



MATERNITY QUALITY AND SAFETY PROGRAMME

Canterbury District Health Board

Annual Report

2019 - 20

Canterbury

District Health Board

Te Poari Hauora o Waitaha

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The use of māmā/mother/wāhine/woman/women/her/she

We recognise that not all people who become pregnant identify with the female gender. However terms specific to female identity are often used in this document for ease of understanding by a wide audience, while acknowledging that this is cis and heteronormative. Where the words māmā/mother/wāhine/woman/women/ her/she are used, this is not intended to exclude people of diverse gender identity, gender expression, sex characteristics and/or sexual orientation who are going through their pregnancy journey, in particular trans men or non-binary people who have a uterus.

DISCLAIMER

While every effort is made to ensure the accuracy of the information contained in this report, Canterbury District Health Board cannot guarantee this based on the variation and completeness of data supplied.

The Ministry of Health (MOH) Maternity Clinical Indicators are compiled using a range of sources such as the Lead Maternity Carer (LMC) claim forms, Department of Internal Affairs, Statistics New Zealand, and the National Minimum Data Set for hospital inpatient admissions. MOH information will also include homebirths and private birthing facilities (such as St. Georges Maternity Facility). Data may be 'cut' based on birth location, DHB of domicile of the mother, or DHB of domicile of the baby, which may differ to the mother depending on what was recorded at the time of birth. Depending on the measure reported MOH data may also include all stillbirths/terminations greater than 20 weeks or may only include standard primiparae. If a segment of data is missing from the Maternity Dataset (MAT), then the record may be excluded from the data set, denominator or numerator completely - this is particularly applicable to those women who may have birthed under the care of the hospital team and therefore did not have LMC registration data.

Where Neonatal Intensive Care Unit (NICU) information is reported this may not be all babies who have spent time in NICU but only those admitted in or depending on the measure may only be birth events here, transferred to and discharged from NICU. The caveats applied to the measure can change the data quite considerably.

CDHB information includes data for those women birthing, and babies born in CDHB facilities only. The organisation continues to strive for data accuracy and integrity at each step along the way - from LMC forms, CareSys, PICS and HCS data entry, clinical coding, system configuration, transfer into the Data Warehouse, maintenance and reporting.

Data should be used with caution, and in consultation with the CDHB Decision Support team as caveats are applied to each and every figure and table that may or not be transferrable to the context in which a user may wish to apply the data. We ask that you gain quality assurance that data is contextualised accurately when using this information to inform service improvement or funding decisions.

FOREWORD

Kia ora koutou

The Canterbury District Health Board is pleased to present the Maternity Quality and Safety Programme Annual Report for 2019/20.

We have continued to build on work from the past few years and specifically increasing the work we do with the community and ensuring their voices are becoming louder. This has culminated at the end of 2019 with a Maternity Strategy signed off by our Board. This taonga was developed and led by Tangata Whenua and endorsed by Pasifika and others. Having this framework will provide us with an anchor and a vision for our māmā, pēpi and whānau for the first 1000 days of life as we realign our maternity system to focus on the community and what they are telling us they need. In the past the focus has rested with the maternity facilities specifically, but it is time to reorient ourselves and hear what women and their whānau/families are telling us. Women are hapū in the community and not in our facilities. The Strategy guides us and the Maternity Quality and Safety Programme of work to place our focus on the data and the issues but also to find the solutions by working more closely with the women in the many communities within the population we provide services to.

We continue to have a year of high demand both in our secondary/ tertiary maternity hospital and in our neonatal service. At many times both have been over capacity as we see women presenting with increasing acuity related to underlying health conditions such as obesity, diabetes, and hypertension often worsened by the effects of poverty and poor housing. We have noticed a rise in maternal mental health issues particularly anxiety and acknowledge that in the new world occupied by COVID – 19 many are feeling its effects despite New Zealand's overall success in keeping it at bay.

Our community maternity units continue focus on the care of women who are local to them and are building LMC practices around each of these units that then respond to their local populations. Within central Christchurch we continue to have a contract with St. Georges Maternity but we also acknowledge that there are a number of women who do not wish to use this unit and so Christchurch Women's is their only birth option. This adds to the pressure that is felt on this unit with now over 5,500 women each year who give birth there.

For all staff there have been challenges this year with resignations, retirements and sickness leading to shortages at times. We want to take this opportunity to thank everyone for all their hard work which at times has been over and above but the pride and professionalism shown by all has meant we have managed the outcomes for women that are reflected in this report.

There are always times we could have done better but we are all striving to do our best each day for women and their whānau. Our quality frameworks and feedback from staff through the Safety 1st system, consumer feedback through satisfaction surveys and complaint processes and then our reviews at Incident review meetings means we try hard to ensure that the quality cycle is completed. We develop guidelines with the wider community of practitioners, develop pathways to guide referrals, provide education and simulation teaching sessions that reflect common scenarios. Nga mihi nui to everyone from us.

We changed our IT system within the DHB during 2019 and the new system is enabling us to dig into our data more with analysts that increasingly understand the maternity system and the challenges we face. As a result they have focussed on providing us with clean data and ensuring we can be confident locally regarding our data collection. We thank all those who enter this data and those who then review it and ensure its accuracy as the standard primiparous data provided to us does not enable us to really review our way of providing services against the evidence to determine outcomes or to benchmark against other DHBs.

During this year an outpatient clinic is now established at Rangiora health hub. The Maternity Assessment Unit (MAU) at Christchurch Women's Hospital is now a critical part of our maternity system at Christchurch Women's. This also now has outreaches at all of our community units, so women can meet their LMC there and link in with our MAU staff if needed. This services now sees over 200 women each month and we have written it up in this report.

During early 2020 we commenced a project to move to oral Misoprostol for induction of labour rather than using a vaginal pessary - Cervidil®. The project discussion and preparation took almost a year as we gathered our data to ensure we had a benchmark to note the changes that we hoped would occur. We consulted widely within the sector before embarking on these changes and we are confident they would be well received once we commenced. Again, this is noted in this report and we will continue to monitor the impact on this change on women, their babies and on our system expenses (people and finance).

Our Maternity Consumer Council has become an essential part of our system, the members of this Council far exceed those able to attend meetings and we are indebted to them for the sage advice they provide us on a wide range of topics. We have also ensured that the Chair of our council sits on the clinical governance of the Women's and Children's division of CDHB alongside the Child Health Chair of their Consumer Council.

Thank you very much once again to our MQSP Coordinator Sam Burke and our excellent quality team in maternity who keep us all motivated and focused on improving our maternity services in Canterbury. We hope you enjoy reading our report.



Norma Campbell

Norma Campbell

Director of Midwifery,
Canterbury and West Coast DHB



Emma Jackson

Emma Jackson

Clinical Director, Obstetrics and Gynaecology,
Canterbury DHB

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OVERVIEW

BACKGROUND

This is the seventh Canterbury DHB Maternity Quality and Safety Annual Report since the establishment of the Ministry of Health (MOH) Maternity Quality and Safety Programme (MQSP) in 2011.

The National Maternity Monitoring Group (NMMG) came into operation in 2012, as part of this programme, to oversee the maternity system in general and the implementation of the New Zealand Maternity Standards.

The high-level strategic statements of the [New Zealand Maternity Standards \(MOH, 2011\)](#) are:

- Provide safe, high-quality maternity services that are nationally consistent and achieve optimal health outcomes for mothers and babies;
- Ensure a women-centred approach that acknowledges pregnancy and childbirth as a normal life stage;
- All women have access to a nationally consistent, comprehensive range of maternity services that are funded and provided appropriately to ensure there are no financial barriers to access for eligible women.

AIMS AND OBJECTIVES

Canterbury DHB is committed to improving the quality and safety of maternity services for consumers.

The Canterbury DHB maternity services' aims and objectives are to:

- Provide woman-centred maternity care that meets the needs of the population
- Continue to implement, review and establish as required, systems and processes to support the provision of quality and safe care
- Take a whole of systems approach towards improving the health of women/wāhine and children/pēpi as guided by the Ministry of Health's goals and targets
- Align the maternity workforce to meet the needs of the population
- Align and strengthen regional links

The Maternity Strategy visions and values are outlined on Page 14.

PURPOSE

The purpose of this report is to provide information about the DHB's:

- Improvements in relation to the overall aims and objectives
- Achievements against the quality improvement goals set for 2019/20
- Contribution towards addressing the priorities of the NMMG and recommendations from the Perinatal and Maternal Mortality Review Committee.
- Performance in relation to the Ministry of Health's [New Zealand Maternity Clinical Indicators 2018 \(MOH, 2020\)](#)
- Response to consumer feedback and ongoing consumer involvement
- Quality initiative goals for 2020/21

GLOSSARY

Caesarean Section	An operative birth through an abdominal incision.
Episiotomy	An incision of the perineal tissue surrounding the vagina to facilitate or expedite birth.
Gravida	A pregnant woman.
Maternity Facilities	A maternity facility is a place that women attend, or are resident in, for the primary purpose of receiving maternity care, usually during labour and birth. It may be classed as primary, secondary or tertiary depending on the availability of specialist services (Ministry of Health 2012). This section describes women giving birth at a maternity facility.
Multiparous	Multiparous is a woman who has given birth two or more times.
Neonatal Death	Death of a baby within 28 days of life.
Parity	Number of previous births a woman has had.
Primiparous	A woman who is pregnant for the first time.
Primary Facility	Refers to a maternity unit that provides care for women expected to experience normal birth with care provision from midwives. It is usually community-based and specifically for women assessed as being at low risk of complications for labour and birth care. Access to specialist secondary maternity services and care will require transfer to a secondary/tertiary facility. Primary facilities do not provide epidural analgesia or operative birth services. Birthing units are considered to be primary facilities. Primary maternity facilities provide inpatient services for labour and birth and the immediate postnatal period.
Postpartum Haemorrhage	Excessive bleeding after birth that causes a woman to become unwell.
Primary Maternity Services	Primary maternity services are provided to women and their babies for an uncomplicated pregnancy, labour and birth, and postnatal period. They are based on continuity of care. The majority of these maternity services are provided by Lead Maternity Carers (LMCs).
Secondary Facility	Refers to a hospital that can provide care for normal births, complicated pregnancies and births including operative births and Caesarean Sections plus specialist adjunct services including anaesthetics and paediatrics. As a minimum, secondary facilities include an obstetrician rostered on site during working hours and on call after hours, with access to support from an anaesthetist, paediatrician, radiological, laboratory and neonatal services.
Standard Primiparae	<p>A group of mothers considered to be clinically comparable and expected to require low levels of obstetric intervention. Standard primiparae are defined in this report as women recorded in the National Maternity Collection (MAT) who meet all of the following inclusions:</p> <ul style="list-style-type: none">• delivered at a maternity facility• are aged between 20 and 34 years (inclusive) at delivery• are pregnant with a single baby presenting in labour in cephalic position• have no known prior pregnancy of 20 weeks and over gestation• deliver a live or stillborn baby at term gestation: between 37 and 41 weeks inclusive• have no recorded obstetric complications in the present pregnancy that are indications for specific obstetric interventions. <p>Intervention and complication rates for such women should be low and consistent across hospitals. Compiling data from only standard primiparae (rather than all women giving birth) controls for differences in case mix and increases the validity of inter-hospital comparisons of maternity care (adapted from Australian Council on Healthcare Standards 2008, p 29).</p>
Stillbirth	A baby is stillborn when he or she dies during pregnancy (or in-utero/in the womb) after the 20th week of pregnancy or if the baby weighs more than 400 grams at birth. In New Zealand a stillbirth is legally defined as a dead fetus that: (a) weighed 400 grams or more when it issued from its mother, or (b) issued from its mother after the 20th week of pregnancy.
Tertiary Facility	Refers to a hospital that can provide care for women with high-risk, complex pregnancies by specialised multidisciplinary teams. Tertiary maternity care includes an obstetric specialist or registrar immediately available on site 24 hours a day. Tertiary maternity care includes an on-site, level 3, neonatal service.
Weeks' Gestation	The term used to describe how far along the pregnancy is. It is measured from the first day of the woman's last menstrual cycle to the current date.

ABBREVIATIONS

ACC	Accident Compensation Corporation
APH	Antepartum Haemorrhage
BBA	Born before arrival
BFHI	Baby Friendly Hospital Initiative
CDHB	Canterbury District Health Board
CWH	Christchurch Women's Hospital
CYMRC	Child Youth Mortality Review Committee
DHB	District Health Board
EDD	Estimated date of delivery
GP	General Practitioner
HIE	Hypoxic Ischaemic Encephalopathy
ICU	Intensive Care Unit
IOL	Induction of Labour
LMC	Lead Maternity Carer
MAU	Maternity Assessment unit
MOG	Maternity Operations Group
MOH	Ministry of Health
MMWG	Maternal Morbidity Working Group
MQSP	Maternity Quality and Safety Programme
NE	Neonatal Encephalopathy
NEWS	Newborn Early Warning Score
NGO	Non-government Organisation
NICU	Neonatal Intensive Care Unit
NMMG	National Maternity Monitoring Group
NOC	Newborn Observation Chart
NZNO	New Zealand Nursing Organisation
NZCOM	New Zealand College of Midwives
PMMRC	Perinatal and Maternal Mortality Review Committee
PPH	Postpartum Haemorrhage
PROMPT	Practical Obstetric Multi-Professional Training
RMO	Resident Medical Officer
SMO	Senior Medical Officer
SP	Standard Primiparae
SUDI	Sudden Unexpected Death in Infancy
WCDHB	West Coast District Health Board
W&CH	Women's and Children's Health

CANTERBURY MATERNITY STRATEGY

OUR VISION

Canterbury maternity services provide for the maternity needs of all māmā and whānau as and when needed during their maternity journey in order to enable the best start to life for all pēpi and the ongoing wellbeing of mothers.

OUR VALUES

MANA TAURITE EQUITY

Every person has the opportunity to access culturally appropriate services. Those who work across the maternity system reflect the community in which we live, and understand, value and support cultural practices that may be different to their own.

WHANAUNGATANGA EVERYONE BELONGS

The whole whānau is included and important, with each person feeling comfortable and as though they belong. Interaction with the maternity system is a mana enhancing experience.

MANAAKITANGA RESPECT FOR ALL

The maternity system is hospitable through being welcoming, and respectful. We provide the utmost care for each other.

TINO RANGATIRATANGA EMPOWERING WHĀNAU

Whānau are empowered and supported to make their own informed decisions.

ORANGA TONUTANGA HEALTH AND WELLBEING

Whānau have optimal physical, mental, dental and sexual health before, during and after the birth of pēpi. People have the opportunity to enjoy clean smoke free air and clean water wherever they live, work and play (wai ora).

AROHA LOVE AND EMPATHY

Without bias every person² is treated with love, compassion and empathy.

² When we say 'every person' this is inclusive regardless of sexual orientation, gender identity/expression, sex characteristics, ethnicity, age, religion, culture.

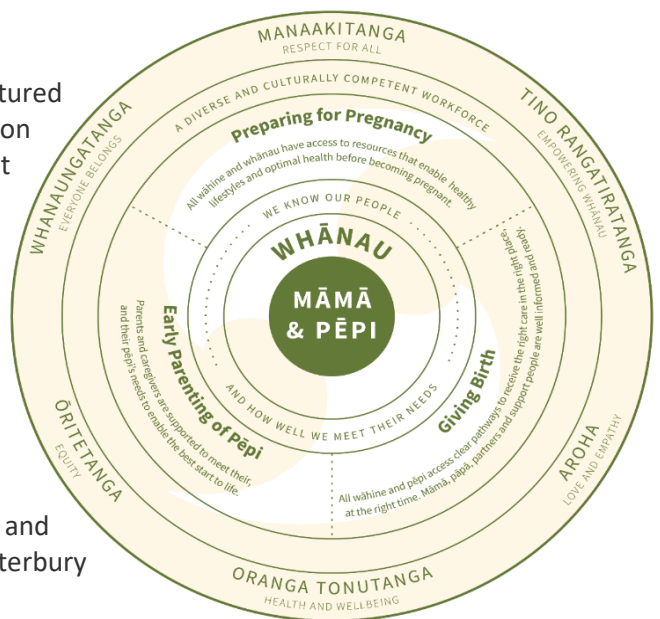
The Canterbury Maternity Strategy also known as the Canterbury Maternity System Strategic Framework (2019-2024) (CDHB, 2019) puts Māmā and Pēpi at the centre of what we do and what we want to achieve for our community.

The framework stands on three pillars and is featured throughout this MQSP annual report and is the foundation document for all CDHB maternity quality improvement work.

The vision statement within the strategy states that “Canterbury maternity services provide for the maternity needs of all māmā and whānau as and when needed during their maternity journey in order to enable the best start to life for all pēpi and the ongoing wellbeing of mothers”.

The strategy also contains statements about our values and provides details about the framework to be used by Canterbury maternity services.

During development of the Maternity Strategy there was extensive consultation through hui with stakeholders from both within and outside of health. A list of partnerships are included in the published document at [Canterbury Maternity Strategy](#).



Maternity Strategy Hui

OUR REGION

The Canterbury DHB is the second largest DHB in the country by both geographical area and population size - serving an estimated 632,300 people (12.8% of the New Zealand population) [Stats NZ 2019](#) (NZ, 2020) in 2019, and covering 26,881 square kilometres.

There are three separate divisions within Canterbury DHB responsible for providing the maternity services; Women's and Children's Health (W&CH), Ashburton and Rural Health services, which includes the Chatham Islands. The DHB also has a contract with St George's Hospital, Maternity Centre to provide maternity care.

CANTERBURY AND WEST COAST 'TRANSALPINE' RELATIONSHIP

Canterbury provides many services for the population of the West Coast DHB. This 'transalpine' approach to service provision has allowed better planning for the assistance and services Canterbury DHB provides to the West Coast DHB, so people can access services as close as possible to where they live.

The Canterbury DHB also provides an extensive range of specialist services on a regional basis to people referred from other DHBs where these services are not available. This includes neonatal services.

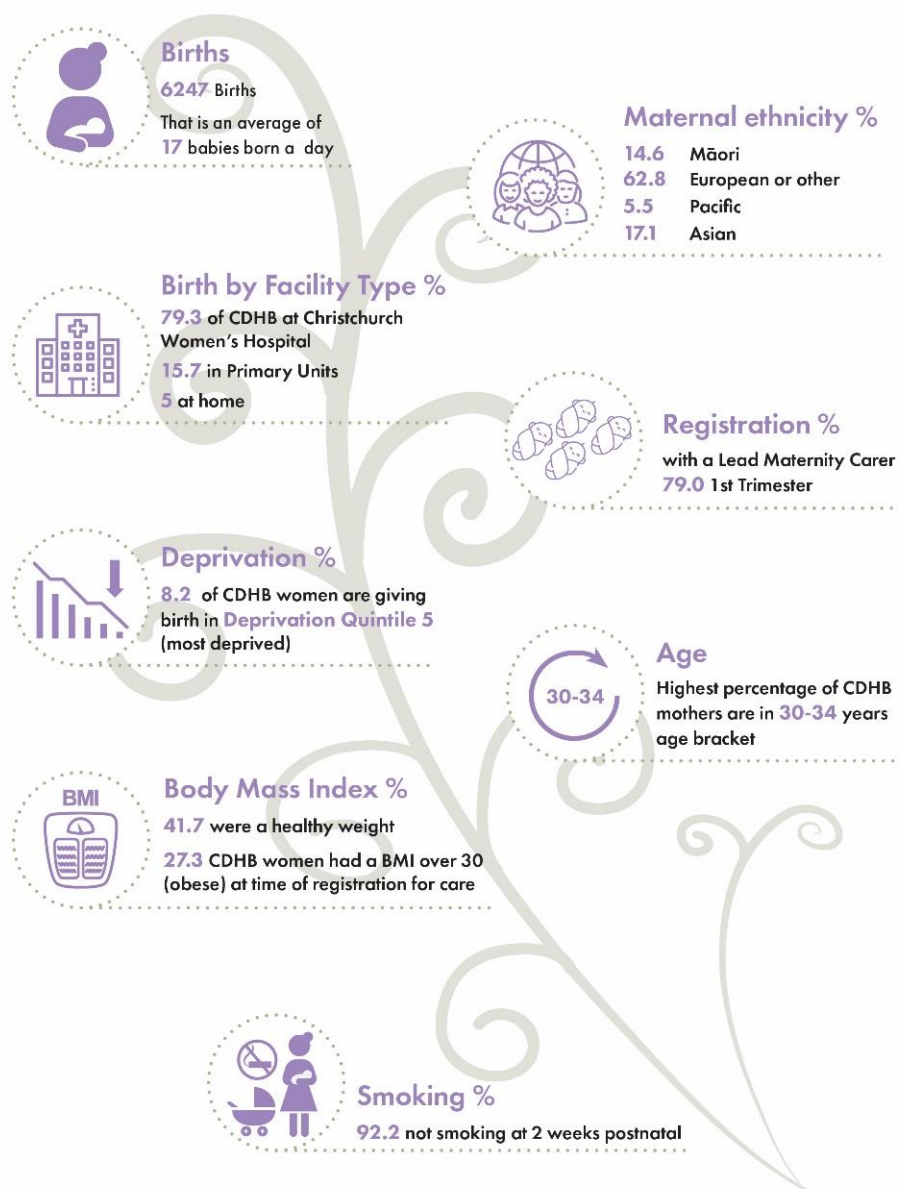


Figure 1. South Island DHB Boundaries

OUR COMMUNITY

Our community demographics are taken from the [New Zealand Maternity Clinical Indicators 2018](#) (MOH, 2020), and the [Report on Maternity web tool](#) (MOH, 2020). These are the latest published MOH reports and have been used to provide a visual picture of health statistics for women giving birth in Canterbury in 2018 which pair with the data presented in the New Zealand Maternity Clinical Indicators and illustrated in this report.

Figure 2. Canterbury DHB snapshot for women giving birth in 2018



OUR MATERNITY SERVICES

There are a range of Maternity facilities available to women in Canterbury (Table 2). Christchurch Women’s Hospital (CWH) is the only tertiary facility and accepts referrals from Canterbury and the West Coast regions as well as throughout the South Island for women who are presenting with complex pregnancies.

All referrals for tertiary care from the West Coast DHB primary and secondary units and Canterbury primary units and homebirths go to Christchurch Women’s Hospital.

Figure 3. gives a visual representation of where rural and remote rural women live and birth in Canterbury. It also provides an indication of women that birth in the tertiary centre from other DHB areas.

Women on the Chatham Islands have antenatal and postnatal care provided by a Lead Maternity Carer (LMC). This is a contracted service between the DHB and LMC. Chatham Islands have a backup emergency service through the health centre in Waitangi. Almost all women leave the Islands to birth.

