

Rockhampton Hospital maternity service



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Rockhampton Hospital

8. Facility

8.1 Facility overview

Rockhampton Hospital, also known as Rockhampton Base Hospital, opened its doors in 1867. It is the largest facility in the Central Queensland catchment, with 304 overnight patient beds. The maternity ward has a total of 15 antenatal and postnatal beds, five birth suites and three assessment rooms. There is also a Special Care Nursery (SCN) with six cots to support unwell and premature babies.⁵² The SCN enables babies that need to be transferred to Brisbane for care to be stepped down to Rockhampton Hospital faster, limiting the amount of time that families have to spend away from home. In 2018, there were 1,248 births at Rockhampton Hospital.⁵³

The maternity and neonatal services at Rockhampton Hospital have been assessed by CQHHS as a CSCF Level 4 service.⁵⁴ This is the only Level 4 maternity service in the CQHHS area and supports a number of the smaller maternity services through a hub and spoke model of care. According to the CSCF modules for maternity and neonatal care, a Level 4 service is expected to provide:

- planned birthing of babies at 32 weeks gestational age or weighing 1,500 grams, where continuous positive airway pressure (CPAP) equipment is available onsite
- antenatal and intrapartum care for women with low or moderate risk pregnancies, and may provide high risk antenatal clinics as a satellite for higher level services
- documented processes with higher and lower level services for rapidly transferring women to ensure they receive the most appropriate care and management
- necessary equipment and expertise to capture fetal samples e.g. blood sampling, arterial and venous cord gases and lactate or pH
- timely access to registered medical practitioners with specialist qualifications in obstetrics and gynaecology, anaesthetics, and paediatrics. Additionally, a minimum of two registered midwives must be rostered onto the maternity ward and birth suite 24 hours per day.⁵⁵

8.2 Benchmarking Rockhampton Hospital's performance

When benchmarked against its peer Level 4 maternity services, Rockhampton Hospital consistently performed within the expected ranges for a variety of maternity indicators and in some cases exceeded the benchmarks for a Level 4 service. The data from the WHA benchmarking report for 2016-17 shows:

⁵² <https://www.health.qld.gov.au/cq/hospitals/rockhampton/services/maternity>

⁵³ <https://data.qld.gov.au/dataset/births-by-hospital/resource/7af8f98e-4f43-496b-b540-efa21bbe5e48>

⁵⁴ https://www.health.qld.gov.au/_data/assets/pdf_file/0028/444619/cscf-selfassess-sum-centralqld.pdf

⁵⁵ CSCF, Maternity Services, Module Overview, version 3.2 and CSCF, Neonatal Services, Module Overview, version 3.2.

- 34.2 per cent of women were giving birth for the first time
- 12.9 per cent of women were over the age of 35 when giving birth, compared to 17.64 per cent of women in the peer facilities (this same trend applied to women giving birth over 40 years of age)
- 5.6 per cent of women had a body mass index⁵⁶ (BMI) in excess of 40 at 20 weeks gestation, compared with 3.37 per cent across Level 3 to 5 facilities
- 43.2 per cent of women had an unassisted vaginal birth after the spontaneous onset of labour versus 29.26 per cent of women in peer facilities
- 11.6 per cent of selected primipara⁵⁷ women had an epidural, compared with 36.10 per cent of women in Level 3 to 5 peers hospitals
- 1.3 per cent of women who gave birth vaginally had a third or fourth degree tear, compared to 3.39 per cent in peer facilities
- 1.0 per cent of babies had an APGAR score⁵⁸ of six or less at five minutes versus 1.87 per cent across Level 3 to 5 hospitals.

In addition to the above, Queensland Health provided CQHHS with a report outlining a *'high-level summary of patient safety and quality performance measures relating to maternal care at Rockhampton Hospital'*. Some highlights of this report include:

- between September 2015 and March 2018, Rockhampton Hospital had two VLAD flags at upper level 1 and 2, demonstrating that they had better outcomes than the state average
- between 1 January 2016 and 11 June 2018, Rockhampton Hospital only had one extreme consumer complaint; this related to a neonatal death
- in 2017 there were no severity assessment code⁵⁹ (SAC) 1 incidents in the maternity service at Rockhampton Hospital.

⁵⁶ Body mass index is 'a measure for indicating nutritional status in adults. It is defined as a person's weight in kilograms divided by the square of the person's height in metres (kg/m²). For example, an adult who weighs 70 kg and whose height is 1.75 m will have a BMI of 22.9.' - <http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi>

⁵⁷ A primipara, also referred to as a primip, is a woman giving birth for the first time.

⁵⁸ An APGAR score is a method to quickly summarise the health of a newborn at 1, 5 and 10 minutes after birth. APGAR involves five criteria, namely appearance, pulse, grimace, activity and respiration. The score ranges from zero to 10. The lower the score the greater the likelihood that the baby requires medical attention and could have serious complications, particularly if the low score persists across the three testing times.

