2021 2022 MATERNITY QUALITY & SAFETY PROGRAMME

ANNUAL REPORT

Te Whatu Ora
Health New Zealand
Capital, Coast and Hutt Valley

Enahara taku toa i te toa takitahi Engari, he toa takitini

My successes are not mine alone, they are ours – the greatest successes we will have are from working together

- Māori proverb

ACKNOWLEDGEMENTS

Thank you to the many administration, midwifery and medical staff who have contributed to the content of this report.

Thanks especially must go to our Maternity Quality & Safety Programme (MQSP) team including Erika Brons-Ware, Carolyn Coles, Siobhan Connor, Simone Curran-Becker, Rose Elder, Claire Jacobs, Sarah le Leu, Joshua Nerona, Cherie Parai, Freyja Phillips, Jenny Quinn, Ngaire Bartlett, Victoria Roper, Jessica Maxwell, Hollie Clark, Amber Igasia, Clare O'Loughlin, Rose Dew, Wendy Castle, Victoria Parsons, Heather LaDell, Mozhdeh Wafa, Carey-Ann Morrison, Rachel Carian, Gargee Mohanty, Fiona Coffey, Linda Elvines, Namoi Taylor, Nikita Hunter, Sipaia Kupa, Michelle Vincent and Hannah Ward, who put in an extraordinary effort throughout an incredibly challenging couple of years.

It is with genuine appreciation that we thank our workforce, consumers, lead maternity carers (LMCs) and wider health care partners and communities.

Thank you also to all the whānau and staff who kindly let us use their images to illustrate our report.

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FOREWORD

It gives Rose and I great pleasure to present the Maternity Quality and Safety Programme (MQSP) report for the Capital, Coast for 2021/2022.

The past two years have been incredibly challenging but we have seen great resilience and strength demonstrated by healthcare providers. Maternity inpatient areas at Wellington were frequently over capacity and pregnant women/people presented with many varied complexities related to underlying health conditions. COVID-19 continued to make its presence felt with increased levels of staff sickness, and restricted visiting within inpatient areas. High acuity and unprecedented midwifery workforce vacancies saw maternity services across the district severely stretched.

We have, however, continued to build on work previously undertaken and are looking forward to 2023 as we continue to improve services and implement change. In 2021 approval was received to double the number of staff working at Kenepuru Maternity Unit. This change from a sole charge midwife position to two staff being employed 24 hours a day, seven days a week will enable us to improve equity of access for those residing in Porirua.

The introduction of the newly created Midwifery Clinical Coach role was a welcome addition to the clinical environment. It is anticipated that this role will help to achieve a safer clinical learning environment, whilst improving staff retention and reducing workplace stressors.

Misoprostol was introduced as the primary induction of labour method for most pregnant women/people. A change that was received favourably by hospital employed midwives, obstetric teams and lead maternity carers (LMCs). An enhanced recovery after surgery (ERAS) pathway for women/people having an elective caesarean sections was rolled out in late 2021 with our postpartum patient controlled oral analgesia project in 2022 for this same group of women.

An external audit was undertaken of both the Newborn Metabolic Screening and Newborn Hearing Screening programmes. Our Newborn Hearing Screening programme received commendations from the auditors and minor corrective actions will be implemented heading in 2023 with regards to the Newborn Metabolic Screening programme. We are currently preparing for the Baby Friendly Hospital Initiative (BFHI) audit which will take place in early 2023.

Academics at Victoria University supported the Wellington based maternity service to undertake a comprehensive review of the neonatal hypoglycaemia policy. The findings of this review and subsequent recommendations will be addressed in 2023.

A number of policies were updated including the national third stage of labour and postpartum haemorrhage guidelines and we are continuing to update the hypertension in pregnancy policy alongside our Hutt Valley colleagues.

A number of initiatives were implemented to help support staff during a time of sustained workforce shortages. These included winter incentive payments and utilisation of a Primary Intrapartum Care (PIC) team manned by LMCs helped to ease the workload placed on the hospital midwifery workforce over the summer period. Further initiatives will be undertaken in 2023 to utilise the PIC team model of care to support pregnant women/people to birth in Kenepuru Maternity Unit.

Rose and I would like to take this opportunity to express our heartfelt gratitude and thank all the midwives, nurses, doctors and maternity healthcare workers who provided care to pregnant women/people within Capital, Coast. Your professionalism and dedication meant that pregnant women/people and their whānau were able to receive the best care possible.

Carolyn Coles, Director of Midwifery, and
Rose Elder, Clinical Leader of Obstetrics

Carolyn Coles, Director of Midwifery

Rose Elder, Clinical Leader of Obstetrics

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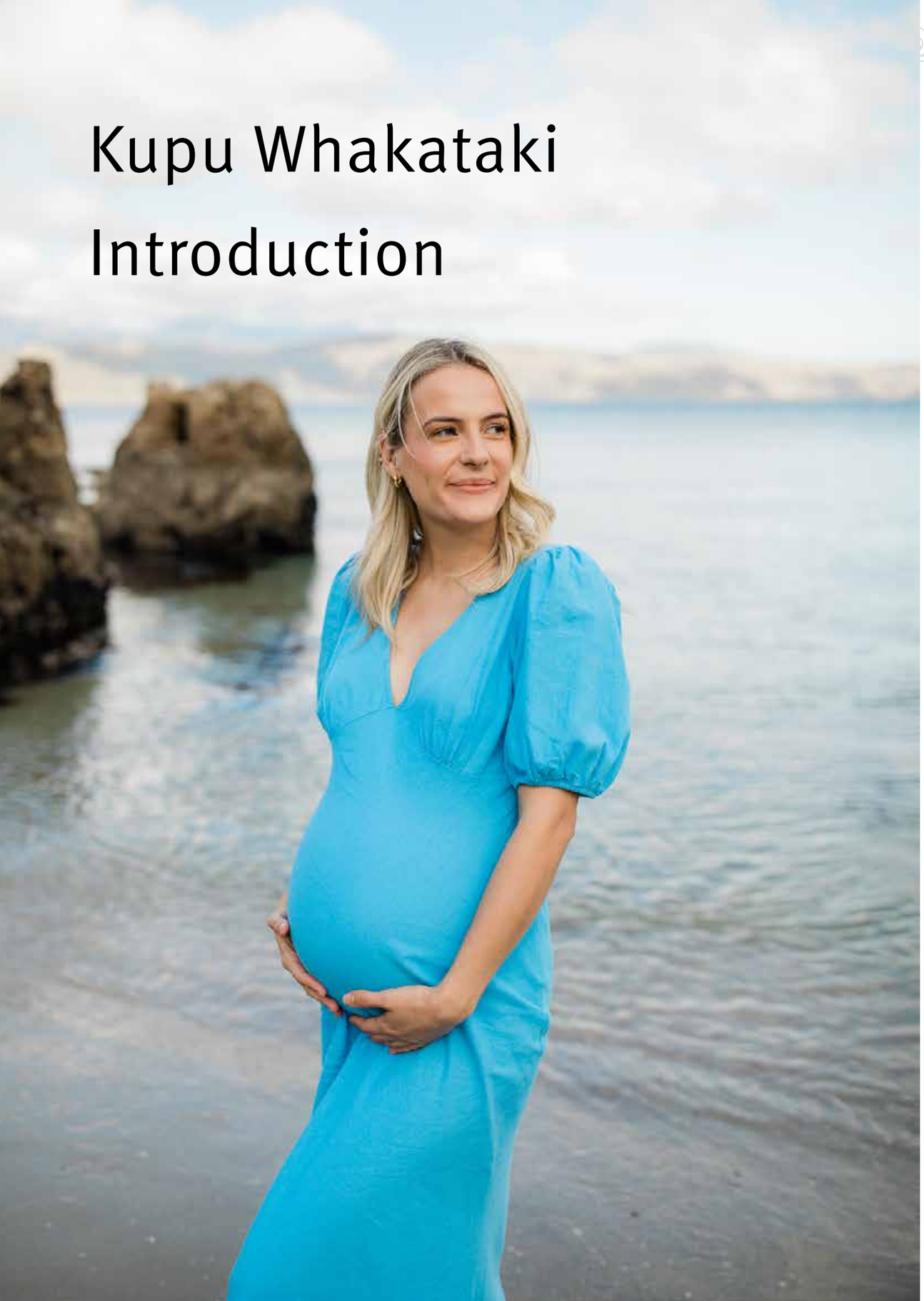


TE WHATU ORA – HEALTH NEW ZEALAND CAPITAL, COAST VISION AND VALUES

Te Whatu Ora – Health New Zealand Capital, Coast is committed to meeting the Manatū Hauora's (the Minister of Health) expectations and delivering our vision of: *Keeping our community healthy and well*.

As a health care provider, we work according to the following three core values:

Manaakitanga	respect, caring, kindness
Kotahitanga	connection, unity, equity
Rangatiratanga	autonomy, integrity, excellence

Manaakitanga is at the heart of Māori tikanga. We care for a person's mana by expressing hospitality, generosity and mutual respect.