Table 1. Canterbury Maternity Facilities

	Women’s and Children’s Health Division	Ashburton	Rural Health Services
Primary	<ul style="list-style-type: none"> ○ Lincoln Maternity Hospital ○ Rangiora Health Hub ○ St George’s Maternity Centre (contract with CDHB) 	<ul style="list-style-type: none"> ○ Ashburton Maternity Centre 	<ul style="list-style-type: none"> ○ Chatham Islands (since 2015) ○ Darfield Hospital ○ Kaikoura Health Hub
Tertiary	Christchurch Women’s Hospital		



Figure 3. Place of residence for rural and remote rural women birthing in Canterbury

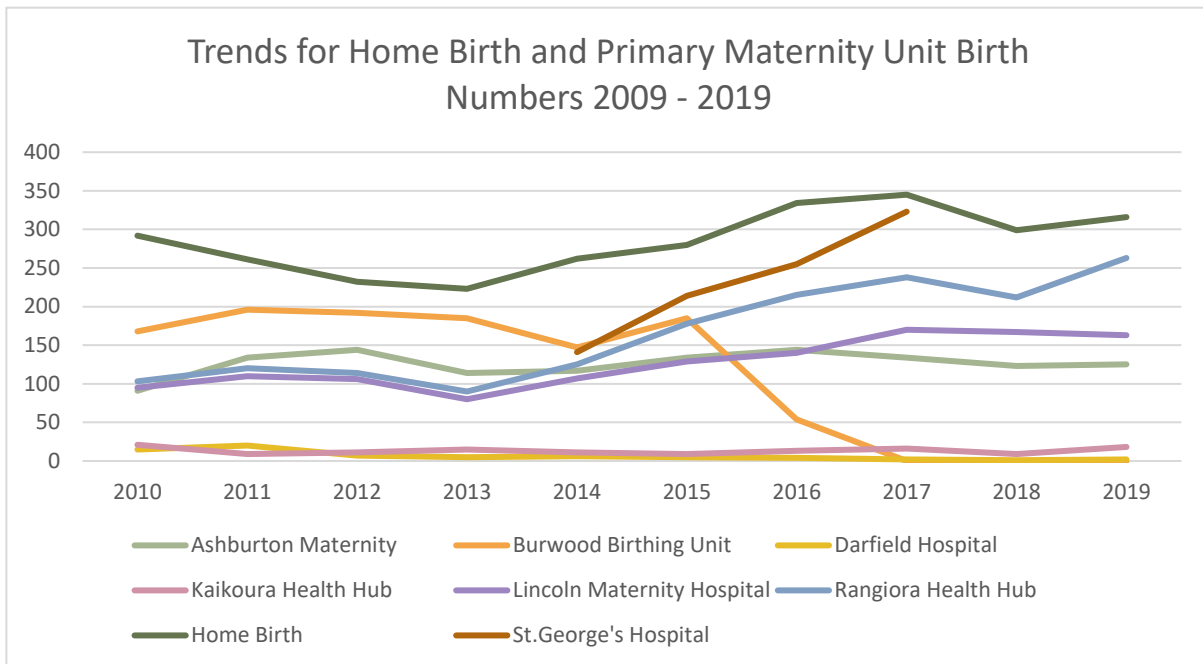


Figure 4. CDHB Trends for Home Birth and Primary Maternity Unit Birth Numbers 2009-2019

A high proportion of our birthing women choose Christchurch Women’s Hospital as their place of birth, 79.3% gave birth at the secondary/ tertiary maternity facility in 2019, with 15.7% birthing at a primary maternity unit. Work to increase birth numbers in our primary units has been active and ongoing since 2010, and it remains a priority of our maternity strategy.

The CDHB have committed to providing care closer to home which has included purpose-built facilities to provide maternity care for women in North Canterbury and Kaikoura Districts.

In 2021 a primary birthing unit, as part of a planned health and social services hub, will open in Rolleston to improve access to health services for the rapidly growing Selwyn population.

Due to the continued work in this area there has been a consistent and upward trend in primary unit birthing as demonstrated in Figure 4.

Canterbury’s home birth rate numbers have also continued to increase in Canterbury.

“All staff are very friendly and helpful, full of knowledge”

Lincoln Maternity Hospital

CDHB MATERNITY HOSPITALS AND PRIMARY MATERNITY UNITS

Our Maternity facilities extend across Canterbury from Kaikoura to Ashburton. Despite the high birth rate at our main centre, Christchurch Women's Hospital, a significant proportion of women will transfer for postnatal care to one of our primary maternity units. The following information provides an overview of these facilities and their activity during 2019 can be reviewed in Appendix 1.

CHRISTCHURCH WOMEN'S HOSPITAL

Overview:

Births = **5229**

Secondary/Tertiary Hospital - designed for women with complex maternity needs which require specialist multidisciplinary care.



- Day Assessment Unit
- Fetal Medicine Unit
- Maternity Assessment Unit located on the Ground Floor of Christchurch Hospital
- The 'Garden Room' is available for women experiencing fetal loss in the latter half of pregnancy
- **13** Rooms for labour and birth
- **2** Pools for water birth
- **2** Acute Observation beds
- **2** Multi-purpose rooms
- **5** Assessment rooms
- **2** Operating theatres
- **45** Antenatal / postnatal unit beds
- **16** Clinic rooms
- **11** Intensive care cots
- **30** Special care cots

RANGIORA HEALTH HUB

SUZANNE SALTON,

CHARGE MIDWIFE/NURSE MANAGER

Distance **35km, 41mins from Christchurch**

PRIMARY MATERNITY UNIT

2 Rooms for labour and birth

2 Pools for water birth

4 Assessment rooms

10 Postnatal rooms



LINCOLN MATERNITY HOSPITAL

BRONWYN TORRANCE,

CHARGE MIDWIFE MANAGER

Distance **19.7km, 30mins from Christchurch**

PRIMARY MATERNITY UNIT

2 Room for labour and birth

2 Pools for water birth

1 Assessment room

6 Postnatal rooms



ASHBURTON MATERNITY

JULIE DOCKRILL,

CHARGE MIDWIFE MANAGER

Distance **87km, 1 hour 8mins from Christchurch**

PRIMARY MATERNITY UNIT

2 Rooms for labour and birth

1 Pools for water birth

5 Postnatal rooms



DARFIELD HOSPITAL

LEANNE DAVIE,

CHARGE NURSE MANAGER

Distance **44km, 40mins from Christchurch**



PRIMARY MATERNITY UNIT WITH
CO LOCATED CONVALESCENT UNIT

- 1** Room for labour and birth
- 1** Pool for water birth
- 2** Postnatal rooms

KAIKOURA HEALTH HUB

AROHA ABRAHAM, LMC FOR KAIKOURA DISTRICTS

JUDE CLARK, CHARGE NURSE MANAGER

Distance **181km, 2 hours 10mins from Christchurch**

Overview:

PRIMARY MATERNITY UNIT



- 1** Room for labour and birth
- 2** Postnatal rooms



ST. GEORGE'S HOSPITAL

ANDREA ROBINSON,

CHARGE MIDWIFE MANAGER

Distance 5.1km, 12min from Christchurch Women's Hospital

Overview:

PRIMARY MATERNITY UNIT



3 rooms for labour and birth – **2** with birthing pools

1 swing room (can be used for another birthing room or postnatal)

10 postnatal rooms

2 rooms for private stay

2 assessment rooms

5 rooms available - for use if required as “overflow” from surgical areas



OUR WORKFORCE

Canterbury's maternity service is provided by our multidisciplinary team of midwives (Lead Maternity Carers (LMC's) and DHB employed midwives), obstetric doctors, GP's, physicians, nurses, lactation consultants, allied health and support staff.

Christchurch Women's Hospital, which is Canterbury's secondary/tertiary unit, provides antenatal clinic care, which includes specialised clinics for high risk pregnancies, diabetes, Ngā Taonga Pēpi and fetal maternal medicine. The outpatient clinic at Christchurch Women's Hospital also provides antenatal care for a small number of women unable to initially secure an LMC.

In line with our maternity strategy and CDHB commitment to provide care closer to home, we provide some antenatal clinics at Rangiora Health Hub, Lincoln Maternity, St. George's and Ashburton with the aim of improving access to our services and care closer to home.

A specialist obstetric clinic is also provided at Rangiora, Ashburton Hospital and the Chatham Islands. We hope to offer these at all of our units as SMO availability allows.

We are also continuing to look at further opportunities to provide specialist consultation and care closer to home exploring the use of technology further to enable this. This continuing work is included in our MQSP priorities and action plan.

A day assessment unit provides observational care for women under the care of the obstetric team, reducing the need for inpatient care.

Christchurch Women's Hospital is an Obstetric and Gynaecology teaching hospital providing a 24-hour service for consultation and acute care.

The medical team consists of:

- Clinical Director
- 20 Full time equivalent (FTE) Obstetricians and Gynaecologists
- 0.7 FTE Obstetric Physician
- 1.6 FTE Medical Officers
- 2 FTE Fellows
- 17 FTE Registrars (RMO)
- 9.5 FTE House Officers
- Anaesthetic cover 24/7

In 2019, 347 midwives identified Canterbury DHB as the primary place of work as a midwife (MCNZ). This equated to 10.7% of the national workforce.

The head count of midwives and nurses employed by the Canterbury DHB to work in the maternity setting fluctuates but is approximately 163, with a majority working at Christchurch Women's Hospital.

In addition to these nurses and midwives we have a senior midwifery team, which consists of:

- Director of Midwifery
- Midwifery Manager
- 6 Charge Midwife Managers
- 13 Associate Charge Midwives (who cover the unit 24/7)
- 2 Midwifery Educators
- 1 Baby Friendly Hospital Initiative (BFHI) Coordinator
- 1 PMMRC Coordinator

We also have approx. 70 ward clerks and hospital aids who are invaluable members of the team.

Six new graduate midwives were employed in the CDHB new graduate programme in 2019.

OUR MATERNITY OPERATIONAL GOVERNANCE AND LEADERSHIP

GOVERNANCE STRUCTURE

The Canterbury DHB Maternity Operations Group (MOG) is comprised of members of the hospital interdisciplinary team as well as community facilities and consumer representation. This group develop, support and guide the operational quality work within the maternity service from several sources as outlined in Figure 5.

The group meet once a month either face to face or with videoconferencing and bring together staff from Women’s and Children’s Health, Ashburton, Rural Health services and St. George’s (CDHB).

With a variation to the crown funding agreement for the Maternity Quality and Safety Programme in late 2020 the terms of reference for MOG have been reviewed to align with the increased scope of the programme and reporting requirements. Changes to the membership of the group and name change to CDHB Maternity Quality Governance Group have also been revised to reflect the links to programmes of work across the CDHB relevant to mama and pēpi.

QUALITY PLANNING AND REPORTING

Figure 5 below gives a graphic representation of the current and revised structure for the MQSP crown funding agreement for 2020 to 2023. It demonstrates the internal and external inputs that then inform and drive the Maternity Operations Group (to be renamed CDHB Maternity Quality Governance Group) in developing an annual quality plan and MQSP annual report. It also outlines the governance structure and reporting lines within the CDHB which extend across the health system.

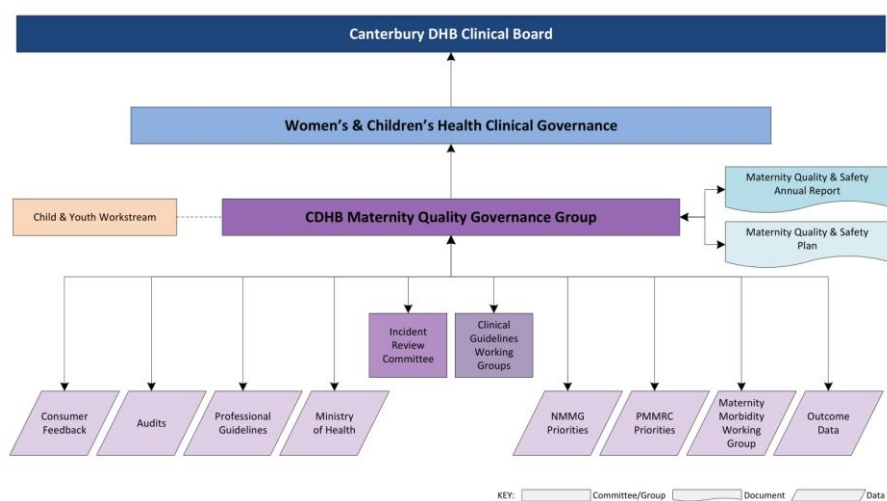


Figure 5. Governance Committee Structure and Reporting Lines

CONSUMER ENGAGEMENT

Engaging with our community through consumers of our maternity service continues to be one of the priorities of the CDHB Maternity Quality and Safety Programme (MQSP).

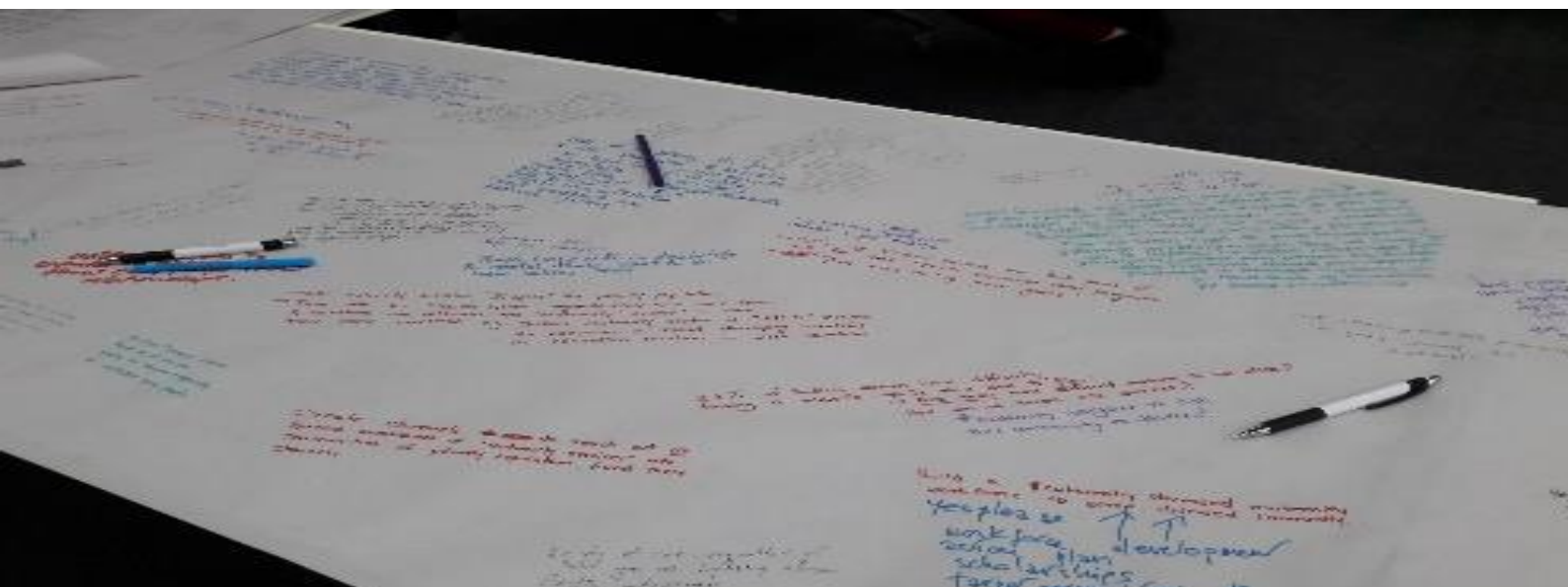
The forum has grown organically since the first hui in 2017 and is now an essential part of the maternity system. The huis are attended by various community groups, which include:

- Representation from Manawhenua ki Waitaha who are a representative collective of the seven Ngāi Tahu Rūnanga that are in the CDHB's district of responsibility
- Canterbury Breastfeeding
- PND Group
- La Leche League
- Home Birth Canterbury
- Canterbury Homebirth Associations
- Remote rural and rural hapū and mama
- Nepalese community
- Pregnancy Help
- Indian community



Women's Health Advisory Forum virtual meeting during Alert Level 2

Consumer members represent the advisory council at different hui, for example, the Maternity Operations Group and Baby Friendly Hospital Initiative steering group and do so as nominated by the council and are representative of all members and the groups they link into. The group provides the opportunity for information sharing, presentations, updates on maternity projects and networking. The meetings are held every six weeks and as a DHB we actively seek feedback and consultation on quality mahi that we are reviewing or developing.



“Over a period of several years the CDHB Maternity Consumer Council has evolved and grown. We meet bimonthly in person and via Zoom videoconferencing. This past year the council has been led by Jen Coster as Chairperson and Lisa Kahu as Vice Chairperson. Our council has become integral to ensuring that the CDHB gives women and their Whānau a strong voice, especially those who are unable to stand up for themselves.

Our group is very diverse and covers a great deal of the wider Canterbury community groups. In particular this year we have heard how important it is to communities like Kaikoura that we look at ways to improve equity of access to care for example, reducing unnecessary travel and utilising telehealth options. We also need to

look at ways that we can improve care for our Māori women and their whānau. If we address the needs of these wāhine, then we improve care for all of those who come through. It’s not just about how we treat the people who come through our services, but how we actually make them feel. We need to see the whole picture of a person. It has been a challenging year with COVID 19 and the council would like to acknowledge the support and hard work of all the CDHB staff who go above and beyond to give great care”.

“Mai Te Kopae, ki Te urupa, tatou ako tonu ai”.

“From the cradle to the grave we are forever learning”.

*Jen Coster, Chair, Women’s Health Advisory Forum and
Lisa Kahu, Vice-Chair Women’s Health Advisor Forum*

COVID - 19 WHAT WE LEARNED

Following the COVID – 19 Level 4 lockdown, as a part of informing our future pandemic planning, we took the opportunity to gain feedback from women birthing in some of our maternity units during this time: Christchurch Women’s Hospital, Lincoln Maternity Hospital, Rangiora Hospital and St George’s Maternity.

We were keen to hear feedback on care during this unprecedented time and use this information to advise how we could do better if there is ever a lockdown situation again. We were looking for themes and trends. A summary of the COVID – 19 Level 4 lockdown results and lessons learnt is shown in Appendix 2.

COVID -19 LMC LIAISON ROLE

CATHERINE RIETVELD,

COVID – 19 LMC LIAISON MIDWIFE

I was employed by the New Zealand College of Midwives Canterbury/West Coast Region (NZCOM), from 30th March 2020 – 30th April 2020, to assist Helen Fraser in her LMC Liaison role.

My principle task was to develop an accurate database of LMC’s and their practices. This newly created role was also an essential pastoral care role for LMC’s in Canterbury at this time. I had the responsibility of discovering how the new COVID-19 services delivery environment worked, with all its requirements and restrictions affecting the midwives at the “coal face”. I also needed to establish if any midwifery practices had additional case capacity should any midwife require caseload support. The additional support for midwives and women would need to be arranged quickly if a midwifery practice were placed in quarantine having been exposed to or tested positive for COVID-19.

During the first week of my appointment I spent much of my time achieving an up to date contact list for LMC’s in the Canterbury & West Coast region. Neither the NZCOM nor CDHB could supply the latest LMC contact list. I do acknowledge that maintaining a current LMC data base is a difficult task as people and practices change. I compared the existing contact lists from CDHB and NZCOM and cross referenced them against the Find Your Midwife website. Once I had compiled an up to date contact list, I sent out an email to one LMC from each practice asking for a spokesperson to be nominated. Most responded to this request quite quickly.

Each spokesperson was then contacted by phone and a profile of each practice was developed. I explained the purpose of my call and the data collection and that the data would only be used to facilitate care and support for LMC’s, women and their whānau during the COVID-19 pandemic. The data collected gave me a sense of how each practice was responding to and coping with the new challenges. We discussed any shortfalls that they might have in resources both physical and electronic. During our conversations I was able to respond to specific requests, provide support and make suggestions as to the most appropriate course of action in line with the NZCOM & MOH COVID-19 guidelines and directives.

My calls were well received and feedback from LMC’s was that the contact should have happened much earlier in the lockdown. I recorded the information gathered from the practice spokespersons under the following headings:

- A list of practice partners with the cell phone and email of the nominated spokesperson
- Each LMC's working status – full time, part time or on leave
- The geographical area of the practice
- The practice caseload
- The practice acuity as determined by the spokesperson. Described as low=1, medium=2, high=3 or severe=4. This was a blunt tool but gave a sense of how complex the practice caseload might be
- Any practice limitations for LMC's in the vulnerable persons category
- Any additional capacity the practice might have for midwifery care
- Was Home birth offered?
- Were any women scheduled for an elective caesarean section suitable or willing to consider vaginal birth after caesarean?
- Was the practice or any of the LMC's epidural certified?
- What are the support networks and back up arrangements?
- Did the practice feel adequately resourced?
- Did the practice have any recommendations or requests?
- Themes from the list of suggestions, requests and recommendations were identified and these formed the basis of the list of suggestions and recommendations presented to both CDHB and NZCOM.

I compiled an email list of the spokespersons from each practice which was circulated to the NZCOM secretary LMC Liaison.

I fielded emails and calls from LMC's about various issues and was able to assist them to identify solutions to their problem or refer them to someone who could help with their query.

Many of the calls I fielded from LMC's were in relation to the transfer of care from the LMC to the Well Child Provider. Many LMC's stated that the family had been informed by their chosen Well Child Provider that there would be no face to face contacts during Levels 3 and 4 lockdowns. This meant there was ongoing care by LMC's long after the 6-week discharge date.

It is my perception from informal feedback received from LMC's, managers, regional and national NZCOM personnel, and the CDHB that the role of COVID-19 LMC Liaison was considered valuable. I would suggest that a similar role be considered an integral component in the rapid response by NZCOM and CDHB to any provincial or national emergency situation that affects midwifery service delivery in the future and that other areas should consider this also.



STRENGTHENING AND SUPPORTING OUR MATERNITY TEAM

LMC LIAISON ROLE

HELEN FRASER,

LMC LIAISON MIDWIFE

“My name is Helen Fraser and I am the LMC Liaison. I am also an LMC midwife running a full caseload and am an active member of the Canterbury West Coast Region of the New Zealand College of Midwives.

Within my role I attend many regular meetings including Maternity Operations Group, Incident Review, Maternity Strategy and this year I am looking forward to progressing forward with the Child and Youth Workstream focus of “The First 1000 days”. I also attend a variety of other meetings ensuring the voice of LMC midwifery is heard and our perspective is acknowledged.

Late last year the Misoprostol induction of labour regime began. I was pleased to have been a part of this process dating back from the previous year when I was involved in a focus group who visited Mid Central DHB. It has been an exciting journey and is already showing positive outcomes for both women and LMC midwives.





Each quarter I encourage all LMC midwives to attend a forum with Norma Campbell, Director of Midwifery and other key staff from the Maternity sector. This enables open discussion and a chance to air any issues. I continue to strive to improve communication at all levels and I welcome contact from anyone. I try to be visible and available to all midwives and I liaise daily with the midwifery community.

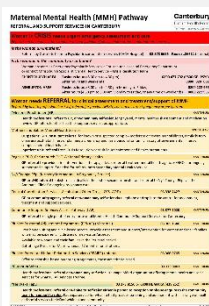
I meet regularly with Norma Campbell and Katherine Gee, Midwifery Manager and am in close contact with the Chair of the NZCOM Canterbury West Coast Region. I attend the monthly meetings of the NZCOM Region when I feedback to the members both as a group and individually”.







OVERVIEW OF MQSP PRIORITIES 2019/20








This table summarises the quality improvement work undertaken by our Maternity Services in the 2019/20 years. The work is the result of interdisciplinary collaboration and the involvement of consumer representatives.