⁵⁹ Severity assessment codes (SAC) are applied to clinical incidents to determine the appropriate course of investigation. There are four SAC categories each of which includes all clinical incidents/near misses where the outcome is not reasonably expected from the healthcare. SAC 1 incidents involve death or likely permanent harm; SAC 2 incidents involve temporary harm; SAC 3 incidents involve minimal harm; and SAC 4 incidents involve no harm or a near miss. SAC 4 incidents were introduced by Queensland Health in line with the rollout of Riskman as the new incident management system.

8.3 Rockhampton Hospital committee structure

Rockhampton Hospital and the maternity service have two levels of safety and quality committees that are responsible for overseeing incident management, responses to complaints and trend analysis to support continuous improvement. Additionally, there are two leadership meetings that also consider complaints and clinical incidents. These meetings were implemented to ensure that leadership remained up-to-date and agile when managing complaints and incidents. Figure 4 shows the Rockhampton Hospital committee structure and how it feeds into the overall safety and quality governance structure of CQHHS.

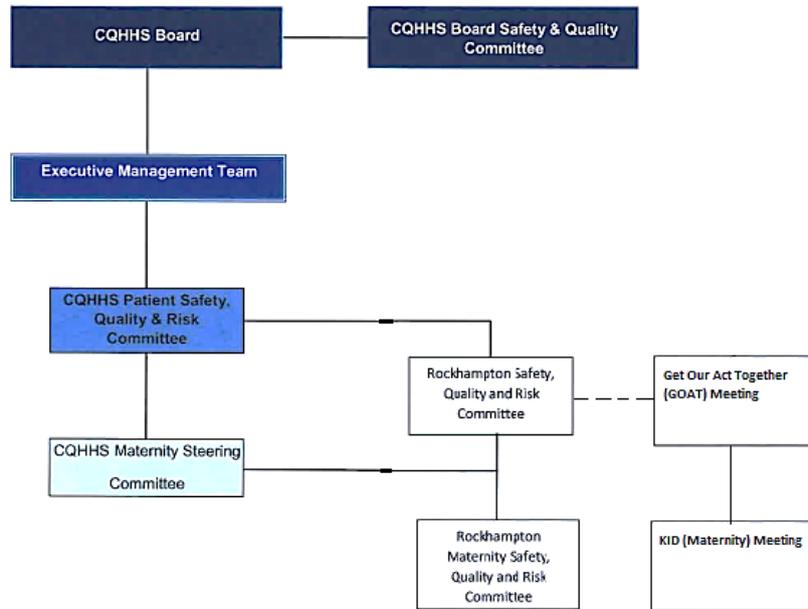


Figure 5 Rockhampton Hospital maternity committee structure

A summary of each of these committees and meetings is as follows:

- Rockhampton Safety, Quality and Risk Committee:** This committee meets monthly and is managed by the Rockhampton Business Unit, who are responsible for the oversight of serious clinical incidents. The committee reviews safety and quality issues from service lines across the hospital. Two of the key responsibilities of the committee are: the review of evidence and sign-off on the closure of SAC 1 incident recommendations, and the identification and consideration of incident trends to drive continuous improvement.
- Rockhampton Maternity Safety, Quality and Risk Committee:** This committee meets monthly and is chaired by a Clinical Midwifery Consultant. The meeting is held on the maternity ward to facilitate attendance by clinicians. The committee discusses topics such as governance systems, audit schedule and audits, risk management, and consumer participation and engagement. It is also the peak avenue for the maternity service to reflect on patient safety matters.

- **Get Our Act Together (GOAT):** The GOAT meeting is held weekly and attended by the Rockhampton Leadership Team, including the Executive Director, Rockhampton Hospital and directors from each service line throughout the hospital. The meeting was introduced to enable leadership to be more agile in responding to and managing complaints outside of the set monthly safety and quality committee meetings. The purpose of the meeting is for the leadership team to review and monitor all complaints (both from consumers and third parties such as this office), review and monitor all clinical incidents until closed, sign-off on the closure of SAC2 to 4 recommendations, and ensure that SAC levels are confirmed within three days of the incident being reported.
- **KID:** With the focus on the maternity service over the last three years it was decided that a KID meeting should be introduced, similar to the GOAT meeting, where the focus is on maternity SAC 1, 2 and 3 incidents. The KID meeting occurs weekly. It covers the progress being made towards closure of the recommendations and provides status updates to the GOAT meeting.

9. Maternity service reviews

9.1 External review

Between May 2015 and August 2016, there were seven serious maternal incidents at Rockhampton Hospital. The first five of these incidents, from May 2015 to February 2016, prompted the then Chief Executive of CQHHS to commission an independent review into the maternity service (the review).⁶⁰ The review was undertaken by three senior clinical experts from the Royal Brisbane and Women's Hospital, Proserpine Hospital and Nambour General Hospital.

The terms of reference for the review requested the provision of:

'...expert clinical advice regarding the treatment provided to the Patients in the Maternity Unit (Unit) at Rockhampton Hospital...[including making recommendations regarding] the ways in which the safety and quality of maternity services at Rockhampton Hospital can be maintained and improved, including identifying any systems and processes required to improve the standard of care and reliability'.

