How are small maternity units performing in terms of clinical outcomes for mothers and newborns?  
*Insights from the WHA benchmarking program*

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CEO,  
Women’s Healthcare Australasia
What is WHA?

A community of people who are passionate about quality maternity & newborn healthcare...

...and who actively support one another to provide the best possible care to women and their families.
88 maternity services participate in WHA, caring for 150,000 births p.a.
Who are our Members?

88 Member Hospitals:

**Tertiary services:**
- Centenary Hospital, for Women & Children ACT
- Royal Hospital for Women, NSW
- Royal North Shore Hospital, NSW
- Royal Darwin Hospital, NT
- Mater Mothers Hospital, QLD
- Royal Brisbane & Women’s Hospital, QLD
- Women’s & Children’s Health Network, SA
- Flinders Medical Centre, SA
- Royal Hobart Hospital, TAS
- The Royal Women’s Hospital, VIC
- Mercy Hospital for Women, VIC
- Monash Medical Centre, VIC
- Fiona Stanley Hospital, WA
- King Edward Memorial Hospital, WA

**Metropolitan Maternity & Women’s Health services**
- Angliss Hospital, VIC
- Armadale Hospital, WA
- Box Hill Hospital, VIC
- Calvary Health Care, ACT
- Frankston Hospital, VIC
- Gold Coast University Hospital, QLD
- Ipswich Hospital, QLD
- Lyell McEwin Hospital, SA
- Ryde Hospital, NSW
- St George Hospital, NSW
- Sutherland Hospital, NSW
- Sunshine Hospital, VIC
- Werribee Mercy Hospital, VIC
- The Women’s Hospital, Sandringham
- Bentley Health Service, WA
Who are our Members?

Regional & Rural Maternity Services:
- Alice Springs Hospital, NT
- Ballarat Health Service, VIC
- Bendigo Health Service, VIC
- Healesville Hospital, VIC
- Launceston General Hospital, TAS
- Mersey Community Hospital, TAS
- Northwest Regional Hospital, TAS
- Nambour Hospital, QLD
- Gympie Hospital, QLD
- Townsville Hospital, QLD
- Atherton Hospital, QLD
- Cairns Hospital, QLD
- Innisfail Hospital, QLD
- Mareeba Hospital, QLD
- Tully Hospital, QLD
- Riverland General Hospital SA
- Ceduna District Health Service SA
- Clare Hospital SA
- Crystal Brook\& District Hospital SA
- Gawler Health Service SA
- Jamestown Hospital & Health Service SA
- Kangaroo Island Health Service SA
- Kapunda Hospital SA
- Loxton Hospital Complex SA
- Modbury Hospital, SA
- Mount Barker District Soldiers Memorial Hospital SA
- Mount Gambier & District Health Service SA
- Murray Bridge Memorial Hospital SA
- Naracoorte Health Service SA
- Port Augusta Hospital SA
- Port Lincoln Health and Hospital SA
- Port Pirie Regional Health Service SA
- Tanunda War Memorial Hospital SA
- South Coast District Hospital SA
- Waikerie Health Service SA
- Wallaroo Hospital & Health Service SA
- Whyalla Hospital & Health Service SA
Who are our Members?

Regional & Rural Maternity Services:

- Albany Regional Hospital, WA
- Bridgetown Hospital, WA
- Broome Regional Hospital, WA
- Bunbury Regional Hospital, WA
- Busselton Hospital, WA
- Carnarvon Hospital, WA
- Collie District Hospital, WA
- Derby Hospital, WA
- Esperence Hospital, WA
- Geraldton Hospital, WA
- Hedland Health Campus, WA
- Kalgoorlie Regional Hospital, WA
- Katanning Hospital, WA
- Kununurra District Hospital, WA
- Margaret River Hospital, WA
- Narrogin Hospital, WA
- Nickol Bay Hospital, WA
- Northam Hospital, WA
- Warren District Hospital, WA
WHA’s Vision

