

**Perinatal and Maternal Mortality Review Committee (PMMRC) 12th Annual Report
June 2018
Frequently asked questions**

What is New Zealand's perinatal death rate?

In 2016, there were 609 deaths of babies aged from 20 weeks gestation to less than 28 days old (or weighing at least 400 g if gestation was unknown). The perinatal related mortality rate in 2016 was 10.1 per 1,000 births.

While there has been no statistically significant reduction in perinatal related mortality from 20 weeks gestation since 2007, there has been a significant reduction in the stillbirth rate, and in perinatal related mortality using the international definition from 28 weeks gestation.

What are the main causes of perinatal death in New Zealand?

In 2016, the main cause of perinatal death in New Zealand was congenital abnormality, which accounted for 28.5 percent of deaths. The second most common cause was unexplained antepartum death (babies dying before birth without a known cause), which accounted for 14.8 percent of deaths. The next most common known causes are antepartum haemorrhage and spontaneous preterm birth at 11.8 percent each.

What is New Zealand's neonatal death rate?

The neonatal death rate was 2.6 per 1,000 live births in 2007 and 2.5 per 1,000 live births in 2016.

What are the main causes of neonatal death in New Zealand?

In 2016, the most common cause of neonatal death was spontaneous preterm birth, which accounted for 25.8 percent of deaths. The second most common cause was congenital abnormality, which accounted for 21.9 percent of deaths.

The most common cause of neonatal death for babies born at 20–24 weeks' gestation from 2007 to 2016 was extreme prematurity, responsible for almost 600 deaths.

Between 2007 and 2016, 68 babies died before 28 days of age from sudden unexpected death in infancy (SUDI).

Why is neonatal death the focus of this report?

Neonatal mortality has not reduced in New Zealand in the last 10 years. Meanwhile, other countries we compare our outcomes to, such as the UK, Australia and countries in Scandinavia, have reported reductions in neonatal deaths.

Are any groups more at risk of losing their babies shortly after birth?

The following factors were all associated with an increased risk of neonatal death:

- age – women under 20 years of age are more at risk
- a body mass index (BMI) of 35 and above
- multiple pregnancy
- smoking
- mothers having their first baby compared with mothers having their second baby
- socioeconomic deprivation.

There is a higher risk of death after birth at 20–24 weeks' gestation among babies born to Māori, Pacific and Indian mothers, even after accounting for factors above. More babies of Māori, Pacific and Indian mothers are born extremely preterm and so these ethnic groups are disproportionately affected by suboptimal care for mothers and babies at this stage of gestation.

Mothers who have a preterm birth are also at higher risk of preterm birth in future pregnancies.

How many deaths were potentially avoidable?

In 2016, 92 (15.1 percent) perinatal related deaths were determined to be potentially avoidable. This means that if at least one of the factors identified as contributing to the death had been absent, the death may not have occurred.

Among neonatal deaths born without congenital anomalies from 2009 to 2016, 90 deaths (15 percent) of babies born from 20 to 24 weeks, 50 deaths (23.5 percent) of babies born from 25 to 34 weeks and 142 deaths (58.7 percent) of babies born from 35 weeks were determined to be potentially avoidable.

What can women do to reduce the likelihood of their baby dying during pregnancy or shortly after birth?

There are a number of things women can do before they get pregnant, to give them and their baby the best chance of a healthy pregnancy and birth.

Talking to a doctor about pre-existing medical conditions, quitting smoking, not drinking alcohol, eating healthy food, exercising regularly, and taking folic acid and iodine are all proven methods to keep both mother and baby healthy.

If you are already pregnant, find a lead maternity carer (LMC), usually a midwife, as soon as you can, and have regular check-ups.

Mothers who have a preterm birth are at higher risk of preterm birth in future pregnancies. Treatment options to prevent preterm birth are best if they start early in pregnancy, so ask your midwife or doctor what you can do to prevent preterm birth.

Pregnant women should call their midwife, doctor or local hospital if they experience signs and symptoms of preterm labour so they can receive care and transfer to a tertiary hospital (a hospital with a neonatal intensive care unit) if required.

Babies should sleep in their own bassinet, wahakura or Pēpi Pod, on their back, with no pillow to reduce the risk of SUDI. Parents should ask their lead maternity carer for a safe sleep bed if they do not have one for their newborn baby.

What's behind the reduction in the birth rate for small for gestational age (SGA) babies since 2008 and the death rate in this group?

It is not clear why the total number of SGA babies has reduced since 2008 (from 10.8 percent to 10.4 percent). However, the reduction of deaths among SGA babies is important. This is likely to be due to emphasis on the diagnosis of SGA, using specific charts to plot baby growth in pregnancy, and to new guidelines for management of pregnancy when a baby is not growing well. In some cases, this will mean delivering the baby before a death in pregnancy might have occurred.

How many babies had neonatal encephalopathy?

In 2016, there were 56 cases of neonatal encephalopathy (NE) in babies born from 37 weeks gestation reported to the PMMRC, or 1 per 1,000 births.

In 2010, the rate was 1.4 per 1,000 births from 37 weeks gestation; this reduction is not statistically significant.

How many maternal deaths were there?

In 2016, there were two maternal deaths. A maternal death is the death of a woman while pregnant or within 42 days of the end of pregnancy.

There has been a statistically significant reduction in maternal mortality in New Zealand from 2006 to 2016. The maternal mortality ratio for the three years from 2014 to 2016 was 9.4 per 100,000 births at 20 weeks or beyond. This is the lowest ratio for a three-year period since the PMMRC began reviewing maternal deaths in 2006. In the first three-year period, from 2006 to 2009, the maternal mortality ratio was 18.2 per 100,000 births.

How many maternal suicides were there, and what is being done to prevent these?

Suicide is the leading single cause of maternal death in New Zealand. Twenty-eight women died by suicide in the 11 years from 2006 to 2016; 26 percent of all maternal deaths during this time.

Māori women are over-represented among maternal suicides. Between 2006 and 2016, 16 of the 28 women who died by suicide in pregnancy or within six weeks of pregnancy (57 percent) were Māori.

The PMMRC recommends that the Ministry of Health funds a maternal and infant mental health network to review current mental health services available across New Zealand for pregnant and recently pregnant women, and establish a national pathway for accessing culturally appropriate maternal mental health services.

The PMMRC 12th report includes guidance for clinicians caring for women; such as a practice point on psychosocial health and maternal suicide, and an example of a maternal mental health birth plan.

What's behind the reduction in stillbirths?

There has been a significant reduction in stillbirths at 37–40 weeks, in part due to fewer babies dying from lack of oxygen around the time of birth and fewer babies dying from growth restriction.

A number of initiatives to improve pregnancy care and/or to reduce perinatal death may be responsible for these reductions. Some changes in demography and the distribution of risk factors may also have had a small effect.

Possible explanations for the observed reduction in perinatal mortality include:

- reduced births among teenage women
- reduced rates of smoking among pregnant women
- reduced births at 40 weeks and beyond (presumably associated with increased rates of iatrogenic birth by induction or elective caesarean for at-risk pregnancies)
- structured review and reporting of perinatal deaths at all New Zealand DHBs
- increased education around the risks of SGA
- introduction of the GROW tool for recognition of reduced fetal growth and the Maternal Fetal Network guideline for management of SGA from 34 weeks gestation
- the Maternity Quality and Safety Programme
- introduction of learning from the maternal sleep position studies suggesting that left-sided sleep is associated with reduced odds of late stillbirth.