Kotahitanga focuses on unity and collective action. We work in a fair and just way with each other and with the communities we serve.

Rangatiratanga challenges us all to use our personal power with absolute integrity to serve our communities and provide the best health services we can. We trust people to share power, influence and decision-making.

KOWHAIWHAI

The Capital, Coast kowhaiwhai depicts growth, development and the interactions between a person and their environment. The manawa (kowhaiwhai) is the heart line that leads to Ngā Kete o Te Wananga (the three baskets of knowledge). These connect the past to the present using the knowledge and experiences of old and new, to strengthen future generations.

STRATEGIC ALIGNMENTS

Te Pae Tata Interim New Zealand Health Plan 2022

Taurite Ora: Māori Health Strategy 2019 - 2030

Pacific Health & Wellbeing Strategic Plan for the Greater Wellington Region 2020-2025

Ola Manuia Interim Pacific Health Plan July 2022-June 2024

New Zealand Health Strategy: Future direction

Living Life Well – A Strategy for mental health and addiction 2019-2025

Health System Plan 2030

New Zealand Maternity Standards

2DHB Maternity and Neonatal System Plan

National Maternity Monitoring Group recommendations

Perinatal and Maternal Mortality Review Committee recommendations

Maternal Morbidity Working Group recommendations

Pae Ora – healthy futures

Whakamaua: Māori Health Action Plan 2020-2025

System Level Measures Improvement Plan 2020/21

Capital & Coast District Health Board Annual Plan: 2021/2022

Ō mātou tāngata – he aha ai, he pēhea hoki

Our People – Why and how

THE TE WHATU ORA – HEALTH NEW ZEALAND CAPITAL, COAST REGION

Te Whatu Ora Capital, Coast District is the provider of health services to residents living in the Kāpiti Coast District, Porirua City and Wellington City.

The region was home to an estimated 320,640 women/people in 2020/21, which is projected to grow by an additional 19,610 women/people by 2030/31.

Capital, Coast is an ethnically diverse region. 12% of our population identify as Māori (38,600), 7% as Pacific peoples (23,500) and 16% are Asian (51,400). The remaining 65% of the Wellington population identify as an 'other' (non- Māori, non-Pacific, non-Asian) ethnic group.

Most of the population are aged 25-69 (58%). Age structures however differ by ethnicity and between geographic areas. The regional population differs from the maternity population.

While most of the region's population are relatively advantaged, there are significant pockets of socioeconomic deprivation. These are focused in Porirua, small parts of central Wellington and the Kāpiti Coast. Māori and Pacific peoples, in particular, experience inequitable health outcomes, and improving their experience in our maternity services has been a focus for the MQSP team from 2021.

The Women's Health Service (WHS) is responsible for tertiary maternal transfers from the central region of Aotearoa New Zealand, which includes Te Whatu Ora Te Pae Hauroa o Ruahine o Tararua MidCentral, Te Whatu Ora Whanganui, Te Whatu Ora Te Matau a Māui Hawke's Bay, Te Whatu Ora Wairarapa and Te Whatu Ora Capital, Coast and Hutt Valley. The WHS is also responsible for maternal transfers from Te Whatu Ora Nelson Marlborough, which is outside of the central region.

The Capital, Coast maternal fetal medicine (MFM) service provide sub-specialist care. They are part of a national network with sub-specialists in Te Whatu Ora Waitaha Canterbury and Te Whatu Ora Te Toka Tumai Auckland.

The multidisciplinary diabetes and endocrine antenatal clinic provides tertiary pre-conception counselling and pregnancy care to women/people with complex needs who live in the Te Whatu Ora Capital, Coast and Hutt Valley and well as Te Whatu Ora Wairarapa.

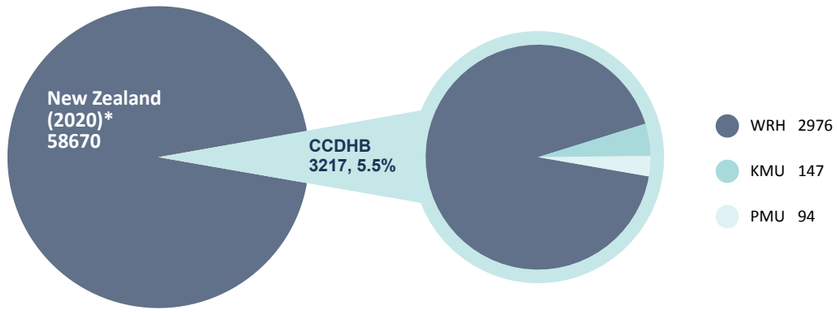
A multidisciplinary team provides care for women/people with complex cardiac conditions during their pregnancy and birth from the Central Region and the Nelson Marlborough district.

Wellington Regional Hospital accepts maternal transfers from outside the central region when neonatal units elsewhere in the country have reached capacity. The neonatal intensive care unit (NICU) provides tertiary healthcare services to premature, surgical, and sick newborns, and while not part of the Women's Health Service, works closely with the team.

THE MATERNITY POPULATION

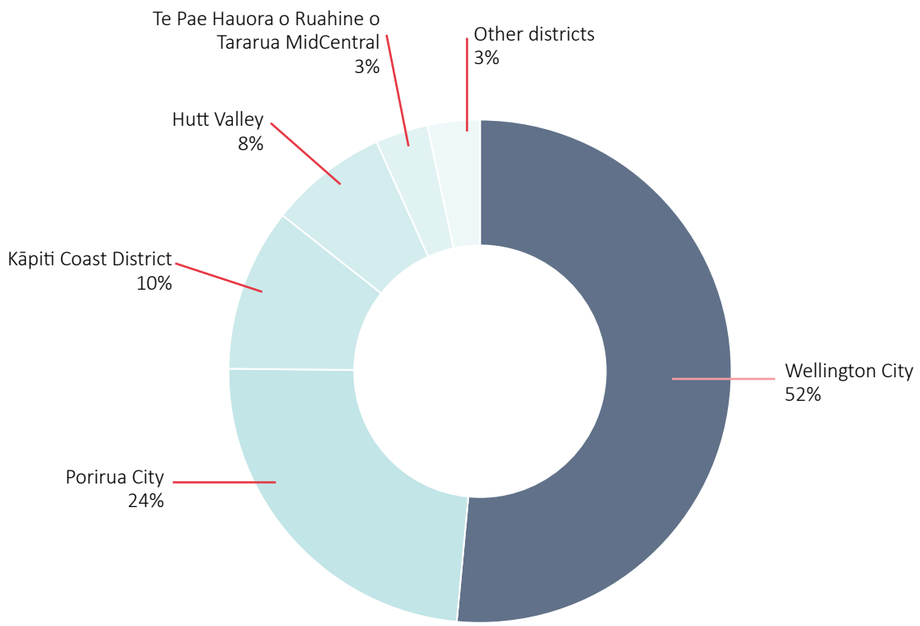
There were 58,670 women/people recorded as giving birth in Aotearoa New Zealand in 2020, according to the Manatū Hauora's Report on Maternity web tool, released in 2023. In 2022, Capital, Coast recorded 3217 women/people who either birthed at their facilities, had an unplanned birth at home, or birthed in transit, en route to hospital. Capital, Coast births equate to 5.5% of the birthing population of Aotearoa New Zealand. There were an additional 119 homebirths which did not require a hospital admission. This additional cohort is not included in Capital, Coast birth statistics, so are excluded from our data.

Women/People Birthing at Capital, Coast 2022, by Birthing Facility



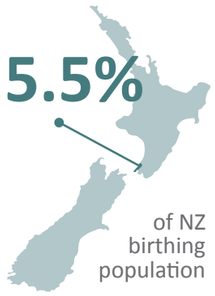
* (Manatū Hauora, 2023)

Where are our people from?