- Indicates that the work has been completed and / or in business as usual phase
- Indicates that the work is in progress / underway and nearing completion
- Indicates that there is still a significant amount to achieve before completion


	Priority area	Progress Report	Status
1.	<p>To ensure women have access to appropriate mental health services during pregnancy and postpartum</p> <p>NMMG Workplan, 2019</p> <p>PMMRC (Maternal Mortality) Recommendations, 2018</p> <p>CDHB Annual Plan 2018/19</p> <p>MQSP 1 of 2018/19 priorities and action plan</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>A multidisciplinary group from all sectors involved in maternity and tamariki ora services was formed to evaluate the awareness, access, use and effectiveness of the CDHB maternal mental health pathways and services for inpatient and community maternal mental health.</p> <p>A complete stocktake of Canterbury DHB funded services and non-government organisations that provide a myriad of support services for māmā and whānau/family was completed.</p> <p>It was recognised that different services would be accessed depending on the needs of the māmā and that they needed to encompass a holistic approach to supporting wellbeing, which included:</p> <ul style="list-style-type: none"> - reducing isolation and linking into networks and support groups - providing clothes, equipment and cooked meals - referral to professional services, i.e. counselling, smoking cessation - a 'one stop shop' for advice and education opportunities - assistance navigating government agencies for financial support - phone and online support <p>The services identified in the stocktake were included in an easy-to-use document and distributed widely for health professionals and women to be able to contact support services. It is also available at our CDHB Pregnancy and birth journey webpage and is updated every six months.</p>	<p style="text-align: center;">     </p>



	Priority area	Progress Report	Status
		<p>The resource was also developed into a sticker that is placed into every Tamariki Ora/wellchild book and it is also uploaded onto Healthinfo as an A4 fact sheet Community support for mental illness during and after pregnancy</p>  <p>Maternal mental health is also incorporated into the CDHB Maternity Strategy as a priority area as one of the three pillars 'Giving Birth' by:</p> <ul style="list-style-type: none"> - Enabling māmā to confidently access the right care, in the right place and at the right time, for themselves and their unborn pēpi. - Support the use of rongoā and other traditional practices within whānau as part of acknowledging the cultural diversity within our community. - Providing community pregnancy support that meet the needs of māmā and pēpi to receive care in the right place and at the right time. <p>We have included this as ongoing work in our MQSP priorities and action plan for 2020/21.</p>	
2.	<p>District Health Boards (DHBs) should demonstrate that they have co-developed and implemented models of care that meet the needs of mothers of Indian ethnicity</p> <p>PMMRC Recommendations, 2019</p>	<p>As a part of the development of the Canterbury Maternity System strategic framework we engaged with the local Indian communities. This was a valuable opportunity to share local data on clinical outcomes for women in this community group and begin dialogue to explore opportunities to enhance pregnancy and birth care.</p> <p>Representation from the Indian community are involved in the CDHB Women's Health Advisory Forum.</p> <p>There is an ongoing working relationship with the many faces of the Indian community as they have also identified maternity services as a key issue.</p>	  
3.	<p>DHBs should monitor key maternity indicators by ethnic group to identify variations in outcomes. They should then improve areas where there are differences in outcome</p> <p>PMMRC Recommendations, 2019</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>We continue to review the NZ Maternity clinical outcomes and local data to identify variation in outcomes. This year we have focussed on reviewing local data for our total birthing population but also examined the clinical outcomes by ethnicity group as is reflected further in the report.</p> <p>Data analysis by ethnicity group was used to form the basis of our CDHB MQSP annual report presentation day and the address from our keynote speaker which was in lieu of the publication of the MOH New Zealand Maternity Clinical Indicators, 2018.</p>	

	Priority area	Progress Report	Status
4.	<p>DHBs to monitor any data which is has variance outside national averages.</p> <p>Maternity clinical indicators - data expectations:</p> <ul style="list-style-type: none"> • Review the data; • Investigate variances; • Implement initiatives; and • Report on outcomes. <p>NMMG workplan, 2019</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>A multidisciplinary review of the maternity clinical indicator data is undertaken with each publication from the MOH.</p> <p>Trends are identified using both local data and the clinical indicator data and opportunities for improvement identified and prioritised for action in 2019/20.</p> <p>‘Misoprostol for induction of labour’ was a large quality improvement project undertaken in 2019. This project was identified to not only improve clinical outcomes, specifically; induction of labour rate and spontaneous vaginal birth, but also the woman’s/wāhine experience of labour and birth. An overview of the project is given further into the report.</p> <p>In collaboration with our decision support analysts work has now aligned our local data with the Robson Classification to allow a standardised comparison of data, particularly around our caesarean section rate not only in NZ but internationally.</p>	   
5.	<p>Support for women to access midwifery led birthing units that are desirable and meet the needs of our population and in turn increase use of these birthing units. Support for women around homebirth.</p> <p>MQSP 7 of 2018/19 priorities and action plan</p> <p>NMMG Work plan, 2019</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>Increasing birthing numbers and occupancy of our primary maternity units has plan to be a focus for the CDHB.</p> <p>Further opportunities to focus on the promotion of primary birthing will continue with the CDHB Maternity Strategy, and it will be included as ongoing work in our MQSP priorities and action plan for 2020/21.</p> <p>In 19/20 the CDHB announced a new ten bed maternity unit was to be built along with the Selwyn District Council. This township, Rolleston, is one of the fastest growing towns in NZ. The unit is due to open in 2021.</p> <p>There has been a continued increase in primary and home birthing since 2013 as shown in Figure 4, page 19.</p>	 
6.	<p>To continue to improve the screening and referral rates of women for family violence</p> <p>MQSP 8 of 2018/19 priorities and action plan</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>Work in this area continues to improve family screening results for pregnant women. This work has been rolled over into the MQSP priorities and action plan for 2020/21 as this is still an area where we could do better.</p>	

	Priority area	Progress Report	Status
7.	<p>All neonatal encephalopathy (NE) cases need to be considered for a Severity Assessment Code (SAC) rating. Neonatal hypoxic brain injury resulting in permanent brain damage (or permanent and severe loss of function) should be rated as SAC 1. Those who received cooling with as yet undetermined outcome should be rated as SAC 3</p> <p>PMMRC Recommendations, 2019</p>	<p>A review of current processes in place for reporting through to the CDHB incident management system Safety 1st has been undertaken.</p> <p>A clear pathway and notification system are being developed for CDHB staff to capture all neonatal encephalopathy (NE) cases, modified from the Auckland DHB <i>Rapid Multidisciplinary Panel (RAMP) Review Process</i>. An adaptation of some of their processes will improve our methods for review of Hypoxic Ischaemic Encephalopathy (HIE) cases and speed up our current processes.</p> <p>Our aim is to:</p> <ul style="list-style-type: none"> - Improve detection of babies born who at risk of NE - Improve the compliance of notification of all Neonatal encephalopathy Sarnat 2 and 3 to the Maternity Quality team and Incident Review Group (IRG) via the CDHB incident management system Safety 1st - As soon as possible after an HIE event, complete a review summary for each case using a template we are developing based on the ADHB and HQSC templates. The summary of the case to then be presented at the next fortnightly IRG meeting with the expectation that there will be enough information at that point to confirm a SAC rating. Confirmed SAC 1 and 2s would then be taken through the Sentinel Event Review and Report process. The platform for review for confirmed SAC 3 and 4 cases would at this point would be progressed within the IRG environs or expanded to a Service Level Review whichever deemed most appropriate by the IRG group members 	 
8.	<p>All babies with NE, regardless of severity, should have a multidisciplinary discussion about whether to refer to the Accident Compensation Corporation (ACC) for consideration for cover as a treatment injury, using ACC's Treatment Injury Claim Lodgement Guide. Parents should be advised that not all treatment claims are accepted</p> <p>PMMRC Recommendations, 2019</p>	<p>A review of current processes is underway as outlined in point 7. This will include a clear pathway and notification system is in place for CDHB staff to review and notify ACC as required of all neonatal encephalopathy (NE) cases.</p> <p>All cases of diagnosed NE are discussed as part of our interdisciplinary meeting on Tuesdays at lunchtime. This meeting is for all maternity health professionals to discuss PMMRC cases and morbidity cases including maternal morbidity.</p>	
9.	<p>Implementation of the Maternity Early Warning System (MEWS) CDHB wide</p> <p>MMWG recommendations, 2019</p>	<p>Phase 1 and Phase 2 of implementation of MEWS across the CDHB completed</p> <p>Phase 3 – The next step is to implement MEWS into the non-maternity areas across Canterbury DHB. We are awaiting Patientrak as these areas use this application for their adult early warning system.</p> <p>The Newborn Observation Chart NOC/NEWS chart has been live since February 2020. NEWS/NOC auditors have been appointed as part of their</p>	  

	Priority area	Progress Report	Status
		clinic portfolio or QLP to ensure weekly audits are carried out to monitor implementation.	
10.	<p>Women who are admitted to an HDU or ICU should be offered the opportunity to debrief and discuss their experience between three and six months following the maternal morbidity event</p> <p>MMWG recommendations, 2019</p>	<p>A review of current processes in place for follow up of all women admitted to ICU for care following a maternal morbidity event has been completed.</p> <p>A process is in place to review monthly any ICU admissions (which are reported for Maternity Early Warning System (MEWS) auditing of outcome measures).</p> <p>An audit of the twelve ICU admissions in 2020 demonstrated that all women had a formal follow up and debrief with referral for ongoing support if identified.</p> <p>Development of a 'Birth after Trauma' clinic which women/wāhine and/or health professionals will be able to refer to is underway.</p> 	<p>●</p> <p>●</p> <p>●</p> <p>●</p>
11.	<p>Realign maternity services to provide care closer to home when clinically indicated</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>There continues to be a move of regular education and specialist antenatal and postnatal clinics to locations other than Christchurch Woman's Hospital.</p> <p>Work continues to link with rural and remote rural communities to understand real issues for women accessing maternity care and support services.</p> <p>Work continues to investigate the feasibility of telehealth to provide specialist consultation and care to rural and remote rural communities.</p>	<p>●</p> <p>●</p> <p>●</p>
12.	<p>Implement Trendcare and Care capacity demand management programme (CCDM)</p> <p>NMMG recommendations, 2019</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<p>The CCDM programme was implemented in Maternity services as scheduled in August 2020 beginning with Trendcare workshops for Charge Midwives and Trendcare Champions.</p> <p>All staff have received training in Trendcare and IRR Testing [annual testing of all staff who use Trendcare to ensure data is accurate and complete] is in progress.</p> <p>CDHB is part of a national forum [including Maternity service providers] to ensure consistency in the use of Trendcare and CCDM.</p> <p>CCDM team is working closely with our information support services to ensure that Trendcare is available to staff 24/7, including access to a Service Desk after hours.</p> <p>A pathway is under development for escalation during times of high acuity or reduced staffing which includes a Variance Response Management (VRM) Maternity Escalation Process Standard Operating Response flipchart. This incorporates the current Maternity Escalation process.</p> <p>Once IRR Testing is complete the data will be considered validated and can be confidently used for the next step in the CCDM programme, i.e. FTE Calculations.</p> <p>Monthly reporting through Safety 1st is ongoing at this point to capture and review escalations for safe staffing.</p>	<p>●</p> <p>●</p> <p>●</p> <p>●</p> <p>●</p> <p>●</p> <p>●</p>

MATERNITY QUALITY SNAPSHOT



Trendcare and Care Capacity Demand Management Programme (CCDM) implemented into all CDHB Maternity Units



"Message from your Pēpi" developed with consumer group for support persons staying with Māmā in hospital



"What Matters to You?" feedback forms reported quarterly across the CDHB to identify areas for improvement

14 new graduate midwives were employed in 2019 & 2020




61 Midwives achieved Quality Leadership programme (QLP)

Women's Health Consumer Advisory Forum meet every six weeks



Maternity Mental Health Pathway developed




Oral Misoprostol introduced for induction of labour


5 new maternity guidelines were developed and 7 updated and reviewed



Flannel warmers for perineal support in second stage of labour rolled out in tertiary unit



Free education for all midwifery, nursing staff and LMCs




NZ National Maternity Early Warning Score implemented in the acute observation unit and all five primary community units

OUR QUALITY INITIATIVES

Continued evaluation and improvement of our maternity services is vitally important to Canterbury DHB. It underpins our vision, values and goals for Women's and Children's Health and is encouraged to be a part of everyday business for the team. We are actively involved in the implementation of the wider organisations quality initiatives but also draw improvement projects from many sources, not limited to, but including:

- audit recommendations
- clinical case reviews
- incident investigation
- new evidence for clinical practice changes
- consumer feedback

Our quality activities always strive to ensure the women's experience is optimal by reducing variation and being evidence based.

During 2019/20 our team worked on many quality improvement projects, and for the purposes of our MQSP Annual Report we have chosen a handful to showcase our efforts and ongoing quality work.

SUPPORTING OUR COMMUNITY TO STAY WELL - ORANGA TORANGA


SMOKING CESSATION

SOLEDAD LABBE-HUBBARD
PROJECT SPECIALIST, PLANNING & FUNDING, CDHB



Smoking cessation remains a priority area for the CDHB. In all previous MQSP Annual Reports we have included our ongoing work on smoking cessation during pregnancy and reported on our results.

[Stop Smoking Canterbury - Te Hā - Waitaha](#) has had in place a pregnancy incentives programme since 2017, providing free medications (NRT products and Quickmist) and multi-session evidence based behavioural support to develop and maintain strategies and coping mechanisms to support a positive outcome. Sessions are provided to individuals and in groups. This has been widely adopted by community providers.

 [Facebook Stop Smoking Canterbury](#)

There have been on average 100 referrals per quarter being managed by Te Hā - Waitaha.

SUDI PREVENTION

KATE NICOLL

SUDI PREVENTION CO-ORDINATOR, TE PUAWAITANGA KI ŌTAUTAHI TRUST

Promoting the safe sleep message for pēpi and engaging with whānau continues to be a key focus for the SUDI prevention coordinator. Stronger relationships are being developed with Te Hā Waitaha kaimahi around this mahi and referrals for wahakura have been increasing. A Kaiwhakapuawai role has also been created to work across the SUDI prevention space including wahakura wānanga, kōrero with community groups- particularly young whānau, Whānau Mai pregnancy and parenting and the pregnancy breastfeeding classes from Te Puawaitanga ki Ōtautahi Trust.

Te Rā Mokopuna was held in December with a focus on kaimahi who work with whānau contributing to SUDI prevention, 28% of the attendees were Stop Smoking Practitioners.

A Health Learn forum and eLearning package has been completed and uploaded for all the South Island DHB's to access as part of supporting staff.



The SUDI prevention coordinator has also been working around post SUDI processes and support within the CDHB. A small working group including the regional CYMRC coordinator, Hauora Māori (CDHB) and community paediatrician liaison (CDHB) has been developed to further this work. Alongside this the coordinator is involved with the national expert advisory group on SUDI.



Baby Harlow in his wahakura

PROMOTING AND PROTECTING BREASTFEEDING INFORMATION – COVERING THE BASICS

SARITA GARGIULO-WELCH

MIDWIFE, BFHI CO-ORDINATOR, CDHB

The exclusive breastfeeding rate on discharge from the Christchurch women’s hospital maternity ward for babies greater than 37 weeks gestation who did not have a NICU admission was 72.24%. With the same set of criteria, babies receiving ANY breastmilk at discharge was 96.17%.

Exclusive breastfeeding rates for babies on discharge who were born in our primary community maternity units is 87.45%.

Across all maternity units, the percentage of parents choosing not to breastfeed from birth sits at around 3.5%.

One significant quality project that commenced in 2019 and has progressed over 2020 was the development of a “Breastfeeding Information – Covering the basics” resource for parents and whānau. Provided for all postnatal parents, “Covering the Basics” will help support parents to get their breastmilk supply off to the best possible start. Designed to *supplement* individualised maternity care, it is hoped this information resource may go some way to addressing the perception of ‘conflicting’ advice around lactation initiation and breastfeeding support.

The information covers the basics for four common scenarios experienced during the early postnatal days and can then be further individualised based on each dyad’s clinical and infant feeding needs. The resource is kept with parents in their maternity rooms.

“Covering the Basics” provides information about:

- Breastfeeding your baby
(for the well parent and baby dyad)
- Breastfeeding your baby when there are identified challenges
(for the parent and baby dyad with common issues known to impact breastfeeding and/or the establishment of lactation)
- Feeding your NICU baby – getting your breastmilk supply off to the best start
(for the parent who has been medically separated from their baby, admitted to NICU)
- Feeding your baby infant formula
(for parents who have made the informed decision not to breastfeed)

The resource went through a significant consultation process, including consultation with the Women’s Health Advisory Forum (who has a diverse membership), Canterbury Infant and Young Child Feeding Network membership, BFHI Steering Group at CWH, staff and feedback from whānau who used the resource during the initial trial and was signed off for use by our Maternity Operations Group.

The feedback received from users of the resource was overwhelmingly positive (due to the intense nature of the first few days of parenthood). Continued feedback will be obtained as use of “Covering the Basics” increases so that we may continue to develop the resource to ensure it best meets the needs of our consumers.

*“Advice and support available
27/7”*

Ashburton Maternity

REMOTE RURAL MIDWIFERY

AROHA ABRHAM, LMC, KAIKOURA

Kaikoura has a population of approximately 4,220 people and is situated on the East coast of the South Island 180 Kms North of Christchurch. The district is a relatively large geographical area and extends from Kekerengu trough to the coastal Conway and is inclusive of the inland Conway. The birthing unit is situated at the Kaikoura Health Te Hā o Te Ora an integrated health centre in between the long term care facility and acute care service. It is not uncommon for women who birth here to have friends or whānau/family members using one of these facilities or working at the hospital. The dynamic within the birthing unit is often reflective of the small and caring nature of the wider Kaikoura community.

Christchurch Women's Hospital is the tertiary provider to Kaikoura. It is 3 hours by car/ambulance and 45mins by helicopter to transfer. The road situation to and from Kaikoura is unique. There are two roads South and both of these can be problematic. The coastal road will close due to landslides in poor weather and is also closed at night for repairs. The inland road has no cell phone coverage. Part of the role of the midwife is to have an up to date understanding of the roading situation and navigate this appropriately.

Kaikoura has one midwife in the district at a time and an annual caseload of approximately 40 women. The GP's attend all births and act as the second midwife. The service provided by the GP's gives women confidence and is crucial to the delivery of birthing services in Kaikoura. For women the idea of birthing in Kaikoura is appealing. This is largely due to how much more convenient not travelling to Christchurch



is. Because of the rural environment women have different employment dynamics and getting time off work can be challenging. An example of this would be women who work on farms where time off can be an animal welfare issue.

A review of the current 2021 client load shows that out of the 20 women who are eligible to birth here (well women with no comorbidities or pregnancy complications) 17 have planned to birth in Kaikoura. Out of the 17 who plan to birth here 11 are women having their first baby. From a midwifery perspective the normal birth culture that exists in Kaikoura is an enjoyable bonus of the job.

For the women who are not eligible to birth in Kaikoura, coming to Christchurch for an undetermined amount of time can be daunting. In the last 12 months prior to March 2021 17 women were required to be in Christchurch. Women are often encouraged to be in Christchurch as they approach 37 weeks and stay in accommodation to await birth. Jay is Kaikoura's permanent locum coming to Kaikoura approximately every 3 weeks for a week. Jay returns to Christchurch and provides continuity of care in Christchurch to any women who have had to head South.

HOME BIRTH IN CANTERBURY

VIOLET CLAPHAM, HOME BIRTH MIDWIFE

Data show that whilst the national rate of homebirth in 2017 was 3.4%, the incidence is higher in the Canterbury region (4.6% in 2017, 5.9% in 2018). Accessing reliable and timely data on homebirth incidence and outcomes is problematic and would be a valuable future focus for the CDHB reporting on maternity, especially considering the rising rate of homebirth in the region. Amongst developed countries, New Zealand's homebirth rate is second only to the Netherlands (homebirth rate 20%). Homebirth incidence is believed to have increased during Covid-19 lockdown periods, although data are yet to be released.

The NZ College of Midwives supports homebirth as a safe choice for many women, with outcomes known to include less pain relief requirement and fewer Caesarean section and forceps births.

RANZCOG statements support hospital birth as the 'safest' place of birth in Australia/NZ and suggest homebirth should be supported only for 'low risk' women having their second or third baby.

There is a growing body of evidence to support planned homebirth compared to planned hospital birth, including a recent systematic review including 28 studies. This review found that place of birth did not have a statistically significant impact on infant mortality.

Future research focus is needed on women's satisfaction with their birth experience, and the impact of place of birth on outcomes such as breastfeeding success, postnatal depression, newborn microbiome, and newborn weight loss/gain.



NEWBORN HEARING SCREENING

ANGELA DEKEN

UNIVERSAL NEWBORN HEARING SCREENING COORDINATOR

2019 Outcomes

Eligible babies for screening: 6564

Screening completed: 6449

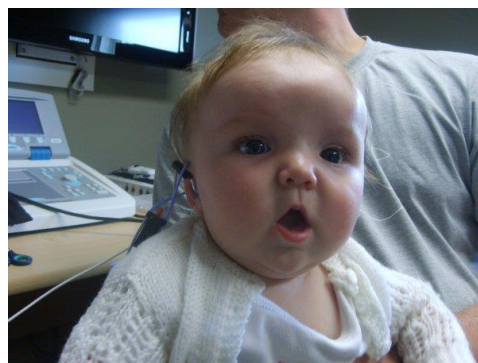
Referred to audiology: 67

Surveillance: 54

Screening not completed:

Declined 39

DNA/Disengaged/Lost contact/Missed: 76



Baby Elise

PROGRAME OUTCOMES:

Percentage of the Population that has completed screening:

Outcome	Number	Percentage
Babies completed screening	6449	98.2% of the population
Referred to audiology for diagnostics	67	.74%
Audiology surveillance	54	.82% who completed screening
Offered screening	6552	99.8% of all babies' parents
Declined screening	39	.6% of offered
Didn't complete screening: DNA, disengaged, lost contact and missed	76	1% of eligible babies
Number of babies diagnosed with hearing loss	11 3 babies had no risk factors 3 had risk of syndromes 2 had microtia 1 had a family history of loss 1 had complex medical history 1 had hyperbilirubinaemia	2 bilateral SNHL 1 unilateral SNHL 3 mixed bilateral 1 mixed unilateral 3 conductive unilateral 1 Auditory Neuropathy Spectrum Disorder (ANSO)
Habilitation	2 babies referred to cochlear implant program and 1 baby implanted 10 referred to ENT and Paediatricians 5 referred for hearing aids 3 referred to advisors on deaf children	

MATERNITY EARLY WARNING SYSTEM

SAM BURKE

MATERNITY QUALITY SAFETY PROGRAMME (MQSP) COORDINATOR, CDHB

The maternity vital signs chart is based on the New Zealand adult Early Warning Score (EWS) system that is being implemented across Canterbury DHB as a part of the Health Quality and Safety Commission (HQSC) patient deterioration programme.



The Maternity Early Warning System (MEWS) is designed specifically to address the unique physiology related to pregnancy which can mask early indicators of deterioration.

The system helps clinicians identify when a pregnant woman's condition is becoming worse, prompting a rapid response using the tailored escalation pathway.

The MEWS has been developed nationally giving a standardised chart for clinicians regardless of ward setting and is for all women from a positive pregnancy test through to six weeks postnatal.

Canterbury DHB was part of the first cohort nationally to implement the MEWS.

Phased implementation of MEWS

Phase 1 – In October 2019, MEWS was implemented in Christchurch Women's Hospital Maternity areas (the Maternity ward, Birthing Suite, Women's Outpatient clinics and the Maternity Assessment Unit).