The review concluded that the maternity service needed to improve in a number of the main areas that comprise a contemporary and safe health service including, clinical incident management, clinical governance, triaging, risk assessing and escalating women and their care, appropriate staffing and skills mix, culture and communication, and clinical recordkeeping. It made 35 recommendations, all of which were accepted by CQHHS. All of the recommendations were implemented by January 2017; this involved a considerable amount of effort on the part of all maternity staff and the executive of both Rockhampton Hospital and CQHHS.

⁶⁰ The review was commissioned under section 124 of the HHB Act and as such is confidential. CQHHS released a public version of the review recommendations.

9.2 Gap analysis

With the release of the office's report, *Gold Coast University Hospital's response to adverse maternity events*, in March 2018, CQHHS decided to proactively undertake a gap analysis between the Rockhampton maternity service and the issues and recommendations made in the report. Rockhampton Hospital reviewed its processes, policies and procedures, identifying that in a majority of cases there were appropriate measures in place to address the gaps identified in the report. The office was provided with a copy of the gap analysis and supporting evidence and is satisfied that Rockhampton Hospital has the necessary processes relevant for its CSCF level and facility environment.

10. Complaints to the office

As noted in section 1.1 above, the office commenced an own motion systemic investigation into the Rockhampton Hospital maternity service. Additionally, the office has received 15 complaints about the maternity service at Rockhampton Hospital between June 2015 and December 2018.⁶¹ These complaints have taken various pathways through the office's jurisdiction as outlined in Table 1 below. The main issue identified across the complaints was professional performance.

Table 1 Rockhampton Hospital complaint outcomes

Outcome type	Number of outcomes ⁶²
No further action at intake	3
No further action after assessment	4
Referral to another government entity	4
Resolved via local resolution	2
Conciliation	1
Complaint withdrawn	1

It should be noted that the total number of complaints received by the office about the maternity service is statistically insignificant when compared to the approximately 5,092 births occurring at Rockhampton Hospital between 2015 and 2018.

⁶¹ The total number of complaints does not include complaints which are still pending an outcome.

⁶² There may be multiple outcomes for a complaint as it progresses through the office's jurisdiction.

11. Issues affecting maternity services at Rockhampton Hospital

The following sections provide a detailed analysis of the issues investigated by the office in relation to the Rockhampton Hospital maternity service.

11.1 Risk and escalation

In four of the seven serious maternal incidents referred to above in section 9.1, the incident reviews identified that there was a lack of an appropriate initial risk assessment, no reassessment of risk as the pregnancy progressed and during the intrapartum period, and poor escalation of care even when it was acknowledged that the risk status had changed. These findings were also highlighted by the review. This poor approach to risk was attributed to a failure in the culture to embed continuous risk assessing as a 'business as usual' process when providing antenatal and intrapartum care, which resulted in limited staff understanding of how to respond to and manage changes in risk. The two case studies below demonstrate the significance that an inaccurate initial risk categorisation and ongoing response to risk can have on the outcomes for mother and baby.

Case study of Patient A

Patient A was a 27 year old first time mother who had been admitted to Rockhampton Hospital for observations on several occasions throughout her pregnancy. In 2015, the maternity service was using the Maternity Risk Assessment Tool (MRAT), which had been developed from the referral guidelines. The MRAT was supposed to be completed at the initial booking-in appointment and then reassessed at 28, 34, 39, and 41 weeks gestation and when the woman presented in labour. The MRAT was only completed for Patient A during her booking-in appointment and she was categorised as low risk.

The categorisation of Patient A as low risk carried over into her intrapartum period, where her entire clinical picture, including previous attendances for antepartum haemorrhage (APH)⁶³, poor progression of labour, and abnormalities on the cardiotocography⁶⁴ (CTG), should have altered her risk status. Specifically, in early July 2015, at around 06:20, Patient A presented to the Rockhampton birth suite having experienced contractions of 2 every 10 minutes lasting for 45 seconds. Patient A was reviewed and discharged home with a plan to return if the contractions increased or there were reduced fetal movements. This was a missed opportunity to reassess

⁶³ Antepartum haemorrhage (APH) is defined as 'bleeding from or in to the genital tract, occurring from 24 weeks of pregnancy and prior to the birth of the baby' -

https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_63.pdf

⁶⁴ Cardiotocography (CTG) is a type of intrapartum fetal surveillance that monitors the maternal and fetal heart rate. A CTG may be undertaken at various stages throughout a pregnancy and it is reviewed to ascertain if it is normal or abnormal, with corresponding escalation of care required for an abnormal CTG -

https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Intrapartum-Fetal-Surveillance-Guideline-Third-edition-Aug-2014.pdf?ext=.pdf

Case study of Patient A

Patient A's risk in light of her current presentation and past issues, as noted above, throughout her pregnancy. Patient A was 40 weeks pregnant.

