | 198,328 | 196,797 | 1,531 | 1,279 | 8 |
| 2005-2007 | 208,448 | 206,643 | 1,805 | 0.87 | 207,024 | 205,234 | 1,790 | 1,409 | 15 |
| 2006-2008 | 214,322 | 212,324 | 1,998 | 0.93 | 212,784 | 210,806 | 1,978 | 1,518 | 20 |
| 2007-2009 | 216,598 | 214,332 | 2,266 | 1.05 | 214,994 | 212,763 | 2,231 | 1,569 | 35 |
| 2008-2010 | 218,514 | 216,054 | 2,460 | 1.13 | 216,898 | 214,480 | 2,418 | 1,574 | 42 |
| 2009-2011 | 219,762 | 217,095 | 2,667 | 1.21 | 218,161 | 215,536 | 2,625 | 1559 | 42 |
| 2010-2012 | 225,185 | 222,403 | 2,782 | 1.24 | 223,599 | 220,857 | 2,742 | 1546 | 40 |
| 2011-2013 | 228,955 | 226,038 | 2,917 | 1.27 | 227,380 | 224,499 | 2,881 | 1539 | 36 |
| 2012-2014 | 234,000 | 230,977 | 3,023 | 1.29 | 232,421 | 229,431 | 2,990 | 1546 | 33 |
| 2013-2015 | 235,174 | 231,944 | 3,230 | 1.37 | 233,598 | 230,391 | 3,207 | 1553 | 23 |
| 2014-2016 | 237,996 | 234,663 | 3,333 | 1.40 | 236,455 | 233,138 | 3,317 | 1525 | 16 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Neonatal deaths (NND) | | Stillbirth rate Adjusted b | | | Neonatal mortality rate c | | | Perinatal mortality rate Adjusted b | | |
| Non- Aboriginal mother | Aboriginal mother | Non- Aboriginal mother | Aboriginal mother | RR(CI) | Non- Aboriginal mother | Aboriginal mother | RR(CI) | Non- Aboriginal mother | Aboriginal mother | RR(CI) |
| 2001-2003 | 658 | 10 | 6.5 | 14.9 | 2.3(1.4-3.6) | 3.5 | 8.4 | 2.4(1.3-4.1) | 10.0 | 23.1 | 2.3(1.5-3.3) |
| 2002-2004 | 657 | 14 | 6.4 | 10.6 | 1.7(0.95-2.9) | 3.5 | 11.5 | 3.3(1.9-5.6) | 9.9 | 22.0 | 2.2(1.5-3.2) |
| 2003-2005 | 676 | 14 | 6.4 | 8.2 | 1.3(0.7-2.3) | 3.5 | 10.5 | 3.2(1.9-5.4) | 9.9 | 18.6 | 1.9(1.3-2.7) |
| 2004-2006 | 665 | 16 | 6.5 | 5.2 | 0.8(0.4-1.6) | 3.4 | 10.5 | 3.1(1.9-5.1) | 9.8 | 15.6 | 1.6(1.1-2.4) |
| 2005-2007 | 701 | 15 | 6.8 | 8.3 | 1.2(0.7-2.0) | 3.4 | 8.4 | 2.4(1.5-4.1) | 10.2 | 16.6 | 1.6(1.1-2.3) |
| 2006-2008 | 668 | 16 | 7.1 | 10.0 | 1.4(0.9-2.2) | 3.2 | 8.1 | 2.5(1.5-4.2) | 10.3 | 18.0 | 1.7(1.3-2.4) |
| 2007-2009 | 656 | 13 | 7.3 | 15.4 | 2.1(1.5-2.9) | 3.1 | 5.8 | 1.9(1.1-3.3) | 10.4 | 21.2 | 2.0(1.5-2.7) |
| 2008-2010 | 642 | 16 | 7.3 | 17.1 | 2.3(1.7-3.1) | 3.0 | 6.6 | 2.2(1.3-3.6) | 10.3 | 23.6 | 2.3(1.8-3.0) |
| 2009-2011 | 647 | 16 | 7.2 | 15.7 | 2.2(1.6-2.9) | 3.0 | 6.1 | 2.0(1.2-3.3) | 10.2 | 21.7 | 2.1(1.6-2.8) |
| 2010-2012 | 642 | 14 | 7.0 | 14.4 | 2.1(1.5-2.8) | 2.9 | 5.1 | 1.7(1.0-2.9) | 9.8 | 19.4 | 2.0(1.5-2.6) |
| 2011-2013 | 648 | 16 | 6.8 | 12.3 | 1.8 (1.3- 2.5) | 2.9 | 5.6 | 1.9(1.2- 3.1) | 9.7 | 17.8 | 1.8 (1.4- 2.4) |
| 2012-2014 | 652 | 19 | 6.7 | 10.9 | 1.6(1.2-2.3) | 2.8 | 6.4 | 2.2(1.4-3.5) | 9.5 | 17.2 | 1.8(1.4-2.4) |
| 2013-2015 | 631 | 21 | 6.7 | 7.1 | 1.1(0.7-1.6) | 2.7 | 6.5 | 2.4(1.4-3.5) | 9.4 | 13.6 | 1.4(1.1-1.9) |
| 2014-2016 | 609 | 14 | 6.5 | 4.8 | 0.74 (0.5-1.2) | 2.6 | 4.2 | 1.6 (0.95-2.7) | 9.1 | 9.0 | 0.99 (0.69-1.41) |

Notes:

Source of adjusted total birth and live birth denominator data: VPDC.

Aboriginal: Infants born to women who identified themselves as Aboriginal and / or of Torres Strait Islander descent according to VPDC data.

Births in which Aboriginality was unknown are excluded from this table.

Rolling triennia are used in this table.

a All figures and rates in this table exclude terminations of pregnancy (TOP) ≥ 20 weeks for maternal psychosocial indications (MPI) resulting in stillbirth or neonatal death. All figures and rates in this table do not exclude TOP for congenital anomaly.

b Stillbirth and perinatal mortality rates are calculated using adjusted total births as the denominator, and expressed as deaths per 1,000 adjusted total births.

c Neonatal mortality rate is calculated using live births as the denominator, and is expressed as deaths per 1,000 live births.

## Table 6.14b: PMR Adjusteda by Aboriginal status of mother, by rolling triennia, Victoria 2001-2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Stillbirth rate Adjusted non- Aboriginal | Neonatal mortality rate Adjusted non- Aboriginal | PMR Adjusted non -Aboriginal | Stillbirth rate  Adjusted Aboriginal | Neonatal mortality rate Adjusted Aboriginal | PMR Adjusted Aboriginal |
| 2001-2003 | 6.5 | 3.5 | 10.0 | 14.9 | 8.4 | 23.1 |
| 2002-2004 | 6.4 | 3.5 | 9.9 | 10.6 | 11.5 | 22.0 |
| 2003-2005 | 6.4 | 3.5 | 9.9 | 8.2 | 10.5 | 18.6 |
| 2004-2006 | 6.5 | 3.4 | 9.8 | 5.2 | 10.5 | 15.6 |
| 2005-2007 | 6.8 | 3.4 | 10.2 | 8.3 | 8.4 | 16.6 |
| 2006-2008 | 7.1 | 3.2 | 10.3 | 10.0 | 8.1 | 18.0 |
| 2007-2009 | 7.3 | 3.1 | 10.4 | 15.4 | 5.8 | 21.2 |
| 2008-2010 | 7.3 | 3.0 | 10.3 | 17.1 | 6.6 | 23.6 |
| 2009-2011 | 7.2 | 3.0 | 10.2 | 15.7 | 6.1 | 21.7 |
| 2010-2012 | 7.0 | 2.9 | 9.8 | 14.4 | 5.1 | 19.4 |
| 2011-2013 | 6.8 | 2.9 | 9.7 | 12.3 | 5.6 | 17.8 |
| 2012-2014 | 6.7 | 2.8 | 9.5 | 10.9 | 6.4 | 17.2 |
| 2013-2015 | 6.7 | 2.7 | 9.4 | 7.1 | 6.5 | 13.6 |
| 2014-2016 | 6.5 | 2.6 | 9.1 | 4.8 | 4.2 | 9.0 |

Data presented in Figure 6.4

## Figure 6.4: PMR Adjusteda by Aboriginal status of mother, by rolling triennia, Victoria 2001-2016

Data taken from table 6.14b

## Table 6.15: Perinatal Deaths, Victoria 2016, by PSANZ PDC major categories and type

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cause of death PSANZ PDC | Stillbirths | | | Adjusted a stillbirths | | | Neonatal deaths | | | Total perinatal deaths | | | Adjusted a total perinatal deaths | | |
| n | % | Rated | n | % | Ratef | n | % | Rated | n | % | Rated | n | % | Ratef |
| 1. Congenital abnormalityb | 177 | 28.3 | 2.2 | 177 | 35.3 | 2.2 | 74 | 34.7 | 0.9 | 251 | 29.9 | 3.1 | 251 | 35.2 | 3.1 |
| 2. Infection | 29 | 4.6 | 0.4 | 29 | 5.8 | 0.4 | 18 | 8.5 | 0.2 | 47 | 5.6 | 0.6 | 47 | 6.6 | 0.6 |
| 3. Hypertension | 14 | 2.2 | 0.2 | 14 | 2.8 | 0.2 | 6 | 2.8 | 0.1 | 20 | 2.4 | 0.2 | 20 | 2.8 | 0.2 |
| 4. Antepartum haemorrhage | 28 | 4.5 | 0.3 | 28 | 5.6 | 0.3 | 15 | 7.0 | 0.2 | 43 | 5.1 | 0.5 | 43 | 6.0 | 0.5 |
| 5. Maternal conditionsc | 132 | 21.1 | 1.6 | 7 | 1.4 | 0.1 | 5 | 2.3 | 0.1 | 137 | 16.3 | 1.7 | 12 | 1.7 | 0.1 |
| 6. Specific perinatal conditionse | 67 | 10.7 | 0.8 | 67 | 13.4 | 0.8 | 22 | 10.3 | 0.3 | 89 | 10.6 | 1.1 | 89 | 12.5 | 1.1 |
| 7. Hypoxic peripartum death | 7 | 1.1 | 0.1 | 7 | 1.4 | 0.1 | 8 | 3.8 | 0.1 | 15 | 1.8 | 0.2 | 15 | 2.1 | 0.2 |
| 8. Fetal growth restriction (FGR) | 46 | 7.3 | 0.6 | 46 | 9.2 | 0.6 | 2 | 0.9 | 0.0 | 48 | 5.7 | 0.6 | 48 | 6.7 | 0.6 |
| 9. Spontaneous preterm | 50 | 8.0 | 0.6 | 50 | 10.0 | 0.6 | 55 | 25.8 | 0.7 | 105 | 12.5 | 1.3 | 105 | 14.7 | 1.3 |
| 10. Unexplained antepartum death | 76 | 12.1 | 0.9 | 76 | 15.2 | 0.9 | 0 | 0.0 | 0.0 | 76 | 9.1 | 0.9 | 76 | 10.6 | 0.9 |
| 11. No obstetric antecedent | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 8 | 3.8 | 0.1 | 8 | 1.0 | 0.1 | 8 | 1.1 | 0.1 |
| Total | 626 | 100.0 | 7.7 | 501 | 100.0 | 6.2 | 213 | 100.0 | 2.7 | 839 | 100.0 | 10.4 | 714 | 100.0 | 8.8 |
|  | (G) |  |  | (H) |  |  | (Ui) |  |  | (Vi) |  |  | (Vii) |  |  |

