

Media Release

9 December 2022

New report uses linked data analysis to better identify risk factors for early childhood mortality

A report tabled by the NSW Ombudsman today links perinatal (birth) records with the records of children who have died to better understand risk factors for early childhood mortality.

The report, titled *Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis*, was prepared by the Australian Institute of Health and Welfare (AIHW) for the NSW Child Death Review Team (CDRT), NSW Ombudsman.

Previous AIHW studies and CDRT reports on NSW child mortality had identified risk factors based on the analysis of data for children who had died. That earlier work had consistently shown that mortality risks are higher for certain children, including children from lower socioeconomic local areas and Indigenous children.

For the first time, this new study has extended the scope and depth of analysis by linking relevant death records to all perinatal (birth) records for the full cohorts of babies born between 2005-2018. This allows more detailed analysis of the risk factors by directly comparing the characteristics of children who have died with the characteristics of all other children born in the same period.

Preterm birth was found to be the strongest and most consistently significant risk factor for infant mortality (death under age 1), especially for babies born under 32 weeks gestational age. Other consistent significant risk factors for infant deaths included being born with a birthweight that is small for gestational age or being born to a teenage mother (aged 19 or under).

Significant risk factors for deaths of children between ages 1 to 4 included: having a low birthweight for gestational age; being an Indigenous baby; being a male baby; being born to a mother aged 20–25, and maternal smoking during pregnancy.

It is apparent that some of these factors – such as being Indigenous or being born to a young mother – are not inherent risk factors in themselves, but indicate that there are deeper and unobserved factors that are elevating the risk of early childhood mortality for children in those groups. Further work is required to better understand the underlying causes behind those risk factors.

The report confirms previous findings that there has been a pronounced narrowing of the gap in infant mortality between Indigenous and non-Indigenous babies across the 15-year period (2005–2019).

As well as the important findings of this report, its importance is in demonstrating for the first time in New South Wales that perinatal (birth) and death records can be reliably linked. Doing so provides a richer understanding of risk of early childhood death than can be achieved through consideration of death records alone.

The report also identifies the potential further avenues for research that can be undertaken to explore relationships between early childhood mortality and other factors not contained in the perinatal (birth) records.

An unexpected result of the research was that area-level socioeconomic status indicators (based on the usual place of residence of the mother at the time of the birth) were not found to be consistently significant risk factors, when other maternal and baby characteristics in the perinatal records were accounted for. This requires further investigation, given that previous work has shown that socioeconomic status, even when measured as an area-level average, is expected to affect health and mortality outcomes, including overall life expectancy.

The CDRT is considering the results of the study and will identify future research to gain a richer understanding of the risk factors for early childhood mortality. The CDRT's functions include pursuing research with the aim of preventing or reducing the risk of child deaths.

Download the summary [report](#) and the full [report](#) from the NSW Ombudsman website.

Media enquiries contact

NSW Ombudsman media team

0477 724 835

media@ombo.nsw.gov.au

Technical questions contact

AIHW media team

02 6244 1148

media@aihw.gov.au