The best possible start in life

Statewide Neonatal Care Plan for Queensland

The health prospects for infants in Australia today are the best of any generation but we can do more. Queensland Health is committed to developing our neonatal health system to match our growing population and positively shape neonatal health services across the state.

Our vision

Improved care and outcomes for Queensland babies requiring specialised care

Our focus

1. Neonatal workforce
2. Neonatal service capability
3. Neonatal retrievals
4. Supporting systems
Queensland Health is committed to growing our public sector service so infants requiring neonatal care receive the best start in life.

Giving babies the best chance of a healthy start to life is achieved through access to high-quality health care from preconception through to birth and beyond. Recognising the importance of the antenatal period, Queensland Health is investing in several initiatives designed to support high-quality service delivery during this period.

In the past 10 years investment in neonatal services has achieved great results. However with a growing population, emerging technologies and changes in our workforce, we need a strong plan and strategies for continued success.

The Statewide Neonatal Care Plan identifies opportunities to strengthen existing neonatal services across Queensland.

**Reduce risk factors**
Significant opportunity exists to reduce risk factors in the antenatal period, such as maternal smoking, alcohol and drug use, and overweight and obesity

**Utilise planning methods and information systems**
Planning for future neonatal services can be optimised by reliable planning methodologies and information systems

**Increase specialised services**
Demand for specialised neonatal services will continue to grow

**Care services offered closer to home**
Increased demand needs to be met by building service capability closer to home where safe and feasible

**Develop a skilled and resilient workforce**
Sustained efforts are needed to recruit, retain and grow a skilled neonatal workforce

**Offer targeted and culturally appropriate interventions**
Higher risk factors and poorer outcomes for Aboriginal and Torres Strait Islander infants warrant culturally-appropriate, targeted antenatal interventions

**Improve neonatal retrievals**
Explore opportunities to keep improving the retrieval system for acutely unwell infants
Mothers and Babies

Fertility rates (2015)

- 1.9 babies per woman in Queensland
- 1.8 babies per woman in Australia
- 2.3 babies per Aboriginal and Torres Strait Islander women in Queensland

Fertility rates of 1.9 babies per woman will remain until 2036

Women of child bearing age (2015)

- 986,249 of Queensland women were of child bearing age
- 6.2% of these women gave birth
- 6.5% of these were Aboriginal and Torres Strait Islander

The number of women of child bearing age is expected to grow by 12% between 2016 and 2026

Queensland births and babies (2016)

- 62,779 babies born to 61,876 mothers in Queensland
- 4,320 babies born to 4,178 Indigenous mothers in Queensland

3 in 4 births were in public facilities

Queensland birthweight (2016)

<table>
<thead>
<tr>
<th>Birthweight</th>
<th>Low</th>
<th>Healthy</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2500g</td>
<td>7.3%</td>
<td>82%</td>
<td>10.5%</td>
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</table>

Factors contributing to birthweight (2016)

High birthweight baby 4000+g

- 50% more likely women who were overweight at conception
- 9% more likely for mothers who did not have an antenatal visit in the first trimester

Low birthweight baby <2500g

- at least twice as likely for mothers who smoked during pregnancy
- 45% more likely for mothers who had less than 8 antenatal visits
- 25% more likely for Indigenous Queensland mothers
- 12% more likely for mothers living in low socioeconomic areas

In 2015 the biggest cause of neonatal morbidity was related to short gestation (prematurity) or low birthweight accounting for 10.6% of births (6509 infants).
Trends in demand

The increasing demand on NICU and SCN services and the associated workforce pressures pose a threat to the sustainability of future neonatal services.

Workforce shortages

Projected neonatal workforce shortages are driven by:

- a move away from the traditional dual nursing/midwifery registration career pathway
- high staff turnover rates
- limited training and education opportunities

Maternal health and wellbeing

A newborn baby’s health shapes their health and wellbeing throughout life. Risk factors to health outcomes for mothers and babies include physical health, antenatal care and exposure to harmful behaviours.

Women giving birth 35 years or older

(2015)

Increasing age of women giving birth aged over 35

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2015</td>
<td>20%</td>
</tr>
<tr>
<td>2006</td>
<td>18%</td>
</tr>
<tr>
<td>1997</td>
<td>13%</td>
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Increased number of babies born to public sector hospitals = increased demand on public sector neonatal services

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2015</td>
<td>72.5%</td>
</tr>
<tr>
<td>2006</td>
<td>68.3%</td>
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Neonates requiring surgery

797

2015/16

Smoking and alcohol during pregnancy

(2016)

Maternal smoking is declining but at a slower rate for teenagers, Indigenous Queensland mothers and those from low socioeconomic areas.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>12%</td>
<td>Mothers smoked during pregnancy</td>
</tr>
<tr>
<td>3x higher</td>
<td>for Aboriginal and Torres Strait Islander mothers</td>
</tr>
<tr>
<td>4x higher</td>
<td>for women in low socioeconomic areas</td>
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Antenatal care