The Te Whatu Ora Capital, Coast Birthing Population*

BIRTHS

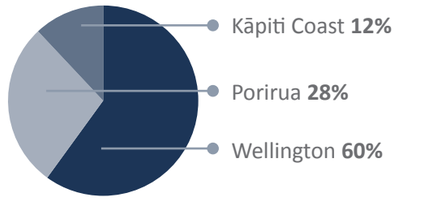


THAT'S AN AVERAGE OF **9** babies born each day

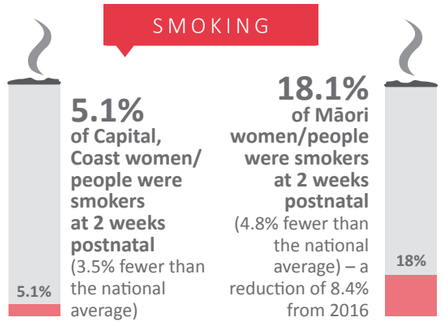
DOMICILE

14%(462)

Capital, Coast resident births were from:



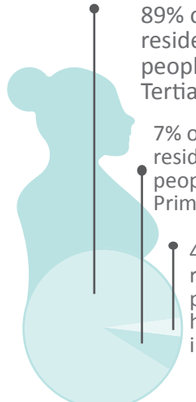
SMOKING



5.1% of Capital, Coast women/ people were smokers at 2 weeks postnatal (3.5% fewer than the national average)

18.1% of Māori women/people were smokers at 2 weeks postnatal (4.8% fewer than the national average) – a reduction of 8.4% from 2016

BIRTH FACILITY

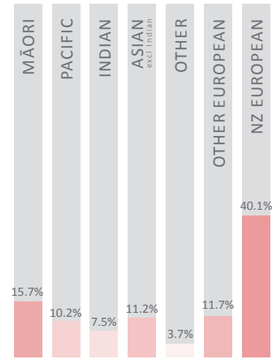


89% of Capital, Coast resident women/ people birthed at a Tertiary Hospital

7% of Capital, Coast resident women/ people birthed at Primary Birthing Units

4% of Capital, Coast resident women/ people birthed at home without coming into a hospital

ETHNICITY



Capital, Coast has fewer Māori and more European mothers than the national average

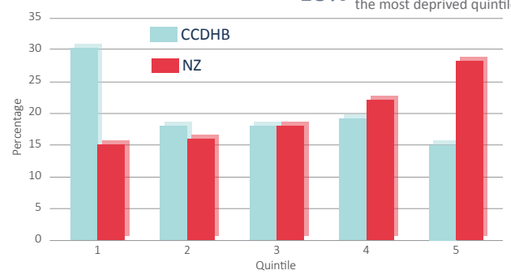
PARITY

Capital, Coast women/people are more likely to be first time mothers **(49%)** than women/people nationally **(40%)**

DEPRIVATION

30% Higher than average amount of mothers living in the least deprived quintile (NZ Dep 2013)

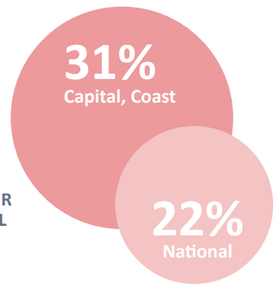
15% Fewer than average living in the most deprived quintile



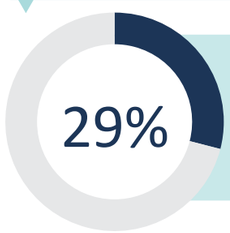
AGE

35+

CAPITAL, COAST MOTHERS ARE OLDER THAN THE NATIONAL AVERAGE



REGISTRATION



OF CAPITAL, COAST PREGNANT WOMEN/ PEOPLE REGISTERED WITH AN LMC IN THE FIRST TRIMESTER

BODY MASS INDEX

At the time of booking, CCDHB pregnant people were more likely to be in the healthy weight range and less likely to be obese than pregnant people nationally

44%	28%	20%
HEALTHY WEIGHT	OVERWEIGHT	OBESE

*Aotearoa New Zealand data and Capital, Coast maternity clinical indicator data is for the year 2020 (the most recent complete year of data. Aotearoa New Zealand data is sourced from the Manatū Hauora Qlik Sense hub and the Maternity Clinical Indicator web tool.

MATERNITY FACILITIES

Birthing facilities are available at three locations – Wellington Regional Hospital, Kenepuru Community Hospital and Kāpiti Health Centre.

WELLINGTON REGIONAL HOSPITAL (WRH) – PRIMARY, SECONDARY, AND TERTIARY

Birthing suite
Twelve labour and birth rooms with pools
One operating theatre

Ward 4 North Maternity
Twenty six resourced maternity beds
One bereavement room
Two assessment beds for LMCs (not resourced)

Acute Assessment Unit
Five assessment rooms
Four additional assessment spaces

KENEPURU MATERNITY UNIT (KMU) – PRIMARY

Eight bed capacity

Two birthing rooms

One birthing pool

Six postnatal rooms

PARAPARAUMU MATERNITY UNIT (PMU) – PRIMARY

Three bed capacity

One birthing room

Two postnatal rooms

A virtual tour of our three facilities can be accessed at CCDHB website: www.ccdhb.org.nz/our-services/maternity/giving-birth-at-our-hospitals/

MATERNITY SERVICES

EARLY PREGNANCY SUPPORT

The 'Find a Midwife' service supports pregnant women/people to find a midwife LMC. The service is accessible at www.ccdhb.org.nz/our-services/maternity/contact-us-for-help-finding-a-midwife/, or by calling 0800 346 369.

FIND A MIDWIFE SERVICE CONTACTS WITH WOMEN/PEOPLE IN 2022:

Number of unique women/people accessing the service	1,547
Referred to LMC	346
Referred to CMT	424

Early pregnancy (0-14 weeks) education was available for women/people free of charge at WRH up until December 2022 and were used while they are looking for a midwife. These ran via video and audio conferencing due to the presence of COVID-19. You can now find all information for antenatal classes at https://www.wellington.pepeora.nz/taha-wairua#antenatal_education

PREGNANCY AND PARENTING CLASSES

Free childbirth and parenting education classes are provided. These classes were established to provide greater access for Māori, Pacific, migrant women/people, and women/people who may not be able to afford to attend a paid class. The Capital, Coast funded childbirth education through community based external providers with the objective of increasing the number of first-time pregnant women/people accessing antenatal education.

HAPŪ WĀNANGA TE RAUKURA Ō TE AROHA

Hapū Wānanga is a Kaupapa Māori focused education programme to support whānau and revitalise traditional Māori haputanga practices.

Hapū Wānanga Te Raukura ō Te Aroha is held at Porirua.

Whānau can book in here through this link https://forms.gle/F24ZfKEjRKmbNpMZ9

Find us on social media here https://www.facebook.com/HapuWa/

PREGNANCY EDUCATIONAL TALANOA - THE TĪNA INITIATIVE

The Tīna Initiative project was established in 2020 by three Pacific Midwives to create and provide culturally appropriate Pacific pregnancy education and information talanoa for Pacific women and their families in the Wellington region.

These talanoa are facilitated by Pasefika Midwives and run monthly from July 2022. They alternate venues from Wellington to Porirua to cater to all our women/people and their aiga, free transport is provided for those who require it.

The talanoa run from 6.00pm to 8.30pm and are 1 session each week for 2 weeks. The talanoa are interactive, Pacific focussed and appropriate, visually engaging. They provide Pacific style refreshments (meals) during the classes. They also provide some practical Pacific resources to take home that can be very useful during labour.

Please click on the 'Join A Talanoa' or check out their website https://www.pasefikamidwivescollective.co.nz/

TU ORA COMPASS HEALTH CHILDBIRTH AND BREASTFEEDING FREE CLASSES

Tu Ora Compass Health is a not-for profit organisation, supported by Te Whatu Ora Health New Zealand, Capital, Coast, and Hutt Valley Hospitals.

During 2021 due to COVID-19 restrictions Compass Health run their classes' video conferencing.

In 2022 they offer in person or zoom classes.

Classes are run by childbirth educators who have worked as midwives. In-person class venues are in Newtown, Porirua and Kāpiti.

You can book via this link https://www.childbirthclasses.co.nz/

PRIMARY BIRTHING

Women/People are often guided by the experiences of friends and whānau when deciding where to birth their baby. Capital, Coast encourages well women/people with normal healthy pregnancies to consider having their babies in a primary birthing setting. There are known benefits to primary birthing for women/people and no differences in outcomes for babies based on Aotearoa New Zealand and international birthing outcomes. Evidence suggests that the experience and outcomes are better when a well pregnant woman/person, with a healthy baby, chooses to labour and birth in a primary maternity facility.

The Birthing Suite at WRH has 12 good sized rooms with birthing pools and ensuites, a Koru room which was developed to create a home-like birthing environment. Kenepuru and Paraparaumu Maternity Units are primary birthing units, where women/people can have a natural birth without intervention, with a midwife in attendance.

KMU and PMU are both actively promoted by the midwife LMCs working within these areas. Familiarity with the units are encouraged for women/people having antenatal assessments and cardiotocograph (CTG) monitoring. LMCs use the assessment time as an opportunity to show pregnant women/people and whānau around the facilities.

BREASTFEEDING EDUCATION AND SUPPORT

Baby Friendly Hospital Initiative accreditation is a requirement for all maternity facilities in Aotearoa New Zealand, which supports and promotes the protection of breastfeeding in hospital. 2022 was year four of the accreditation cycle, with the audit due in March 2023. The clinical midwife specialist (lactation)/BFHI coordinator is involved in developing and implementing standards of midwifery/nursing practice around lactation, and also educational requirements to meet recertification requirements.