Patient A returned to the birth suite at 15:15 with stronger contractions and was found to be three centimetres dilated. On 10 July 2015, at 20:10, Patient A had a spontaneous vaginal birth. The baby had APGAR scores of 3 at 1 minute, 3 at 5 minutes and 5 at 10 minutes. The baby took its first spontaneous breath at 15 minutes; but showed signs of stage 2 hypoxic-ischemic encephalopathy (HIE).⁶⁵ If Patient A's risk had been properly assessed across the course of 10 July 2015 then this may have resulted in an expedited delivery of her baby during the first or second stages of labour.

The missed opportunities to respond to and escalate care were due to a continued belief that Patient A was low risk. Appropriately identifying and responding to risk during pregnancy is vital for securing safe outcomes.

Case study of Patient B

Patient B was a 20 year old woman with three previous confirmed pregnancies and one birth. At her booking-in appointment she was categorised as a lower risk B on the MRAT. This was despite Patient B having high risk factors (previous lower segment Caesarean section due to an abruption, intra-uterine fetal growth restriction, and previous APH) that should have resulted in her being categorised as a high risk C on the MRAT. These high risk factors were documented by both midwifery and medical staff within the MRAT but Patient B's risk status was not re-categorised, which impacted the management of her care.

At an antenatal appointment on 27 April 2015, Patient B was reviewed by a junior medical officer, not a consultant, despite her high risk profile. It was noted around this time that Patient B was '*High Risk and required follow up care at hospital*'. Despite this, Patient B continued to be cared for in a low risk environment.

On 16 July 2015 at 03:55, Patient B presented to the maternity service in labour. She had a category 2 Caesarean section; this should have been a category 1 given the immediate threat to the life of the neonate. At 05:19 the baby was born lifeless and resuscitation efforts were commenced, continuing for 32 minutes until the baby was declared stillborn. Patient B also suffered a massive post-partum haemorrhage following a placental abruption.

While it is not possible to ascertain whether the outcome would have changed if Patient B's risk status had been properly categorised, it is important that missed opportunities are minimised to secure confidence in the quality and safety of care being provided. In Patient B's case there were multiple opportunities throughout the antenatal period at her routine clinic appointments to have re-categorised her and ensure she received the care appropriate to her risk status.

⁶⁵ Hypoxic-ischemic encephalopathy is a '*type of neonatal encephalopathy caused by systemic hypoxaemia and/or reduced cerebral blood flow resulting from an acute peri partum or intrapartum event. It is a condition which can cause significant mortality and long-term morbidity.*' Source:

https://www.health.qld.gov.au/__data/assets/pdf_file/0014/140162/g-hie.pdf

In late 2015, ahead of the review, CQHHS had an MRAT Working Party which was reviewing the appropriateness of the MRAT and considering the types of risk assessment tools that were being used by other maternity services. This work culminated in the development of the initial midwife assessment (IMA), which is a two page risk assessment tool to guide a midwife through the relevant risk factors and their categories as per the Referral Guidelines. The IMA is supported by the CQHHS *Maternity Risk Assessment Tool (Initial Midwife Assessment)* procedure (the procedure), which was published in November 2016. The IMA and the procedure aim to create a consistent approach to risk assessment across the CQHHS maternity service.

The procedure is unambiguous in how the IMA is to be used and how the information from the IMA should be recorded in the patient's handheld pregnancy health record (the record). For example, a midwife should document the relevant risk code in the '*Midwife Risk Evaluation*' section of the record each time the risk is assessed, with formal assessments required at 36 and 40 weeks gestation. This section should also be updated as and when any new risks are identified during the antenatal period. When risks are identified and/or updated they are also required to be input into the '*Medical and Obstetric Issues and Management Plan*' in the record. Routinely and comprehensively completing these sections with the relevant risk information ensures that when clinicians review the patient they are cognisant of relevant risk factors and the risk categorisation, which will impact the woman's care pathway.

To ensure the IMA and a risk assessment culture is embedded, while also supporting compliance with the National Standards, there are 10 audits of the IMA annually. The audit results for April to December 2018, show that the IMA was utilised in 80 per cent of the cases audited. This is the lower level safe benchmark set by CQHHS so there is an ongoing opportunity for use of the IMA. In addition to the IMA, the Maternity Unit introduced the High Risk Case Conference, which is for the highest risk women (colloquially described as C++ women). The conference occurs each week and is multidisciplinary, attended by a range of clinicians and non-clinicians including, consultant obstetrician, consultant paediatrician, midwifery navigator, social worker and child safety officer. Due to the hub and spoke model at CQHHS, other maternity services can teleconference into the conference to discuss any high risk patients and receive advice about an appropriate management plan. The conference has been operating since around January 2017 and will be audited and evaluated to ascertain whether it needs to be refined going forward.