Phase 2 – In late May 2020, MEWS was implemented in the acute observation unit within the Birthing Suite at Christchurch Women's Hospital and also in primary community maternity units in Kaikoura, Rangiora, Ashburton, Lincoln and St George's.

Phase 3 – The next step is to implement MEWS into the non-maternity areas across Canterbury DHB, this will also include utilising Patientrak. In preparation for this we have been liaising with the vendor and Waitemata DHB who piloted the MEWS Patientrak module. We have also worked with all other campuses across the CDHB to work through the escalation processes in the case of deterioration when we do have Patientrak running. This work has now been picked up by the Health Quality and Safety Commission.

Systems put in place and learnings from the implementation processes have included:

- the development of a standardised frequency of observations matrix which mirrors our clinical guidelines depending on the reason for requiring observations, for example observations required post normal vaginal birth

- Roll out of education for all staff both online and also incorporated into emergency skills day, PROMPT and maternity practice skills day
- Continued weekly audit of MEWS charts to review where there are learning opportunities for staff to improve audit results. These are available for staff and link into the sponsors of the project, the Maternity Operations Group and CDHB Patient Deterioration Steering Group
- All escalations to the emergency team and Intensive Care unit (ICU) admissions are reviewed as a part of MEWS auditing to identify cases for review and subsequent recommendations for change to clinical practice



MEWS working group members: From left to right: Rhonda Robertson, Sam Burke, Louise McKinney, Tina Hewitt, Suzanne Esson, Helen Fraser

MATERNITY ASSESSMENT UNIT

LAURA AILEONE AND LOUISE MCKINNEY
 MATERNITY PROJECT SPECIALIST AND ASSOCIATE CHARGE MIDWIFE MANAGER

The Maternity Assessment Unit (MAU) formally opened in September 2019, following a 10-month detailed process of planning and coordination to separate unplanned antenatal assessment from the Birthing Suite environment. The goal of the MAU establishment was to realign antenatal service provision and bring about a more nationally and internationally consistent model of antenatal assessment.

The original vision of the MAU and the outcomes we have achieved over the last almost 18 months since it has opened has been to:

- Redirect as clinically appropriate antenatal activity to a dedicated assessment space
- Create more capacity within Birthing Suite to deal with intrapartum care and acute presentations
- Improve flow for women accessing unplanned antenatal care at CWH
- Provide a culturally appropriate and welcoming space for women and their whānau to be able to access
- Alignment to nationally and internationally consistent antenatal assessment models with a clearer pathway for presentation, assessment and treatment as required.

Prior to the establishment of the MAU all antenatal assessments were carried out within the Birthing Suite environment, with the following baseline:

- An average of 660 antenatal attendances on Birthing Suite per month
- An average length of stay for all women of 3hrs 30mins
- Wait times for women noted up to 7 hours
- Overall impact of this 'churn' on the Birthing Suite overall workload
- Women coming to and been seen on Birthing Suite when not in labour

We are now 18 months into implementation and have had significant positive outcomes since establishment including:

Following MAU establishment, we have seen the following changes:

- Approximately 213 attendances of women taken off Birthing Suite per month (this is a redirection of 32% of all antenatal attendances per month)
- An average length of stay for women of 1hr 57mins (this is a decrease of 47% of pre- MAU establishment wait times)
- Approximately 57 women per month being referred to Birthing Suite directly
- Approximately 7 women per month being admitted to the Maternity Ward directly
- Approximately 149 women per month being discharged directly home through midwifery led discharge process
- A 'fit for purpose' antenatal environment, with women not having to go onto the busy Birthing Suite environment if they don't need to. Birthing Suite is busy with higher acuity, greater noise, bells etc versus the MAU which is a quieter and more bespoke antenatal environment.

Overall this means we have been able to:

- Redirect 2,556 women off Birthing Suite per year and to the MAU instead
- Have the ability to provide service 7 days week 7am-10pm
- Seen 1,788 women in MAU and sent them directly home per year (70% of all attendances)
- Overall 47% reduction in length of wait time for women needing assessment
- Improved flow for women from 3hr30min average wait to 1hr57 wait now
- Support a midwifery led unit where midwives can work to the top of their scope - midwives working within the MAU have commented on the immense satisfaction at being able to work in such an autonomous way, in a midwifery led unit and to top of scope
- Freed up the workforce capacity within the medical workforce in not having to do the initial attendance / work up for antenatal women
- Extremely positive feedback from consumers, medical staff, midwifery staff, LMCs
- Operating expenses less than originally budgeted

LMC Feedback

- *"Fabulous Staff and service, best initiative the CDHB have devised and instigated for past 20 years I've worked as an LMC"*
- *"As an LMC I have found MAU space highly valuable - amazing for timely assessments"*
- *"So appreciate this valuable service"*

Consumer Feedback

- *"The care was really good and timely"*
- *"Nice and quiet compared to the old observation unit"*
- *"So lovely and friendly and no waiting to be seen!"*
- *"Great people, amazing experience and great service"*

In summary the MAU establishment has substantially transformed the way in which we provide unplanned antenatal assessments for women within the CDHB. Most importantly we believe we have improved the assessment process for women, significantly reduced their wait times and now provide a more culturally appropriate space for them to access when required. At the same time we have been able to better support our busy maternity workforce to ensure the right clinicians are caring for women at the right point in our DHB system. The creation of the MAU has allowed us to do things differently, within our existing workforce and budget constraints but to demonstrate that it can be possible to change a model of care to better meet consumer needs, when it is clinician driven and comes from an innovation focus.

MISOPROSTOL FOR INDUCTION OF LABOUR

LAURA AILEONE

(PREPARED ON BEHALF OF THE ORAL MISOPROSTOL FOR INDUCTION OF LABOUR IMPLEMENTATION WORKING GROUP)

The CDHB commenced with the implementation of Misoprostol as the active Induction of Labour (IOL) agent on the October 12th, 2020. This followed over a year of planning and coordination of the change from our previous medication of Cervidil® to misoprostol. We have been the first tertiary DHB in New Zealand to implement for IOL use. Importantly this has meant the change from vaginal to oral administration of medication, which is a significant change for women and our midwifery and medical workforce.

Although we have only had misoprostol for IOL in place for approximately 4 months the preliminary findings have been extremely positive to date. We have seen almost immediate positive impacts on clinical outcomes, reduced perceived delays in care, improved staff morale and overall culture change in the Birthing Suite. Also the benefits of increased autonomy and midwifery leadership from midwives running the assessment unit process and commencing and monitoring the misoprostol part of IOLs. We have also had pharmacy and stock management changes and in turn substantive financial savings.

Overall the impact we have seen from commencement is:

- 411 misoprostol IOLs since commencement
- Vaginal birth rate of 69%, Caesarean section rate of 31%
- Increase of vaginal births since misoprostol implementation: from 69% to now 76%
- Decrease of caesarean section births since misoprostol implementation: from 31% to now 24.2%
- 62% of women who had oral misoprostol went into established labour within 24hrs of having their first dose
- Reduced oxytocin usage
- Gradual decline overall in numbers of women needing epidurals potentially correlated to the gradual decline in numbers of women who have oxytocin infusions
- Financial impact emerging, with significant savings on drug costs and consumables
- Data showing we are using less morphine in early labour
- Extremely positive consumer feedback
- Positive overall staff feedback, medical, midwifery, LMCs, pharmacy and management.

We will continue ongoing monitoring of data as we progress with moving to business as usual. Overall, we are confident that this approach is better for women and their babies as well as having a significant positive impact on our maternity workforce and Birthing Suite. The implementation has resulted in not just a medication change but a substantive difference in how we care for women requiring an Induction of Labour at CWH.

OBSTETRIC RESEARCH UPDATE

DI LEISHMAN

RESEARCH MIDWIFE – UNIVERSITY OF OTAGO

Cleft lip and palate study

Ongoing recruitment of cases and controls for this gene and environment study on risk factors involved in cleft lip and / or palate.

PIPIT Study

Recruitment is complete for the PIPIT trial. Two hundred and thirty Christchurch women have consented for the study.



The study aims to look at the benefits to women and their babies of introducing a blood test (S-Flt/PIGF ratio) to direct the management of suspected pre-eclampsia or small for gestational age babies.

Respiratory Syncytial Virus Vaccine

Due to COVID-19 and the national lock down no women were recruited in Christchurch this year for the RSV study.



Working with Pfizer next year's recruitment will commence from 25th January 2021. To be eligible for the vaccine women will need an EDD between 17th May and 17th September 2021.

This is a phase 3, randomized, double blinded, placebo-controlled trial to evaluate the efficacy and safety of a Respiratory Syncytial Virus (RSV) Perfusion F Subunit vaccine in infants born to women vaccinated in pregnancy.

C*STEROID STUDY (commencing in 2021)

The main aim of the C*STEROID Trial is to assess whether giving women antenatal corticosteroids prior to planned Caesarean Section at 35⁺⁰ to 39⁺⁶ weeks safely reduces the risk of breathing problems for baby after birth.

The C*STEROID Trial is a multi-centre, triple blind, placebo controlled, parallel, phase 111 trial with randomisation at participation level (1:1 allocation ratio). Participants in this study are assigned randomly to receive either the corticosteroid medication betamethasone or a placebo injection containing saline.

The PROTECT Me TRIAL (commencing in 2021)

A triple – blinded, randomized, parallel-group placebo-controlled trial (PROTECT ME) to assess the impact of maternal antenatal melatonin supplementation on early childhood developmental outcomes in the setting of severe preterm fetal growth restriction.

Many thanks for the ongoing support from pregnant women who participate in ongoing research and their caregivers both midwives and obstetricians who promote and support women to access these trials which aim to improve outcomes for mothers and babies.

PROMPT- PRACTICAL OBSTETRIC MULTI PROFESSIONAL TRAINING

DR SHARRON BOLITHO
SENIOR MEDICAL OFFICER, OBSTETRICS AND GYNAECOLOGY, CDHB
(PREPARED ON BEHALF OF THE PROMPT TEAM)

PROMPT PROGRESSES and GAP–GROW is COMING!

An update on 2 key CDHB Perinatal and Maternal Mortality and Neonatal Encephalopathy Prevention initiatives.

The New Zealand Perinatal and Maternal Mortality Review Committee (PMMRC) and the subcommittee on Neonatal Encephalopathy makes many recommendations involving training in its annual reports.

A frequent one is;

‘All clinicians involved in the care of pregnant women should undertake regular multidisciplinary training in management of obstetric emergencies.’ 2016 PMMRC Report.

However, there is training and there is training and all initiatives are not equal. It is always important to evaluate the effectiveness and outcomes of quality initiatives in the area of training. PROMPT and GAP GROW are evidence based programmes showing clear improvements in clinical outcomes. For example PROMPT Bristol has shown a 50% reduction in Neonatal encephalopathy when all professional groups

attend PROMPT annually. Their results have been sustained over 20 years. PROMPT programmes in Zimbabwe have shown a >30% reduction in maternal mortality.

PROMPT

PROMPT is a Practical Obstetric Multi Professional Training programme that focuses on giving a unit's real multi professional emergency team a chance to practice teamwork and giving effective care in their real work environment, (also known as in situ simulation). A multi professional team of Facilitators, led by Midwifery Educators Tina Hewitt and Rhonda Robertson, Obstetrician Sharron Bolitho and an anaesthetic lead, has run PROMPT for CDHB since 2008. Please note we see LMCs as a vital part of our teams and they are invited and welcome to attend this course at no cost. Many LMCs attend the smaller Unit PROMPTS, for example those we have supported at Ashburton and Te Nikau Hospitals in 2020.

In the last couple of years the programme has been revamped, introducing a new version of PROMPT, increasing the hands-on component, including perinatal simulation and improved liaison with both NICU and quality. NICU staff are now attending PROMPT and training and simulations are including neonatal resuscitation. Christine Dwyer, Quality Coordinator, Maternity has recently joined our leadership team and we are closing the 'quality feedback loop' by training on quality hot topics and by feeding back to quality department potential problems picked up in simulation to be actioned, to avoid the same thing happening in real life. Only one course was cancelled due to COVID - 19 last year.

Our local team are at the forefront of developments nationally. Exciting news for 2021 is that 'PROMPT Aotearoa' is launching PROMPT 3 (latest version) at the inaugural PROMPT T3 ("Train The Trainers") Workshop at Manawa in March. PROMPT is now run in every DHB in Aotearoa. The inaugural course is for the South Island and there has been a very enthusiastic response with the course fully subscribed with representatives from all hospitals and many smaller birthing units.

GAP – GROW

The **Growth** Assessment Protocol (**GAP**) is a **programme** developed by the Perinatal Institute that consists of the use of gestation-related optimal weight (**GROW**) customised charts, alongside a **schedule** of antenatal risk assessment for SGA, management protocols for suspected SGA fetuses, audit tools and training. It is one of four initiatives supported by the ACC Neonatal Encephalopathy (Prevention) Taskforce. The strategy is to identify growth restricted babies and optimise their care with the aim of decreasing still birth and NE.

GAP GROW has been rolled out throughout the rest of Aotearoa. In 2020 Canterbury and West Coast DHBs were one of the few DHBs outstanding. Following an online webinar with Prof Lesley Mc Cowan and Joyce Cowan the project leads, and successful contract discussions we are pleased to announce that this programme is coming to Christchurch in 2021. The programme is funded by ACC for 20/21 and further 22/23 years.

If you would like to find out more about GAP GROW please refer to the NZ GAP section of the Perinatal Institute website <https://www.perinatal.org.uk/GAP/NZ>

IMPROVING EQUITY FOR LONG TERM CONTRACEPTION

RACHEL THOMAS
MANAGER, PLANNING AND FUNDING, CDHB

Training which NZ Family Planning has been contracted to provide has been delayed. We hope to be able to provide training for midwives to widen access for women.

Low Cost Contraception consults and free funded long acting reversible contraception (LARC) for eligible women is available in most Canterbury general practices. 1493 insertions and 760 removals have been completed since the programme began in April 2019. A consult costing \$5 can be made at a general practice to discuss what free device is the best option. Pathways for high risk groups who may not access the service through general practice are being developed.

ELIGIBILITY

Women, transgender men and non-binary people who have a uterus and;

- are a resident in the CDHB area and enrolled in a Canterbury General Practice and;
- hold a community services card; or
- are under 18-year-old; or
- Maori and Pacific; or
- alcohol or illicit drug dependent; or
- a high user of Maternity Services (hx of TOP, unplanned pregnancy or miscarriage in the last 5 years); or
- have a long term, severe mental health disorder including any psychotic disorder, BAD, severe depression.

- 1) **Free Long Acting Reversible Contraception (LARCs).** Free insertion and removal of funded LARCs for the eligible population. No additional charges for consumables or a co-payment may be charged.
- 2) **Very Low-Cost Consultations for Contraception.** A maximum \$5.00 co-payment may be charged.



Maternity Annual Report 2018/19 presenters. From left to right: Catherine Rietveld, Violet Clapham, Neroli Nicholson, Cara Meredith, Laura Aileone, Nicola Austin, Rosemary Reid, Sam Burke, Jen Coster, Norma Campbell, Emma Jackson. Not pictured Helen Fraser, Lisa Kahu.

OUR OUTCOMES

CLINICAL INDICATOR ANALYSIS

The MOH data [New Zealand Maternity Clinical Indicators 2018](#) (MOH, 2020) was published in October 2020. The publication shows key maternity outcomes for each DHB for 2018 and is the most recent published MOH data available for compilation of this Annual Report.

The analysis below shows Canterbury DHB's performance and position in relation to both the indicators and national rate. Percentage figures are from either the DHB of domicile or the facility of birth, as indicated, and Clinical Indicators 2, 3, 4, 5, 6, 7, 8 and 9 are based on the standard primiparae only.

The "standard primiparae" (SP) make up approximately 15% of all births nationally.



The standard primiparae group are:

- Aged 20 – 34 years, with uncomplicated singleton pregnancies
- Birthing at full term with a cephalic presentation

This group represents the least complex situations for which intervention rates can be expected to be low and therefore give valid comparisons between institutions.




The purpose of these indicators is to increase the visibility of quality and safety of maternity services and to highlight areas where quality improvement can potentially be made.


As a maternity service we have, and continue, to use these clinical indicators in developing our quality planning. As a DHB we have deliberated that the eight clinical indicators that apply the SP is not reflective of the total wider birthing population due to the narrow criteria and consequently small numbers. In order to better analyse these clinical outcomes, we also review our total birthing population as seen from page 61.

Of the remaining twelve clinical indicators; eight apply to all women giving birth in New Zealand, one to all babies born in New Zealand and three to babies born at term (between 37 and 41 completed weeks' gestation).

Findings from this work together with the clinical indicators have directed us in developing our one and three year MQSP priorities and action plan.

Table 2. Canterbury DHB Clinical Indicator Analysis 2018

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower national rate	National Rate
INDICATOR 1 - REGISTRATION WITH AN LMC IN THE FIRST TRIMESTER OF PREGNANCY (ALL POPULATION GROUPS)		78.1%	80.0%	79.3%		72.7%
<p>Comment: This indicator has continued with an upward trend overall since 2009 for all ethnic groups and as a DHB we remain above the national average, (see Appendix 3).</p> <p>As a DHB we continue to focus on opportunities for improvement; in particular equity of access to maternity services, this is a as a priority area as one of the three pillars 'Giving Birth' within the CDHB Maternity Strategy.</p>						
Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
INDICATOR 2 - SPONTANEOUS VAGINAL BIRTH (ALL POPULATION GROUPS)		SP 69.2%	SP 64.5%	SP 62.0%		SP 64.7%
<p>Comment: 2018 Standard primiparae rates were below the national average, there had been improvement since 2009, but a decrease in 2016 for both national and CDHB rates (see Appendix 3).</p> <p>Action: This continues to be a focus for our service and remains a priority for our quality improvement action plan for 2020/21.</p>						
Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
INDICATOR 3 - INSTRUMENTAL VAGINAL BIRTH (ALL POPULATION GROUPS)		SP 16.5%	SP 19.0%	SP 20.0%		SP 17.0%
<p>Comment: Overall from 2009 – 2018 there has been a downward trend in instrumental birth, although our rates remain higher than the national average, (see Appendix 3).</p>						

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 4 - CAESAREAN SECTION (ALL POPULATION GROUPS)	SP 13.6%	SP 15.1%	SP 17.6%		SP 17.2%

Comment: The SP rate had been consistently below the national average from 2012 – 2017 but has trended upwards since 2015 through to 2018 at 17.6%, (see Appendix 3).


The rate of caesarean section for Māori and Pacifica are 9.3% and 10.5% respectively and have shown a downward trend since 2009.

Action: We continue with mandatory fetal monitoring training for all CDHB health professionals undertaking any aspect of electronic fetal monitoring and is a strong recommendation for all self-employed Lead Maternity Carers (LMC's). The CDHB minimum requirements are a once-off face to face session for new staff or for those requiring a more in-depth update. The online education module is compulsory once every two years for all other staff.

A further project undertaken to improve clinical outcomes including the rate of caesarean section is a change in process for induction of labour. This is featured in detail on page 47.

CDHB 'Fetal heart monitoring' maternity guideline continues to be reviewed and updated regularly to ensure we are following best practice.

This clinical outcome continues to be a focus for our service and remain a priority for our quality improvement action plan for 2020/21.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 5 - INDUCTION OF LABOUR (ALL POPULATION GROUPS)	SP 6.4%	SP 6.3%	SP 6.3%		SP 7.8%

Comment: Nationally there is a consistent increase in induction of labour rates. The SP group for the CDHB remains relatively static after a sharp increase of 2.1% in 2016, (see Appendix 3).

As a DHB we have introduced the use of oral Misoprostol for induction of labour, as a part of the implementation of the draft Induction of Labour in Aotearoa New Zealand – A clinical practice guideline 2019.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 6 - INTACT LOWER GENITAL TRACT (ALL POPULATION GROUPS)	SP 34.3%	SP 31.9%	SP 25.2%	↓	SP 26.5%

Comment: The rate of intact lower genital tract for the SP group had remained static since 2009. From 2017 the SP rate has decreased and the last data set shows that we are now lower than the national average.

Action: This data has been reviewed further and compared with our 2019 local data of the total birthing population for Canterbury. Since 2016 the rate of intact lower genital tract has remained static (2016 = 51.25%, 2017 = 50.67%, 2018 = 51.90%, 2019 = 53.36%).

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 7 - EPISIOTOMY <u>WITHOUT</u> THIRD AND FOURTH DEGREE TEAR (ALL POPULATION GROUPS)	SP 17.2%	SP 23.8%	SP 27.1%	↑	SP 24.6%

Comment: The rate of episiotomy without 3rd and 4th degree tear for the SP group remains higher than the New Zealand rate and has been attributed to our instrumental rates.

Action: This data is from 2018 and there has been a significant amount of quality work undertaken and ongoing within the maternity service to improve our perineal trauma rates. A review of local data for 2019 show the rate for the total birthing population has remained static. We will continue to implement and evaluate our quality work in this area.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 8 - THIRD OR FOURTH DEGREE TEAR WITHOUT EPISIOTOMY (ALL POPULATION GROUPS)	SP 5.4%	SP 4.4%	SP 4.5%	=	SP 4.5%

Comment: Our rates for the SP group have continued to decrease since 2015. Quality improvements in this area have been ongoing over the last three years as a part of the MQSP priorities and action plan.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 9 - EPISIOTOMY WITH THIRD OR FOURTH DEGREE TEAR (ALL POPULATION GROUPS)	SP 0.8%	SP 1.6%	SP 2.0%	↓	SP 2.1%

Comment: This clinical indicator rate has increased again from 2017. While this rate is slightly below the national average for the SP group, a repeat audit of our local data is planned for 2021 to investigate further quality work that may be required in this area

Action: We will continue to implement and evaluate our quality work in this area as discussed under clinical indicator 7.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATOR 10 - GENERAL ANAESTHETIC FOR CAESAREAN SECTION (ALL POPULATION GROUPS)	5.3%	7.5%	4.7%	↓	8.5%

Comment: Canterbury rates for women having a General Anaesthetic (GA) for caesarean section remains lower than the national average.

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
	INDICATORS 11 AND 12 - BLOOD TRANSFUSION AFTER CAESAREAN SECTION AND VAGINAL BIRTH (ALL POPULATION GROUPS)	3.0% Caesarean	3.0% Caesarean	3.3% Caesarean	↑	3.0% Caesarean
		2.7% Vaginal	2.7% Vaginal	2.9% Vaginal	↑	2.1% Vaginal

Comment: This clinical indicator uses blood transfusion as a broad measure of excessive blood loss and a measure of severe, life threatening haemorrhage.

The rate for women requiring a blood transfusion following a vaginal birth has remained static and above the national average.

Action: Work on our local postpartum haemorrhage (PPH) rate was set as one of the MQSP priorities for 2016/17. This work has continued with the development of MBOP (Maternal Blood Optimisation) Guideline and Practice Improvement Strategy and review of our PPH clinical guideline to include Misoprostol and Tranexamic acid for use in our primary units in consultation with the tertiary unit.