We have had to be responsive to COVID-19 throughout 2021, which meant that we were unable to run the free breastfeeding classes that were previously offered at WRH and KMU prior to the COVID-19 pandemic. We outsourced the classes to an external provider, Compass Health, where free breastfeeding education is presented by a midwife via online sessions.

Te Whatu Ora Capital, Coast facilities offer free breastfeeding support in the community for all new parents. This Team comprises of two breastfeeding advocates and a lactation consultant, with a particular focus on working with Māori and Pacific women/people, and those with complex needs.

The team support breastfeeding in hospital, at home or the Breastfeeding Centre, and by phone. Together they staff the Breastfeeding Centre where women/people can drop in and receive breastfeeding support and advice. In 2021, COVID-19 impacted on the number of people that were able to be seen by our team, and the Breastfeeding Centre was relocated from Ora Toa Health Service, Porirua to the Outpatients Department at KMU for one on one appointments with a lactation consultant. 2022 brought about a further relocation to the Women's Centre in Pember House, Porirua where our lactation team assists between 9 and 12 women/people each week.

We also hold a tongue-function clinic on Thursday mornings at KMU for breastfeeding babies where there is a suspected or diagnosed tongue-tie. The clinic is staffed by a registered midwife who has been trained to individually assess and diagnose tongue-ties using the Hazel Baker assessment tool, and perform anterior tongue-tie releases as clinically appropriate. She is supported by a lactation consultant and midwives or nurses who assist with the procedure and support breastfeeding afterwards. The process requires a written referral from either LMC's, midwives and nurses or via staff at the breastfeeding centre. If the tongue-tie looks too complicated to release at the clinic or the baby is over six weeks of age, breastfeeding support is offered and a referral is sent to the Paediatric Ear, Nose and Throat specialists at Te Whatu Ora Capital, Coast for follow-up.

SECONDARY AND TERTIARY CLINICS

Secondary and tertiary level care is provided to pregnant women/people who require obstetric referral for consultation, or transfer of care during their pregnancy. Pregnant women/people are referred to clinics through their General Practitioner (GP), LMC or Obstetrician (if coming from another district/hospital for tertiary review), for a range of conditions. Referral may relate to existing medical conditions, or high risk care planning and follow-up for those who have suffered the loss of a baby.

WOMEN'S HEALTH ULTRASOUND SERVICE

The Women's Health ultrasound service provides a critical role in the evaluation and monitoring of pregnant women/people. Specialised imaging is provided to support clinics, and for regular monitoring of complex pregnancies. This department also provides expertise in fetal sonography to support pregnant women/people requiring care through the Maternal Fetal Medicine (MFM) service and secondary/tertiary clinics.

MATERNAL FETAL MEDICINE

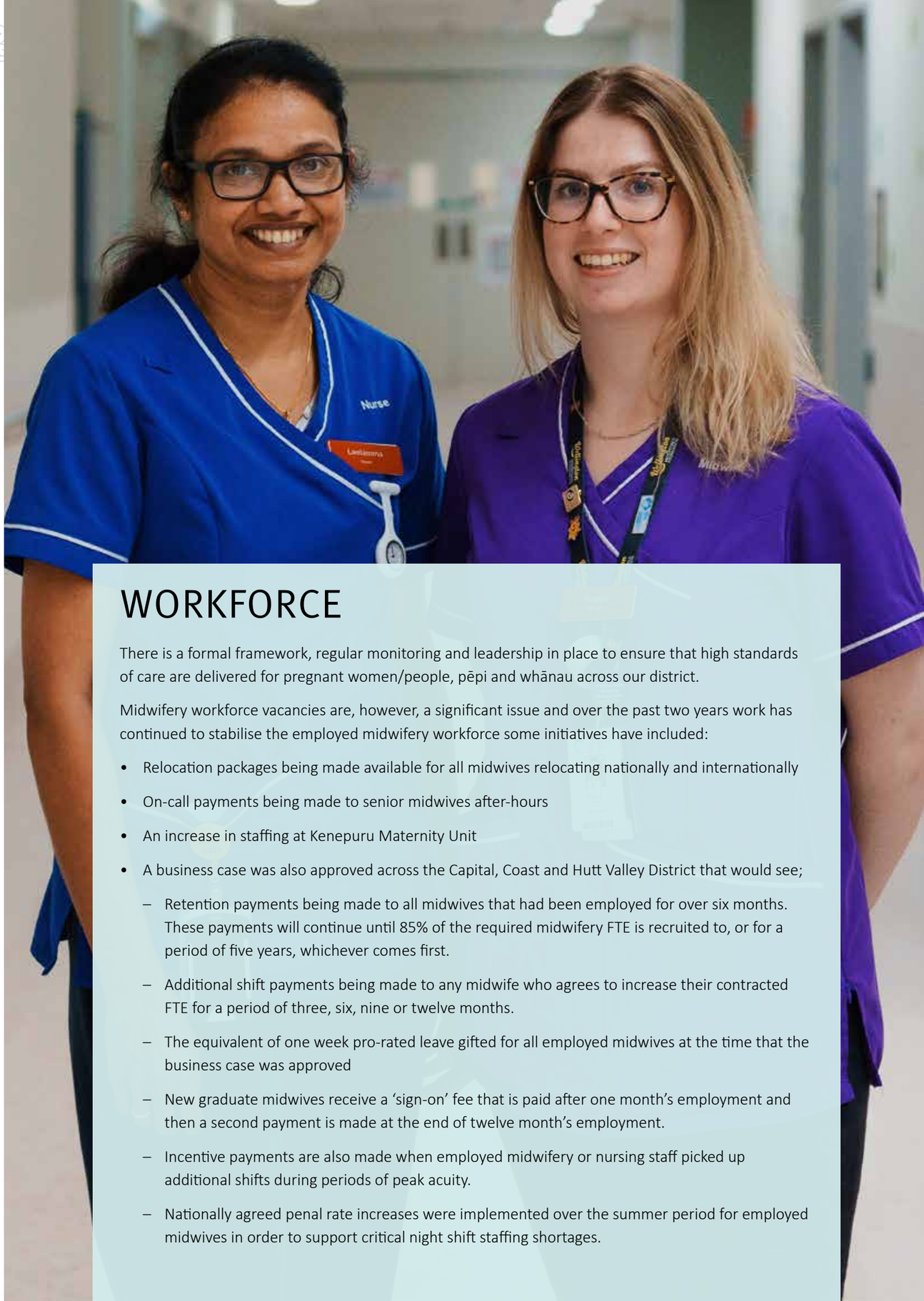
MFM is a tertiary level sub-specialty service which provides care to those who have complex pregnancies. The MFM service is one of three MFM hubs in Aotearoa New Zealand. As the central hub, they provide care to the Central Region and Nelson Marlborough.

Our Hub is host to the Aotearoa New Zealand MFM Network. The purpose of the Aotearoa New Zealand MFM Network is to facilitate safe and equitable care on the background of a sustainable service. A programme manager and administrator support the National Clinical Director (Dr Jay Marlow) to facilitate this network.

The MFM service is also a training centre for future MFM sub-specialists, obstetricians doing a Diploma of Diagnostic Ultrasound (DDU) and obstetricians with an interest in fetal medicine.

Teleconference facilities for consultation are enabled for the central hub catchment.The MFM specialises in:

- the management and supervision of high-risk first and second trimester screening results by:
  - provision of non-invasive pre-natal testing
  - diagnosis by chorionic villous sampling or amniocentesis
  - funded non-invasive prenatal testing (NIPT)
- diagnosis and management of major and complex fetal anomalies
- management of fetal cardiac anomalies that are unlikely to require immediate cardiac surgery
- management of other cardiac disease
- intrauterine transfusions for red blood cell incompatibility
- multi-fetal reduction and feticide
- management of fetal genetic conditions in pregnancy
- management of fetal surgical conditions in pregnancy
- input into the care of pregnant women/people with complex medical conditions.



WORKFORCE

There is a formal framework, regular monitoring and leadership in place to ensure that high standards of care are delivered for pregnant women/people, pēpi and whānau across our district.

Midwifery workforce vacancies are, however, a significant issue and over the past two years work has continued to stabilise the employed midwifery workforce some initiatives have included:

- Relocation packages being made available for all midwives relocating nationally and internationally
- On-call payments being made to senior midwives after-hours
- An increase in staffing at Kenepuru Maternity Unit
- A business case was also approved across the Capital, Coast and Hutt Valley District that would see;
  - Retention payments being made to all midwives that had been employed for over six months. These payments will continue until 85% of the required midwifery FTE is recruited to, or for a period of five years, whichever comes first.
  - Additional shift payments being made to any midwife who agrees to increase their contracted FTE for a period of three, six, nine or twelve months.
  - The equivalent of one week pro-rated leave gifted for all employed midwives at the time that the business case was approved
  - New graduate midwives receive a ‘sign-on’ fee that is paid after one month’s employment and then a second payment is made at the end of twelve month’s employment.
  - Incentive payments are also made when employed midwifery or nursing staff picked up additional shifts during periods of peak acuity.
  - Nationally agreed penal rate increases were implemented over the summer period for employed midwives in order to support critical night shift staffing shortages.