Between April 2016 and January 2018, there were no serious SAC 1 incidents in which a failure to appropriately categorise, re-categorise or escalate maternal risk has been identified as a contributing factor to a poor outcome. This suggests that the measures implemented by the Rockhampton Hospital maternity service have been effective at embedding a culture focused on making risk assessing 'business as usual' during antenatal and intrapartum care.

11.2 Emergency and maternity liaison

While the office did not identify any specific concerns with the liaison between the emergency department and maternity service at Rockhampton Hospital in the context of the incident reviews, this is a common area for improvement across Queensland maternity services. At Rockhampton Hospital the relationship between the two service lines is important because women below 20 weeks gestation will be

managed in the emergency department, if they present with pregnancy-related complications, so staff need to have some understanding of obstetric issues and feel comfortable seeking assistance from the maternity service.

During the on-site stakeholder visit in October 2018, the office's staff toured the emergency department. This put into context the geographic layout of the hospital and the distances between emergency and maternity, which are on different levels of the hospital. It is clear from the tour and discussions with relevant staff that the two service lines have refined their ways of working together to improve collaboration and increase the knowledge of the emergency staff in managing obstetric presentations. Some of the measures that have been implemented include:

- a senior medical officer covering the emergency department between 07:30 and 23:30 every day, including ensuring a pregnant woman is always seen by a senior medical officer before they are discharged
- one obstetric-focused training session each month during the protected medical training time
- mock scenarios including both emergency and maternity
- utilising the portable ultrasound scanner from birth suite in the emergency department, if required, and if it is unavailable then setting a standard that the woman will be admitted until a scan can be performed
- utilising the handover board and team leader handbook in birth suite to identify pregnant women in other areas in the hospital and making proactive contact with nursing and medical staff to ascertain if midwifery support is required.

The following case study provides an example of how the mock scenarios between emergency and maternity are being applied in practice:

Case study of mock scenario

On 11 October 2018, there was a mock scenario held between the emergency department and maternity service. The scenario utilised live actors and the staff involved were not aware of the scenario in advance. There were four scenario facilitators, being educators from maternity and emergency.

The mock situation involved a woman at 32 weeks gestation presenting to the emergency department, having had nausea, vomiting, abdominal pain and dizziness. The woman was also suffering from a severe headache. She had elevated blood pressure and intermittent seizures throughout the scenario until appropriate interventions were completed.

The scenario had six learning objectives:

1. undertaking a thorough patient assessment
2. recognising a medical emergency and escalating as per the protocol
3. providing supportive care to the patient and family
4. implementing the correct treatment for pre-eclampsia
5. stabilising the patient and preventing complications

Case study of mock scenario

6. demonstrating safe and effective interdepartmental and interdisciplinary communication.

Following the scenario staff held a debrief to discuss what went well and what could have been improved. Overall, the scenario was considered to be well managed and identified one area for improvement that was risk rated low.

These types of mock scenarios that involve multiple service lines are invaluable for applying, honing and refining key skills and relationships to ensure that in a real-life event staff are prepared for, and confident in, managing the situation.

11.3 Models of care

The Rockhampton Hospital maternity service offers the following models of care:

- public hospital care and public hospital high risk care
- MGP
- team midwifery
- shared care
- combined care
- remote area maternity care for Aboriginal and Torres Strait Islander peoples
- private midwifery care.

The below discussion will focus on MGP and shared care.

11.3.1 Midwifery Group Practice

In August 2014, Rockhampton Hospital launched the MGP model of care. In February 2016, this model was suspended by the then Chief Executive due to concerns with the safety and quality of the model. This coincided with the review of the maternity service. The MGP was reinstated in August 2016. From this date until present it has operated as an all-risk caseload model with a full-time midwife undertaking between 35 and 40 births per year. There is a large body of literature demonstrating the beneficial outcomes achieved through the MGP model of care due to the continuity of carer throughout a woman's pregnancy. This model also has a generally higher level of satisfaction for women as they can form a relationship with their midwife prior to birth.

As part of the on-site stakeholder visit in October 2018, staff met with members of the MGP and were advised that the model of care works as follows:

- There are two teams of three MGP midwives, with five positions filled and one vacant.
- Each midwifery team is aligned with an obstetrician enabling improved ways of working together and greater interdisciplinary collaboration.
- There are weekly case conferences between the midwives and the obstetrician.

- High risk women are booked into the relevant obstetrician’s antenatal clinic and a management plan is developed between the MGP midwife and obstetrician; if a woman’s risk changes or there are concerns about her progression then she can be referred back to the obstetrician’s clinic.
 - There will always be at least one MGP midwife attending antenatal clinics so the obstetrician can communicate directly with the MGP about relevant care plans and management.
- All of the MGP midwives will try to introduce themselves to each other’s women throughout the pregnancy, which is beneficial if an MGP midwife, other than the primary carer, has to deliver the baby.

The MGP representatives also advised that they have good relationships with the core midwives, feeling as though they are part of one team, supporting each other to achieve the best outcomes for mothers and babies. Staff from this office considered that this was demonstrated through the interactions between the Midwifery Unit Manager and MGP midwives, which seemed collegiate and consistent with the relationships observed between core staff.