Indicator	Title	2016 CDHB (n)	2017 CDHB (n)	2018 CDHB (n)	National (n)
INDICATOR 13 - DIAGNOSIS OF ECLAMPSIA (ALL POPULATION GROUPS)		(n = 0)	(n = 3)	(n = 2)	(n = 20)
<p>Comment: This data refers to diagnosis of eclampsia during birth admission. Eclampsia was diagnosed 20 times in 2018 nationally, which is an increase of three in the previous report, three were made in Canterbury with one of Indian ethnicity.</p>					
Indicator	Title	2016 CDHB (n)	2017 CDHB (n)	2018 CDHB (n)	National (n)
INDICATOR 14 - PERIPARTUM HYSTERECTOMY (ALL POPULATION GROUPS)		(n=1)	(n = 2)	(n = 4)	(n = 36)
<p>Comment: In 2018 four cases of peripartum hysterectomy were reported. A review of local data shows there were five cases reported. These cases has been reviewed and appropriate management of care was noted.</p>					
Indicator	Title	2016 CDHB (n)	2017 CDHB (n)	2018 CDHB (n)	National (n)
INDICATOR 15 - MECHANICAL VENTILATION (ALL POPULATION GROUPS)		(n=1)	(n = 2)	(n = 3)	(n = 16)
<p>Comment:</p> <p>In 2018 three women were admitted to ICU and requiring ventilation during the pregnancy or postnatal period. Two women were of Māori ethnicity.</p> <p>All Canterbury cases of pregnant or postnatal women requiring ICU admissions during 2018 were reported via ICU to the MQSP coordinator. These notifications continue to be made and all clinical cases with an unexpected or adverse outcome are reported and reviewed through our Safety 1st incident management system.</p>					

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
INDICATOR 16 - TOBACCO USE DURING THE POSTNATAL PERIOD (ALL POPULATION GROUPS)		10.0%	9.0%	7.8%	↓	9.4%
<p>Comment: This indicator monitors maternal tobacco use at two weeks postnatal. Our 2018 rate demonstrates that we are below the national average of 9.4%. The national rate has continued to decrease steadily as has Canterbury's rate.</p>						
Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than national rate	National Rate
INDICATOR 17 - PRE-TERM BIRTHS (UNDER 37 WEEK'S GESTATION) (ALL POPULATION GROUPS)		7.5%	7.8%	7.0%	↓	7.5%
<p>Comment: The rate of pre-term births for the CDHB had remained relatively static since 2009 (2009 = 7.9%, 2010 = 7.6%, 2011 = 8.0%, 2012 = 8.4%, 2013 = 8.0%, 2014 = 7.9%, 2015 = 8.2%) and this is comparable with other tertiary facilities in NZ.</p>						
Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than the national rate	National Rate
INDICATOR 18 - SMALL BABIES AT TERM (37 – 42 WEEKS GESTATION) (ALL POPULATION GROUPS)		2.0%	2.3%	2.3%	↓	3.1%
<p>Comment: CDHB rates remain below the national average of 3.1% and remains consistent with previous data.</p>						

Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than the national rate	National Rate
INDICATOR 19 - SMALL BABIES AT TERM (BORN AT 40 – 42 WEEKS GESTATION) (ALL POPULATION GROUPS)		35.7%	40.4%	22.6%	↓	29.9%
<p>Comment: The rate for small babies at term (40 – 42 weeks) for our DHB is lower than the national average. In 2017 our rate had increased and was included in the MQSP priorities for 2019/20. Quality work in this area has included a review of the Induction of Labour guideline and implementation of the GAP GROW programme.</p>						
Indicator	Title	2016 CDHB Rate	2017 CDHB Rate	2018 CDHB Rate	Higher or lower than the national rate	National Rate
INDICATOR 20 - BABIES REQUIRING RESPIRATORY SUPPORT BORN AT 37+ WEEKS GESTATION (ALL POPULATION GROUPS)		1.1%	0.9%	1.5%	↓	2.1%
<p>Comment: As noted in our previous MQSP annual report, as a DHB we have carried a significant amount of work to investigate the discrepancy in neonatal data between local and MOH reported data. Further in the report we have reviewed and made comment on the locally collected data as reported to the Australian and New Zealand Neonatal Network (ANZNN) to identify any areas for improvement.</p>						

Conclusion

The indicators show a high level of safety for both mothers and babies in Canterbury and that these continue to be above average for New Zealand. Data for almost all the indicators show continuing improvement compared to the previous 2017 figures.

A review of the maternity clinical indicators (both SP and total Canterbury population) and local data by the multidisciplinary team have identified areas for further review, and these are included in the 2020/21 priorities and action plan.

There is a need to carry on our work to reduce the number of caesarean sections, instrumental births, induction of labours and to continue with planned projects aimed at increasing our spontaneous vaginal birth rate.

DATA ANALYSIS

The data in this section is from local Canterbury DHB Maternity data sources and shows 2018 and 2019 in comparison, with percentage increase or decrease noted for the year where applicable. Data here is counted either in terms of all 'deliveries' which is a count of all mothers or in terms of 'births' which is a count of babies. The data relates to only births in CDHB facilities and so excludes data for homebirths or St. George's Hospital which is included as part of the overview of hospitals and primary birthing units in Canterbury.

The data presents a group of clinical outcomes and an analysis of the population groups that make up the Canterbury community. Analysis in this way enables us to determine our local outcomes, potential issues of health equity and areas for quality improvement.

Table 3. Gestation at Birth for total population 2018 - 2019, Canterbury DHB

Gestation at Birth	Number of Births 2018		Number of Births 2019	
Extremely preterm (<28 weeks)	37	0.67%	46	0.80%
Very preterm (28-31 weeks)	53	0.96%	49	0.85%
Moderate preterm (32-34 weeks)	107	1.93%	110	1.91%
Late preterm (35-36 weeks)	241	4.35%	310	5.39%
Term (37-41 weeks)	4997	90.26%	5135	89.27%
Prolonged (>42 weeks)	101	1.82%	102	1.77%
Total	5536	100%	5752	100%

The gestational categories were changed last year to better reflect the moderate preterm admissions to the neonatal unit. The data remains almost unchanged for the total population with the exception of a slight increase in births <28 weeks and late pre term (35-36 weeks). A review of population groups (comparing total birthing numbers for each population group) shows a higher incidence of preterm births for Māori, South East Asian and Chinese, (see Appendix 4).

Table 4. Type of Labour for total population, 2018 and 2019 Canterbury DHB

Type of labour	Number of deliveries 2018		Number of deliveries 2019	
Spontaneous	2925	53.13%	2727	47.93%
Induced	939	17.06%	677	11.90%
Artificial rupture of membranes	367	6.67%	737	12.95%
Augmented	376	6.83%	609	10.70%
Did not labour	898	16.31%	940	16.52%
Total	5505	100%	5690	100%

Data for 2019 shows a reduction in spontaneous vaginal birth and increase in induction of labour which is consistent with the national trend.

Table 5. Induction of Labour 2018 and 2019 Canterbury DHB

Induction of labour	Number of deliveries 2018		Number of deliveries 2019	
No	4566	82.94%	4507	79.21%
Yes	939	17.06%	1183	20.79%
Total	5505	100%	5690	100%

A review of our local data shows the proportion of women who had their labours induced has increased as demonstrated in the previous tables. When reviewing the rate of induction of labour by population group it can be seen that the rates are much lower for Māori, Pacific Peoples and Chinese ethnicities, see Appendix 4).

Table 6. Method of Birth 2018 and 2019 Canterbury DHB

Method of Birth	Number of Births 2018		Number of Births 2019	
Vaginal	2672	48.27%	2754	47.88%
Vaginal Water Birth	280	5.06%	277	4.82%
Vacuum Extraction	296	5.34%	279	4.85%
Forceps	407	7.35%	413	7.18%
Caesarean Section	1881	33.98%	2029	35.28%
Total	5536	100%	5752	100%

Data shows an increase in the caesarean section rate and slight decrease in the instrumental birth rate. The highest rate of caesarean section by population group is South East Asian and Indian and the highest rates of instrumental birth is the Indian population group, (see Appendix 4).

Table 7. Breech Births 2018 and 2019 Canterbury DHB

Breech Birth	Number of Births 2018		Number of Births 2019	
No	5347	96.58%	5577	96.95%
Yes	189	3.41%	175	3.05%
Total	5536	100%	5752	100%

There was very little change in the percentage of breech births between 2018 and 2019. Of the total breech births only 14 (8.0%) were vaginal births and of these 6 (42.8%) were term gestation (37 - 41 weeks). 161 (92.0%) of breech presentations were delivered by caesarean section.

Wonderful Staff, supportive and encouraging, midwives were very in tune with our needs

Christchurch Women's Hospital

Table 8. Anaesthetic 2018 and 2019 Canterbury DHB

Anaesthetic	Number of deliveries 2018		Number of deliveries 2019	
None	2132	38.73%	2309	40.05%
Local	605	10.99%	540	9.37%
Pudendal Block	87	1.58%	125	2.17%
Epidural	994	18.06%	966	16.76%
Spinal/Epidural	94	1.71%	131	2.27%
Spinal	1497	27.19%	1588	27.55%
Caudal	1	0.02%	0	0.00%
General	71	1.29%	92	1.60%
Mixed general/Epidural	7	0.13%	2	0.03%
Other	17	0.31%	12	0.21%
Total	5505	100%	5765	100%

A review of our 2019 data shows there was an increase in the general anaesthesia rate. However, our rate remains well below the national rate. Data on our anaesthetic rates are captured by our senior anaesthetist and reviewed regularly.

Table 9. Perineal Tears 2018 and 2019 Canterbury DHB

Perineal Tears	Number of deliveries 2018		Number of deliveries 2019	
Intact	2857	51.90%	3036	53.36%
First Degree Tear	712	12.93%	682	11.99%
Second Degree Tear	1007	18.29%	1046	18.38%
3a Degree Tear	76	1.38%	110	1.93%
3b Degree Tear	49	0.89%	38	0.67%
3c Degree Tear	20	0.36%	16	0.28%
4th Degree Tear	7	0.13%	11	0.19%
Episiotomy	777	14.11%	751	13.20%
Total	5505	100%	5690	100%

The 2019 data shows a slight increase in the intact perineum rate which is not consistent with standard primiparae group (New Zealand Maternity Clinical Indicators 2018). The episiotomy rate has shown a slight decrease, both outcomes are reflective of the ongoing quality work in this area.

Table 10. Blood Loss at Delivery 2018 and 2019 Canterbury DHB

Blood Loss at Delivery	Number of deliveries 2018		Number of deliveries 2019	
<1000mL	4899	88.99%	5053	88.80%
1000ml - 1500mL	436	7.92%	455	8.00%
>1500mL	170	3.09%	182	3.20%
Total	5505	100%	5690	100%

Overall there was no significant change in blood loss.

Table 11. Blood Transfusion Required 2018 and 2019 Canterbury DHB

Blood Transfusion Required	Number of deliveries 2018		Number of deliveries 2019	
	No	5347	97.13%	5623
Yes	158	2.87%	108	1.88%
Total	5746	100%	5763	100%

There has been a reduction in blood transfusions required, this was identified and included in our MQSP priorities and action plan for 2016/17 and a significant amount of quality work has been completed and is ongoing in this area.

Table 12. Feeding Method 2018 and 2019 Canterbury DHB

Feeding Method	Number of Babies 2018		Number of Babies 2019	
	Artificial	149	2.69%	165
Exclusive	3981	71.98%	3843	67.75%
Fully	79	1.43%	119	2.10%
Unknown status baby in NICU	470	8.50%	402	7.09%
Partial	818	14.79%	964	17.00%
Other	34	0.62%	12	0.21%
Total	5531	100%	5672	100%

Since 2012 there has been an increase in the number of babies partially breastfed and this continues. Both exclusive and artificial feeding rates have also remained static since 2012. These rates are reflective of all of the maternity facilities, and it is expected that exclusive and fully breastfeeding rates will be higher in the primary maternity units.

NEONATAL DATA

The CDHB Neonatal Unit collate a minimum data set which feeds into the Australian and New Zealand Neonatal Network (ANZNN). The ANZNN provides a collaborative network and a quality framework that can monitor care and outcomes using quality data. The following three data sets are taken from the CDHB data supplied to the ANZNN and provides a more accurate representation of neonatal activity than the MOH Maternity Clinical Indicators.

Comment: As a service we have spent some time working with our analysts and liaising with the MOH to explore the discrepancy in data between local and MOH reported data. Reasons for the discrepancy are outlined in the disclaimer at the beginning of this report. We have focused on looking our locally collected data as reported to the Australian and New Zealand Neonatal Network (ANZNN) to identify any areas for improvement.

Table 13. Babies requiring respiratory support and admission to NICU by gestation 2018 – 2019 Canterbury DHB

	Number of Babies 2018		Number of Babies 2019	
<26 weeks gestation	14	4.44%	10	3.01%
26 – 27 weeks gestation	14	4.44%	11	3.49%
28 – 31 weeks gestation	50	15.87%	42	13.33%
32 – 36 weeks gestation	93	29.52%	116	34.93%
≥ 37 weeks gestation	144	45.71%	153	46.08%
Total	315	100%	332	100%

Figure 6 demonstrates the number of babies requiring neonatal unit admission and respiratory support. The data was collated using the same criteria used for clinical indicator 20 of the MOH data [NZ Maternity Clinical Indicators 2018](#) (MOH, 2020) and shows a steady increase in the rates of babies requiring neonatal admission and respiratory support at ≥ 37 weeks gestation.

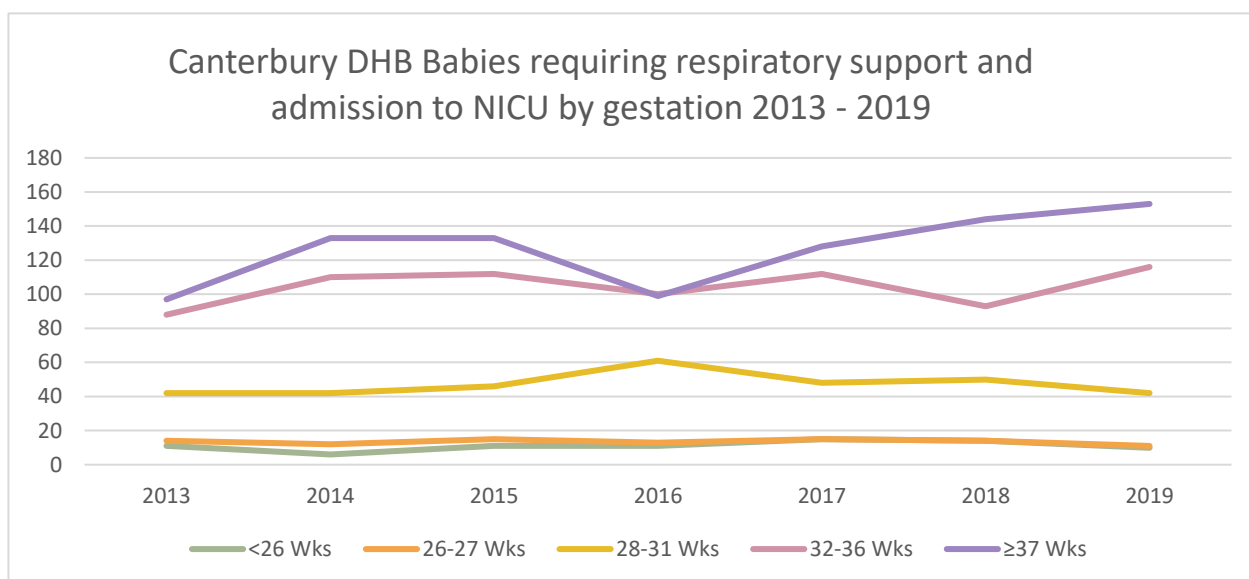


Figure 6. CDHB babies requiring support and admission to NICU by gestation 2013 - 2019

OTHER NEONATAL DATA

Figure 7 shows the percentage of steroid administration for babies <32 weeks gestation. The data is taken from the clinical record and verified on MedChart. The coding for this data set is:

- Code 0 – **Unknown** – Information not available
- Code 1 – **None** – Corticosteroids not ever given during this pregnancy at a time likely to enhance lung maturation
- Code 2 – **Incomplete, less than 24 hours** – First dose given less than 24 hours prior to the baby’s birth
- Code 3 – **Complete** – More than one dose of corticosteroids given, and first dose was given more than 24 hours and the last dose less than 8 days before baby’s birth
- Code 4 – More than 7 days – Steroids given more than 7 days before the baby’s birth. If two courses given and ‘one’ is complete, use complete

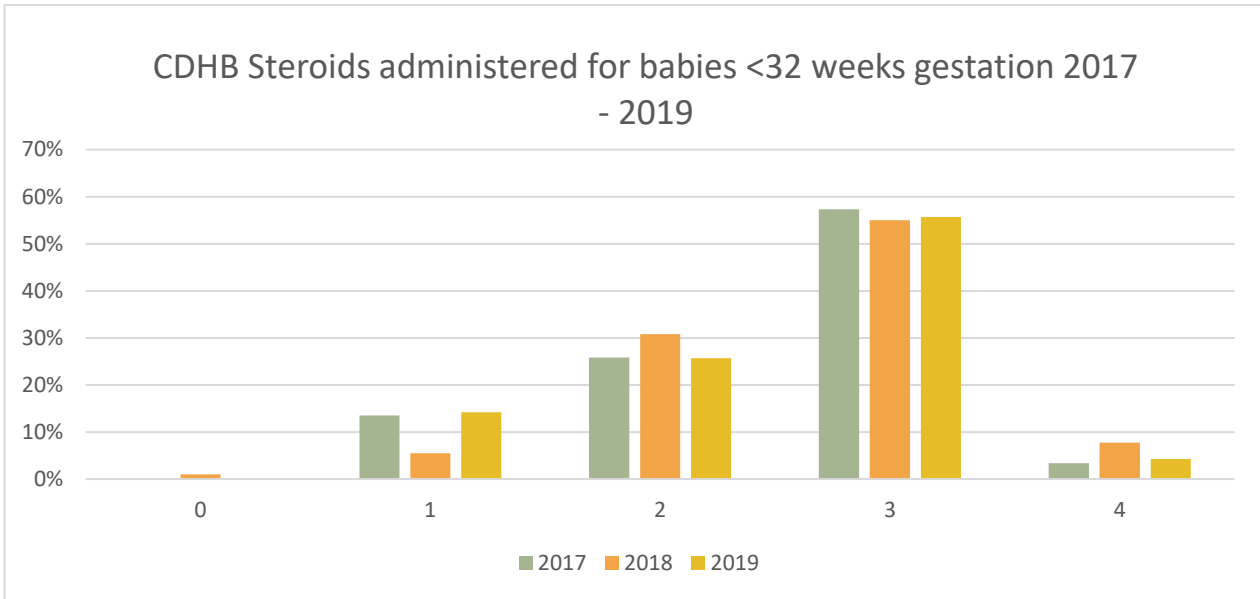


Figure 7. CDHB steroids administered for babies <32 weeks gestation 2017 - 2019

Figure 8 shows the percentage of Magnesium Sulphate given for baby's neuroprotection in preterm births <30 weeks from 2017 to 2019. As with the previous data set this is collected from the clinical record and verified on MedChart. The coding for this data set is:

- Code 0 – **Unknown** – Information not available
- Code 1 – **Magnesium Sulphate not given at all**
- Code 2 – **Magnesium Sulphate stopped >24 hours before birth**
- Code 3 – **Magnesium Sulphate commenced > 24 hours before birth and stopped <24 hours before birth**
- Code 4 – **Magnesium Sulphate commenced between 4 to 24 hours before birth**
- Code 5 – **Magnesium Sulphate commenced within 4 hours of birth**
- Code 6 – **Magnesium Sulphate given but details not known**
- Code 7 – **Magnesium Sulphate/Placebo given for randomised trial**

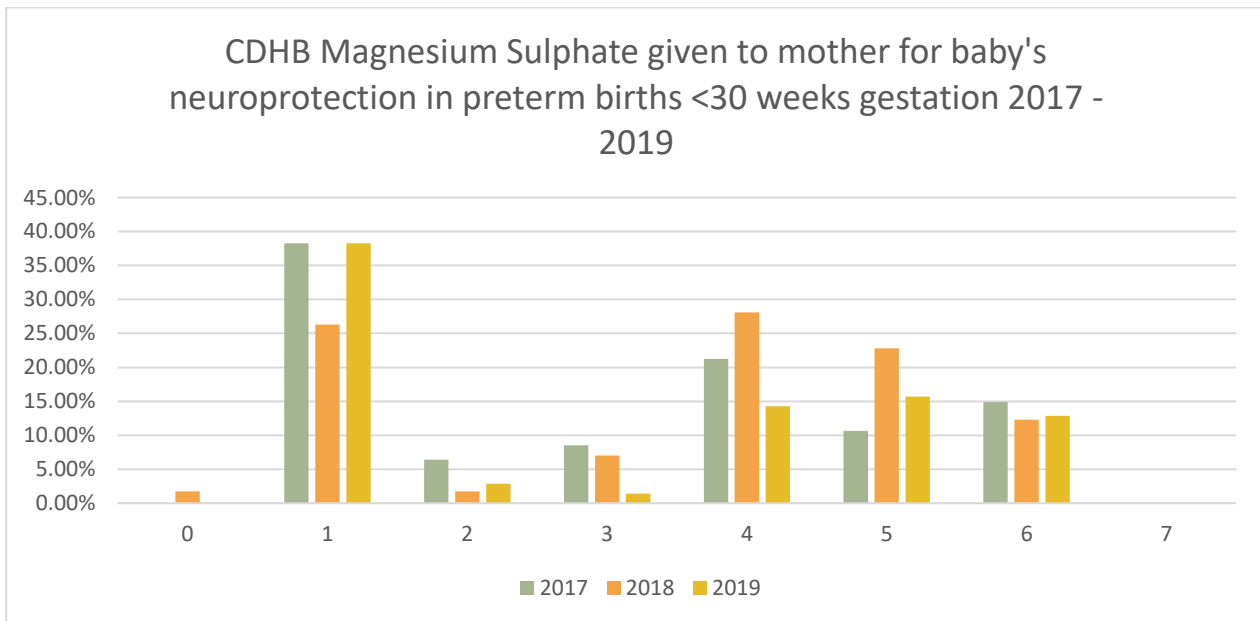


Figure 8. CDHB Magnesium Sulphate given to mother for baby's neuroprotection in preterm births <30 weeks gestation 2017 - 2019

MQSP PRIORITIES AND ACTION PLAN

2020/21

As a DHB we have identified MQSP priorities for 2020/2021 (see Appendix 5). We have taken into consideration the National Maternity Monitoring Group (NMMG) priorities for monitoring and investigation, as per the [National Maternity Monitoring Group Annual Report 2019](#) (NMMG, 2020). We have also reviewed and included any priorities and recommendations from the [Fourteenth Annual Report of the Perinatal and Maternal Morbidity Review Committee](#) (PMMRC, 2021) and [Maternal Morbidity Working Group Annual report](#) (HQSC, 2019).

As a DHB we have also committed to the Canterbury Maternity System Strategic Framework and some key themes and work arising from the strategy are also incorporated into our MQSP priorities and action plan for 2020/2021.

The Canterbury Maternity System Strategic Framework is a three year project and we continue to develop the work programme in partnership with our community groups. This programme of work forms the basis of our three year MQSP project plan.

In addition, we have considered our local data and clinical outcomes, current and ongoing maternity projects, work by collegial work streams such as the Service Level Alliances, Child and Youth Workstream and work supported by Planning and Funding.