PĒPE ORA

In 2019 Capital, Coast commissioned the external agency DNA to undertake a piece of qualitative research to understand the lived experiences of hapū māmā, whānau and their tamariki in the Porirua region. Insights from maternity health providers were also featured in this research. The research findings highlighted a need to create an accessible online touch point for parents to be able to find information about the local services available to them during conception, pregnancy and the first 1000 days after birth. This information would be helpful to providers, to create awareness of each other and to work better together to support whānau.

Responding to these findings, Capital, Coast approached Te Whatu Ora- Wairarapa in 2020 to explore opportunities to partner in Pēpe Ora, a successful website and provider collective established some years prior. With the support of Wairarapa, Capital, Coast began to develop a sister Pēpe Ora website. Collaborating to create a familiar touch point for whānau moving around the rohe.

In 2021, the first iteration of the Capital, Coast Pēpe Ora website was delivered. The website mirrors the Wairarapa site and content is based around the four pillars of Te Whare Tapa Whā:

- Taha wairua (spiritual health)
- Taha tinana (physical health)
- Taha hinengaro (mental health)
- Taha whānau (family health)

2021 also saw the establishment of the first Capital, Coast Pēpe Ora collective. This collective is based in Kāpiti and is comprised of health professionals and community agencies who work in the first 1000 days space. Quarterly hui enable providers to come together to share new initiatives happening in their work places, find ways to support each other and kōrero about things that could be improved for whānau in maternity and the first 1000 days. At the last Pēpe Ora Kāpiti hui for 2021, the collective identified a desire for more information about family harm. A workshop called 'Supporting Safe Relationships' is organised for the first quarter of 2022. Establishing provider collectives in Te Whanganui-a-Tara and Porirua is planned for 2022.

Following the website launch, we sought feedback from consumers. Their feedback highlighted that the platform wasn't accessible enough for our community, particularly younger māmā, and gave us other ideas for improvement. Simultaneously, the Maternal Neonatal System Plan 2021 recognised Pēpe Ora as an important community connector, and positioned it for a redevelopment process in response to the feedback.

In 2022 we released a new and revitalised Pēpe Ora website (https://www.wellington.pepeora.nz/).

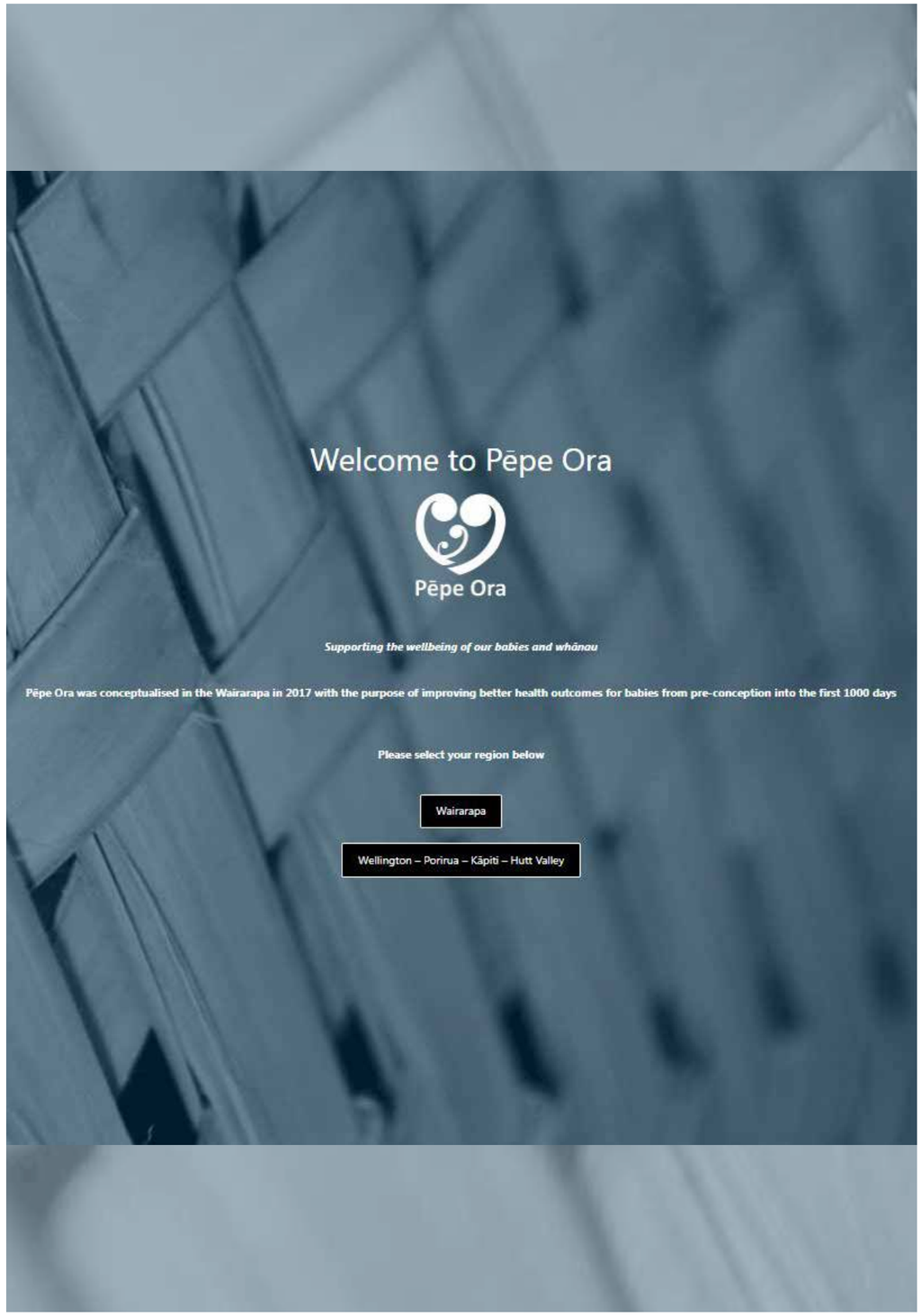
The criteria to be listed on the website includes:

- Maternal or first 1000 days service
- Hutt Valley, Wellington, Porirua or Kāpiti service
- Free or low cost service or programme

Although the website is designed for whānau, healthcare providers who work with hapū māmā and pēpi may also find it a useful tool. Pēpe Ora creates awareness of community organisations that you may wish to refer whānau to. The goal is for hapū māmā to be told about Pēpe Ora at their first antenatal visit, thereafter referring to it throughout their pregnancy and postpartum journey. So please, tell the whānau you are working with and your colleagues.

Pēpe Ora: https://www.wellington.pepeora.nz/

Facebook: https://www.facebook.com/PepeOraNZ



SAFE SLEEP PROGRAMME

As part of the Manatū Hauora's National SUDI (sudden unexplained death in infancy) Prevention Programme, Capital, Coast continues to coordinate a well-established Safe Sleep Programme. The programme aims to capture those pēpi who are most vulnerable to SUDI.