The MGP representatives commented that they face some resistance from the local GP community in advising women about the model of care. The MGP midwives have taken to ‘cold-calling’ women to see if they are aware of the MGP model of care, explaining what it entails and advising them on how to be referred by their GP. The MGP is also considering allowing women to self-refer to the model to address the issues with GP referrals. The MGP representatives explained that the barrier with GPs appears to be in relation to the financial incentive for a GP to manage a woman’s pregnancy and also the high turnover of GPs in Rockhampton—the turnover rate is between 6 and 12 months.

It is clear that the Rockhampton Hospital maternity service is running a high quality MGP and there are plans to expand the service, including recruiting an Indigenous-focused MGP. This will be a gradual expansion as increasing resourcing in the MGP will impact on the resourcing available to the core maternity service. However, as more women birth via the MGP model there should be a corresponding decrease in demand on the core maternity services, balancing out the resourcing requirements.

11.3.2 Shared care

One area of risk for the maternity service comes from referrals from GPs. During the on-site stakeholder visit, representatives from the maternity service expressed the opinion that some higher risk women do not receive the best care possible due to a late referral from their GP to the hospital. In many instances this is not due to a woman’s late presentation to her GP but rather due to the GPs delayed referral to the maternity service. The maternity service is seeking to establish better relationships with the GP cohort to facilitate more timely referrals i.e. as close to 12 weeks gestation as possible. The office was advised that this is challenging due to the frequent changeover of GPs and hesitance on the part of GPs to engage. Some of the strategies being used by the maternity service to improve the referral rate are: providing an electronic referral form that works with the major GP software programs, and holding regular education and meet-and-greet forums, inviting all of the local GPs. These relationships will take time to mature but the efforts being made are focused on providing the best, shared care for mothers and babies.

11.4 Staffing and skills mix

Precipitating the incidents in 2015 and early 2016, there had been considerable discussions around the sufficiency and appropriateness of the staffing and skills mix in the Rockhampton Hospital maternity service, particularly in light of an increasingly complex patient cohort. In mid-February 2016, the tensions between staff and the CQHHS executive reached a critical point with the Queensland Nurses and Midwifery Union (QNMU) calling for a vote of no confidence in the then Chief Executive's leadership and management of understaffing issues. The vote passed and the QNMU wrote to CQHHS cataloguing a variety of serious staffing concerns.⁶⁶ The adequacy of staffing was also a central feature in the review recommendations released in June 2016. The following case study illustrates the issue with staffing and skills mix in 2015:

Case study of Patient A

A contributing factor to Patient A's baby's outcome was the inadequate level of staffing throughout the duration that Patient A was in the birth suite. This staffing was not impacted by any external factors but represented the standard staffing in the birth suite and maternity ward at that time. Specifically, in July 2015, the senior midwife on the morning shift was unable to check-in with the midwife in birth suite, in part because the senior midwife was covering multiple roles. Also, there was no consultant present at the morning handover due to unrecognised leave having been allocated without appropriate cover. On the afternoon shift, a student midwife was assigned to Patient A and the supervision of that student was sporadic and indirect, owing to the primary midwife assigned to Patient A needing to fulfil multiple roles. These included senior midwife, covering all of birth suite, primary midwifery carer of Patient A, and supervisor for two graduate midwives.

A lack of clarity between roles, responsibilities and escalating care meant that staff did not have sufficient capacity to review Patient A's presentation and make a fulsome assessment of her risk status and the care she required. This resulted in a prolonged labour and a poor outcome for the baby.

Understaffing in regional areas is not an issue that can be immediately rectified as it is challenging to attract suitably qualified and skilled staff to vacant positions across regional Australia. In Rockhampton's case this issue was compounded by the poor media coverage of the maternity service in 2016, as the quality of the service is an important factor in attracting staff. Despite these challenges, Rockhampton Hospital committed over the last three years to filling vacant positions and growing the maternity workforce for both midwifery and medical staffing.

11.4.1 Midwifery staffing

Rockhampton Hospital has implemented a number of measures to address the midwifery staffing to make sure that it is safe for mothers and babies. Some of these measures include:

- setting staff ratios for the birth suite, SCN and maternity ward, where possible. These are:

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https://www.qnmu.org.au/QNMU/PUBLIC/MEDIA_AND_PUBLICATIONS/Media_release_uploads/2016/hospital_staff_call_urgent_action_mums_babies.aspx

- one-to-one care for a labouring woman
 - one SCN nurse/midwife to one baby if unstable or on assisted ventilation
 - one SCN nurse/midwife to two babies if they are on CPAP but otherwise clinically stable
 - one SCN nurse/midwife to four babies who are clinically stable
 - one-to-four/five care on the maternity ward during morning and afternoon shifts and one-to-seven care overnight
- establishing a centralised hub of midwifery and nurse navigators^{67,68}, eight of whom sit in CQ Community Health services. The midwifery navigator is closely linked to the maternity services team, supporting women with complex health care needs throughout their pregnancy, birth and postnatal journey
 - allocating three new MGP positions⁶⁹ to the Rockhampton Hospital maternity service
 - ensuring that there is a team leader rostered on to every shift, this role is supernumerary and coordinates and allocates the activity of the service, provides clinical supervision and assesses intrapartum care standards
 - greater support for graduate midwives through the clinical facilitator and clinical coach positions
 - dedicated midwifery educator for the Rockhampton Hospital maternity service
 - increased compliance with all staff inputting into Trendcare⁷⁰ every shift to build a better profile of the care hours versus staffing hours each shift; this has been built into the performance and development expectations of all staff.