a Adjusted stillbirths and adjusted total perinatal deaths are those following exclusion of 125 terminations of pregnancy for maternal psychosocial indications resulting in stillbirth.

b Congenital abnormality includes terminations of pregnancy ≥20 weeks (152 stillbirths and 33 neonates).

c Maternal conditions includes terminations of pregnancy ≥20 weeks for psychosocial indications (125 stillbirths). These are removed from adjusted stillbirths and adjusted total perinatal deaths.

d Stillbirth and perinatal death rates were calculated using total births (live births and stillbirths) as the denominator (Q). Neonatal death rates were calculated using live births as the denominator (C).

e Specific perinatal conditions includes:

Twin-twin transfusion

Feto -maternal haemorrhage

Antepartum cord complications

Uterine abnormalities

Birth trauma

Alloimmune disease

Idiopathic hydrops

Termination for suspected but not confirmed congenital abnormalities

f Adjusted stillbirth and adjusted perinatal rates are calculated using adjusted total births (S), adjusted livebirths (D) and adjusted stillbirths (H) and neonatal deaths (Uii) (not including the 125 terminations of pregnancy for maternal psychosocial indications) as the denominator.

The letters in parentheses under the totals and in the footnotes refer to the totals in Appendix 3.

## Figure 6.5: Causes of perinatal death (%), PSANZ PDC, Victoria 2016

|  |  |  |
| --- | --- | --- |
| PSANZ PDC | % TOP | % non TOP |
| Congenital abnormality | 22.1% | 7.9% |
| Infection |  | 5.6% |
| Hypertension |  | 2.4% |
| Antepartum haemorrhage |  | 5.1% |
| Maternal conditions | 14.9% | 1.4% |
| Specific perinatal conditions |  | 10.6% |
| Hypoxic peripartum death |  | 1.8% |
| Fetal growth restriction (FGR) |  | 5.7% |
| Spontaneous preterm |  | 12.5% |
| Unexplained antepartum death |  | 9.1% |
| No obstetric antecedent |  | 1.0% |
| Total | 36.9% | 63.1% |

Note: TOP refers to terminations of pregnancy for congenital abnormality or maternal psychosocial indications.

## Figure 6.6(i): Causes of stillbirth (%), PSANZ PDC, Victoria 2016

|  |  |  |
| --- | --- | --- |
| PSANZ PDC | % TOP | % non TOP |
| Congenital abnormality | 24.3% | 4.0% |
| Infection |  | 4.6% |
| Hypertension |  | 2.2% |
| Antepartum haemorrhage |  | 4.5% |
| Maternal conditions | 20.0% | 1.1% |
| Specific perinatal conditions |  | 10.7% |
| Hypoxic peripartum death |  | 1.1% |
| Fetal growth restriction (FGR) |  | 7.3% |
| Spontaneous preterm |  | 8.0% |
| Unexplained antepartum death |  | 12.1% |
| No obstetric antecedent |  | 0.0% |
| Total | 44.2% | 55.8% |

Note: TOP refers to terminations of pregnancy for congenital abnormality or maternal psychosocial indications.

## Figure 6.6 (ii): Causes of adjusted stillbirth (%), PSANZ PDC, Victoria 2016

|  |  |  |  |
| --- | --- | --- | --- |
|  | PSANZ PDC | % TOP | % non TOP |
| 1 | Congenital abnormality | 30.3% | 5.0% |
| 2 | Infection |  | 5.8% |
| 3 | Hypertension |  | 2.8% |
| 4 | Antepartum haemorrhage |  | 5.6% |
| 5 | Maternal conditions |  | 1.4% |
| 6 | Specific perinatal conditions |  | 13.4% |
| 7 | Hypoxic peripartum death |  | 1.4% |
| 8 | Fetal growth restriction (FGR) |  | 9.2% |
| 9 | Spontaneous preterm |  | 10.0% |
| 10 | Unexplained antepartum death |  | 15.6% |
| 11 | No obstetric antecedent |  | 0.0 % |
|  |  | 30.3% | 70.2% |
|  |  |  |  |

Note: TOP refers to terminations of pregnancy for congenital abnormality.

## Figure 6.7: Causes of neonatal death (%), PSANZ PDC, Victoria 2016

|  |  |  |
| --- | --- | --- |
| PSANZ PDC | % TOP | % non TOP |
| Congenital abnormality | 15.5% | 19.2% |
| Infection |  | 8.5% |
| Hypertension |  | 2.8% |
| Antepartum haemorrhage |  | 7.0% |
| Maternal conditions |  | 2.3% |
| Specific perinatal conditions |  | 10.3% |
| Hypoxic peripartum death |  | 3.8% |
| Fetal growth restriction (FGR) |  | 0.9% |
| Spontaneous preterm |  | 25.8% |
| No obstetric antecedent |  | 3.8% |
| Total | 15.5% | 84.5% |

Note: TOP refers to terminations of pregnancy for congenital anomaly or maternal psychosocial indications.

## Table 6.16: Perinatal deaths by PSANZ PDC expanded categories and type, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Stillbirths (Fetal death) | | | Neonatal death | | | Total | | |
| PSANZ PDC | n | | *%* | n | % | | n | % | |
| 1. CONGENITAL ABNORMALITYa | 177 | | *28.3* | 74 | *34.7* | | 251 | *29.9* | |
| 1.1 Central nervous system abnormalities | 4 | | *0.6* | 2 | *0.9* | | **6** | ***0.7*** | |
| TOP Central nervous system abnormalities | 50 | | *8.0* | 11 | *5.2* | | **61** | ***7.3*** | |
| 1.2 Cardiovascular system | 2 | | *0.3* | 10 | *4.7* | | **12** | ***1.4*** | |
| TOP Cardiovascular system | 18 | | *2.9* | 7 | *3.3* | | **25** | ***3.0*** | |
| 1.3 Urinary Tract | 1 | | *0.2* | 4 | *1.9* | | **5** | ***0.6*** | |
| TOP Urinary Tract | 9 | | *1.4* | 3 | *1.4* | | **12** | ***1.4*** | |
| 1.4 Gastrointestinal | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| TOP Gastrointestinal | 4 | | *0.6* | 1 | *0.5* | | **5** | ***0.6*** | |
| 1.5 Chromosomal | 11 | | *1.8* | 7 | *3.3* | | **18** | ***2.1*** | |
| TOP Chromosomal | 37 | | *5.9* | 6 | *2.8* | | **43** | ***5.1*** | |
| 1.6 Metabolic | 0 | | *0.0* | 3 | *1.4* | | **3** | ***0.4*** | |
| TOP Metabolic | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| 1.7 Multiple | 4 | | *0.6* | 8 | *3.8* | | **12** | ***1.4*** | |
| TOP Multiple | 19 | | *3.0* | 1 | *0.5* | | **20** | ***2.4*** | |
| 1.8 Other congenital abnormality | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| TOP Other congenital abnormality | 1 | | *0.2* | 0 | *0.0* | | **1** | ***0.1*** | |
| 1.81 Musculoskeletal | 2 | | *0.3* | 2 | *0.9* | | **4** | ***0.5*** | |
| TOP Musculoskeletal | 8 | | *1.3* | 2 | *0.9* | | **10** | ***1.2*** | |
| 1.82 Respiratory | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| TOP Respiratory | 0 | | *0.0* | 1 | *0.5* | | **1** | ***0.1*** | |
| 1.83 Diaphragmatic hernia | 0 | | *0.0* | 4 | *1.9* | | **4** | ***0.5*** | |
| TOP Diaphragmatic hernia | 2 | | *0.3* | 1 | *0.5* | | **3** | ***0.4*** | |
| 1.84 Haematological | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| Haematological (termination) | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| 1.85 Tumours | 1 | | *0.2* | 1 | *0.5* | | **2** | ***0.2*** | |
| TOP Tumours | 3 | | *0.5* | 0 | *0.0* | | **3** | ***0.4*** | |
| 1.88 Other specified congenital abnormality | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| TOP Other specified congenital abnormality | 1 | | *0.2* | 0 | *0.0* | | **1** | ***0.1*** | |
| 1.9 Unspecified congenital abnormality | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| TOP Other specified congenital abnormality | 0 | | *0.0* | 0 | *0.0* | | **0** | ***0.0*** | |
| 2. PERINATAL INFECTION | 29 | *4.6* | | 18 | | *8.5* | 47 | | *5.6* |
| 2.1 Bacterial |  |  | |  | |  |  | |  |
| 2.11 Group B Streptococcus | 3 | *0.5* | | 6 | | *2.8* | **9** | | ***1.1*** |
| 2.12 E coli | 1 | *0.2* | | 0 | | *0.0* | **1** | | ***0.1*** |
| 2.13 Listeria | 1 | *0.2* | | 1 | | *0.5* | **2** | | ***0.2*** |
| 2.18 Other bacterial | 8 | *1.3* | | 1 | | *0.5* | **9** | | ***1.1*** |
| 2.19 Unspecified bacterial | 3 | *0.5* | | 0 | | *0.0* | **3** | | ***0.4*** |
| 2.2 Viral |  |  | |  | |  |  | |  |
| 2.21 Perinatal infection - Cytomegalovirus | 6 | *1.0* | | 1 | | *0.5* | **7** | | ***0.8*** |
| 2.23 Herpes simplex virus | 0 | *0.0* | | 1 | | *0.5* | **1** | | ***0.1*** |
| 2.3 Protozoal e.g. toxoplasma | 1 | *0.2* | | 0 | | *0.0* | **1** | | ***0.1*** |
| 2.9 Other unspecified organism | 6 | *1.0* | | 8 | | *3.8* | **14** | | ***1.7*** |
| 3. HYPERTENSION | 14 | *2.2* | | 6 | | *2.8* | 20 | | *2.4* |
| 3.4 Gestational Hypertension | 1 | *0.2* | | 0 | | *0.0* | **1** | | ***0.1*** |
| 3.5 Pre-eclampsia | 8 | *1.3* | | 5 | | *2.3* | **13** | | ***1.5*** |
| 3.6 Pre-eclampsia superimposed on chronic  hypertension | 5 | *0.8* | | 1 | | *0.5* | **6** | | ***0.7*** |
| 4. ANTEPARTUM HAEMORRHAGE | 28 | *4.5* | | 15 | | *7.0* | 43 | | *5.1* |
| 4.1 Placental abruption | 23 | *3.7* | | 10 | | *4.7* | **33** | | ***3.9*** |
| 4.11 Placental abruption with laboratory evidence of  thrombophilia | 4 | *0.6* | | 0 | | *0.0* | **4** | | ***0.5*** |
| 4.3 Vasa Praevia | 0 | *0.0* | | 1 | | *0.5* | **1** | | ***0.1*** |
| 4.8 Other APH | 0 | *0.0* | | 1 | | *0.5* | **1** | | ***0.1*** |
| 4.9 APH of unknown origin | 1 | *0.2* | | 3 | | *1.4* | **4** | | ***0.5*** |
| 5. MATERNAL CONDITIONSb | 132 | *21.1* | | 5 | | *2.3* | 137 | | *16.3* |
| 5.1 TOP maternal psychosocial indications | 125 | *20.0* | | 0 | | *0.0* | **125** | | ***14.9*** |
| 5.2 Diabetes / gestational diabetes | 3 | *0.5* | | 0 | | *0.0* | **3** | | ***0.4*** |
| 5.3 Maternal injury | 0 | *0.0* | | 0 | | *0.0* | **0** | | ***0.0*** |
| 5.31 Maternal injury (accidental) | 1 | *0.2* | | 2 | | *0.9* | **3** | | ***0.4*** |
| 5.32 Maternal injury (non-accidental) | 1 | *0.2* | | 0 | | *0.0* | **1** | | ***0.1*** |
| 5.4 Maternal sepsis | 0 | *0.0* | | 1 | | *0.5* | **1** | | ***0.1*** |
| 5.6 Obstetric cholestasis | 1 | *0.2* | | 0 | | *0.0* | **1** | | ***0.1*** |
| 5.8 Other specified maternal conditions | 1 | *0.2* | | 2 | | *0.9* | **3** | | ***0.4*** |

