

Small babies at term (37 – 42 weeks)

HQMNZ ID: HQM16.6.29.925

Outcome

All maternity services are consistently delivered to the highest standard across NZ.

Measure

Percentage or number of small babies at term born at 37 – 42 weeks gestation

Type

Contributory measure

Relationship(s) to other frameworks

Ministry of Health. 2015. New Zealand Maternity Clinical Indicators 2013. Wellington: Ministry of Health.

Rationale

Infants who are born small for gestational age (SGA) are at increased risk of neonatal morbidity and mortality, reduced growth through childhood, lower childhood neurodevelopmental scores, reduced educational attainment and increased lifetime risk for impaired glucose tolerance, including type 2 diabetes, and cardiovascular disease (Arcangeli et al 2012; Lawn et al 2014).

Placental disease (including that associated with pre-eclampsia) and smoking are common causes of poor fetal growth leading to SGA babies. Appropriate management of women at increased risk of SGA (those with a past history of SGA, hypertension or obesity, and those who smoke) may reduce the risk. Timely detection of poor fetal growth may reduce the risk of stillbirth by presenting the opportunity for enhanced surveillance and iatrogenic early birth.

This measures the proportion of all babies born at term gestation who are small for their gestational age. This measure is intended to drive multidisciplinary review of the prevention and management of poor fetal growth at a population level, with the potential for reducing risk of both SGA and stillbirth.

Eligible population

Live-born babies born at 37–42 weeks' gestation

Measure status

Active

Numerator

Total number of babies born at 37–42 weeks' gestation with birthweight under the 10th centile for their gestation.

Denominator

Total number of babies born at 37–42 weeks' gestation.

National target

N/A

Local target

Milestones to be decided by Alliance

Data Sources

National Maternity Collection, Mortality Collection, INTERGROWTH-21 growth charts

Data extracted from data sources

MAT, fact mat agg birth

- National Health Index (NHI) number
- Baby date of birth
- Birth key
- Baby birth status
- Gestational age
- Birthweight
- Sex

Mortality Collection

- NHI number
- Baby date of birth

INTERGROWTH-21 growth charts (Villar J, Ismail LC, Victora CG, et al. 2014. International standards for newborn weight, length, and head circumference by gestational age and sex: the Newborn Cross-Sectional Study of the INTERGROWTH-21st Project. *Lancet* 384(9946): 857–68.

- 10th centile birthweight for male and female babies according to gestational age

Data availability

This measure is reported annually on the Ministry of Health website: www.moh.govt.nz (Search: NZ Maternity Clinical indicators)

Measure calculation process

1. Extract baby data from MAT.

2. For each baby, search for any stillbirth registration in Mortality Collection. If any, exclude from dataset.
3. Exclude babies where Baby birth status = 'SB'.
4. Exclude babies with gestational age <37 or >42 weeks
5. For each baby, match sex and gestational age with the INTERGROWTH-21 standards.
6. Numerator: count the number of babies (birthkey) where their birthweight is lower than the matched 10th centile birthweight for their sex and gestational age
7. Denominator: count the number of babies (birthkey)
8. Rate: $\text{numerator} / \text{denominator} * 100$. Extract baby data from MAT.
9. For each baby, search for any stillbirth registration in Mortality Collection. If any, exclude from dataset.
10. Exclude babies where Baby birth status = 'SB'.
11. Exclude babies with gestational age < 20 weeks
12. Numerator: count the number of babies (birthkey) where gestational age < 37 weeks.
13. Denominator: count the number of babies (birthkey)
14. Rate: $\text{numerator} / \text{denominator} * 100$.

Measure development notes

None