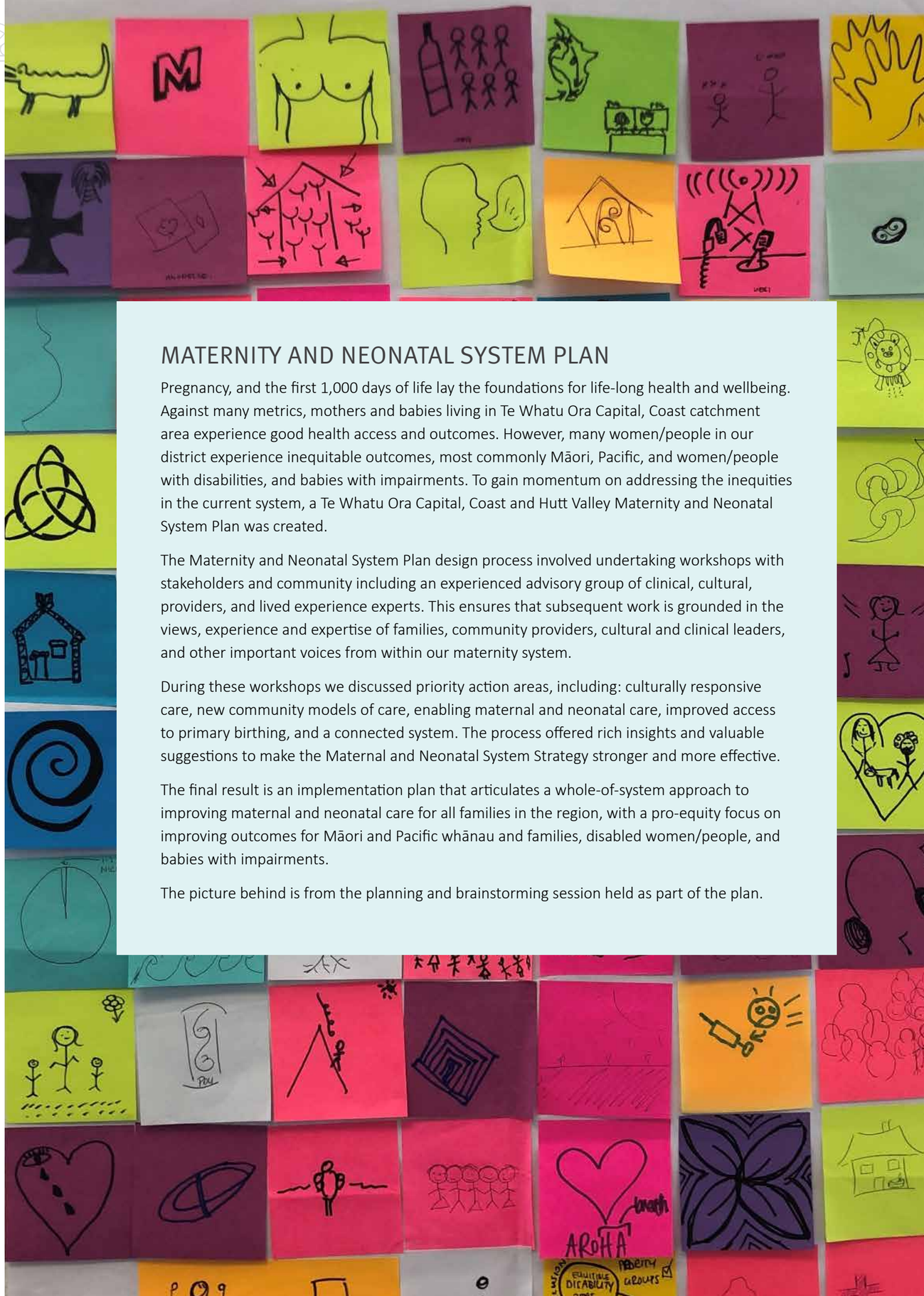
There are several opportunities for whānau to receive a wahakura or Pēpi-Pod safe sleep bed (SSB) within Capital, Coast. Whānau are able to receive a SSB through their midwife, or Well Child Tamariki Ora nurse, or in some cases, other health or social services providers. Health providers who distribute SSBs receive training on delivering strengths based, culturally appropriate safe sleep messaging. The providers accessing training often have existing relationships with whānau who commonly meet risk-assessment criteria that qualify them for additional support with keeping baby safe during sleep.

Together with Ora Toa Takapuwahia, Kairaranga (weaver) Puhi Nuku and her whānau support wānanga wahakura in the Capital, Coast District. These wānanga are an excellent way to engage hapū māmā and their whānau, instilling safe sleep mātauranga (knowledge) whilst weaving. Māmā who attend Hapū Wānanga (kaupapa Māori antenatal classes), also have an opportunity to receive a wahakura and learn about safe sleep.

In May 2021, Capital, Coast supported a wānanga wahakura for kaimahi (staff) who work in the safe sleep space. This was provided by the Capital, Coast Safe Sleep Coordinator, Ora Toa Takapuwahia, and Puhi Nuku and her whānau. The interactive workshop provided a refresh of mātauranga and focused on supporting strength based delivery of safe sleep messaging.

2022 was a successful year for the programme, seeing the trajectory of SSBs distributed continue to increase. 409 SSBs were given to whānau in 2022, 130 over the Manatū Hauora's target. This is a 25% increase from 2021 (326 SBBs), a 98% increase from 2020 (279 SSBs) and a 605% increase from 2019, which saw 58 SSBs distributed.

In 2022, Capital, Coast supported further wānanga wahakura for kaimahi, to allow for more wānanga for hapū māmā and whānau.



MATERNITY AND NEONATAL SYSTEM PLAN

Pregnancy, and the first 1,000 days of life lay the foundations for life-long health and wellbeing. Against many metrics, mothers and babies living in Te Whatu Ora Capital, Coast catchment area experience good health access and outcomes. However, many women/people in our district experience inequitable outcomes, most commonly Māori, Pacific, and women/people with disabilities, and babies with impairments. To gain momentum on addressing the inequities in the current system, a Te Whatu Ora Capital, Coast and Hutt Valley Maternity and Neonatal System Plan was created.

The Maternity and Neonatal System Plan design process involved undertaking workshops with stakeholders and community including an experienced advisory group of clinical, cultural, providers, and lived experience experts. This ensures that subsequent work is grounded in the views, experience and expertise of families, community providers, cultural and clinical leaders, and other important voices from within our maternity system.

During these workshops we discussed priority action areas, including: culturally responsive care, new community models of care, enabling maternal and neonatal care, improved access to primary birthing, and a connected system. The process offered rich insights and valuable suggestions to make the Maternal and Neonatal System Strategy stronger and more effective.

The final result is an implementation plan that articulates a whole-of-system approach to improving maternal and neonatal care for all families in the region, with a pro-equity focus on improving outcomes for Māori and Pacific whānau and families, disabled women/people, and babies with impairments.

The picture behind is from the planning and brainstorming session held as part of the plan.

Te kounga me te haumaru o te taurima wāhine hapū

Maternity quality and safety

MATERNITY QUALITY AND SAFETY PROGRAMME

The WHS MQSP governance committee, as part of the Te Whatu Ora Capital, Coast clinical governance infrastructure, ensures that systems are in place to enable clinicians and managers to share responsibility and accountability for patient safety, to minimise risks to pregnant women/people and babies and to continuously monitor and improve the quality of clinical care provided.

The maternity quality and safety programme is a national programme which establishes and builds upon national and local maternity quality improvement activities. It seeks to ensure the highest possible safety and best possible outcomes for all pregnant women/people and babies.

This report is underpinned by the New Zealand Maternity Standards (New Zealand Manatū Hauora, 2011), which are overseen by NMMG.

Standard One: Maternity services provide safe, high quality services that are nationally consistent and achieve optimal health outcomes for all pregnant women/people and babies.

Standard Two: Maternity services ensure a woman/person-centred approach that acknowledges pregnancy and childbirth as a normal life stage.

Standard Three: All pregnant women/people 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 pregnant women/people.

At Te Whatu Ora Capital, Coast governance of the programme was undertaken by the MQSP governance group.

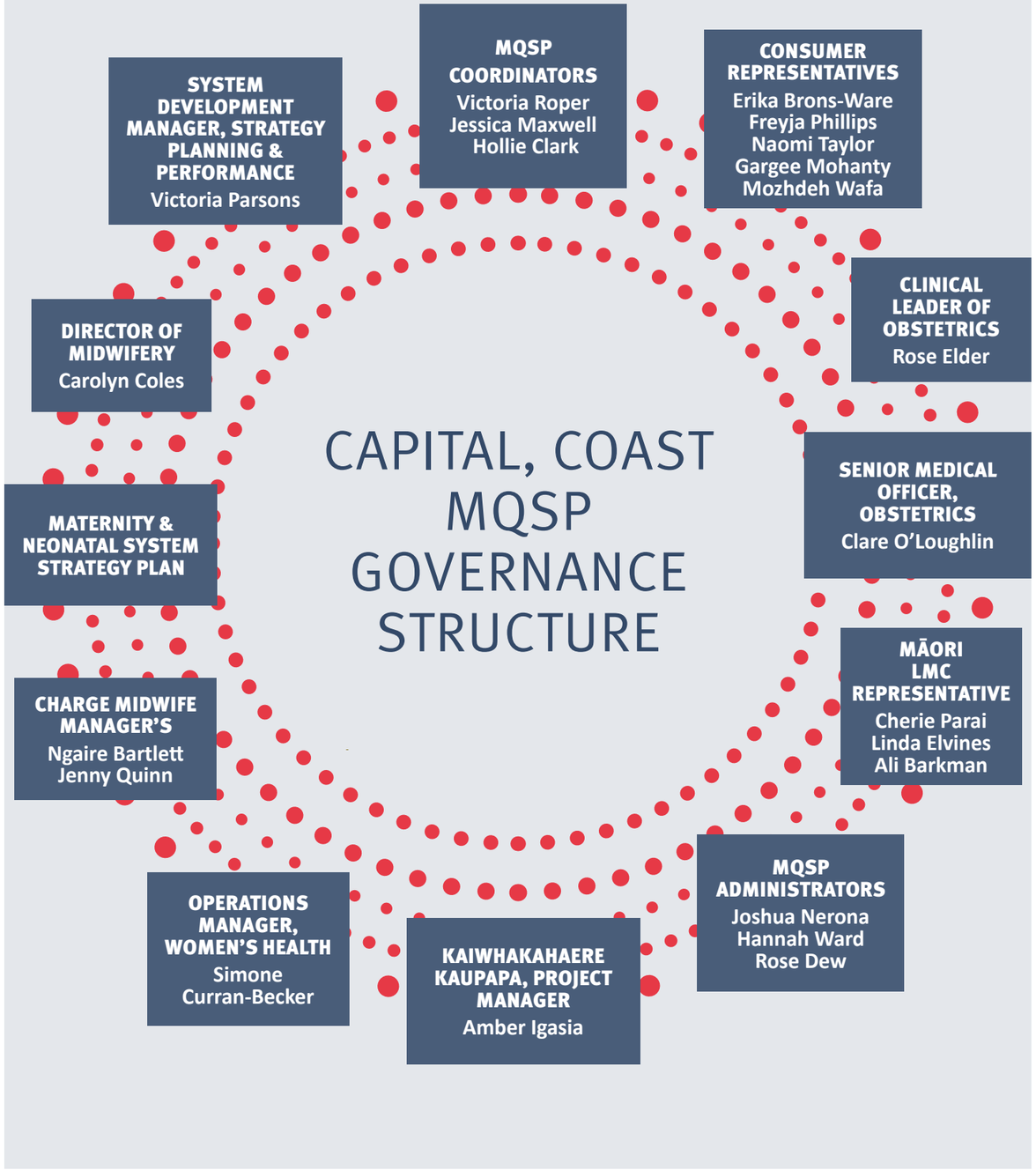
Membership included: representation from consumers and LMC midwives, a Māori health representative, a Pacific health representative, obstetric and midwifery clinical leads, MQSP coordinators, an operational lead, and a representative from Strategy, Planning & Performance. Representation from other stakeholder groups is co-opted on a project-by-project basis throughout the year.