These priorities were formed and supported by the Canterbury Maternity Operational Group and approved by the Executive Director Planning, Funding and Decision Support.



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APPENDIX 1

BIRTH STATISTICS AND CLINICAL OUTCOMES FOR CDHB PRIMARY COMMUNITY BIRTHING UNITS 2019

WOMEN BIRTHING AT RANGIORA HEALTH HUB

263 BIRTHS

- 57% used water emersion for birth and / or pain relief
- 67% of women were multiparous
- 68% did not require suturing

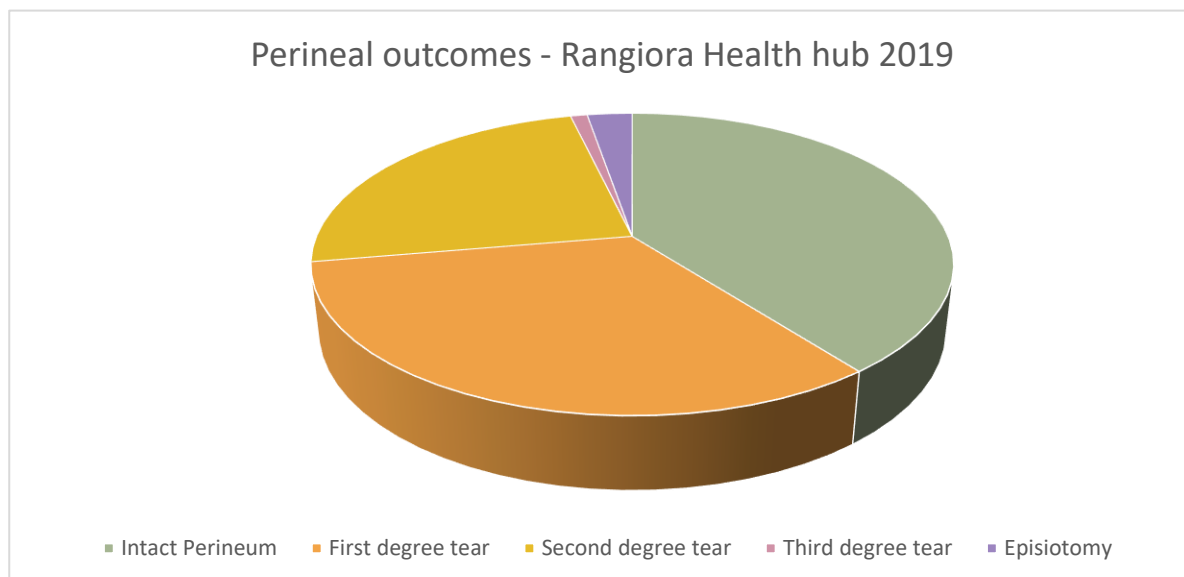


Figure 9. Perineal outcomes for women birthing at Rangiora Health Hub 2019

TRANSFERS FROM RANGIORA HEALTH HUB TO CHRISTCHURCH WOMENS HOSPITAL – MATERNAL OUTCOMES

- 16% women transferred in labour (n = 50)
- That is a 3.8% chance of transfer in labour for multiparous women, and a 33% chance for a primigravida
- 11 women transferred after birth for maternal reasons
- Total transfer rate before and after birth 24%
- The postpartum haemorrhage rate for women who birth at Rangiora Health Hub and require transfer to Christchurch Women's Hospital is 1.9%
- The reasons for maternal transfer after birth include retained placenta, suturing, post-partum haemorrhage, maternal pyrexia and hypertension
- Of the women who planned to birth and commenced labour at Rangiora Health Hub in 2019 (n=313), 88.1% gave birth vaginally regardless of actual place of birth

Reasons for transfer in labour - Rangiora Health Hub 2019

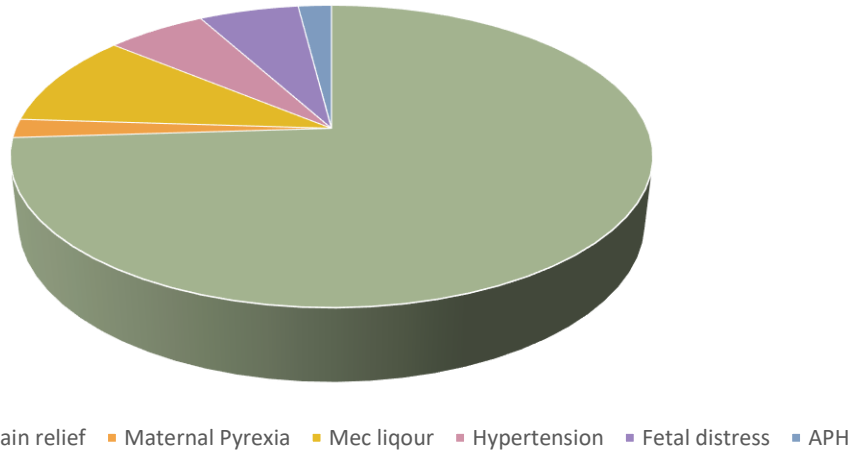


Figure 10. Reasons for transfer in labour - Rangiora Health Hub 2019

Mode of birth for women planning to birth at Rangiora Health Hub 2019

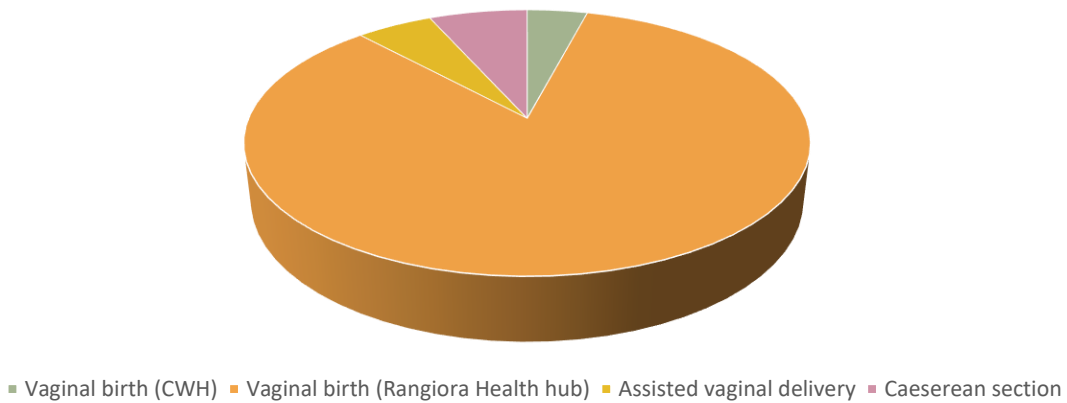


Figure 11. Mode of birth for women planning to birth at Rangiora Health Hub 2019

NEONATAL OUTCOMES

- **14** babies born at Rangiora were retrieved and admitted to NICU, of these;
 - **9** had tachypnoea with suspected infection
 - **2** were born prematurely
 - **2** were below 9th Centile
 - **1** congenital abnormality
- The rate of neonatal retrieval for babies born in Rangiora is **4.5%**

WOMEN ACCESSING RANGIORA HEALTH HUB FOR POSTNATAL CARE

- **849** women and their babies received postnatal care
- **10** women birthed before arrival (BBA) but were admitted for postnatal care
- **586** women transferred to Rangiora Health Hub after birth at Christchurch Women's Hospital
- **3** women returned to Christchurch Women's Hospital for complex care, and **9** babies were retrieved for ongoing care

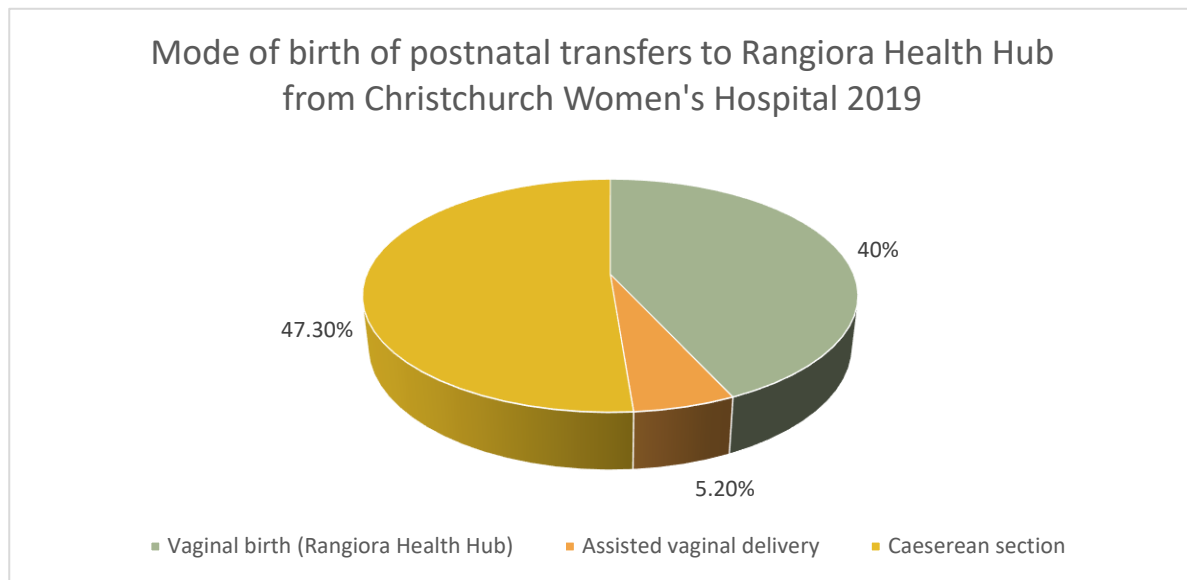


Figure 12. Mode of birth of postnatal transfers to Rangiora Health Hub from Christchurch Women's Hospital 2019

WOMEN BIRTHING AT LINCOLN MATERNITY HOSPITAL

163 births

- **40%** used water emersion for birth and / or pain relief
- **64%** of women were multiparous
- **60%** had physiological 3rd stage
- **65%** did not require suturing

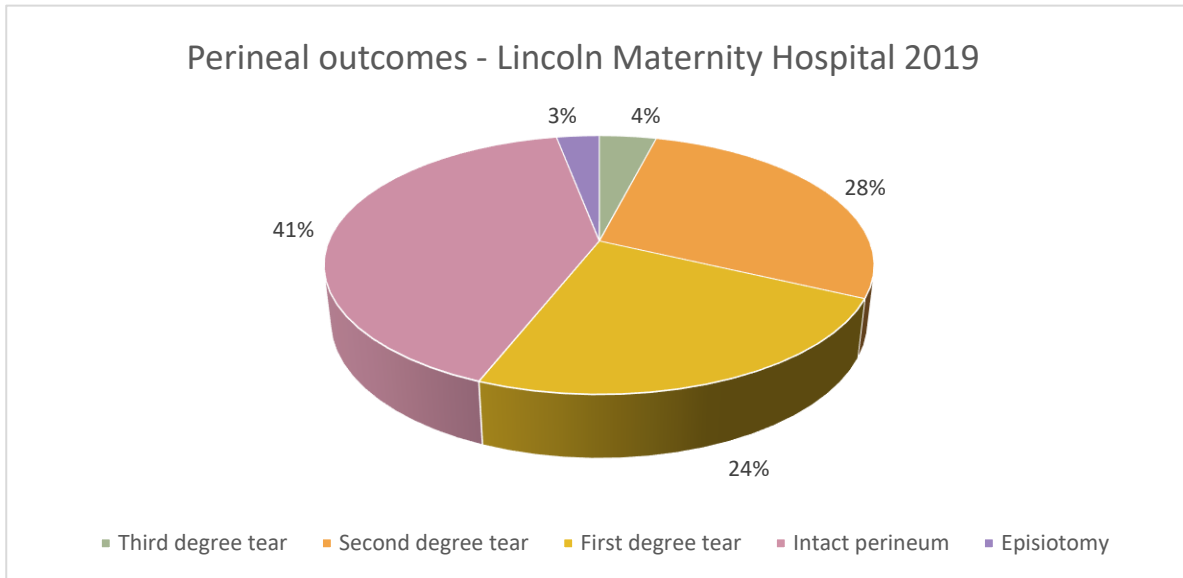


Figure 13. Perineal outcomes for women birthing at Lincoln Maternity Hospital 2019

TRANSFERS FROM LINCOLN MATERNITY HOSPITAL TO CHRISTCHURCH WOMENS HOSPITAL – MATERNAL OUTCOMES

- **23%** women transferred in labour (n = 50)
- That is a **4%** chance of transfer in labour for multiparous women, and a 19% chance for a primigravida
- **16** women transferred after birth for maternal reasons
- Total transfer rate before and after birth **36%**
- The postpartum haemorrhage rate for women who birth at Lincoln is **3%**
- The reasons for maternal transfer after birth include; retained placenta, suturing and post-partum haemorrhage
- Of the women who planned to birth and commenced labour at Lincoln in the last half of 2019 (n=106), 91% gave birth vaginally regardless of actual place of birth

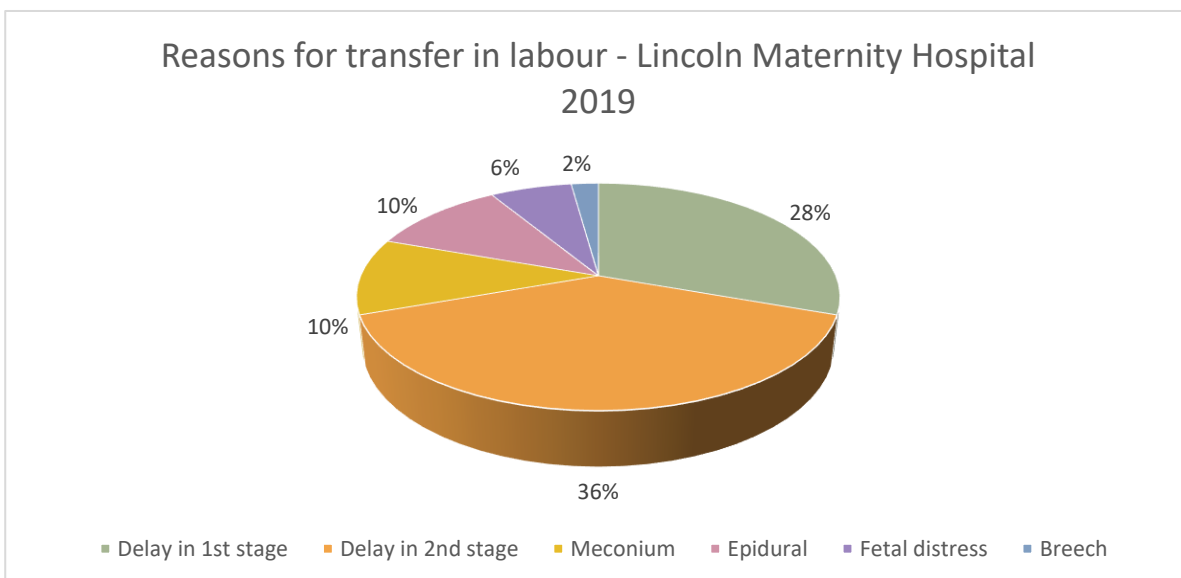


Figure 14. Reasons for transfer in labour - Lincoln Maternity Hospital 2019

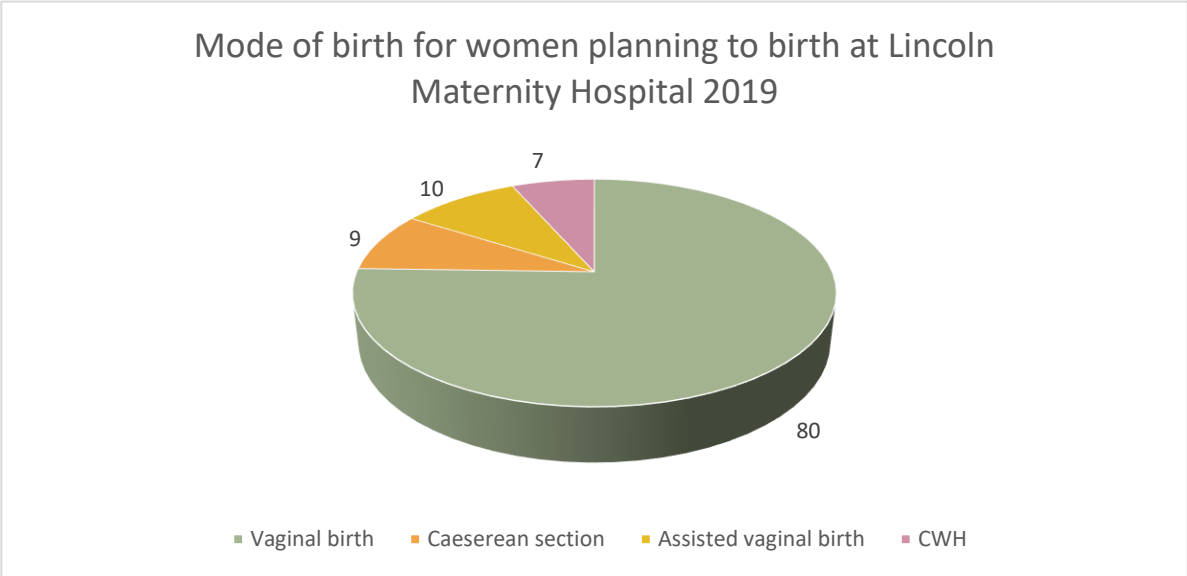


Figure 15. Mode of birth for women planning to birth at Lincoln Maternity Hospital 2019

NEONATAL OUTCOMES

**From January 2019 to December 2019

- 6 babies born at Lincoln were retrieved
- 4 babies of women who transferred from Lincoln then birthed at CWH, were admitted to NICU with an average length of stay of 2 days
- The rate of neonatal retrieval for babies born to at Lincoln is 3.7%
- Average length of stay in NICU for the babies that were retrieved was 4 days; all but one had suspected or confirmed infection, and all were well when discharged

WOMEN ACCESSING LINCOLN MATERNITY HOSPITAL FOR POSTNATAL CARE

- 833 women and their babies received postnatal care
- 11 women birthed before arrival (BBA) but were admitted for postnatal care
- 634 women transferred to Lincoln Maternity Hospital after birth at Christchurch Women’s Hospital
- 8 women returned to Christchurch Women’s Hospital for complex care, and 9 babies were retrieved for ongoing care

Mode of birth of postnatal transfers to Lincoln Maternity Hospital from Christchurch Women's Hospital 2019

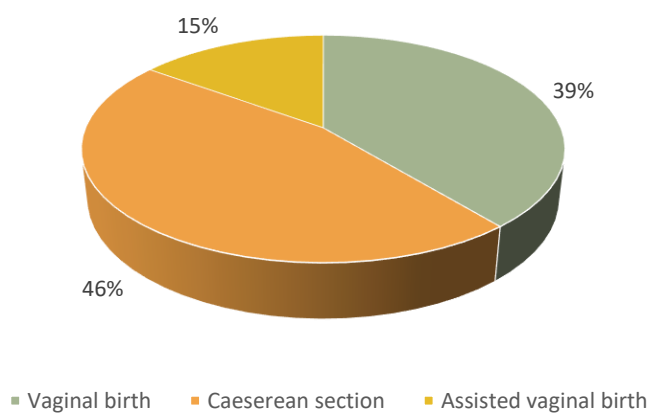


Figure 16. Mode of birth of postnatal transfers to Lincoln Maternity Hospital from Christchurch Women's Hospital 2019

** 6 months of data available due to the changeover of patient management systems

WOMEN BIRTHING AT ASHBURTON MATERNITY

125 births

- 22% used water emersion for birth and / or pain relief
- 68% of women were multiparous
- 56% had physiological 3rd stage

Perineal outcomes - Ashburton Maternity 2019

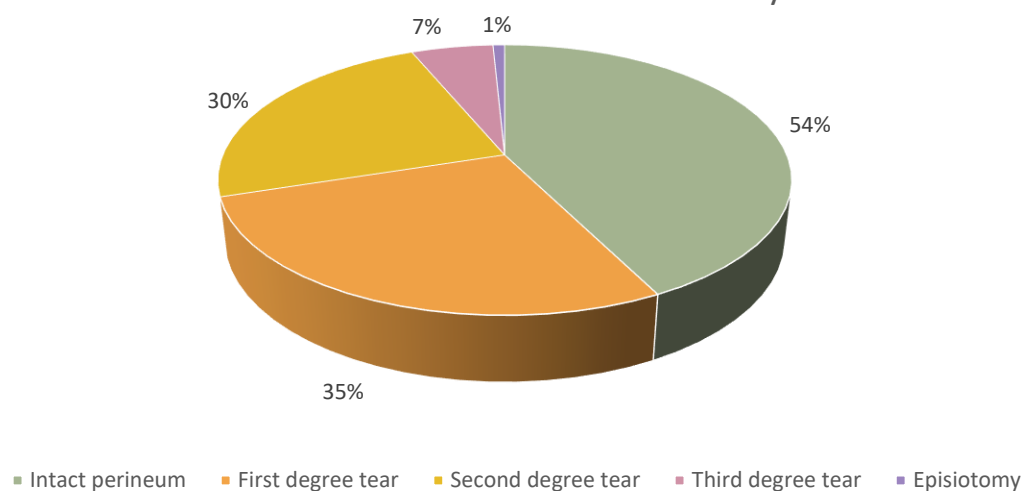


Figure 17. Perineal outcomes for women birthing at Ashburton Maternity 2019

TRANSFERS FROM ASHBURTON MATERNITY TO CHRISTCHURCH WOMEN'S HOSPITAL – MATERNAL OUTCOMES

- **24%** women transferred in labour (n = 30)
- 4 multiparous women, and 26 primigravida
- **16** women transferred after birth for maternal reasons
- Total transfer rate before and after birth **37%**
- The postpartum haemorrhage rate for women who birth at Ashburton is **8%**
- The reasons for maternal transfer after birth were retained placenta and post-partum haemorrhage

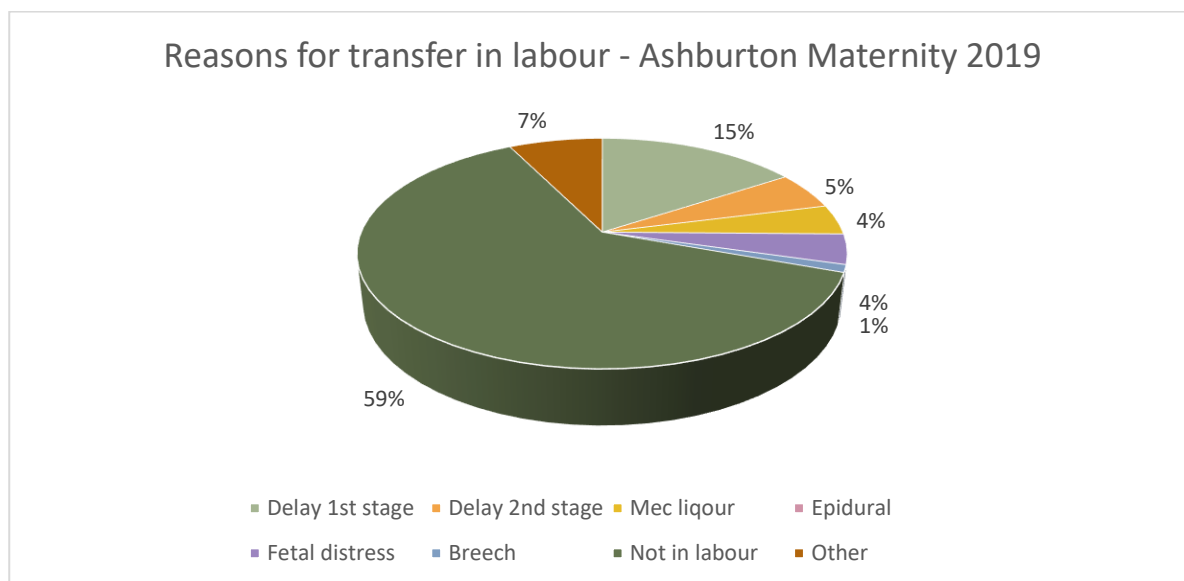


Figure 18. Reasons for transfer in labour - Ashburton Maternity 2019

NEONATAL OUTCOMES

- **14** babies born at Ashburton were retrieved
- The rate of neonatal retrieval for babies born to at Ashburton is **11%**