a Congenital abnormality (CA) includes terminations of pregnancy ≥20 weeks (152 stillbirths and 33 neonates)

b Maternal conditions includes PDC 5.1 : terminations of pregnancy ≥20 weeks for psychosocial indications (125 stillbirths)

The letters in parentheses under the totals refer to the totals in Appendix 3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6. SPECIFIC PERINATAL CONDITIONS | 67 | *10.7* | 22 | *10.3* | 89 | *10.6* |
| 6.1 Twin-twin transfusion | 24 | *3.8* | 11 | *5.2* | **35** | ***4.2*** |
| 6.2 Fetomaternal haemorrhage | 10 | *1.6* | 2 | *0.9* | **12** | ***1.4*** |
| 6.32 Antepartum cord complications (True knot with evidence of occlusion) | 4 | *0.6* | 1 | *0.5* | **5** | ***0.6*** |
| 6.38 Antepartum cord complications (other) | 14 | *2.2* | 0 | *0.0* | **14** | ***1.7*** |
| 6.39 Antepartum cord complications (unspecified) | 1 | *0.2* | 0 | *0.0* | **1** | ***0.1*** |
| 6.4 Uterine abnormalities | 9 | *1.4* | 7 | *3.3* | **16** | ***1.9*** |
| 6.68 Alloimmune disease: other | 1 | *0.2* | 0 | *0.0* | **1** | ***0.1*** |
| 6.7 Idiopathic hydrops | 1 | *0.2* | 1 | *0.5* | **2** | ***0.2*** |
| 6.8 Other specific perinatal complications |  |  |  |  |  |  |
| 6.88 Other | 3 | *0.5* | 0 | *0.0* | **3** | ***0.4*** |
| 7. HYPOXIC PERIPARTUM DEATH | 7 | *1.1* | 8 | *3.8* | 15 | *1.8* |
| 7.1 With intrapartum complications |  |  |  |  |  |  |
| 7.11 Uterine rupture | 0 | *0.0* | 1 | *0.5* | **1** | ***0.1*** |
| 7.13 Shoulder dystocia | 0 | *0.0* | 1 | *0.5* | **1** | ***0.1*** |
| 7.18 Other intrapartum complication | 1 | *0.2* | 0 | *0.0* | **1** | ***0.1*** |
| 7.2 No intrapartum complication (evidence of non-  reassuring fetal status) | 0 | *0.0* | 6 | *2.8* | **6** | ***0.7*** |
| 7.9 Unspecified hypoxic peripartum death | 6 | *1.0* | 0 | *0.0* | **6** | ***0.7*** |
| 8. FETAL GROWTH RESTRICTION (FGR) | 46 | *7.3* | 2 | *0.9* | 48 | *5.7* |
| 8.1 Evidence of uteroplacental insufficiency | 28 | *4.5* | 2 | *0.9* | **30** | ***3.6*** |
| 8.2 With chronic villitis | 1 | *0.2* | 0 | *0.0* | **1** | ***0.1*** |
| 8.3 No placental pathology | 12 | *1.9* | 0 | *0.0* | **12** | ***1.4*** |
| 8.8 Other specified placental pathology | 3 | *0.5* | 0 | *0.0* | **3** | ***0.4*** |
| 8.9 Unspecified or not known whether placenta  examined | 2 | *0.3* | 0 | *0.0* | **2** | ***0.2*** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. SPONTANEOUS PRETERM | 50 | | *8.0* | | 55 | *25.8* | 105 | *12.5* |
| 9.1 Spontaneous preterm with intact membranes, or  membrane rupture < 24 hours before delivery |  | |  | |  |  |  |  |
| 9.11 Chorioamnionitis (placental histology) | 17 | | *2.7* | | 14 | *6.6* | **31** | ***3.7*** |
| 9.12 No chorioamnionitis (placental histology) | 7 | | *1.1* | | 16 | *7.5* | **23** | ***2.7*** |
| 9.13 With clinical evidence of chorioamnionitis, no  examination of placenta | 0 | | *0.0* | | 2 | *0.9* | **2** | ***0.2*** |
| 9.17 No clinical signs of chorioamnionitis, no  examination of placenta | 2 | | *0.3* | | 7 | *3.3* | **9** | ***1.1*** |
| 9.19 unspecified or not known whether placenta  examined | 2 | | *0.3* | | 0 | *0.0* | **2** | ***0.2*** |
| 9.2 Spontaneous preterm with membrane rupture  >/= 24 hours before delivery |  | |  | |  |  |  |  |
| 9.21 Chorioamnionitis (placental histology) | 14 | | *2.2* | | 8 | *3.8* | **22** | ***2.6*** |
| 9.22 No chorioamnionitis (placental histology) | 3 | | *0.5* | | 6 | *2.8* | **9** | ***1.1*** |
| 9.23 With clinical evidence of chorioamnionitis, no examination of placenta | 1 | | *0.2* | | 1 | *0.5* | **2** | ***0.2*** |
| 9.3 Spontaneous preterm with membrane rupture of unknown duration before delivery |  | |  | |  |  |  |  |
| 9.31 Chorioamnionitis (placental histology) | 3 | | *0.5* | | 1 | *0.5* | **4** | ***0.5*** |
| 9.39 Unspecified or not known whether placenta examined | 1 | | *0.2* | | 0 | *0.0* | **1** | ***0.1*** |
| 10. UNEXPLAINED ANTEPARTUM DEATH | 76 | | *12.1* | | 0 | *0.0* | 76 | *9.1* |
| 10.0 Unexplained antepartum death | 1 | | *0.2* | | 0 | *0.0* | **1** | ***0.1*** |
| 10.1 Evidence of uteroplacental insufficiency | 14 | | *2.2* | | 0 | *0.0* | **14** | ***1.7*** |
| 10.2 With chronic villitis | 2 | | *0.3* | | 0 | *0.0* | **2** | ***0.2*** |
| 10.3 No placental pathology | 38 | | *6.1* | | 0 | *0.0* | **38** | ***4.5*** |
| 10.4 No examination of placenta | 4 | | *0.6* | | 0 | *0.0* | **4** | ***0.5*** |
| 10.8 Other specified placental pathology | 15 | | *2.4* | | 0 | *0.0* | **15** | ***1.8*** |
| 10.9 Unspecified or not known whether placenta  examined | 2 | | *0.3* | | 0 | *0.0* | **2** | ***0.2*** |
| 11. NO OBSTETRIC ANTECEDENT | 0 | | *0.0* | | 8 | *3.8* | 8 | *1.0* |
| 11 No obstetric antecedent | 0 | | *0.0* | | 6 | *2.8* | **6** | ***0.7*** |
| 11.1 No obstetric antecedent - Sudden Infant Death Syndrome | 0 | | *0.0* | | 0 | *0.0* | **0** | ***0.0*** |
| 11.3 Accidental asphyxiation | 0 | | *0.0* | | 1 | *0.5* | **1** | ***0.1*** |
| 11.9 No obstetric antecedent - Unknown /  Undetermined | 0 | | *0.0* | | 1 | *0.5* | **1** | ***0.1*** |
| Total | 626 | *100.0* | | 213 | | *100.0* | 839 | *100.0* |
|  | (G) | |  | | (Ui) |  | (Vi) |  |