(2015)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>13.8%</td>
<td>Aboriginal and Torres Strait Islander expectant mothers</td>
</tr>
<tr>
<td>4.8%</td>
<td>Non-Indigenous expectant mothers</td>
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<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>80.7%</td>
<td>Non-Indigenous expectant mothers</td>
</tr>
<tr>
<td>63.5%</td>
<td>Aboriginal and Torres Strait Islander expectant mothers</td>
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Teenage pregnancy

(2015)

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<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>3.9%</td>
<td>Mothers birthing in Queensland were under 20 years of age</td>
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Aboriginal and Torres Strait Islander women are over-represented among teenage mothers in Queensland and across Australia.
Where we need to be

While the health prospects of infants in Queensland are the best of any previous generation, we know we can do more. Despite significant growth and reform in the past decade in Queensland’s neonatal service system, we need to continue to evolve to withstand future demands.

**Neonatal workforce**
- Develop a neonatal nursing workforce plan that adequately meets the needs of the future
- Strategies
  - Develop a neonatal nursing workforce plan that addresses current and future workforce requirements and maximises staff retention
  - Develop and implement a framework and resources to support neonatal staff training and education, (e.g. e-learning platforms)
- Success measures
  - Identified neonatal nursing workforce needs are met through a business planning framework and aligned with the Clinical Services Capability Framework (CSCF)
- Targets
  - Enhanced statewide neonatal medical coordination and retrieval services in Queensland
  - Clinical decisions and coordination of transfer to other levels of care are supported by robust clinical information systems

**Neonatal service capability**
- Provide a plan for care to be safely and sustainably provided closer to an infant’s home
- Strategies
  - Provide a ten-year plan for changes to CSCF capability levels where safe and sustainable including considering maternity and other support services through statewide planning processes
  - Reduced flows/transfers to metropolitan hospitals with NICUs
  - Improvements in Queensland neonatal morbidity indicators
  - Improvements in the neonatal mortality component of the Queensland perinatal mortality rate
- Targets
  - More infants and their families can access special care nursery (SCN) services closer to where they live
  - Neonatal intensive care units (NICUs) provide highly specialised services and allow neonates to transfer back to their local facility after intensive care

**Neonatal retrievals**
- Develop operational processes, policies and guidelines for neonatal retrievals across the state
- Strategies
  - Enhance the coordination of retrieval services for neonates and for pregnant women with babies expected to experience conditions requiring neonatal care
  - Consistent operational processes, policies and guidelines for neonatal retrieval across the state
  - Electronic cot and retrieval management system is in place
- Success measures
  - Review the health service planning guideline for neonatal services
  - Explore options for reporting future neonatal workforce requirements
  - Review the current funding framework for the treatment of newborn neonates receiving services outside a NICU/SCN
- Targets
  - Planning for future neonatal services is achieved by contemporary and reliable planning methodologies, enhanced data and reporting systems
  - Planning incorporates appropriate recognition of the neonatal care provided outside the typical NICU/SCN environment

**Supporting systems**
- Develop evidence-based guidelines for projecting future service activity and capacity requirements
- Strategies
  - Review the health service planning guideline for neonatal services
  - Explore options for reporting future neonatal workforce requirements
  - Review the current funding framework for the treatment of newborn neonates receiving services outside a NICU/SCN
- Success measures
  - Accurate projections of future activity, capacity requirements and need for neonatal services through evidenced-based guidelines
  - Funding of care for unqualified neonates is reviewed
Healthy ageing: A strategy for older Queenslanders

Our population is growing across the state and we anticipate increased demand on services and our workforce. While our intensive care services are primarily located in the south-east corner and special care nurseries positioned along the coastline, we are working to deliver robust and responsive neonatal health services at every site.

How we will do it

Queensland Health is committed to developing our neonatal health system through our Statewide Neonatal Care Plan.

Our population is growing across the state and we anticipate increased demand on services and our workforce. While our intensive care services are primarily located in the south-east corner and special care nurseries positioned along the coastline, we are working to deliver robust and responsive neonatal health services at every site.

The following steps will achieve successful implementation of the strategies in the Plan:

- communicate the plan to all stakeholders and facilitate transition to implementation
- implement the specific actions that are designed to deliver on each strategy
- consult with Hospital and Health Services and the Queensland Neonatal Services Advisory Group as appropriate
- undertake the monitoring, review and evaluation components of the planning cycle.

Queensland Health has conducted detailed service planning to support the actions in the plan. Successful implementation of the actions will require a coordinated effort across many areas of the health system.

The Departmental Policy and Planning Executive Committee will oversee the implementation process. Implementation of this plan will require:

- actions to be completed under each strategy
- lead entities responsible for implementing actions
- timeframes for implementation
- resources required
- partner agencies involved
- expected outputs from the process.

Current Service System

Intensive care services are mostly located in the south east corner, and special care nurseries are mostly scattered along the coastline.