To enhance the health and wellbeing of women and newborns through...

supporting women’s hospitals and maternity services to achieve excellence in clinical care
Women’s Healthcare Australasia’s Vision

To enhance the health and well-being of women and newborns through supporting hospitals and health services to achieve excellence

**Enablers:**

- WHA develops and maintains strong relationships with our member organisations and their staff and is responsive to their needs
- WHA develops & maintains partnerships with other organisations to enhance its capacity to support members to achieve excellence
- WHA continues to be a well governed, well managed and sustainable organisation for the membership

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**Best practice care through benchmarking**

WHA supports continuous improvement in the care of women and newborns by delivering quality, relevant, timely & accessible benchmarking studies that meet members needs

**Best practice care through networking with peers**

WHA facilitates collaboration & sharing among members of ideas, resources & know-how about best practice care for women and newborns

**Best practice care through translating evidence into practice**

WHA forges consensus on best practice care informed by research evidence. WHA identifies & communicates research priorities. WHA facilitates collaboration among members on agreed priority quality & safety improvement initiatives

**Best practice care through advocacy**

WHA is recognised as a trusted, impartial expert adviser on maternity services and is proactive in advocating on key issues related to the care of women and newborns
Benchmarking for Maternity Units

Significant increase in participation by maternity units in recent years has enhanced value of benchmarks

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Very large Maternity Units (&gt;4,001 births p.a.)</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>9</td>
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<tr>
<td>Large Maternity Units (2,001-4,000 births p.a.)</td>
<td>15</td>
<td>13</td>
<td>14</td>
<td>12</td>
<td>17</td>
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<tr>
<td>Medium Maternity Units (401-2,000 births p.a.)</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>13</td>
<td>13</td>
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<tr>
<td>Small Maternity Units (&lt;400 births p.a.)</td>
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<td>1</td>
<td>3</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>26</td>
<td>31</td>
<td>53</td>
<td>69</td>
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</tbody>
</table>
Increased participation helps compare hospitals with like-sized peers

<table>
<thead>
<tr>
<th>(&gt;4,001 births per year)</th>
<th>(2,501 – 4000 births per year)</th>
<th>(1,501 – 2500 births per year)</th>
<th>(501 – 1,500 births per year)</th>
<th>(101-500 births per year)</th>
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</thead>
<tbody>
<tr>
<td>Royal Women’s Hospital, Parkville</td>
<td>Sunshine Hospital</td>
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<td>Launceston General Hospital</td>
<td>Geraldton Hospital</td>
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<td>Mater Mother’s Hospital</td>
<td>Monash Health – Clayton</td>
<td>Royal Women’s Hospital, Sandringham</td>
<td>Mackay Base Hospital</td>
<td>Gympie Hospital</td>
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<tr>
<td>King Edward Memorial Hospital</td>
<td>Lyell McEwin Hospital</td>
<td>Cairns Base Hospital</td>
<td>Ballarat Health Service</td>
<td>Hedland Hospital</td>
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<tr>
<td>Mercy Hospital for Women</td>
<td>Flinders Medical Centre</td>
<td>Box Hill Hospital</td>
<td>Sutherland Hospital</td>
<td>Broome Hospital</td>
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<td>Westmead Hospital</td>
<td>Centenary Hospital for Women and Children</td>
<td>Angliss Hospital</td>
<td>Bendigo Health Service</td>
<td>Nickol Bay Hospital</td>
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<tr>
<td>Women’s and Children’s Health Network</td>
<td>Fiona Stanley Hospital</td>
<td>Monash Health – Casey</td>
<td>Bunbury Hospital</td>
<td>Brusselton Hospital</td>
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<tr>
<td>Gold Coast University Hospital</td>
<td>Werribee Hospital</td>
<td>Caboolture Hospital</td>
<td>Kalgoorlie Health Campus</td>
<td>Proserpine Hospital</td>
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<tr>
<td>Royal Brisbane &amp; Women’s Hospital</td>
<td>Ipswich Hospital</td>
<td>Royal Darwin Hospital</td>
<td>Albany Regional Hospital</td>
<td>Atherton Hospital</td>
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<tr>
<td>Royal Hospital for Women</td>
<td>Royal North Shore Hospital</td>
<td>Calvary Health Care ACT</td>
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<td>Mareeba Hospital</td>
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<td></td>
<td>Frankston Hospital</td>
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<td>Innisfail Hospital</td>
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<td>Townsville Hospital</td>
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<td>Esperance Hospital</td>
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<td></td>
<td>Monash Health – Dandenong</td>
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<td>Roma Hospital</td>
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<td>St. George Hospital, NSW</td>
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<td>Narrogin Hospital</td>
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<td>Kununurra Hospital</td>
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<td>Ryde Hospital</td>
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<td>Derby Hospital</td>
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Benchmarking is but one element of a continuous improvement journey.
2 main types of data used in WHA benchmarking:

**Costed DRG data**

- Care: Insights into comparative outcomes of care for women & babies
- Cost: Insights into comparative efficiency of the service
- Quality: Insights into opportunities for improvement in both quality & performance

**Clinical Indicator data**
Profile of women receiving maternity care in small units across Australia
All births in units <1000 births p.a.
% Women giving birth for the first time – small units 2014-15
% Women giving birth for the first time

**Trends**

<table>
<thead>
<tr>
<th>Year</th>
<th>Level 1-5</th>
<th>Level 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>41.18%</td>
<td></td>
</tr>
<tr>
<td>2009/10</td>
<td>44.28%</td>
<td></td>
</tr>
<tr>
<td>2010/11</td>
<td>41.18%</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td>44.28%</td>
<td></td>
</tr>
<tr>
<td>2012/13</td>
<td>42.28%</td>
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</tr>
<tr>
<td>2013/14</td>
<td>43.42%</td>
<td></td>
</tr>
<tr>
<td>2014/15</td>
<td>43.06%</td>
<td></td>
</tr>
</tbody>
</table>
% women who were selected primparas
– small units 2014-15

20-35 years of age
Singleton foetus
Cephalic presentation
Born 37-41 completed weeks gestation
% women who had a previous primary Caesarean Section – small units 2014-15
% women who had a previous primary Caesarean Section – all WHA members
% women aged >35 giving birth in small units:

2014-15
% Women aged 35 years or more – all WHA hospitals
BMI >40 at 20 weeks gestation – small units 2014-15
BMI >40 at 20 weeks gestation – all WHA hospitals
Labor and Birth Care
% women who gave birth vaginally – selected primiparas

Average for all hospitals
81.18%

Average for different levels
Level 1-5 81.18%
Unassisted vaginal birth following spontaneous onset of labour – all women

% of women having an unassisted vaginal birth following spontaneous onset of labour

Total number of women who give birth by any method

Lower 99.8% Limit
Lower 95% Limit
Mean
Upper 95% Limit
Upper 99.8% Limit

Level 1-5 Maternity Care
Level 6 Maternity Care

Average for all hospitals
39.15%

Average for different levels
Level 1-5 39.15%
Unassisted vaginal birth following spontaneous onset of labour – selected primiparas only

The graph illustrates the percentage of selected primiparas having an unassisted vaginal birth following spontaneous onset of labour. The data is shown for different levels of maternity care, with the average for all hospitals at 33.64%. The graph also shows the total number of selected primiparas who give birth by any method.
Unassisted vaginal birth following spontaneous onset of labour – selected primiparas

Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tr>
<td>2009/10</td>
<td>34.48%</td>
</tr>
<tr>
<td>2010/11</td>
<td>33.31%</td>
</tr>
<tr>
<td>2011/12</td>
<td>29.44%</td>
</tr>
<tr>
<td>2012/13</td>
<td>28.20%</td>
</tr>
<tr>
<td>2013/14</td>
<td>26.34%</td>
</tr>
<tr>
<td>2014/15</td>
<td>27.28%</td>
</tr>
</tbody>
</table>

Level Group
- Level 1-5
- Level 6
Induction of Labour - Selected Primips
2014-15 small member hospitals only

% of selected primiparas undergoing an induction of labour

Total number of selected primiparas who give birth by any method

Average for all hospitals
20.76%

Average for different levels
Level 1-5 20.76%

Level 1-5 Maternity Care
Level 6 Maternity Care

Lower 99.8% Limit
Lower 95% Limit
Mean
Upper 95% Limit
Upper 99.8% Limit
Induction of Labour—Selected Primips—all WHA hospitals

Trends

Level Group
- Level 1-5
- Level 6

2009/10: 26.28%
2010/11: 26.89%
2011/12: 25.80%
2012/13: 30.18%
2013/14: 31.77%
2014/15: 33.53%
Epidural use for pain relief in labour in small units – selected primiparas 2014-15

6b. Epidural use for pain relief in labour - selected primiparas who give birth vaginally

- Level 1-5 Maternity Care
- Level 6 Maternity Care

Average for all hospitals: 25.27%

Average for different levels:
- Level 1-5: 25.27%
Epidural—Selected Primips—all WHA hospitals
Assisted vaginal births selected primips - small units only 2014-15
Assisted Vaginal Birth – All Women all WHA

- Forceps
- Vacuum
Caesarean section rate in small units 2014-15 – all women

Average for all hospitals
22.86%

Average for different levels
Level 1-5 22.86%
Caesarean Section – All Women all WHA hospitals

Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Level 1-5</th>
<th>Level 6</th>
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<tbody>
<tr>
<td>2009/10</td>
<td>29.58%</td>
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<tr>
<td>2010/11</td>
<td>29.81%</td>
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<tr>
<td>2011/12</td>
<td>29.98%</td>
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<tr>
<td>2012/13</td>
<td>29.78%</td>
<td></td>
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<tr>
<td>2013/14</td>
<td>29.19%</td>
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<tr>
<td>2014/15</td>
<td>29.17%</td>
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</table>
Caesarean section rate – selected primiparas – small units 2014-15

Average for all hospitals
19.39%

Average for different levels
Level 1-5 19.39%
Caesarean Section – Selected Primips 2014-15 – all WHA member hospitals

Average for all hospitals
22.43%

Average for different levels
Level 1-5 22.58%
Level 6 22.16%
Caesarean Section – Selected Primips all WHA hospitals

Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Level 1-5</th>
<th>Level 6</th>
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<tbody>
<tr>
<td>2009/10</td>
<td>23.47%</td>
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<tr>
<td>2010/11</td>
<td>23.89%</td>
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<tr>
<td>2011/12</td>
<td>23.45%</td>
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<tr>
<td>2012/13</td>
<td>22.44%</td>
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<tr>
<td>2013/14</td>
<td>22.89%</td>
<td></td>
</tr>
<tr>
<td>2014/15</td>
<td>22.43%</td>
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</tbody>
</table>
VBAC rate following previous primary Caesarean Section

- Lower 99.8% Limit
- Lower 95% Limit
- Mean
- Upper 95% Limit
- Upper 99.8% Limit

- Level 1-5 Maternity Care
- Level 6 Maternity Care

Average for all hospitals: 11.22%
Average for different levels:
- Level 1-5: 11.22%

Total number of women who give birth who have had a previous primary caesarean section and NO intervening pregnancies greater than 20 weeks gestation.
VBAC 2014-15