## 

## Table 6.17 : Adjusteda perinatal deaths in singleton and multiple births, by PSANZ PDC, Victoria, 2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PSANZ PDC | Singleton | | Multiple | | Total | |
| n | % | n | % | n | % |
| 1. Congenital abnormalityb | 237 | *38.5* | 14 | *14.1* | 251 | *35.2* |
| 2. Infection | 40 | *6.5* | 7 | *7.1* | 47 | *6.6* |
| 3. Hypertension | 20 | *3.3* | 0 | *0.0* | 20 | *2.8* |
| 4. Antepartum haemorrhage | 41 | *6.7* | 2 | *2.0* | 43 | *6.0* |
| 5. Maternal conditions | 12 | *2.0* | 0 | *0.0* | 12 | *1.7* |
| 6. Specific perinatal conditionsc | 49 | *8.0* | 40 | *40.4* | 89 | *12.5* |
| 7. Hypoxic peripartum death | 14 | *2.3* | 1 | *1.0* | 15 | *2.1* |
| 8. Fetal growth restriction (FGR) | 45 | *7.3* | 3 | *3.0* | 48 | *6.7* |
| 9. Spontaneous preterm | 78 | *12.7* | 27 | *27.3* | 105 | *14.7* |
| 10. Unexplained antepartum death | 71 | *11.5* | 5 | *5.1* | 76 | *10.6* |
| 11. No obstetric antecedent | 8 | *1.3* | 0 | *0.0* | 8 | *1.1* |
| Total | 615 | *100.0* | 99 | *100.0* | 714 | *100.0* |
|  |  |  |  |  | (Vii) |  |

a  This table excludes terminations of pregnancy ≥20 weeks for psychosocial indications (125 stillbirths).

b Congenital abnormality includes terminations of pregnancy ≥20 weeks (152 stillbirths and 33

neonates).

c Specific perinatal conditions includes

Twin-twin transfusion

Feto -maternal haemorrhage

Antepartum cord complications

Uterine abnormalities

Birth trauma

Alloimmune disease

Idiopathic hydrops

Termination for suspected but not confirmed congenital abnormalities

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.18: Adjusteda perinatal deaths by PSANZ PDC and Aboriginal status of infant, Victoria, 2003-2016

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PSANZ PDC | Aboriginal | | | Non-Aboriginal | | | Total | | |
| Count | *%* | rate | Count | *%* | rate | Count | *%* | rate |
| 1. Congenital abnormality | 32 | *15.8* | 2.8 | 3,212 | *33.1* | 3.2 | 3,244 | *32.8* | 3.2 |
| 2. Infection | 4 | *2.0* | 0.4 | 294 | *3.0* | 0.3 | 298 | *3.0* | 0.3 |
| 3. Hypertension | 13 | *6.4* | 1.1 | 276 | *2.8* | 0.3 | 289 | *2.9* | 0.3 |
| 4. Antepartum  haemorrhage | 25 | *12.3* | 2.2 | 745 | *7.7* | 0.7 | 770 | *7.8* | 0.8 |
| 5. Maternal conditions | 5 | *2.5* | 0.4 | 254 | *2.6* | 0.3 | 259 | *2.6* | 0.3 |
| 6. Specific perinatal  conditions | 13 | *6.4* | 1.1 | 863 | *8.9* | 0.9 | 876 | *8.8* | 0.9 |
| 7. Hypoxic peripartum  death | 4 | *2.0* | 0.4 | 278 | *2.9* | 0.3 | 282 | *2.8* | 0.3 |
| 8. Fetal growth restriction | 18 | *8.9* | 1.6 | 636 | *6.6* | 0.6 | 654 | *6.6* | 0.6 |
| 9. Spontaneous preterm | 58 | *28.6* | 5.1 | 1,607 | *16.6* | 1.6 | 1,665 | *16.8* | 1.6 |
| 10. Unexplained  antepartum death | 26 | *12.8* | 2.3 | 1,460 | *15.1* | 1.4 | 1,486 | *15.0* | 1.5 |
| 11. No obstetric  antecedent | 5 | *2.5* | 0.4 | 71 | *0.7* | 0.1 | 76 | *0.8* | 0.1 |
| Total | 203 | *100.0* | 17.9 | 9,696 | *100.0* | 9.6 | 9,899 | *100.0* | 9.7 |

a This table excludes terminations of pregnancy for maternal psychosocial indications, and perinatal

deaths in which Aboriginal status was unknown.

The data in this table relates to Aboriginal status of infant (not mother), and therefore may differ from data in tables based on Aboriginal status of mother.

Aboriginal: Infants identified as Aboriginal or of Torres Strait Islander descent.

Births in which Aboriginality was unknown are excluded from this table.

## Table 6.19: Perinatal deaths as a result of terminations in pregnancy, Victoria 2016

|  |  |  |  |
| --- | --- | --- | --- |
| Cause of death PSANZ PDC | Stillbirths | Neonatal deaths | Total |
| n | n | n |
| Termination for suspected or confirmed congenital abnormality | 152 | 33 | 185 |
| Terminations for psychosocial indications | 125 | 0 | 125 |
| Total | 277 | 33 | 310 |

The figures in this table correspond to the letters (O), (L), (N), (K), (Ri), (Rii) and (Riii) in Appendix 3.

## Table 6.20: Perinatal deaths by PSANZ PDC and gestational age Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PSANZ PDC | | 20–27 weeks | | | 28–31 weeks | | 32–36 weeks | | 37+ weeks | | Total | | | Total excluding PSANZ PDC 5.1 e | |
| n | | *%* | n | *%* | n | *%* | n | *%* | n | *%* | n | | *%* |
| 1. Congenital abnormalitya | | 171 | | *29.9* | 21 | *34.4* | 32 | *36.0* | 27 | *22.9* | 251 | *29.9* | 251 | | *35.2* |
| 2. Infection | | 35 | | *6.1* | 2 | *3.3* | 1 | *1.1* | 9 | *7.6* | 47 | *5.6* | 47 | | *6.6* |
| 3. Hypertension | | 13 | | *2.3* | 2 | *3.3* | 1 | *1.1* | 4 | *3.4* | 20 | *2.4* | 20 | | *2.8* |
| 4. Antepartum haemorrhage | | 24 | | *4.2* | 4 | *6.6* | 9 | *10.1* | 6 | *5.1* | 43 | *5.1* | 43 | | *6.0* |
| 5. Maternal conditionsb (excluding terminations of pregnancy for psychosocial indications) | | 5 | | *0.9* | 4 | *6.6* | 2 | *2.2* | 1 | *0.8* | 12 | *1.4* | 12 | | *1.7* |
| 5.1 Maternal conditionsc (terminations for psychosocial indications only) | | 124 | | *21.7* | 1 | *1.6* | 0 | *0.0* | 0 | *0.0* | 125 | *14.9* | NA | | *NA* |
| 6. Specific perinatal conditionsd | | 49 | | *8.6* | 7 | *11.5* | 21 | *23.6* | 12 | *10.2* | 89 | *10.6* | 89 | | *12.5* |
| 7. Hypoxic peripartum death | | 0 | | *0.0* | 1 | *1.6* | 2 | *2.2* | 12 | *10.2* | 15 | *1.8* | 15 | | *2.1* |
| 8. Fetal growth restriction | | 23 | | *4.0* | 7 | *11.5* | 8 | *9.0* | 10 | *8.5* | 48 | *5.7* | 48 | | *6.7* |
| 9. Spontaneous preterm | | 99 | | *17.3* | 3 | *4.9* | 3 | *3.4* | 0 | *0.0* | 105 | *12.5* | 105 | | *14.7* |
| 10. Unexplained antepartum death | | 28 | | *4.9* | 9 | *14.8* | 10 | *11.2* | 29 | *24.6* | 76 | *9.1* | 76 | | *10.6* |
| 11. No obstetric antecedent | | 0 | | *0.0* | 0 | *0.0* | 0 | *0.0* | 8 | *6.8* | 8 | *1.0* | 8 | | *1.1* |
| Total | 571 | | 100.0 | | 61 | 100.0 | 89 | 100.0 | 118 | 100.0 | 839 | 100.0 | 714 | | 100.0 |
|  | |  | |  |  |  |  |  |  |  | (Vi) |  | (Vii) | |  |

a Congenital abnormality includes terminations of pregnancy ≥20 weeks (152 stillbirths and 33 neonates).

b Maternal conditions not including terminations of pregnancy ≥ 20 weeks for psychosocial indications (11 perinatal deaths).

c Only maternal conditions classified PDC 5.1: terminations of pregnancy ≥ 20 weeks for psychosocial indications (125 stillbirths).

d Specific perinatal conditions includes

Twin-twin transfusion

Feto -maternal haemorrhage

Antepartum cord complications

Uterine abnormalities

Birth trauma

Alloimmune disease

Idiopathic hydrops

Termination for suspected but not confirmed congenital abnormalities

e Total excluding PDC 5.1 (terminations of pregnancy ≥ 20 weeks for psychosocial indications: 125 stillbirths)

NA - not applicable.

