



# Chapter 1

## Neonatal and paediatric health

### At a glance



#### Early planned caesarean section without medical or obstetric indication

Planned early birth is an important intervention in maternity care, but the timing of birth should be carefully considered to optimise the outcome. There is growing evidence that planned caesarean section before 39 weeks' gestation increases short-term risks, including neonatal respiratory problems and infections in the first five years of life. It may also increase the risk of long-term developmental problems, poorer school performance and attention deficit hyperactivity disorder.

The Atlas found that, in 2015, between 42% and 60% of planned caesarean sections performed before 39 weeks' gestation did not have a medical or obstetric indication, and between 10% and 22% performed before 37 weeks did not have a medical or obstetric indication. These data have recently begun to be collected routinely in Australia; four states or territories with reliable data have been reported on. Rates were generally higher for privately funded patients than for publicly funded patients.

#### Antibiotics in children

The rate of antibiotic use in children in Australia is high compared with similar countries. For example, Australia's use in children aged 0–9 years is three

times higher than in Norway and the Netherlands. In many cases, antibiotics are not needed – for example, for viral illnesses. Overuse of antibiotics contributes to bacterial resistance. Emerging research also suggests that changes to the normal gut bacteria caused by antibiotics may increase the risk of chronic autoimmune diseases in children, such as asthma. The Atlas found high rates of antibiotic use in children, with more than 3 million antibiotic prescriptions dispensed for children aged 0–9 years in 2016–17.

#### Proton pump inhibitor medicines in infants

Proton pump inhibitor medicines are often used to treat infants with simple reflux or colicky symptoms, such as irritability or crying, even though they are not effective for these symptoms. These medicines reduce the level of stomach acid, and increase the risk of infections such as pneumonia. They can also change the gut microbiome, which may increase the risk of allergies. The Atlas found about a four-fold difference between the lowest and highest state and territory rates in dispensing of proton pump inhibitor medicines under the Pharmaceutical Benefits Scheme for infants aged 1 year and under in Australia.

## Recommendations

### Early planned caesarean section without medical or obstetric indication

- 1a. Local Hospital Networks, health service organisations and clinicians to have systems in place to obtain fully informed patient consent for planned caesarean section by providing prospective parents with comparative information on the short- and long-term risks of planned early-term caesarean section without a medical or obstetric indication.
- 1b. The Medicare Benefits Schedule (MBS) Review Taskforce to review item 16519 (Management of labour and birth by any means including caesarean section), and ensure that item descriptors align with current clinical evidence and support a gestation period of at least 39 weeks unless there are medical or obstetric indications.
- 1c. Relevant colleges to initiate a joint project to develop evidence-based guidance, education and consumer information on early planned caesarean section without a medical or obstetric indication. This guidance should emphasise the need to ensure that potential risks for both mother and baby are discussed with the prospective parents.
- 1d. Local Hospital Networks and health service organisations to have systems in place, as part of their clinical governance processes, for regular review and reporting of rates of early planned caesarean section without a medical or obstetric indication, and for addressing unwarranted variation.
- 1e. All states and territories to ensure consistent, routine collection and reporting of data on gestational age for planned caesarean section without a medical or obstetric indication to improve the quality of data collections. This should include reporting of gestational age in days to allow more in-depth understanding of the distribution of births occurring before 39 weeks.

- 1f. The National Health and Medical Research Council to consider funding research to identify the effects of gestational age and delivery method on childhood development.

- 1g. The Commission to investigate the potential to include early planned caesarean section without a medical or obstetric indication in the national list of hospital-acquired complications, given the evidence about potential short- and long-term risks.

### Inappropriate use of proton pump inhibitor medicines and antibiotics in children

- 1h. The Pharmaceutical Benefit Advisory Committee to recommend Pharmaceutical Benefits Scheme streamlined authority required listings for proton pump inhibitor medicines that have Therapeutic Goods Administration-approved indications in infants and children, such as gastro-oesophageal reflux disease.
- 1i. NPS MedicineWise to ensure that its public education campaigns highlight the potential harms of inappropriate antibiotic use in children, and provide advice for parents on managing coughs, colds, earaches and sore throats without the use of antibiotics.
- 1j. The Commission, as part of the Antimicrobial Use and Resistance in Australia Surveillance System, to monitor antibiotic use in children in hospitals and the community.
- 1k. The National Health and Medical Research Council to consider funding research into approaches to reduce antibiotic overuse in children, particularly in acute respiratory infections when antibiotics are most commonly prescribed.