The maternity service has clearly made a concerted effort to secure the staffing to ensure that there are sufficient numbers and skill mix on each shift. By March or April 2019, they are expecting to have full occupancy of midwifery positions. Additionally, there has been a commitment to ensuring that staff are not overburdened by multiple responsibilities, allowing them to focus on providing care. The case study below illustrates just one example of how Rockhampton Hospital has supported this approach.

⁶⁷ Funding for the navigator positions is provided by the Office of the Chief Nursing and Midwifery Officer, Queensland Health.

⁶⁸ *Nurse navigators are a team of registered nurses who provide a service for patients who have complex health conditions and require a high degree of comprehensive clinical care* Their key functions including, coordinating a patient's care across multiple health services, improving patient outcomes and facilitating system improvements- <https://www.health.qld.gov.au/ocnmo/nursing/nurse-navigators>.

⁶⁹ CQHHS was received 11.2 new midwifery positions following on from the Queensland Government's promise of 100 new midwives. The three new positions will be funded out of the 11.2 allocation.

⁷⁰ Trendcare is a workforce planning and workload management system that provides data about patient acuity and hours of patient care versus hours of rostered staffing. It can track the hours of care planned versus the hours of care actualised. Trendcare feeds into the Business Planning Framework and health services plan their forward funding and staffing requirements for the service.

Case study of Maternity Day Assessment Unit

In 2016/17, the maternity service acknowledged that there were some difficulties in sustaining one-to-one care when women were labouring due to unplanned antenatal visits. While there was a midwife rostered to attend to these unannounced women, the increasing workload of the service meant that this midwife was routinely pulled away to provide other clinical care.

In an effort to address this disruption and provide a better service to women, in February 2018, the maternity service established a Maternity Day Assessment Unit (MDAU) on the maternity ward for women at equal to or greater than 20 weeks gestation. The MDAU operates between 08:30 and 17:00, Monday to Friday. If women contact the MDAU outside of these hours the phone automatically reverts to the switchboard or team leader. Approximately 50 per cent of women presenting to the MDAU are self-referrals. The types of presentations vary but approximately 50 per cent are due to reduced fetal movement and of those women 90 per cent require no further care. The maternity service is pleased with these figures as it means that women are both aware of the MDAU and education around reduced fetal movement is reaching the community.

The benefit of the MDAU is that midwives are no longer pulled away from the birth suite. Further, the MDAU has a direct link with the antenatal clinics so can loop women back into the clinics to normalise their care. Finally, the MDAU midwives will check through the book for weekends and afterhours to see if they need to follow-up with any women in the community in relation to their care. One of the biggest gaps is ultrasound scans, particularly for rural women. This has been an effective and proactive service supporting Rockhampton women.

11.4.2 Medical staffing

At the on-site stakeholder visit in October 2018, Rockhampton Hospital representatives confirmed that as of 15 October 2018 the obstetric medical workforce was no longer being supported by locum positions. This is the first time in Rockhampton's recent history that it has not had to rely on a locum workforce to fill some vacancies in obstetric medical staffing. The establishment of a permanent team leads to a number of benefits, including more consistent ways of working between medical and midwifery staff, greater accountability and improved compliance with CQHHS and Rockhampton Hospital policies and procedures, and an increased capacity to be more strategic in the development of the maternity service as the staffing and skills mix is a known quantity.

In addition to securing permanent staff, the obstetrics and gynaecological team introduced a four-day roster of 10-hours per day with set clinic days. This provides consistency in rostering for the staff but also frees-up clinicians to assist on days when they are not rostered on clinics. It builds some redundancy and support into the rostering to enable the maternity service to better respond to times of pressure. In relation to the registrars, the maternity service introduced a colour coded system for incoming registrars, which provides a visual representation of their competency. They get rated on the extent of their experience in certain key procedures and clinical situations. This enables appropriate rostering of various levels of experience. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) suspended the placement of registrars at Rockhampton Hospital from 2017 due to the availability of the necessary procedures forming part of the training. One position will be reinstated in 2019 and three positions will be offered in 2020.

Longer term, the obstetrics team is looking to improve obstetric continuity of care, similar to MGP but for hospital-based care, and will assign portfolios to the obstetricians that align across all of the CQHHS facilities to start to build clinical networks. They are also advocating for a gynaecological nurse navigator to assist with managing a woman's care throughout gynaecological and obstetric issues; it is envisaged that this role could coordinate with the midwifery navigator, particularly for women who are non-compliant with antenatal care.