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Figure 6.8: Causes of perinatal death, PSANZ PDC, Victoria 2016

|  |  |  |
| --- | --- | --- |
|  |  | 2016 |
|  |  | % |
| 1 | Congenital abnormality | 29.9 |
| 2 | Infection | 5.6 |
| 3 | Hypertension | 2.4 |
| 4 | Antepartum haemorrhage | 5.1 |
| 5 | Maternal conditions | 16.3 |
| 6 | Specific perinatal conditions | 10.6 |
| 7 | Hypoxic peripartum death | 1.8 |
| 8 | Fetal growth restriction (FGR) | 5.7 |
| 9 | Spontaneous preterm | 12.5 |
| 10 | Unexplained antepartum death | 9.1 |
| 11 | No obstetric antecedent | 1.0 |
|  | Total | 100.0 |

## Figure 6.9: Causes of perinatal death adjusteda, PSANZ PDC, Victoria 2016

|  |  |
| --- | --- |
|  | 2016 |
|  | % |
| Congenital abnormality | 35.2 |
| Infection | 6.6 |
| Hypertension | 2.8 |
| Antepartum haemorrhage | 6.0 |
| Maternal conditions | 1.7 |
| Specific perinatal conditions | 12.5 |
| Hypoxic peripartum death | 2.1 |
| Fetal growth restriction (FGR) | 6.7 |
| Spontaneous preterm | 14.7 |
| Unexplained antepartum death | 10.6 |
| No obstetric antecedent | 1.1 |
| Total | 100.0 |

a This figure excludes terminations of pregnancy ≥20 weeks for psychosocial indications PDC 5.1 (125 stillbirths).

## Table 6.21: Stillbirths by PSANZ PDC and gestational age, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PSANZ PDC | 20–27 weeks | | 28–31 weeks | | 32–36 weeks | | 37+ weeks | | Total | | Total excluding PSANZ PDC 5.1e | |
| n | *%* | n | *%* | n | *%* | n | *%* | n | *%* | n | *%* |
| 1. Congenital abnormalitya | 138 | *31.6* | 17 | *34.0* | 15 | *22.7* | 7 | *9.6* | 177 | *28.3* | 177 | *35.3* |
| 2. Infection | 22 | *5.0* | 1 | *2.0* | 1 | *1.5* | 5 | *6.8* | 29 | *4.6* | 29 | *5.8* |
| 3. Hypertension | 10 | *2.3* | 1 | *2.0* | 1 | *1.5* | 2 | *2.7* | 14 | *2.2* | 14 | *2.8* |
| 4. Antepartum  haemorrhage | 15 | *3.4* | 3 | *6.0* | 7 | *10.6* | 3 | *4.1* | 28 | *4.5* | 28 | *5.6* |
| 5. Maternal conditions  (excluding terminations  of pregnancy for  psychosocial indications)b | 2 | *0.5* | 3 | *6.0* | 1 | *1.5* | 1 | *1.4* | 7 | *1.1* | 7 | *1.4* |
| 5.1 Maternal conditions  (terminations for psychosocial  indications only)c | 124 | *28.4* | 1 | *2.0* | 0 | *0.0* | 0 | *0.0* | 125 | *20.0* | NA | *NA* |
| 6. Specific perinatal conditionsd | 30 | *6.9* | 7 | *14.0* | 19 | *28.8* | 11 | *15.1* | 67 | *10.7* | 67 | *13.4* |
| 7. Hypoxic peripartum death | 0 | *0.0* | 1 | *2.0* | 1 | *1.5* | 5 | *6.8* | 7 | *1.1* | 7 | *1.4* |
| 8. Fetal growth restriction | 22 | *5.0* | 6 | *12.0* | 8 | *12.1* | 10 | *13.7* | 46 | *7.3* | 46 | *9.2* |
| 9. Spontaneous preterm | 46 | *10.5* | 1 | *2.0* | 3 | *4.5* | 0 | *0.0* | 50 | *8.0* | 50 | *10.0* |
| 10. Unexplained antepartum  death | 28 | *6.4* | 9 | *18.0* | 10 | *15.2* | 29 | *39.7* | 76 | *12.1* | 76 | *15.2* |
| Total | 437 | *100.0* | 50 | *100.0* | 66 | *100.0* | 73 | *100.0* | 626 | *100.0* | 501 | *100.0* |
|  |  |  |  |  |  |  |  |  |  |  | (H) |  |

a Congenital abnormality includes terminations of pregnancy ≥20 weeks (152 stillbirths and 33 neonates)

b Maternal conditions not including terminations of pregnancy ≥ 20 weeks for psychosocial indications (11 perinatal deaths).

c Only maternal conditions classified PDC 5.1: terminations of pregnancy ≥ 20 weeks for psychosocial indications (125 stillbirths).

d Specific perinatal conditions includes

Twin-twin transfusion

Feto -maternal haemorrhage

Antepartum cord complications

Uterine abnormalities

Birth trauma

Alloimmune disease

Idiopathic hydrops

Termination for suspected but not confirmed congenital abnormalities

e Total excluding PDC 5.1 (terminations of pregnancy ≥ 20 weeks for psychosocial indications: 125 stillbirths).

NA - not applicable

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Figure 6.10: Causes of stillbirth, PSANZ PDC, Victoria 2016

|  |  |
| --- | --- |
| PSANZ PDC group | 2016 |
|  | % |
| Congenital abnormality | 28.3 |
| Infection | 4.6 |
| Hypertension | 2.2 |
| Antepartum haemorrhage | 4.5 |
| Maternal conditions | 21.1 |
| Specific perinatal conditions | 10.7 |
| Hypoxic peripartum death | 1.1 |
| Fetal growth restriction | 7.3 |
| Spontaneous preterm | 8.0 |
| Unexplained antepartum death | 12.1 |
| Total | 100.0 |

## Figure 6.11: Causes of stillbirth (adjusted)a, PSANZ PDC, Victoria 2016

|  |  |
| --- | --- |
| PSANZ PDC | 2016 |
|  | % |
| Congenital abnormality | 35.3 |
| Infection | 5.8 |
| Hypertension | 2.8 |
| Antepartum haemorrhage | 5.6 |
| Maternal conditions (excluding terminations of pregnancy for psychosocial indications) | 1.4 |
| Specific perinatal conditions | 13.4 |
| Hypoxic peripartum death | 1.4 |
| Fetal growth restriction | 9.2 |
| Spontaneous preterm | 10.0 |
| Unexplained antepartum death | 15.2 |
| No obstetric antecedent | 0.0 |
| Total | 100.0 |

a This figure excludes terminations of pregnancy ≥20 weeks for psychosocial indications PDC 5.1 (125 stillbirths).

## Table 6.22: Neonatal deaths by PSANZ PDC and gestational age, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PSANZ PDC | 20–27 weeks | | 28–31 weeks | | 32–36 weeks | | 37+ weeks | | Total | |
| n | % | n | % | n | % | n | % | n | % |
| 1. Congenital abnormality a | 33 | *24.6* | 4 | *36.4* | 17 | *73.9* | 20 | *44.4* | 74 | *34.7* |
| 2. Infection | 13 | *9.7* | 1 | *9.1* | 0 | *0.0* | 4 | *8.9* | 18 | *8.5* |
| 3. Hypertension | 3 | *2.2* | 1 | *9.1* | 0 | *0.0* | 2 | *4.4* | 6 | *2.8* |
| 4. Antepartum  haemorrhage | 9 | *6.7* | 1 | *9.1* | 2 | *8.7* | 3 | *6.7* | 15 | *7.0* |
| 5. Maternal conditionsb | 3 | *2.2* | 1 | *9.1* | 1 | *4.3* | 0 | *0.0* | 5 | *2.3* |
| 6. Specific perinatal  conditions c | 19 | *14.2* | 0 | *0.0* | 2 | *8.7* | 1 | *2.2* | 22 | *10.3* |
| 7. Hypoxic peripartum  death | 0 | *0.0* | 0 | *0.0* | 1 | *4.3* | 7 | *15.6* | 8 | *3.8* |
| 8. Fetal growth restriction | 1 | *0.7* | 1 | *9.1* | 0 | *0.0* | 0 | *0.0* | 2 | *0.9* |
| 9. Spontaneous preterm | 53 | *39.6* | 2 | *18.2* | 0 | *0.0* | 0 | *0.0* | 55 | *25.8* |
| 11. No obstetric antecedent | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* | 8 | *17.8* | 8 | *3.8* |
| Total | 134 | *100.0* | 11 | *100.0* | 23 | *100.0* | 45 | *100.0* | 213 | *100.0* |
|  |  |  |  |  |  |  |  |  | (Ui) |  |

a Congenital abnormality includes termination of pregnancy ≥20 weeks (33 neonates).

b Maternal conditions includes termination of pregnancy ≥20 weeks for psychosocial indications PDC 5.1.

c Specific perinatal conditions includes

Twin-twin transfusion

Feto -maternal haemorrhage

Antepartum cord complications

Uterine abnormalities

Birth trauma

Alloimmune disease

Idiopathic hydrops

Termination for suspected but not confirmed congenital abnormalities

Note that the PSANZ PDC Code 10 - Unexplained antepartum death does not occur in neonatal deaths.

The letter in parentheses under the total refers to the total in Appendix 3.

## Figure 6.12: Causes of neonatal death, PSANZ PDC, Victoria 2016

|  |  |
| --- | --- |
| PSANZ PDC | 2016 |
|  | % |
| Congenital abnormality | 34.7 |
| Infection | 8.5 |
| Hypertension | 2.8 |
| Antepartum haemorrhage | 7.0 |
| Maternal conditions | 2.3 |
| Specific perinatal conditions | 10.3 |
| Hypoxic peripartum death | 3.8 |
| Fetal growth restriction (FGR) | 0.9 |
| Spontaneous preterm | 25.8 |
| No obstetric antecedent | 3.8 |
| Total | 100.0 |

## Table 6.23: Neonatal deaths by PSANZ NDC and gestational age, Victoria 2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cause of death PSANZ NDC | 20–27 weeks | | 28–31 weeks | | 32–36 weeks | | 37+ weeks | | Total | |
| n | *%* | n | *%* | n | *%* | n | *%* | n | *%* |
| 1. Congenital abnormalitya | 34 | *25.4* | 4 | *36.4* | 16 | *69.6* | 20 | *44.4* | 74 | *34.7* |
| 2. Extreme prematurity | 78 | *58.2* | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* | 78 | *36.6* |
| 3. Cardio-respiratory disease | 11 | *8.2* | 1 | *9.1* | 1 | *4.3* | 0 | *0.0* | 13 | *6.1* |
| 4. Infection | 3 | *2.2* | 2 | *18.2* | 1 | *4.3* | 5 | *11.1* | 11 | *5.2* |
| 5. Neurological | 7 | *5.2* | 3 | *27.3* | 5 | *21.7* | 13 | *28.9* | 28 | *13.1* |
| 6. Gastrointestinal | 1 | *0.7* | 1 | *9.1* | 0 | *0.0* | 0 | *0.0* | 2 | *0.9* |
| 7. Other | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* | 7 | *15.6* | 7 | *3.3* |
| Total | 134 | *100.0* | 11 | *100.0* | 23 | *100.0* | 45 | *100.0* | 213 | *100.0* |
|  |  |  |  |  |  |  |  |  | (Ui) |  |

a Congenital abnormality includes termination of pregnancy ≥20 weeks (33 neonates).

