

Program may have helped prevent five babies from developing cerebral palsy

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A new study from SAHMRI and the University of Adelaide has found the number of children being born with cerebral palsy (CP) each year across Australia and New Zealand could be cut by more than 20, if

hospitals improve their practices around giving women magnesium sulfate just before they have a very preterm baby.

Magnesium sulfate delivered via intravenous infusion to [women](#) giving birth at less than 30 weeks gestation is well proven to significantly reduce the risk of children being born with CP.

Associate Professor Amy Keir, who led the study to improve its use, says the healthcare system isn't always well set up to get [magnesium](#) sulfate to the women that need it.

"Administering magnesium sulfate to women giving birth very preterm is now [standard practice](#), but unfortunately, that doesn't mean it's being delivered in every case," A/Prof Keir said.

"Our research shows how costly it is when we don't get this right. We found that there are almost one million dollars in lifetime healthcare costs for every child with CP. Not to mention, the pain and discomfort for the child with CP, who will require these hospitalisations and care throughout their life."

By implementing a [quality improvement](#) (QI) program at one hospital in Adelaide, A/Prof Keir says the team was able to boost its magnesium sulfate coverage from 63% to 86% of eligible women, resulting in a projected five fewer children with CP over five years.

The program included a dedicated clinician-led QI team consisting of a neonatologist, midwife, and neonatal nurse trained in QI methodology. The team addressed the barriers to magnesium sulfate administration with changes such as making magnesium sulfate available in multiple locations throughout the hospital instead of just one area.

"Even though clinicians know what needs to be done when it comes to

dispensing these drugs, the process is often complicated, and in the rush of a stressful potential premature birth in the hospital environment, it can result in some women not receiving what they need, when they need it," A/Prof Keir said.

There are many other hospitals where babies are born very preterm throughout Australia and New Zealand and A/Prof Keir says she's confident each unit could achieve a similar increase in efficiency through implementing a QI program.

But these programs cost time and money and need to be prioritized.

A/Prof Keir says funding for undertaking such improvement work and sustaining its impact, is not always readily available.

"If other units across Australia and New Zealand were supported to do similar work, they too would be able to prevent a significant number of children developing CP," A/Prof Keir said.

It's hoped the study results will highlight the importance of appropriately resourcing the implementation of evidence-based practice guidelines into prenatal care.

More information: Amy Keir et al, Antenatal magnesium sulphate for preventing cerebral palsy: An economic evaluation of the impact of a quality improvement program, *Australian and New Zealand Journal of Obstetrics and Gynaecology* (2021). [DOI: 10.1111/ajo.13459](https://doi.org/10.1111/ajo.13459)

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