11.5 Culture and communication

In 2015 and 2016, the Rockhampton Hospital maternity service had significant workplace cultural issues, marked by mistrust and poor communication between staff and the CQHHS executive. This was not a culture only requiring repair but wholesale change, led from the top. As with all damaged cultures, they usually require a momentous event as a catalyst for change, which the maternity service had via multiple incidents, the review and a vote of no confidence. It was apparent to staff during the on-site stakeholder visit in October 2018 that there has been an extraordinary shift in the culture of the maternity service, which is continuing to be built upon. Staff observed a commonality in purpose, mission and values that runs like a *golden thread* from the CQHHS executive to front line staff.

This shared culture and improved communication has not occurred in a vacuum—it has taken a considerable amount of energy and a willingness from all staff to change. During the visit, staff from the office were advised that culture has become a key element in recruitment. The maternity service only wants to recruit staff that share the values of the service and will help it thrive; at times this has resulted in positions being left vacant until an appropriate candidate could be engaged. Making these types of decisions in a high-demand and difficult-to-recruit environment is brave and demonstrates a genuine commitment to cultural change.

The below case study demonstrates one of the key, innovative measures utilised by CQHHS to start to address the culture in the maternity service.

Case study of kaizen workshops

In early 2017, the Rockhampton Hospital maternity service held kaizen workshops⁷¹ across five full days. Staff attending the workshops were taken offline and backfilled with agency staff to ensure the whole maternity service could commit to the workshops. The Chief Executive, Executive Director of Nursing and Midwifery; Quality and Safety, and the Executive Director, Rockhampton Hospital also attended and contributed to the workshops. The workshops focused on opportunities and principles, challenges and cultural change, and staff frustrations and issues. They provided everyone with the opportunity to gauge the baseline of the maternity service prior to pursuing their shared improvement journey. At times the workshops were emotional as staff felt damaged by the actions of the CQHHS executive, particularly over the last two years, and needed to express their feelings in a raw and real way.

⁷¹ Kaizen workshops form part of the lean methodology for management. The workshop involves relevant staff coming together and identifying ways to improve processes; where they can be improved immediately the team should come together to make the change.

Case study of kaizen workshops

The workshops were also highly productive. During one of the improvement days staff tried to be innovative in the application of improvements. For example, some midwives wore pedometers during a birth and identified that over the course of a birth they could walk up to eight kilometres due to the layout of the maternity service. In order to reduce this walking time, moving commonly required items around the Birth Suites and Maternity Ward so that they were grouped together made a significant impact.

Staff also came together to create and name the WOMB room. This is a room on the maternity ward, adjacent to the birth suites, where staff have handover, undertake education and generally come together for meetings. Being on the ward it has increased staff attendance at non-clinical meetings and education because they can step in and out of the meeting or education as their clinical care duties allow.

The maternity service described the kaizen workshops as the acute phase in the change management process, whereby issues were identified, solutions explored and commitments made to implementing projects moving forward. The workshops gave all staff a voice, including junior staff. There were 21 projects identified from the workshops—these were voted on by staff and it was agreed that two would be implemented within the first year. Thirteen projects were then planned for implementation over the next three to five years, with seven having been completed to date.

Following on from the kaizen workshops, the maternity service held another four workshops, one per month over four months, each focusing on a specific topic e.g. antenatal care or SCN. The goal of each workshop was to have an open conversation around what makes clinicians feel safe in those clinical environments and how the maternity service could secure a safe service. The CQHHS executive were of the view that once the maternity service was safe it could be refined and move into a phase of achieving 'excellence'.

The above are just some of the steps that the maternity service has taken to improve its culture both amongst staff and between staff and the CQHHS executive. It is clear in meeting with staff and watching them interact that the maternity service has a healthy and positive culture. Staff are held accountable for their actions and feel safe to speak up when they may have concerns. It will be vital for the Rockhampton Hospital maternity service to maintain the culture it has developed and continue to be aware of the possible vulnerabilities of the culture, which need to be attended to as and when they arise.

12. Conclusion

The Rockhampton Hospital maternity service has made significant strides over the last three years, and is no longer the same service that it was in 2016 when the external review was completed. This was evident during the on-site stakeholder meeting in October 2018, where staff from this office observed a genuine commitment to providing a safe and quality maternity service, which is continuously improving so as to provide the best care for the women of Central Queensland. The maternity service has had considerable support and focus from the CQHHS executive so it is now time for the successes to be consolidated and shared across CQHHS. It will be a challenging next phase for the Rockhampton Hospital maternity service to maintain the quality and pace of the change while splitting its focus to

support the other maternity services to reach the same benchmark. I am confident that the maternity service understands its challenges in continually refining the service and has the strategic and operational capability to continue on its journey. In recognition of the change efforts at Rockhampton Hospital, I do not consider it necessary to make any recommendations.