The letter in parentheses under the total refers to the total in Appendix 3.

## Figure 6.13: Causes of neonatal death, PSANZ NDC, Victoria 2016

|  |  |
| --- | --- |
| PSANZ NDC | % |
| Congenital abnormality | 34.7 |
| Extreme prematurity | 36.6 |
| Cardio-respiratory disease | 6.1 |
| Infection | 5.2 |
| Neurological | 13.1 |
| Gastrointestinal | 0.9 |
| Other | 3.3 |
| Total | 100.0 |

## Table 6.24: Neonatal deaths by PSANZ NDC, expanded categories and gestational age, Victoria 2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PSANZ NDC | Gestational age | | | |  | |
| 20–27 weeks | 28–31 weeks | 32–36 weeks | 37+ weeks | Total | |
| n | n | n |  | n | *%* |
| 1. Congenital abnormalitya | 34 | 4 | 16 | 20 | 74 | *34.7* |
| 1.1 Central nervous system | 11 | 1 | 0 | 1 | 13 | *6.1* |
| 1.2 Cardiovascular system | 9 | 1 | 4 | 4 | 18 | *8.5* |
| 1.3 Urinary Tract | 2 | 1 | 4 | 0 | 7 | *3.3* |
| 1.4 Gastrointestinal system | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 1.5 Chromosomal | 6 | 0 | 3 | 4 | 13 | *6.1* |
| 1.6 Metabolic | 0 | 0 | 0 | 3 | 3 | *1.4* |
| 1.7 Multiple | 1 | 1 | 3 | 4 | 9 | *4.2* |
| 1.8 Other congenital abnormality | 0 | 0 | 1 | 0 | 1 | *0.5* |
| 1.81 Musculoskeletal | 2 | 0 | 0 | 0 | 2 | *0.9* |
| 1.82 Respiratory | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 1.83 Diaphragmatic hernia | 1 | 0 | 1 | 3 | 5 | *2.3* |
| 1.85 Tumours | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 2. Extreme prematurity | 78 | 0 | 0 | 0 | 78 | *36.6* |
| 2.1 Not resuscitated | 73 | 0 | 0 | 0 | 73 | *34.3* |
| 2.2 Unsuccessful resuscitation | 5 | 0 | 0 | 0 | 5 | *2.3* |
| 3. Cardio-respiratory disease | 11 | 1 | 1 | 0 | 13 | *6.1* |
| 3.1 Hyaline membrane disease / Respiratory Distress Syndrome | 10 | 1 | 1 | 0 | 12 | *5.6* |
| 3.6 Pulmonary haemorrhage | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 4. Infection | 3 | 2 | 1 | 5 | 11 | *5.2* |
| 4.1 Bacterial |  |  |  |  |  |  |
| 4.11 Congenital bacterial |  |  |  |  |  |  |
| 4.111 Group B Streptococcus | 0 | 0 | 0 | 2 | 2 | *0.9* |
| 4.112 Bacterial - E coli | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 4.113 Listeria monocytogenes | 0 | 1 | 0 | 0 | 1 | *0.5* |
| 4.119 Unspecified bacterial | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 4.12 Acquired bacterial |  |  |  |  |  |  |
| 4.121 Acquired bacterial - Group B Streptococcus | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 4.2 Viral |  |  |  |  |  |  |
| 4.21 Congenital viral |  |  |  |  |  |  |
| 4.211 Cytomegalovirus | 1 | 0 | 0 | 0 | 1 | *0.5* |
| 4.213 Herpes Simplex Virus | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 4.22 Acquired viral |  |  |  |  |  |  |
| 4.228 Other specified viral | 0 | 1 | 0 | 1 | 2 | *0.9* |
| 4.5 Fungal | 0 | 0 | 1 | 0 | 1 | *0.5* |
| 5. Neurological | 7 | 3 | 5 | 13 | 28 | *13.1* |
| 5.1 Hypoxic ischaemic encephalopathy / perinatal asphyxia | 4 | 3 | 5 | 11 | 23 | *10.8* |
| 5.2 Intracranial haemorrhage |  |  |  |  |  |  |
| 5.21 Intraventricular haemorrhage | 3 | 0 | 0 | 0 | 3 | *1.4* |
| 5.28 Other intracranial haemorrhage | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 5.8 Other | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 6. Gastrointestinal | 1 | 1 | 0 | 0 | 2 | *0.9* |
| 6.1 Necrotising enterocolitis | 1 | 1 | 0 | 0 | 2 | *0.9* |
| 7. Other | 0 | 0 | 0 | 7 | 7 | *3.3* |
| 7.3 Trauma |  |  |  |  |  |  |
| 7.31 Accidental trauma | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 7.9 Unknown / Undetermined | 0 | 0 | 0 | 1 | 1 | *0.5* |
| 7.92 Other - Unknown/Undetermined | 0 | 0 | 0 | 5 | 5 | *2.3* |
| Total | 134 | 11 | 23 | 45 | 213 | *100.0* |
|  |  |  |  |  | (Ui) |  |

a Congenital abnormality includes termination of pregnancy ≥20 weeks (33 neonates).

The letter in parentheses under the total refers to the total in Appendix 3.

## Table 6.25: Maternal and infant characteristics relating to type of perinatal death, Victoria 2007 – 2016

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Perinatal deaths not relating to termination of pregnancy for CA or MPI | | | | | | | | | |
| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 (Viii) |
| n=(568) | n=(569) | n=(583) | n= 607 | (n= 550) | (n=539) | (n=595) | (n=584) | (n=513) | (n=529) |
| % | % | % | % | % | % | % | % | % | % |
| Maternal age |  |  |  |  |  |  |  |  |  |  |
| <20 years | 5.8 | 4.9 | 6.1 | 5.1 | 5.6 | 2.8 | 6.6 | 4.3 | 3.3 | 2.8 |
| 20-24 years | 13.3 | 14.4 | 13.8 | 13.3 | 12.2 | 12.4 | 12.3 | 11.0 | 13.1 | 11.0 |
| 25-29 years | 25.3 | 25.8 | 24.2 | 25.7 | 25.3 | 24.5 | 25.5 | 23.6 | 25.7 | 26.3 |
| 30-34 years | 28.3 | 14.4 | 24.1 | 28.3 | 28.9 | 32.1 | 26.9 | 33.7 | 31.4 | 34.2 |
| 35-39 years | 21.9 | 25.8 | 23.9 | 19.8 | 22.2 | 20.8 | 22.4 | 20.9 | 21.8 | 17.6 |
| ≥40 years | 5.3 | 6.7 | 7.9 | 7.1 | 5.5 | 7.4 | 6.4 | 5.5 | 4.1 | 8.1 |
| Unknown | 0.0 | 7.9 | 0.0 | 0.7 | 0.4 | 0.0 | 0.0 | 1 | 1.0 | 0.0 |
| Place of residence |  |  |  |  |  |  |  |  |  |  |
| Victoria | 97.5 | 97.7 | 95.3 | 98.2 | 96.5 | 96.7 | 96.1 | 96.4 | 97.1 | 98.1 |
| Interstate | 2.1 | 2.1 | 4.7 | 1.8 | 3.5 | 3.2 | 3.9 | 3.6 | 2.5 | 1.9 |
| Overseas | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 |
| Unknown | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gestation |  |  |  |  |  |  |  |  |  |  |
| 20-22 weeks | 26.2 | 27.2 | 23.6 | 26.5 | 24.4 | 28.2 | 26.4 | 28.9 | 31.4 | 30.6 |
| 23-27 weeks | 23.7 | 22.5 | 25.3 | 23.9 | 27.8 | 22.1 | 28.4 | 21.6 | 21.6 | 23.4 |
| ≥28 weeks | 50.1 | 50.1 | 50.9 | 49.6 | 47.8 | 49.7 | 45.2 | 49.5 | 49.5 | 45.9 |
| Unknown | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Infant sex |  |  |  |  |  |  |  |  |  |  |
| Male | 49.2 | 53.1 | 54.4 | 51.7 | 58.5 | 47.1 | 51.8 | 46.9 | 52.2 | 53.9 |
| Female | 49.0 | 45.7 | 43.2 | 46.0 | 39.1 | 50.3 | 46.9 | 50.5 | 45.8 | 45.6 |
| Indeterminate | 0.0 | 0.0 | 1.9 | 2.3 | 2.2 | 2.6 | 1.3 | 2.1 | 1.9 | 0.6 |
| Unknown | 1.8 | 1.2 | 0.5 | 0.0 | 0.2 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |

The letters in parentheses next to 2016 refer to the totals in Appendix 3

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Termination of pregnancy for suspected or confirmed congenital anomaly | | | | | | | | | |
| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 (Rii) |
| (n=181) | (n=150) | (n=196) | n=175 | (n= 195) | (n=198) | (n=179) | (n=172) | (n=202) | (n=185) |
| % | % | % | % | % | % | % | % | % | % |
| Maternal age |  |  |  |  |  |  |  |  |  |  |
| <20 years | 2.2 | 2.0 | 2.0 | 2.3 | 2.6 | 2.0 | 0.6 | 0.6 | 1.0 | 1.6 |
| 20-24 years | 12.7 | 13.3 | 7.6 | 12.0 | 8.2 | 9.1 | 5.6 | 9.3 | 7.4 | 8.1 |
| 25-29 years | 25.4 | 32.0 | 21.9 | 26.9 | 27.7 | 26.8 | 22.9 | 23.8 | 23.8 | 22.7 |
| 30-34 years | 26.0 | 26.0 | 42.3 | 31.4 | 30.3 | 33.3 | 37.4 | 36.6 | 39.6 | 36.2 |
| 35-39 years | 28.7 | 21.3 | 23.5 | 21.7 | 25.6 | 20.7 | 24.6 | 19.8 | 24.3 | 22.2 |
| ≥40 years | 5.0 | 5.3 | 2.0 | 5.1 | 5.6 | 8.1 | 8.9 | 9.3 | 4.0 | 9.2 |
| Unknown | 0.0 | 0.0 | 0.5 | 0.6 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| Place of residence |  |  |  |  |  |  |  |  |  |  |
| Victoria | 94.5 | 95.3 | 87.8 | 92.0 | 90.8 | 96.0 | 98.3 | 99.4 | 95.5 | 98.9 |
| Interstate | 4.4 | 3.3 | 12.2 | 8.0 | 9.2 | 4.0 | 1.7 | 0.6 | 4.0 | 1.1 |
| Overseas | 0.6 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 |
| Unknown | 0.6 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gestation |  |  |  |  |  |  |  |  |  |  |
| 20-22 weeks | 76.2 | 67.3 | 61.7 | 54.3 | 63.6 | 56.1 | 61.5 | 54.6 | 61.9 | 54.6 |
| 23-27 weeks | 21.0 | 27.3 | 25.5 | 30.3 | 26.2 | 31.8 | 31.3 | 32.4 | 31.2 | 32.4 |
| ≥28 weeks | 2.2 | 5.3 | 3.9 | 15.4 | 10.3 | 12.1 | 7.3 | 24.0 | 6.9 | 13.0 |
| Unknown | 0.6 | 0.0 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Infant sex |  |  |  |  |  |  |  |  |  |  |
| Male | 51.0 | 52.0 | 49.5 | 54.3 | 55.9 | 52.0 | 56.4 | 48.8 | 52.0 | 57.3 |
| Female | 46.0 | 47.0 | 46.3 | 43.4 | 41.5 | 46.5 | 41.3 | 45.9 | 46.5 | 42.7 |
| Indeterminate | 2.0 | 1.0 | 1.0 | 2.3 | 2.6 | 1.0 | 2.3 | 4.7 | 1.5 | 0.0 |
| Unknown | 1.0 | 0.0 | 3.2 | 0.0 | 0.0 | 0.5 | 0.0 | 0.6 | 0.0 | 0.0 |

The letters in parentheses next to 2016 refer to the totals in Appendix 3.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Termination of pregnancy for Maternal psychosocial indication | | | | | | | | | |
| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 (Ri) |
| (n=164) | (n=178) | (n=214) | (n=191) | (n= 183) | (n=132) | (n=179) | (n=147) | (n=107) | (n=125) |
| % | % | % | % | % | % | % | % | % | % |
| Maternal age |  |  |  |  |  |  |  |  |  |  |
| <20 years | 38.4 | 36.5 | 26.6 | 28.8 | 31.7 | 25.8 | 21.8 | 18.4 | 16.8 | 27.2 |
| 20-24 years | 29.3 | 30.9 | 32.7 | 31.4 | 25.7 | 28.0 | 31.8 | 32.7 | 41.1 | 28.0 |
| 25-29 years | 15.2 | 12.4 | 19.6 | 19.4 | 21.9 | 17.4 | 14.5 | 19.7 | 15.0 | 21.6 |
| 30-34 years | 5.5 | 9.0 | 9.3 | 11.0 | 12.0 | 13.6 | 16.2 | 15.0 | 15.0 | 11.2 |
| 35-39 years | 6.1 | 4.5 | 7.5 | 6.3 | 4.4 | 8.3 | 11.7 | 8.2 | 8.4 | 9.6 |
| ≥40 years | 2.4 | 3.4 | 4.2 | 2.1 | 4.3 | 6.0 | 2.8 | 6.1 | 3.7 | 2.4 |
| Unknown | 3.0 | 3.4 | 0.0 | 1.0 | 0.0 | 0.8 | 1.1 | 0.0 | 0.0 | 0.0 |
| Place of residence |  |  |  |  |  |  |  |  |  |  |
| Victoria | 35.4 | 37.1 | 46.3 | 48.7 | 45.9 | 48.5 | 43.6 | 46.3 | 60.7 | 54.4 |
| Interstate | 51.8 | 49.4 | 53.7 | 48.2 | 45.9 | 50.0 | 49.2 | 46.3 | 36.4 | 37.6 |
| Overseas | 10.4 | 11.2 | 0.0 | 3.1 | 8.2 | 1.5 | 7.3 | 7.5 | 2.8 | 8.0 |
| Unknown | 2.4 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gestation |  |  |  |  |  |  |  |  |  |  |
| 20-22 weeks | 48.8 | 48.3 | 51.4 | 51.8 | 51.9 | 59.8 | 72.6 | 59.9 | 72.9 | 71.2 |
| 23-27 weeks | 49.4 | 48.9 | 43.5 | 44.5 | 42.1 | 40.2 | 27.4 | 39.5 | 27.1 | 28.0 |
| ≥28 weeks | 1.2 | 1.1 | 5.1 | 3.7 | 6.0 | 0.0 | 0.0 | 0.7 | 0.0 | 0.8 |
| Unknown | 0.6 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Infant sex |  |  |  |  |  |  |  |  |  |  |
| Male | 43.0 | 53.0 | 45.6 | 43.5 | 41.0 | 31.8 | 33.5 | 43.5 | 40.2 | 44.0 |
| Female | 51.0 | 38.0 | 41.9 | 43.5 | 44.8 | 34.8 | 36.3 | 35.4 | 44.9 | 40.8 |
| Indeterminate | 0.0 | 0.0 | 1.4 | 8.4 | 10.9 | 28.8 | 28.5 | 21.1 | 15.0 | 12.8 |
| Unknown | 6.0 | 9.0 | 11.2 | 4.7 | 3.3 | 4.5 | 1.7 | 0.0 | 0.0 | 2.4 |

The letters in parentheses next to 2016 refer to the totals in Appendix 3.

## Table 6.26: Time of fetal death in stillbirths by gestational age, Victoria 2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Gestation (weeks) | Prior to labour | | During labour | | Total | |
|  | n | *%* | n | *%* | n | *%* |
| 20–21 | 48 | *17.0* | 32 | *47.8* | 80 | *22.9* |
| 22–23 | 24 | *8.5* | 17 | *25.4* | 41 | *11.7* |
| 24–25 | 20 | *7.1* | 5 | *7.5* | 25 | *7.2* |
| 26–27 | 35 | *12.4* | 3 | *4.5* | 38 | *10.9* |
| 28–31 | 35 | *12.4* | 1 | *1.5* | 36 | *10.3* |
| 32–36 | 54 | *19.1* | 4 | *6.0* | 58 | *16.6* |
| 37+ | 66 | *23.4* | 5 | *7.5* | 71 | *20.3* |
| Total | 282 | *100.0* | 67 | *100.0* | 349 | *100.0* |
|  |  |  |  |  | (I) |  |

Terminations of pregnancy for suspected or confirmed congenital abnormality and maternal psychosocial indications have been excluded from this table. (125 for maternal psychosocial indications and 152 for congenital anomaly).

Time of fetal death data is provided by the VPDC. This is a compulsory field on the birth form so there are no missing or unknown cases.

The letter in parentheses under the total refers to the total in Appendix 3.

## Table 6.27a: Age at time of death of neonates, Victoria 2016

|  |  |  |  |
| --- | --- | --- | --- |
| Gestation (weeks) | Early neonatal death 0-6 days | Late neonatal death 7-27 days | Total |
| 20-21 | 34 | 0 | 34 |
| 22-23 | 42 | 4 | 46 |
| 24-25 | 12 | 3 | 15 |
| 26-27 | 6 | 1 | 7 |
| 28-31 | 8 | 3 | 11 |
| 32-36 | 16 | 6 | 22 |
| 37+ | 30 | 15 | 45 |
| Total | 148 | 32 | 180 |
| *% of Total* | *82.2* | *17.8* | *100.0* |

Neonatal deaths that were a result of termination of pregnancy for maternal psychosocial indications or suspected or confirmed congenital abnormality are excluded from this table.

The total corresponds to (M) in Appendix 3

|  |  |  |  |
| --- | --- | --- | --- |
| Table 7.27b: Age at time of death of neonates (detailed), Victoria 2016 | | | |
| Gestation (weeks) | Early neonatal death (0-6 days) | Late neonatal death (7-27 days) | Total |
| 20 | 15 | 0 | 15 |
| 21 | 19 | 0 | 19 |
| 22 | 22 | 0 | 22 |
| 23 | 20 | 4 | 24 |
| 24 | 9 | 2 | 11 |
| 25 | 3 | 1 | 4 |
| 26 | 5 | 0 | 5 |
| 27 | 1 | 1 | 2 |
| 28 | 2 | 2 | 4 |
| 29 | 3 | 0 | 3 |
| 30 | 2 | 0 | 2 |
| 31 | 1 | 1 | 2 |
| 32 | 2 | 3 | 5 |
| 33 | 1 | 0 | 1 |
| 34 | 5 | 2 | 7 |
| 35 | 4 | 0 | 4 |
| 36 | 4 | 1 | 5 |
| 37 | 6 | 2 | 8 |
| 38 | 7 | 4 | 11 |
| 39 | 9 | 2 | 11 |
| 40 | 5 | 6 | 11 |
| 41 | 3 | 1 | 4 |
| Total | 148 | 32 | 180 |
| *% of Total* | *82.2* | *17.8* | *100.0* |

Neonatal deaths that were a result of termination of pregnancy for maternal psychosocial indications or suspected or confirmed congenital abnormality are excluded from this table.