The current work programme was developed with stakeholder input and key actions were identified. A record of ongoing achievements to date is contained in previous WHS annual clinical reports. The 2021-2022 report is publicly available online at www.ccdhb.org.nz/news-publications/publications-and-consultation-documents/ccdhb-whs-2021-2022-maternity-quality-safety-programme-annual-report.pdf.

Our MQSP is well established and we continue working towards embedding maternity quality into a strategic quality framework to improve outcomes for pregnant women/people and their babies.

Since we have now become Te Whatu Ora – Health New Zealand Capital, Coast and Hutt Valley the plan for 2023 is to combine both governance groups into one and we will a look at combine workplans and project work across the district.

Figure 1: **Capital, Coast MQSP Governance Structure**



VOICES OF WOMEN/PEOPLE AND THEIR WHĀNAU

Pregnant women/people and whānau continue to provide feedback about our maternity services in a number of ways, and it is very much appreciated.

Consumer survey posters are displayed around the wards, and can be accessed by scanning a quick response (QR) code. For consumers who prefer to reflect and feedback at a later date, a feedback card is placed inside the Well Child Health Book.

Women/People also share their experiences and perspectives with their LMCs and these experiences are discussed at the bi-monthly LMC forums run by our representatives. This feedback is brought to the attention of the MQSP Governance group.

Finally, our consumer representatives spend time engaging with a diverse range of women/people and whānau, seeking their valued thoughts and experiences of our services. Any suggestions or concerns are discussed and actioned as required.

The following is a selection of feedback received:

- "All of the staff at Kenepuru were absolutely amazing. The team of midwives all went above and beyond to help us as first time parents learn how to look after our little man. They all took time to clearly explain and show us things that have made the world of difference particularly with breastfeeding. Couldn't recommend more."
- "Amazing team! It's such a difficult job and they did amazingly. We really appreciated the anaesthetics team for their approach before and during the caesarean section. We also had lovely nurses post op and on the postnatal ward, and really appreciated the support of the midwives in learning to breast feed and settle our baby. Our LMC was excellent before and during the birth."
- "Paraparaumu Birthing Unit is amazing. I went there for two nights after the birth of my first child and felt very supported and cared for. The midwives were incredible in teaching and nurturing me. I was lucky to have the same day midwife there for three days. I have nothing but respect and admiration for midwives, thankyou [sic] for everything you do!"
- "All the staff were so incredible and made me feel so calm and supported."
- "Our experience with the CMT throughout our pregnancy was excellent! All the midwives we encountered were on to it and made us feel confident and supported."
- "We came into Wellington hospital and were really grateful for the care we received from our midwives and the hospital staff present at the time. I felt listened to and reassured that my options were explained to me."
- "Every person on CCDHB Staff that I encountered was amazing. Special shout out to the student midwife who was at my birth at Wellington and Jacinta who was on night shift during my stay at Kenepuru"
- "Really appreciate everything, very helpful staff felt like home"
- "All the midwife and nursing staff at Kenepuru were amazing. I really appreciated their support and help in the days I spent there."
- "The best experience for first time parents, we were treated so well and they cared for my son really well and me and my partner"

We want to acknowledge that we also received some negative feedback in relation to the staffing of our unit in wellington and women/people and their whānau feeling the effects of staffing and feeling like they weren't seen regularly enough. The midwifery workforce shortage is a nationwide issue. However we continue to recruit both nationally and internationally. We have the first cohort of Bachelor of Midwifery Graduates from Victoria University Wellington Te Herenga Waka at the beginning of 2024.

LOOKING AHEAD:

In collaboration with the consumer engagement team, MQSP are exploring alternative methods of gathering feedback across the region from pregnant women/people and whānau.

ENGAGEMENT WITH STAKEHOLDERS ACROSS TE WHATU ORA – CAPITAL, COAST DISTRICT

Meeting structures that support the MQSP through collaboration, information sharing and education, included monthly multidisciplinary maternity meetings (4M) and interface meetings between LMCs and midwifery management at Wellington Hospital. Local interface meetings were also held at Kenepuru and Kāpiti birthing units. These meetings enabled effective two-way communication between governance and clinicians so that information about current issues, impending changes, improvements and policy updates were shared. Alternative meeting options, such as zoom conferencing, were widely used as an option for increasing attendance and to maintain social distancing.

- Perinatal mortality and morbidity review meetings brought together midwifery, obstetric, neonatal, genetics, pathology and paediatric surgical staff for case reviews. Recommendations on system and practice changes were fed back to relevant areas or to the clinical governance groups.
- Morbidity and mortality meetings brought gynaecology and maternity staff together to review cases of significance.
- CapitalDocs, the electronic policy, procedure, protocol and guideline information system contains relevant information for maternity healthcare providers. Work will be undertaken in 2023 which will combine resources with the Hutt Valley. The new system will be called DistrictDocs and maternity services will need to begin merging all their documents.
- Emails, together with our Women's Health Service Newsletter, are used to disseminate information to staff and LMCs about educational events, current articles of interest, public safety alerts, and was utilised to deliver important COVID-19 updates and directives.
- Text and social media were used increasingly to advise pregnant women/people of events and to remind them of appointment dates and times.
- Pēpe ora was promoted to LMCs and pregnant women/people.
- The provision of a 'free to air' educational channel at Wellington Hospital's maternity ward and DVDs at the primary maternity units provided an additional source of information to pregnant women/people and their whānau while they remained inpatients.

CULTURAL EDUCATION AND LEADERSHIP OPPORTUNITIES

Te Whatu Ora Capital, Coast recognises the importance of cultural education amongst our workforce, and professional development particularly for Māori and Pacific midwives and nurses, and provides the following education opportunities.

NOHO MARAE – IMMERSIVE CULTURAL EDUCATION

The Noho Marae in 2021 hosted in Ōtaki was an immersive educational experience for both Māori and non-Māori maternity staff. The Noho Marae in 2022 was offered to Māori staff working across Women's Health Service. For some it reignited their connections and for others a first experience of that environment. Mātauranga was shared, and fresh voices and perspectives from leaders from both within and outside the scope of midwifery were presented. It was a much needed time to 'fill up the midwives cup' as the profession is over-worked and feeling the impact of the COVID-19 pandemic. The desire to be more culturally aware and give safe, appropriate care is forefront in people's minds, and immersive educational/wānanga spaces are an ideal way to provide this.

CULTURAL EDUCATION

During 2022 we had Tākuta Ferris and Iriaka Epiha-Ferris from Hukatai Consultants ran some mini cultural education sessions on the following topics;

- How History has shaped Health Outcomes for Māori today – Working to educate and truly unveil the trust of our Constitutional Framework that is He Whakaputanga and Te Tiriti o Waitangi

NGĀ MANUKURA O ĀPŌPŌ AND ANIVA PROGRAMME

Ngā Manukura o Āpōpō is Tomorrow's Clinical Leaders, which is designed to offer Māori Nurses and Midwives the opportunity to participate in a Māori clinical leadership programme. The programme runs over a four month period, and consists of four, two day wānaga. The programme is designed to stimulate learning, discussion, debate and action.