WOMEN ACCESSING ASHBURTON MATERNITY FOR POSTNATAL CARE

- **786** women and their babies received postnatal care
- **5** women birthed before arrival (BBA) but were admitted for postnatal care
- **178** women transferred to Ashburton Maternity after birth at Christchurch Women's Hospital

Mode of birth of postnatal transfers to Ashburton Maternity from Christchurch Women's Hospital 2019

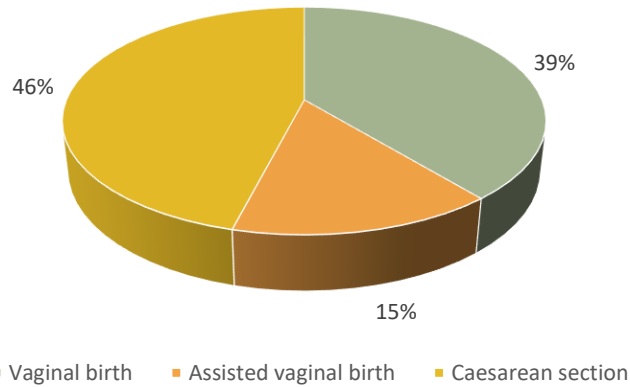


Figure 19. Mode of birth of postnatal transfers to Ashburton Maternity from Christchurch Women's Hospital 2019

WOMEN BIRTHING AT DARFIELSD HOSPITAL

2 births

11 transfers for postnatal care

WOMEN BIRTHING AT KAIKOURA HEALTH HUB

18 births

16 transfers in for postnatal care

WOMEN BIRTHING AT ST. GEORGE'S MATERNITY CENTRE

468 Births

- **29%** used water emersion for birth; data unavailable for water emersion for pain relief in labour
- **71%** of women were multiparous
- **65%** had physiological 3rd stage

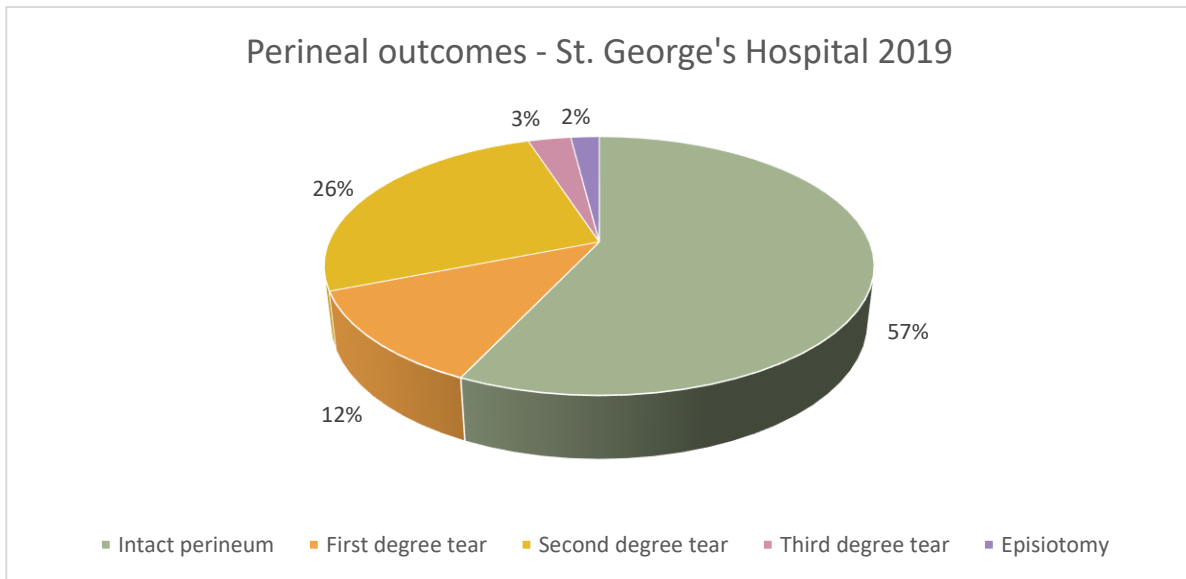


Figure 20. Perineal outcomes for woman birthing at St. George's Hospital 2019

TRANSFER FROM ST GEORGE'S MATERNITY CENTRE TO CHRISTCHURCH WOMENS HOSPITAL – MATERNAL OUTCOMES

- **18%** women transferred in labour (n = 104)
- **46** women transferred after birth for maternal reasons
- Total transfer rate before and after birth therefore is **32%**
- The postpartum haemorrhage rate for women who birth at St George's Maternity Centre is **3%**
- The reasons for maternal transfer after birth include; retained placenta, suturing and post-partum haemorrhage
- Data re outcomes of women who birth at Christchurch Women's Hospital, following transfer from St. George's Maternity in labour, is not shared from CDHB so unavailable to report. Data from reviewing electronic incident reporting (required when transfers made from St George's Maternity Centre to Christchurch Women's Hospital) shows approximately two thirds of women who transfer in labour have a normal or assisted birth with approximately one third a caesarean section.

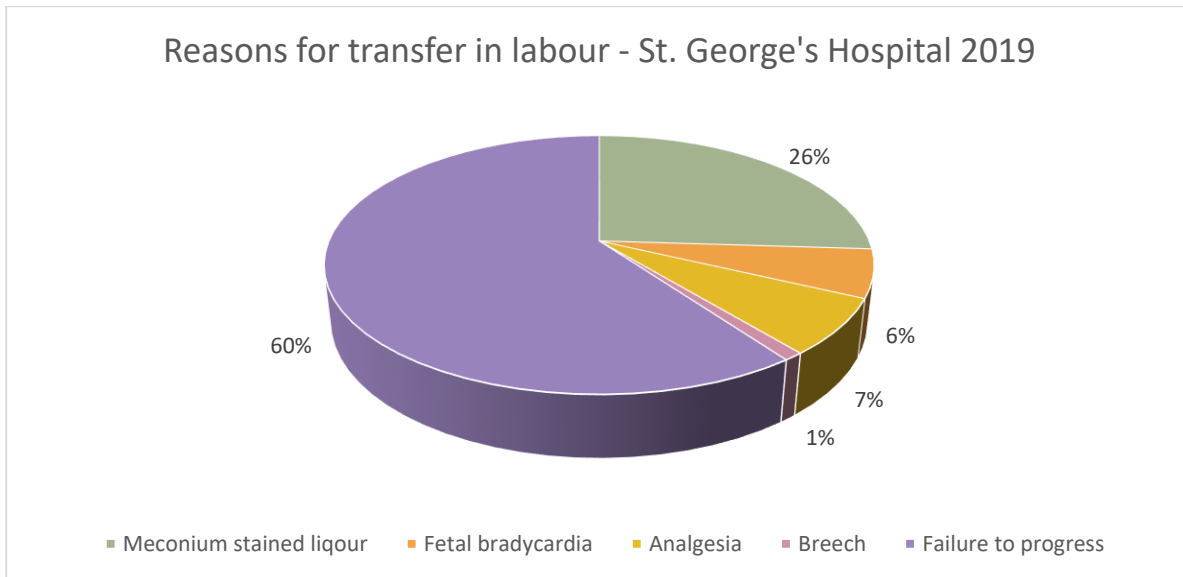


Figure 21. Reasons for transfer in labour - St. George's Hospital 2019

NEONATAL OUTCOMES

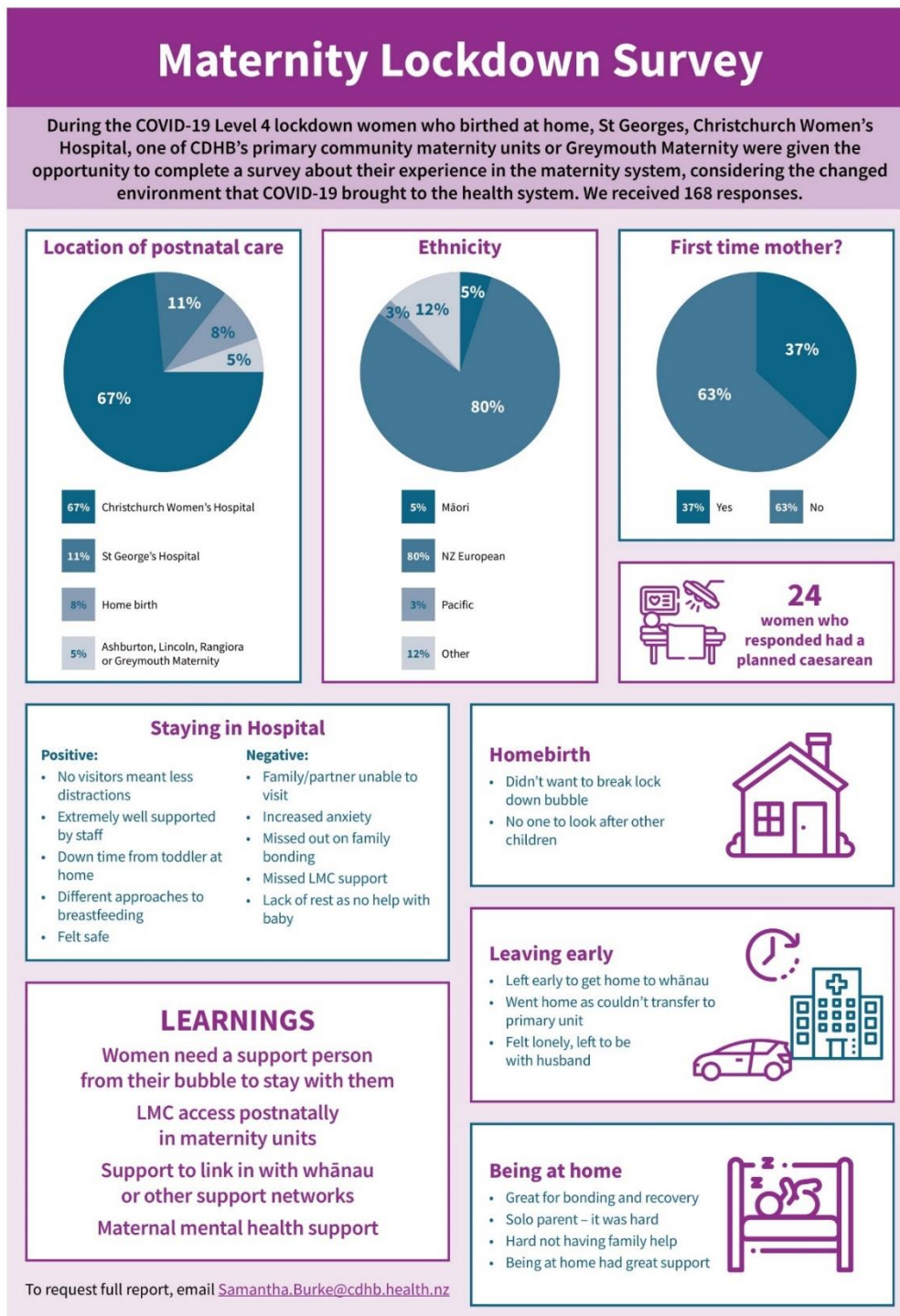
- **18** babies were retrieved
- The rate of neonatal retrieval for babies born at St George's Maternity is **3.8%**
- Data unavailable to report length of stay in NICU for babies retrieved from St George's Maternity Centre, as this is not shared from the CDHB.

WOMEN ACCESSING THE SERVICE FOR POSTNATAL CARE

- **1,310** women and their babies received postnatal care
- **2** women birthed before arrival (BBA) and were admitted for postnatal care
- **842** women transferred to St George's Maternity Centre after birth at Christchurch Women's Hospital

APPENDIX 2

COVID – 19 LOCKDOWN LEVEL 4 SURVEY



APPENDIX 3

NEW ZEALAND MATERNITY CLINICAL INDICATORS 2018

INDICATOR 1 - REGISTRATION WITH A LEAD MATERNITY CARER IN THE FIRST TRIMESTER OF PREGNANCY

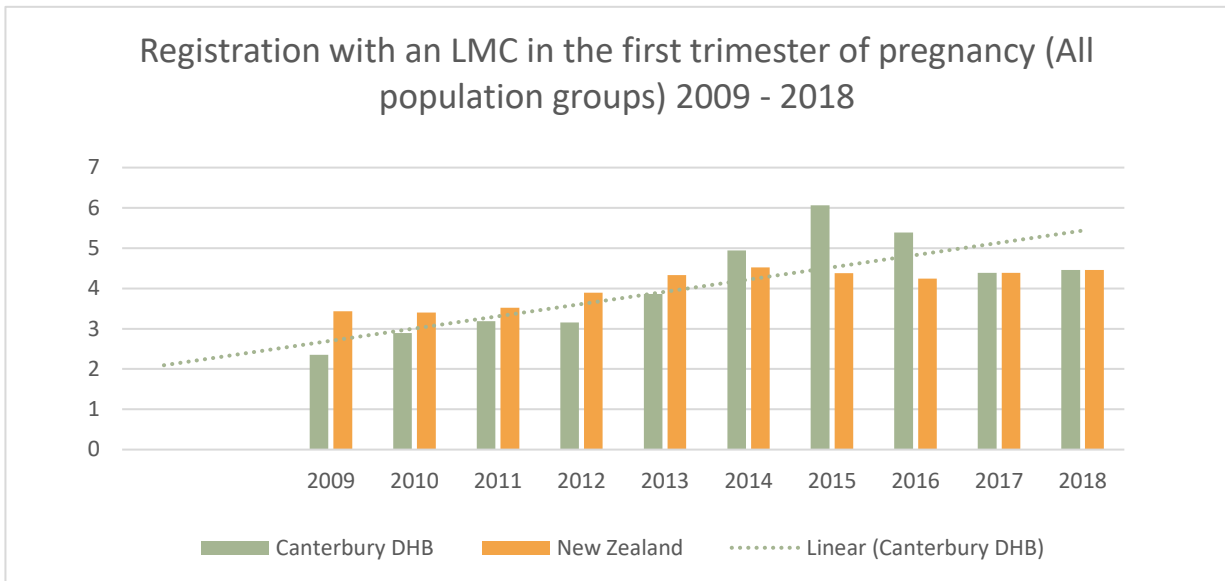


Figure 22. CDHB Rates for Registration with an LMC in the First Trimester of Pregnancy 2009 – 2018 (All population groups)

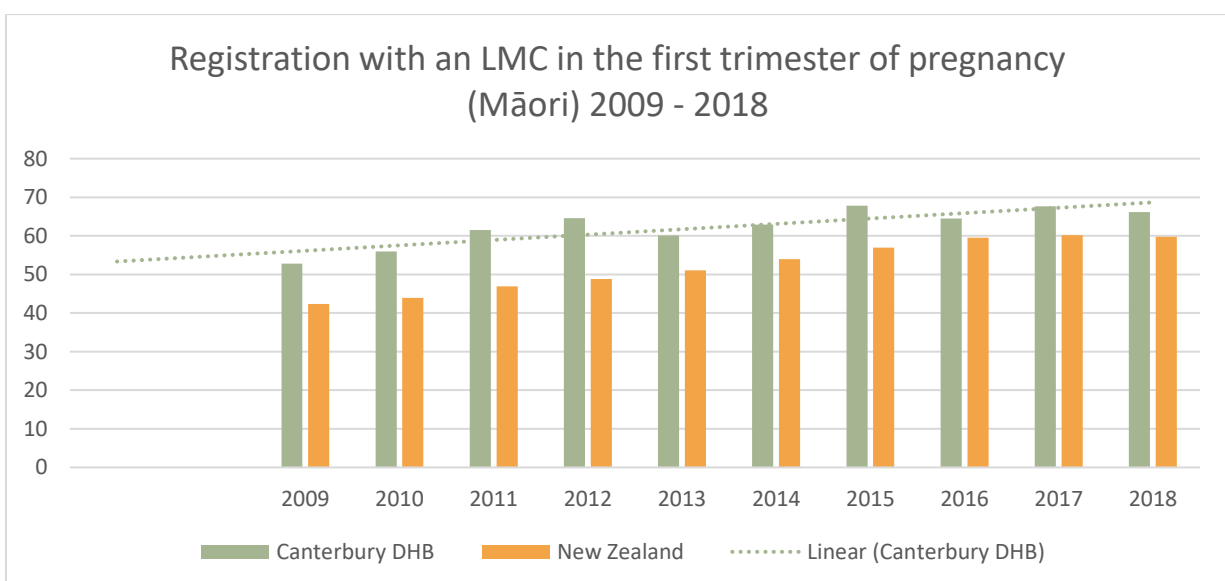


Figure 23. CDHB Registration with an LMC in the first trimester of pregnancy (Māori) 2009 - 2018

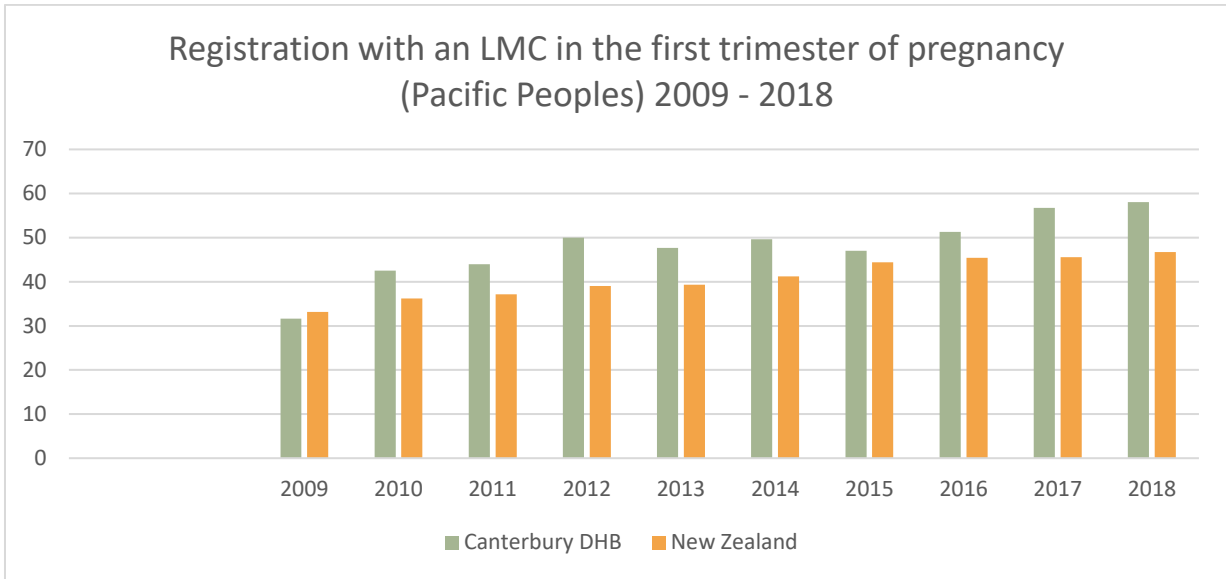


Figure 24. CDHB Registration with an LMC in the first trimester of pregnancy (Pacific Peoples) 2009 - 2018)

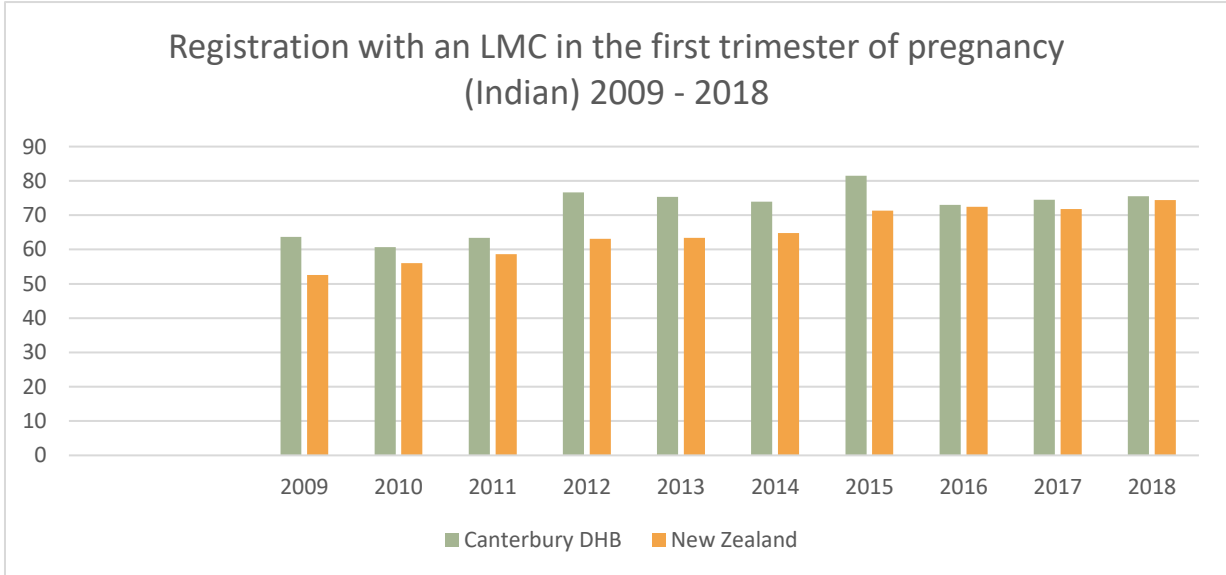


Figure 25. CDHB Registration with an LMC in the first trimester of pregnancy (Indian) 2009 - 2018

INDICATOR 2 - SPONTANEOUS VAGINAL BIRTH

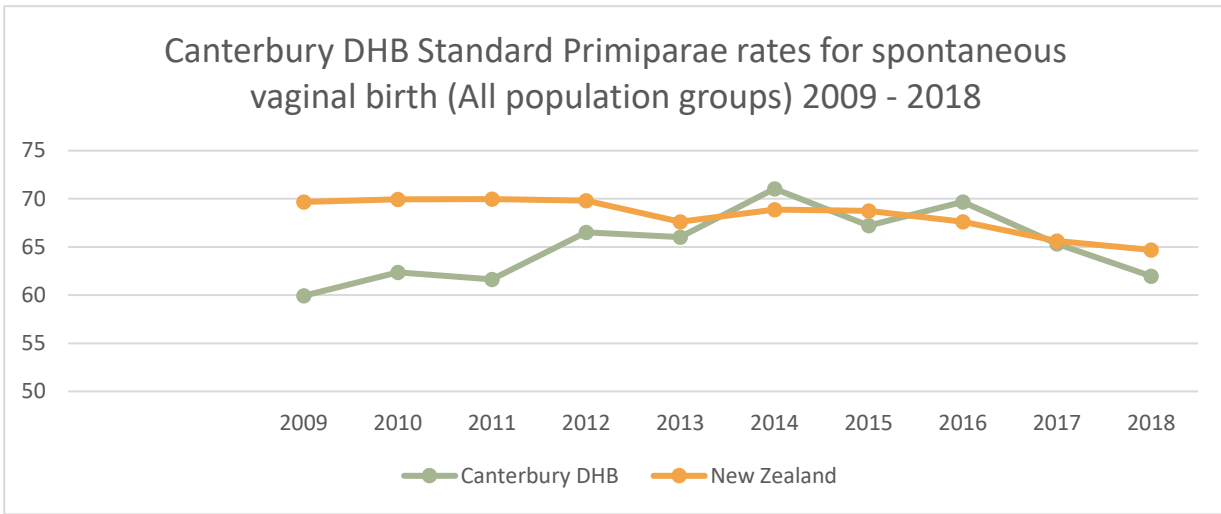


Figure 26. CDHB Standard Primiparae rates for spontaneous vaginal birth (all population groups) 2009 - 2018