The total corresponds to (M) in Appendix 3

## Table 6.28: Adjusteda perinatal autopsy rates, Victoria 2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Type | Stillbirths | | Neonatal deaths | | Perinatal deaths | |
| n | % | n | % | n | % |
| Full | 167 | *33.3* | 47 | *22.1* | 214 | *30.0* |
| Partial | 9 | *1.8* | 7 | *3.3* | 16 | *2.2* |
| External | 35 | *7.0* | 10 | *4.7* | 45 | *6.3* |
| Other | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| Unknown | 38 | *7.6* | 5 | *2.3* | 43 | *6.0* |
| None | 252 | *50.3* | 144 | *67.6* | 396 | *55.5* |
| Total | 501 | *100.0* | 213 | *100.0* | 714 | *100.0* |
|  | (H) |  | (D) |  | (Vii) |  |

a Perinatal deaths as a result of terminations of pregnancy for maternal psychosocial indications have been excluded (125 stillbirths).

Notes:

A partial autopsy is one where a limited internal examination takes place.

An external autopsy is one where an external examination only takes place.

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.29: Adjusteda perinatal autopsy rates, Victoria 2000-2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Stillbirth | 56.6 | 45.9 | 44.2 | 43.8 | 42.9 | 42.2 | 41.6 | 45.7 | 40.5 | 36.9 | 37.9 | 47.5 | 44.8 | 43.8 | 42.9 | 43.2 | 35.1 |
| Neonatal | 36.8 | 30.4 | 34.8 | 33.3 | 32.4 | 26.1 | 30.8 | 31.0 | 34.4 | 20.3 | 24.7 | 29.6 | 29.5 | 28.9 | 28.3 | 39.2 | 25.4 |
| Perinatal | 50.5 | 40.6 | 40.7 | 40.0 | 39.4 | 36.4 | 37.9 | 40.9 | 38.7 | 32.1 | 33.9 | 42.2 | 40.4 | 39.0 | 38.5 | 42.1 | 32.2 |

Note: the percentages in this figure represent the sum of the full and partial autopsies for each death type only.

Data presented in Figure 6.14

a Perinatal deaths as a result of terminations of pregnancy for maternal psychosocial indications have been excluded from these calculations.

## Figure 6.14: Adjusteda perinatal autopsy rates, Victoria 2000-2016

a Perinatal deaths as a result of terminations of pregnancy for maternal psychosocial indications have been excluded from these calculations.

Data taken from Table 6.29

## Table 6.30: Adjusteda placental pathology by type of perinatal death, Victoria 2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Placental pathology available | Stillbirths | *%* | Neonatal Deaths | *%* | Total | *%* |
| Yes | 391 | *78.0* | 157 | *73.7* | **548** | ***76.8*** |
| No | 52 | *10.4* | 36 | *16.9* | **88** | ***12.3*** |
| Missing/Unknown | 58 | *11.6* | 20 | *9.4* | **78** | ***10.9*** |
| Total | 501 | *100.0* | 213 | *100.0* | 714 | *100.0* |
|  | (H) |  | (D) |  | (Vii) |  |

a Perinatal deaths as a result of terminations of pregnancy for maternal psychosocial indications have

been excluded (N=125 stillbirths).

The letters in parentheses under the totals refer to the totals in Appendix 3.

## Table 6.31: Contributing factors in adjusteda perinatal deaths (birth weight ≥500 g), Victoria 2014-2016

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Suspected Contributing factor | Count of contributing factor identified | | | |  |  |
|  | Stillbirths | % of stillbirth factors identified | Neonatal deaths | % of neonatal death factors identified | Total perinatal deaths | % of Total |
| Obstetric factors |  |  |  |  |  |  |
| Antenatal care: | 59 | *28.4* | 9 | *9.2* | 68 | *22.2* |
| Delay or lack of consultation in high-risk pregnancy | 12 | *5.8* | 1 | *1.0* | 13 | *4.2* |
| Inadequate care of diabetic mother | 17 | *8.2* | 0 | *0.0* | 17 | *5.6* |
| Insufficient antenatal care | 30 | *14.4* | 8 | *8.2* | 38 | *12.4* |
| Cervical incompetence | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| No clinical evidence apparent | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  |  |  |
| Inadequate management of: | 18 | *8.7* | 4 | *4.1* | 22 | *7.2* |
| Hypertension/PET/eclampsia | 2 | *1.0* | 0 | *0.0* | 2 | *0.7* |
| Multiple pregnancy | 1 | *0.5* | 1 | *1.0* | 2 | *0.7* |
| Antepartum haemorrhage | 0 | *0.0* | 1 | *1.0* | 1 | *0.3* |
| Growth-restricted fetus | 13 | *6.3* | 1 | *1.0* | 14 | *4.6* |
| Macrosomia | 1 | *0.5* | 0 | *0.0* | 1 | *0.3* |
| Inadequate management of Rh immunised mother | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| Prolonged pregnancy | 1 | *0.5* | 0 | *0.0* | 1 | *0.3* |
| Premature rupture of membranes | 0 | *0.0* | 1 | *1.0* | 1 | *0.3* |
| Cervical incompetence | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  |  |  |
| Inadequate antenatal monitoring: | 14 | *6.7* | 5 | *5.1* | 19 | *6.2* |
| Clinical need for test apparent | 6 | *2.9* | 1 | *1.0* | 7 | *2.3* |
| No clinical evidence apparent | 0 | *0.0* | 1 | *1.0* | 1 | *0.3* |
| Misinterpretation of or undue reliance on tests | 8 | *3.8* | 3 | *3.1* | 11 | *3.6* |
|  |  |  |  |  |  |  |
| Failure of transfer of patient | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| PRM <34 weeks | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| PET <34 weeks | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  | 0 |  |
| Factors relating to the pregnant woman, her family and her social situation | 89 | 42.8 | 17 | 17.3 | 106 | 34.6 |
| Inappropriate maternal drugs | 11 | *5.3* | 5 | *5.1* | 16 | *5.2* |
| Failure/delay in reporting decreased movements | 33 | *15.9* | 1 | *1.0* | 34 | *11.1* |
| Family neglect or ignorance | 37 | *17.8* | 9 | *9.2* | 46 | *15.0* |
| Maternal smoking | 8 | *3.8* | 2 | *2.0* | 10 | *3.3* |
|  |  |  |  |  |  |  |
| Intrapartum care: | 21 | 10.1 | 29 | 29.6 | 50 | 16.3 |
| Caesarean section too late | 3 | *1.4* | 5 | *5.1* | 8 | *2.6* |
| Failure to perform caesarean section | 0 | *0.0* | 1 | *1.0* | 1 | *0.3* |
| Failure to expedite delivery | 9 | *4.3* | 12 | *12.2* | 21 | *6.9* |
| Inadequate intrapartum monitoring | 6 | *2.9* | 10 | *10.2* | 16 | *5.2* |
| Surgical induction too late | 3 | *1.4* | 0 | *0.0* | 3 | *1.0* |
| Unsuitable hospital for delivery | 0 | *0.0* | 1 | *1.0* | 1 | *0.3* |
| Forceps delivery | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  |  |  |
| Inadequate intrapartum management of: | 4 | 1.9 | 5 | 5.1 | 9 | 2.9 |
| Sepsis | 1 | *0.5* | 0 | *0.0* | 1 | *0.3* |
| Breech/other malpresentation | 1 | *0.5* | 0 | *0.0* | 1 | *0.3* |
| Obstructed labour | 0 | *0.0* | 2 | *2.0* | 2 | *0.7* |
| Fetal distress | 1 | *0.5* | 2 | *2.0* | 3 | *1.0* |
| Preterm delivery | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| Prolonged labour | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
| Forceps Delivery | 1 | *0.5* | 1 | *1.0* | 2 | *0.7* |
| Haemorrhage | 0 | *0.0* | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  |  |  |
| Other maternal factor (includes poor compliance) | 3 | *1.4* | 1 | *1.0* | 4 | *1.3* |
|  |  |  |  |  |  |  |
| Paediatric factorsb: |  |  |  |  |  |  |
| Delay in recognition/treatment: |  |  | 18 | *18.4* | 18 | *5.9* |
| Delay or lack of consultation |  |  | 6 | *6.1* | 6 | *2.0* |
| Delay/difficulties/failure to transfer infant |  |  | 4 | *4.1* | 4 | *1.3* |
| Family neglect or ignorance |  |  | 3 | *3.1* | 3 | *1.0* |
| Of malformation |  |  | 1 | *1.0* | 1 | *0.3* |
| Of haemorrhage |  |  | 1 | *1.0* | 1 | *0.3* |
| Of sepsis |  |  | 3 | *3.1* | 3 | *1.0* |
|  |  |  |  |  |  |  |
| Inadequate: |  |  | 10 | *10.2* | 10 | *3.3* |
| Paediatric management |  |  | 4 | *4.1* | 4 | *1.3* |
| Resuscitation |  |  | 6 | *6.1* | 6 | *2.0* |
| Nursery care |  |  | 0 | *0.0* | 0 | *0.0* |
|  |  |  |  |  |  |  |
| Total number of preventable factors identified | 208 | *100.0* | 98 | *100.0* | 306 | *100.0* |
| Total number of cases | 123 |  | 43 |  | 166 |  |

a Perinatal deaths from termination of pregnancy for congenital anomaly or maternal psychosocial indications are excluded from this table.

b There are no paediatric factors in stillbirths.

## Figure 6.15: Major contributing factors in stillbirths, (birth weight ≥500 g), Victoria 2014-2016

|  |  |  |
| --- | --- | --- |
|  | Number | Per cent of all avoidable factors in Stillbirths |
| Family neglect or ignorance | 37 | 17.8 |
| Failure/delay in reporting decreased movements | 33 | 15.9 |
| Insufficient antenatal care | 30 | *14.4* |
| Inadequate care of diabetic mother | 17 | 8.2 |
| Growth-restricted fetus | 13 | *6.3* |
| Delay or lack of consultation in high-risk pregnancy | 12 | 5.8 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Figure 6.16: Major contributing factors in neonatal deaths, (birth weight ≥500 g), Victoria 2014-2016  |  |  |  | | --- | --- | --- | |  | Number | Per cent of all avoidable factors in Neonatal deaths | | Failure to expedite delivery | 12 | *12.2* | | Inadequate intrapartum monitoring | 10 | *10.2* | | Family neglect or ignorance (obstetric) | 9 | *9.2* | | Insufficient antenatal care | 8 | *8.2* | | Delay or lack of consultation (paediatric) | 6 | *6.1* | | Inadequate resuscitation | 6 | *6.1* | |  |  |

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