Total number of women who give birth who have had a previous primary caesarean section and NO intervening pregnancies greater than 20 weeks gestation.
Adverse outcomes for mothers
3\textsuperscript{rd} or 4\textsuperscript{th} degree perineal tears – selected primips who gave birth vaginally
PPH ≥1000mls <1,500 mls – all women who gave birth vaginally in small units 2014-15
PPH ≥1000mls <1,500 mls – all women who gave birth by caesarean section
Outcomes for Newborns born in small units
Apgar score of 6 or less at five minutes post delivery, inborn singleton babies liveborn at term – small units
Apgar score of 6 or less at five minutes post delivery, inborn singleton babies liveborn at term – all WHA members 2014-15

Average for all hospitals 1.58%
Average for different levels
Level 1-5 1.57%
Level 6 1.60%

Total number of live born singleton babies born at 37 completed weeks or more, excluding transfers in
APGAR of 6 or less at 5 minutes
Admission of inborn term baby to SCN or NICU for reasons other than birth defects/congenital anomaly – small units only 2014-15
Admission to SCN or NICU – all WHA hospitals 2014-15

Average for all hospitals
10.93%

Average for different levels
Level 1-5 10.98%
Level 6 10.85%
Admission to SCN or NICU for reasons other than congenital abnormality – all WHA hospitals
Practice variation

• **Need-related factors** include the wide-ranging determinants of a population’s health, including demographics, socioeconomic status, and environmental issues.

• **Demand-related** impacts are more subjective. They are influenced by cultural and educational factors, by beliefs and by the information available to patients.

• **Health system factors** can include referral systems, the distribution of clinicians and services, and payment and remuneration structures.

• **Supply-related factors** include clinical decision-making, government policy, resource availability and service and financing configurations.

However, medical opinion and preferences have a substantial influence over which treatment patients will receive and are a major source of such variation.
Opportunities ahead

• WHA members care for 140,000 births p.a, (60% of public births)
• Key opportunity to shape provision of care & agree on & implement best practice
• WHA is working to develop a consensus statement
  – IOL
  – care during labour
• WHA is changing its benchmarking program to collect deidentified data on each woman’s journey
• Working to benchmark MGP outcomes
• Opportunity through WHA to share achievements & learn from one another
Special Interest Groups

- Allied Health Leaders
- Birth Suite Managers
- Clinical Educators
- Directors of Obstetrics & Gynae
- Executive of Nursing & Midwifery
- Maternity Group Practice
- Prevention of Infection
- Aboriginal Maternity Care
- Safety & Quality in Maternity Care
- Special Care Nurseries
- Women’s Health
- Small rural hospitals

Other WHA networking groups:
- Specialist Women’s Hospital CEOs network
- Women’s Hospital Performance & Efficiency Network
Member Networking

WHA Special Interest Groups
✓ Allied Health Leaders
✓ Birth Suite Managers
✓ Clinical Educators
✓ Directors of Obstetrics & Gynae
✓ Executive of Nursing & Midwifery
✓ Maternity Group Practice
✓ Prevention of Infection
✓ Aboriginal Maternity Care
✓ Safety & Quality in Maternity Care
✓ Special Care Nurseries
✓ Women’s Health
✓ Small rural hospitals

✓ Proposals to establish MGP
✓ Policies & protocols re MGP services
✓ Arrangements for consultation & referral with obstetricians
✓ Practical supports for midwives (e.g. phones, e-health records, etc)
✓ Staff recruitment & retention
✓ MGP for all risk vs low risk women
✓ Management of midwifery & medical students
✓ Evaluation & review
Member Networking

**WHA Special Interest Groups**
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- Maternity Group Practice
- Prevention of Infection
- Aboriginal Maternity Care
- Safety & Quality in Maternity Care
- Special Care Nurseries
- Women’s Health
- Small Maternity Units

**Effective use of and governance for tele-health services to enhance services for local families & reduce unnecessary travel**

**Use of MGP/case-loading to attract and retain midwifery staff & to assist with nursing recruitment**

**Sharing of challenges & successes re attracting & retaining qualified medical staff/VMOs**