INDICATOR 3 - INSTRUMENTAL VAGINAL BIRTH

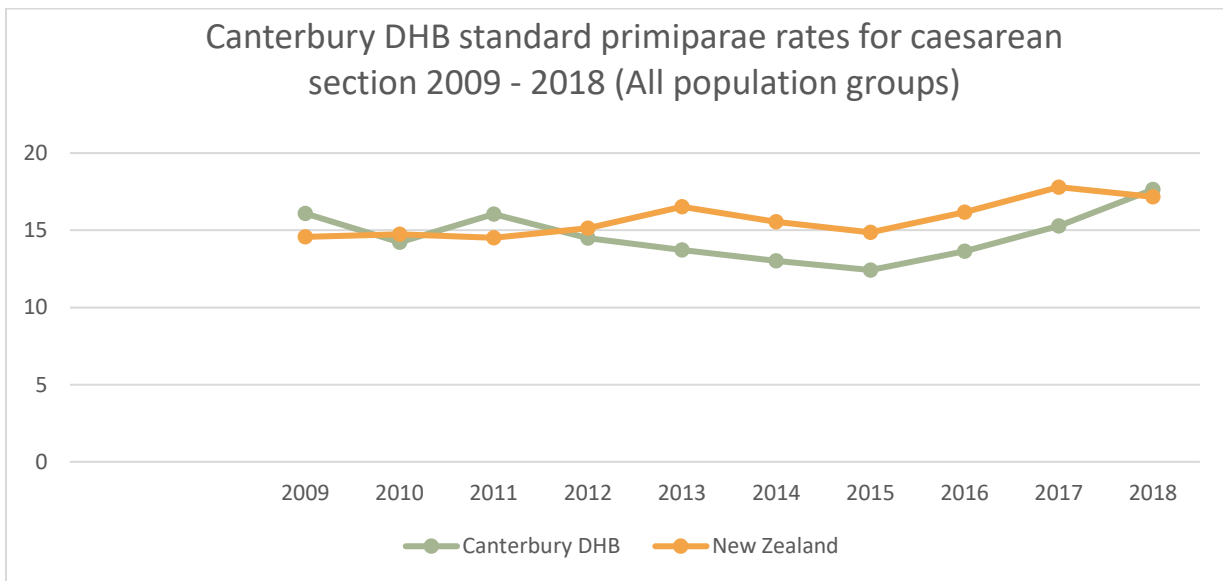


Figure 27. CDHB Standard Primiparae Rates for Caesarean Section (All population groups) 2009 - 2018

INDICATOR 4 – CAESAREN SECTION

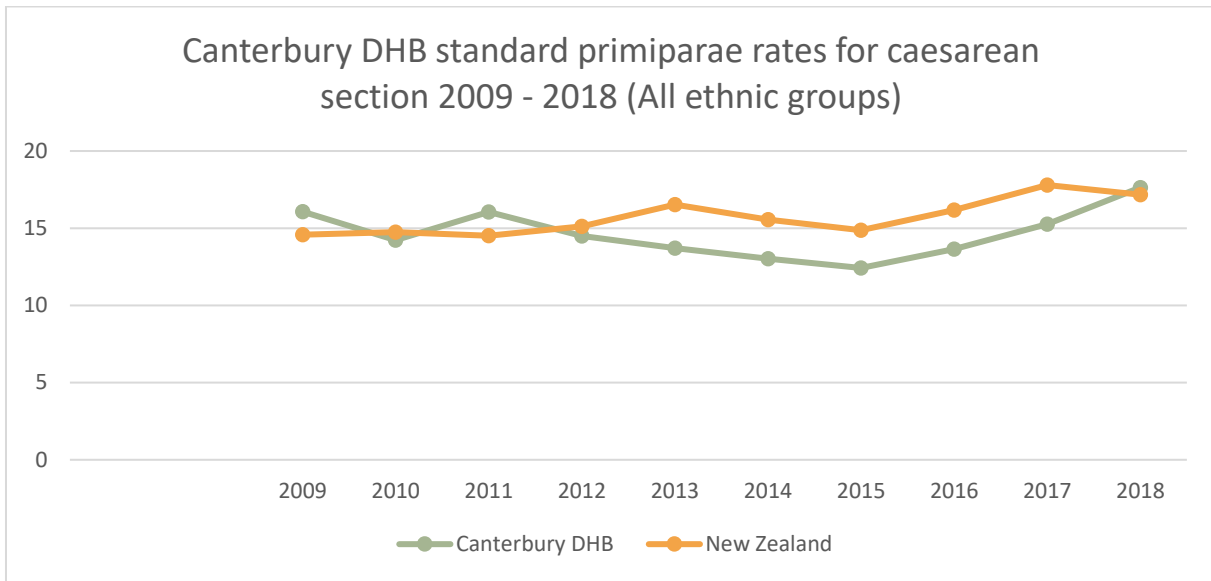


Figure 28. CDHB Standard Primiparae Rates for Caesarean Section (All population groups) 2009 - 2018

INDICATOR 5 - INDUCTION OF LABOUR

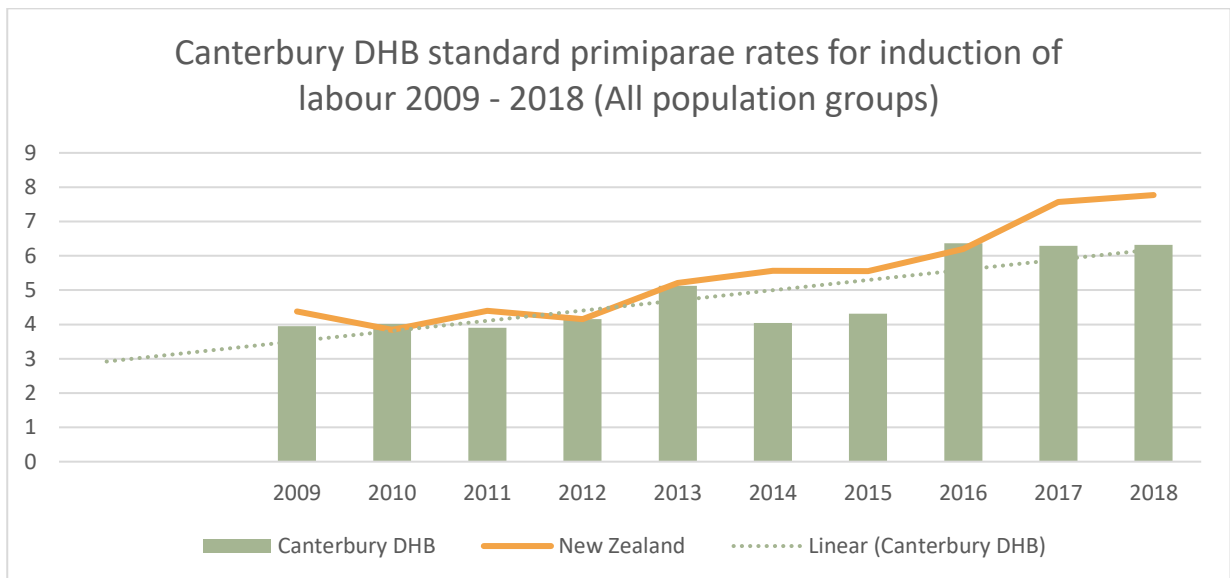


Figure 29. CDHB Standard Primiparae Rates for Induction of Labour (All population groups) 2009 - 2018

APPENDIX 4

CDHB DATA ANALYSIS

CANTERBURY DHB GESTATION AT BIRTH BY POPULATION GROUP 2019

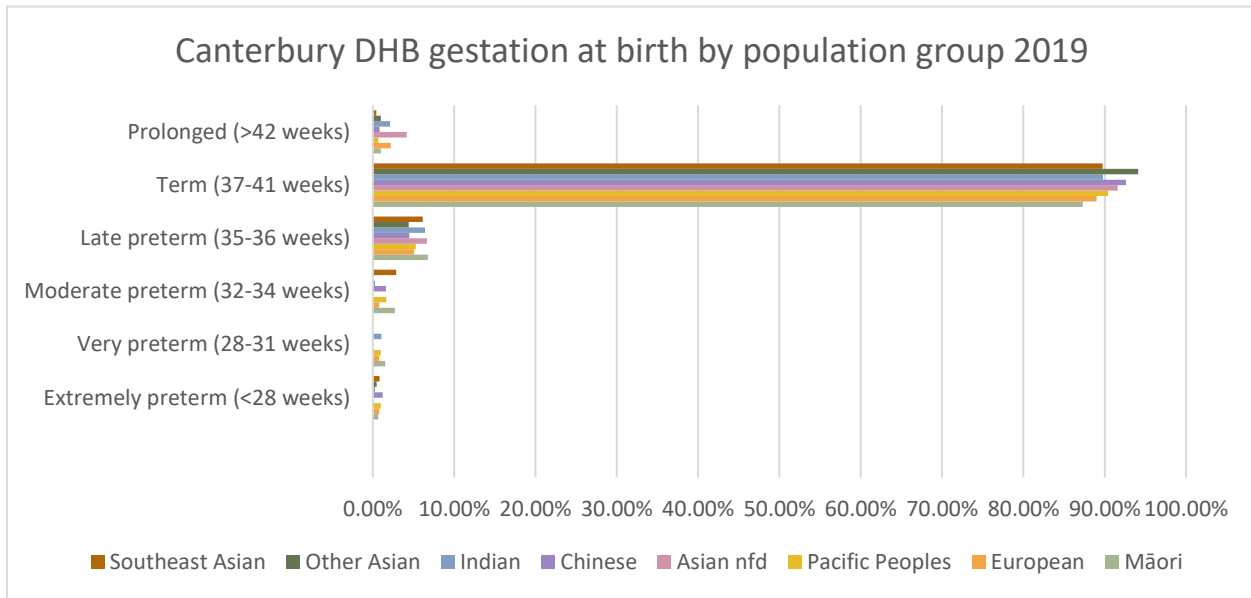


Figure 30. Gestation at birth by population group 2019

CANTERBURY DHB INDUCTION OF LABOUR BY POPULATION GROUP 2019

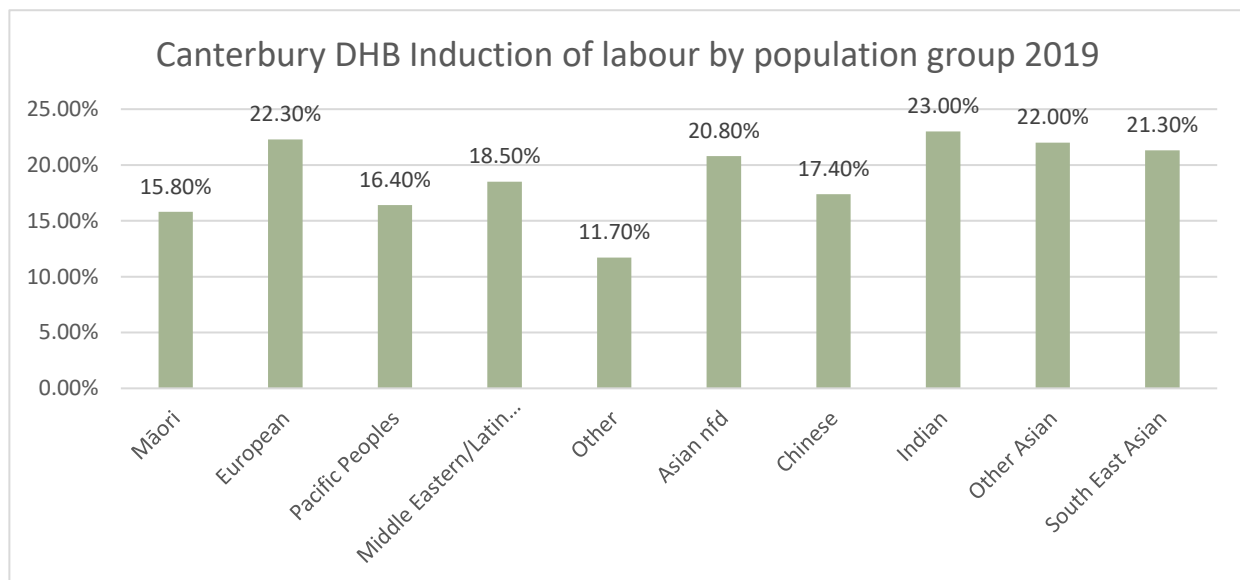


Figure 31. CDHB Induction of labour by population group, 2019

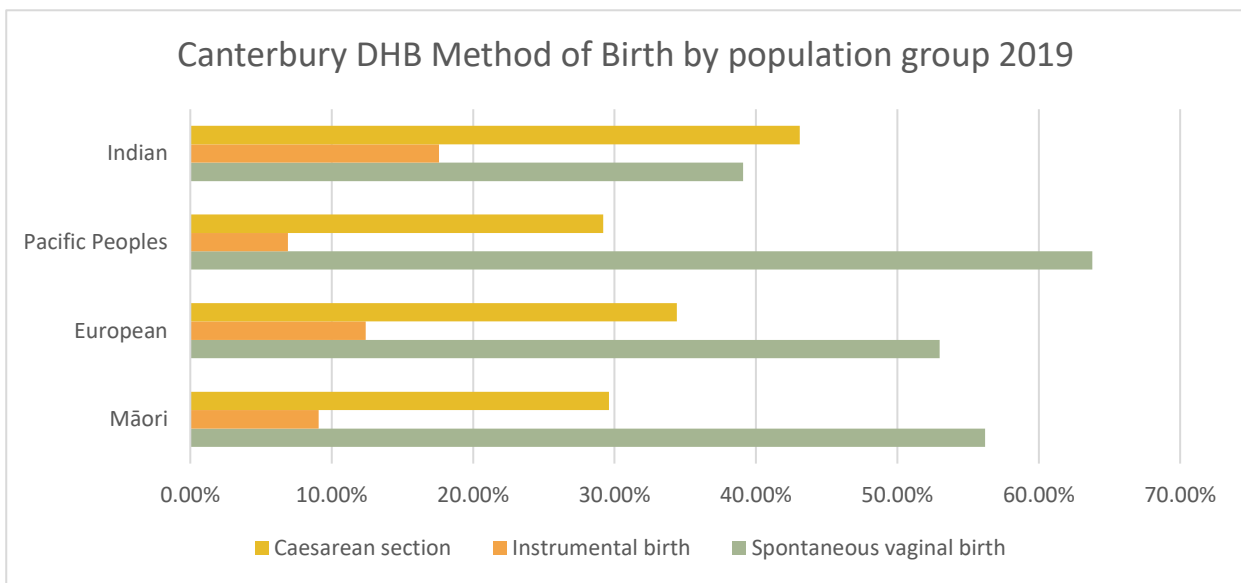


Figure 32. Canterbury DHB Method of Birth by population group, 2019

APPENDIX 5

MQSP PRIORITIES AND ACTION PLAN 2020/21

	Initiative/Priority	Action	Expected Outcome	Measure
1.	<p>Implementation of NEWS/NOC as per national roll out</p> <p>HQSC Patient Deterioration Programme. 2019</p>	<ul style="list-style-type: none"> Continued weekly audit and review of implemented NEWS/NOC 	<ul style="list-style-type: none"> NEWS/NOC is used for all babies born in CDHB maternity units 	<ul style="list-style-type: none"> Weekly auditing of NEWS/NOC demonstrates: <ul style="list-style-type: none"> NOC/NEWS is completed for all newborn babies who are 35 weeks gestation Frequency of observations are appropriate At risk babies are identified following birth using the risk assessment section Minimal vital signs are completed
2.	<p>MEWS audit and case review</p> <p>Morbidity review identified through trigger tool</p> <p>HQSC Patient Deterioration Programme. 2019</p>	<ul style="list-style-type: none"> Continued audit of MEWS charts used in all CDHB Maternity areas Continued review of all ICU admissions and escalations for review Continued work to rollout MEWS across the rest of the CDHB as national work on the maternity 	<ul style="list-style-type: none"> MEWS is completed for all maternity inpatients When MEWS is rolled out across the CDHB that a MEWS is completed for all women from positive pregnancy test to six weeks postpartum 	<ul style="list-style-type: none"> Auditing of MEWS demonstrates: <ul style="list-style-type: none"> Frequency of observations are appropriate All vital signs are completed correctly MEWS scores are correctly calculated

	Initiative/Priority	Action	Expected Outcome	Measure
		module for Patientrak progresses		- Escalations made due to an increased MEWS score are followed as per hospital pathway
3.	<p>Encouraging low-risk women to birth at home or in a primary facility Promotion of primary birthing facilities</p> <p>MQSP 5 of 2019/20 priorities and action plan</p> <p>NMMG Work plan, 2019</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<ul style="list-style-type: none"> • Further investigation of what determines women's preferences regarding place of birth • Build on quality initiatives already developed to promote primary birthing units • Develop strategies to further support LMCs to utilise primary birthing units and support homebirth 	<ul style="list-style-type: none"> • Increase in number of women choosing to birth or have postnatal care in DHB primary birthing units • More women commence their labours at midwifery led units, or at home. 	<ul style="list-style-type: none"> • Bed occupation and birth location indicates increasing usage of primary birthing units
4.	<p>Equitable access to postpartum contraception, including regular audit</p> <p>NMMG Workplan, 2019</p>	<ul style="list-style-type: none"> • Audit CDHB LARC services over a twelve month period to determine trends and areas for improvement • Progress training with NZ Family Planning to provide training for midwives to widen access for women. 	<ul style="list-style-type: none"> • Increase in the number of women accessing LARC 	<ul style="list-style-type: none"> • Evidence of audit shows access and uptake of LARC in all community groups

	Initiative/Priority	Action	Expected Outcome	Measure
5.	<p>Reduce preterm birth and neonatal mortality</p> <p>NMMG Workplan, 2019</p> <p>PMMRC recommendations, 2021</p>	<ul style="list-style-type: none"> Using CDHB data determine the priority areas to focus on for 2020/21 Following community engagement formulate action plans to address areas for improvement, particularly Induction of labour/ Instrumental birth and caesarean section Consider quality initiatives around timing of birth/gestation Consider further support for early engagement and processes to ensure follow up for women with previous preterm birth 	<ul style="list-style-type: none"> Data is used to evaluate the effectiveness of previous actions and plan future actions Capture quality improvement activity resulting from community engagement 	<ul style="list-style-type: none"> Evidence of improvement in preterm birth rates as identified through our CDHB data
6.	<p>To continue to improve the screening and referral rates of women for family violence</p> <p>MQSP 6 of 2019/20 priorities and action plan</p> <p>Canterbury Maternity System Strategic Framework, 2019</p>	<ul style="list-style-type: none"> A plan for regular, mandatory training is made annually and all CDHB employed staff working in maternity services are attending these sessions once per year Survey staff to ascertain the barriers to staff carrying out this screening 	<ul style="list-style-type: none"> Health professionals working in the maternity setting have all received training and are confident to screen for family violence Women in violent and/or psychologically harmful relationships increasingly feel able to disclose this and work towards safety The training sessions address the barriers that staff have identified 	<ul style="list-style-type: none"> Evidence of regular audits shows improved family violence screening results for pregnant women accessing DHB maternity services

	Initiative/Priority	Action	Expected Outcome	Measure
			<ul style="list-style-type: none"> Health professionals are familiar with the screening tool and referrals process 	
7.	<p>Monitor key maternity indicators by ethnicity to identify variations in outcomes & improve areas where there are differences in outcome</p> <p>Co-design models of care to meet the needs of Indian women</p> <p>PMMRC Recommendation, 2021</p> <p>Canterbury Maternity System Strategic Framework, 2019</p> <p>CDHB District Annual Plan , 2021</p>	<ul style="list-style-type: none"> Continue to review local data Continue to work with community groups to develop a programme of work tailored and targeted at their population group to improve maternity care and clinical outcomes for example, BMI, gestational diabetes and access to services, for example ultrasound 	<ul style="list-style-type: none"> To have an engaged community that is working with the maternity service on a programme of work to provide health literacy, navigation and supports for their population groups 	<ul style="list-style-type: none"> Improved early engagement with maternity services across the population groups Increased referral for services to improve clinical outcomes and health e.g. smoking cessation referrals
8.	<p>Implementation of HQSC maternal morbidity review toolkit and SAC rating (maternal & NE case review)</p> <p>MQSP 7/8 of 2019/20 priorities and action plan</p> <p>PMMRC Recommendations, 2021</p>	<ul style="list-style-type: none"> Continued work to review current processes in place for reporting through to the CDHB incident management system Safety 1st Work with the Quality Team to adopt the HQSC maternal morbidity review toolkit 	<ul style="list-style-type: none"> A clear pathway and notification system are in place for CDHB staff to capture all neonatal encephalopathy (NE) cases A clear process and learning package are available for clinicians carrying out maternity case reviews 	<ul style="list-style-type: none"> Regular reporting through the CDHB incident management system Safety 1st shows all neonatal encephalopathy (NE) cases are notified and have been considered for SAC rating An evaluation of maternity case reviews demonstrates that the principles of the maternal morbidity review toolkit have been followed

	Initiative/Priority	Action	Expected Outcome	Measure
9.	<p>Use of the Health Equity Assessment Tool (the HEAT) to assess services for the impact of health equity</p> <p>Maternal Morbidity Working Group, 2019</p>	<ul style="list-style-type: none"> Implement the HEAT tool to meet the principles of equity of outcomes for our community groups 	<ul style="list-style-type: none"> Maternity services utilise the HEAT tool as a basis for analysing, developing and implementing any services or quality improvements 	<ul style="list-style-type: none"> Regular review of maternity planning and analysis demonstrates that the HEAT tool has been implemented
10.	<p>Establish maternal sepsis bundle kits to address human factor components, such as stress in high-acuity settings</p> <p>Establish clinical pathways across primary and secondary/tertiary care to enable earlier recognition and treatment of maternal sepsis</p> <p>Maternal Morbidity Working Group, 2019</p>	<ul style="list-style-type: none"> Develop and implement maternal sepsis bundle kits and a guideline or pathway for sepsis to improve recognition and response 	<ul style="list-style-type: none"> Resources are readily available for clinicians to access when assessing for sepsis Women receive treatment in line with the agreed sepsis treatment pathway 	<ul style="list-style-type: none"> A re audit of coded sepsis case shows that sepsis management pathways are utilised

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