The Aniva Programme, a workforce development programme funded by Manatū Hauora (Ministry of Health) and now Te Whatu Ora (Health New Zealand), is delivered by Pacific Perspectives Limited and hosted by Te Pukenga- Whitireia New Zealand. It provides pathways for senior Pacific nurses and midwives to gain post-graduate qualifications and also supports their leadership development. A key aspect of the Aniva programme is the tailored leadership mentoring and cultural support provided to participants, which is reinforced by extensive administrative support and activities that build and strengthen a Pacific health leader's network.

Capital, Coast supports our Māori and Pacific midwives to attend these leadership opportunities.

NATIONAL PRIORITIES

MATERNAL MENTAL HEALTH

The availability of primary mental health services are key to ensuring maternal and baby wellbeing. Evidence regarding the positive impact on outcomes for children and families of good mental health during the perinatal period is substantial, and is strongly supported by research on attachment, and prevention of conduct disorders and neurodevelopmental impacts on children. There is also evidence linking poor mental health and wellbeing during the perinatal period with suicide and self-harm risk, family violence and increased demand for the need for specialist mental health services.

The Te Whatu Ora Capital, Coast specialist maternal mental health service (SMMHS) is for women/people who are pregnant or have a baby under one year of age (at the time of referral), who are experiencing moderate to severe mental health issues.

The team is able to offer a number of services, including:

- specialist assessments
- treatment and planning
- individualised support and therapy
- medication reviews and advice
- mental health information
- information about community support services.

The team also provides advice to health professionals regarding medication for women/people who have pre-existing moderate to severe mental health problems who are considering becoming pregnant, and those who are pregnant or breastfeeding.

SMMHS covers the Wellington, Porirua, Kāpiti and the Hutt Valley regions. In the Wairarapa, a member of their team works alongside GPs as well as the adult community mental health team, to advise other health professionals who are caring for pregnant women/people or new mothers, who are experiencing mental illness.

REFERRALS

Referrals can be made by GPs, midwives or other health professionals.

For Māori or Pacific women/people living in the Te Whatu Ora Capital, Coast catchment, referral to Te Whare Marie or Health Pasifika is available. SMMHS are available to consult or jointly assess as required.

Referrals are received by Te Haika, the mental health and addictions contact centre for women/people in crisis, or who are experiencing moderate to severe mental health or addiction problems, and then forwarded to SMMHS intake clinicians for telephone contact and screening. The mental health, addictions and intellectual disability service (MHAIDS) are unable to report on the number of maternal mental health referrals that Te Haika triage that are not able to be followed up on, or do not meet the referral criteria, as currently rates/numbers are not separated out from the whole of MHAIDS referrals.

From 2021 to 2022 there were 590 referrals made to the SMMHS. Te Whatu Ora Capital, Coast resident women/people made up only 49.2% (290) of the referrals. For women/people resident in Te Whatu Ora Capital, Coast, there were 257 referrals to SMMHS and 33 requests for maternal mental health consultation. The majority of these referrals and requests came from GPs (51%) followed by midwives (13%), and Other Hospital Departments (10%).

The SMMHS closed a total of 554 maternal mental health referrals in 2021 and 2022 of which 276 (49.8%) were residents of Te Whatu Ora Capital,

Coast. This figure may have included referrals from previous years. The majority were closed due to treatment being completed (59.4%). A very small number were closed due to the service declining the referral (5.8%) and 24.3% of referrals were closed by the women/people themselves. The majority of these were due to the women/people declining treatment (10.1%), with other reasons including being lost to services being uncontactable, moving from the area, or not attending appointments.

INPATIENT SERVICES

Te Whatu Ora Capital, Coast does not have a specific maternal mental health inpatient ward. Women/people who present with severe mental health symptoms can be assessed and considered for admission to Te Whare o Matairangi, an inpatient facility. SMMHS fully support and promote the principle that a baby should remain with their mother, and arrangements that assist this should be considered while maintaining safety and initiating treatment for the woman/person.

There is no provision for a baby to stay with a mother who is admitted at Te Whare o Matairangi. Unfortunately, usual practice is for the baby to remain in the care of whānau, who are encouraged to visit often with the baby. During the inpatient period women/people are encouraged to continue expressing if they are able, and breast pumps are accessed through the central equipment pool.

OTHER PRIMARY AND COMMUNITY BASED SERVICES

In 2020, 'Access and Choice' a new primary mental health initiative significantly increased the availability of free mental health support to women/people and families in primary care. During the 2021 calendar year, Access and Choice has provided over 19,000 sessions to more than 7,000 individual clients in a primary care setting, across the Capital, Coast and Hutt Valley and Wairarapa hospitals.

Additional investment was planned in 2021 in order to increase resources in the Integrated Primary Mental Health and Addiction sector, in the 2022 to 2024 years. Access has increased and these primary mental health resources will provide greater practice coverage and access through to 2024.

In 2020, Te Whatu Ora Capital, Coast also commenced planning to further enhance the network of support and services for women/people who experience mild to moderate distress related to their pregnancy. In 2021, Capital, Coast and Hutt Valley invested in additional support in the Lower Hutt Women's Health Centre and Little Shadows for maternal mental health, and funded increased access to counselling sessions. Capital, Coast and Hutt Valley also invested in additional roles to increase resources for children of parents with mental illness which can include perinatal needs.

CHALLENGES

Challenges to the maternal mental health pathway include limited facilities within inpatient mental health wards, and a lack of funding and workable arrangements to assist mothers with babies within mental health respite facilities. Current respite facilities are unable to accommodate a baby during admission of a mother due to a lack of appropriate staff funding. Staff of current respite facilities also do not have identified or specific maternal mental health training.

A more appropriate treatment and recovery pathway would include support and assistance for mothers to continue their role in mothering their baby as much as able. Safety and reassurance of respite intervention could provide this, if the baby could remain with the mother within the respite facility, where staff also have the relevant and appropriate training in maternal mental health care and training to support mothers caring for their babies.

SUPPORTING SERVICES TO MANAGE MATERNAL DEPRESSION

The clinical team provide support to primary care services in this area through a range of activities.

- A maternal wellbeing clinic is provided at WRH and Kenepuru Hospital. The aim of the clinic is to provide space for pregnant women/people to talk with a maternal mental health care provider about their mental health. Referral is through LMCs and employed midwives and obstetricians for pregnant women/people where there may be concerns for mental wellness during the antenatal period. The clinic offers consultation and assessment with the pregnant woman/person, and provides guidance and advice to the referrer. Referrals to secondary care mental health services (the SMMHS team) can also be facilitated.
- Consultation and liaison is available from our SMMHS for GPs and other health professionals engaging with pregnant and postnatal women/people, and includes information such as advice about medications, or any presenting symptoms. Team clinicians are available on a daily roster.
- Education and networking occurs with LMCs, employed midwives, and NGO's (e.g. Little Shadows). Education is supported and shared with Perinatal Anxiety & Depression Aotearoa (PADA) – a charity providing advocacy and awareness through training and education to primary healthcare professionals and community about perinatal mental health. Information about PADA can be accessed at pada.nz/.

In 2022 MQSP funded two Midwives to attend the PADA Māori Maternal Mental Health Hui in Rotorua, Jeremy Harvey and Paula Pila. Here is the feedback and learning gained from them attending.

"Jeremy and I to immerse ourselves in a two day noho marae, to learn how we as health professionals, can best support Māori and their whānau to improve their birthing experiences and reduce the risk of postnatal depression.

Jeremy and I had the privilege of listening to 12 wāhine speakers. The speakers were a mixture of wāhine comprised of social workers, professors, psychologists and councillors who work with Māori whānau to strengthen communities. The discussions and presentations given were powerful, moving and emotional. Postnatal depression amongst Māori wāhine had strong contributing factors which included disconnect from land, culture, whānau and identity. Colonisation and loss of health practices contributed towards anxiety and distrust around health systems and maternity care. Through the work and research that speakers have completed, the return of traditional Māori birth practices have contributed towards positive birth experiences and healing of postnatal depression. Muka tie, karakia, ori ori, waiata, te reo and burial of whenua were all included as a resurgence of reclaiming birth rights and bringing back a sense of connection to land.

Throughout the noho marae stay, karakia, waiata, ori ori and te reo were used. We learned how to cut harakeke for muka tie and learned how to make muka tie. We were also privileged to hear the journeys and stories from wāhine themselves who have suffered from postnatal depression, and how they themselves used traditional Māori practices to heal.

The experience overall was amazing, it was an honour to share this space with these amazing wāhine. Jeremy and I both learned a lot and have been able to put into practice what we learned from the PADA Māori Maternal Mental Health Hui.

It was a privilege to attend the 2022 PADA Hui on Tangatarua Marae in Rotorua sponsored by MQSP. The genuineness of the participants, diversity in discipline of speakers, and energy of the location made this an event which left

me with an optimism for the future and greater understanding of the harm and hurt caused to individuals and communities through the ongoing impact of colonisation, recolonisation, and racism. Participants were generous in their sharing of spontaneous waiata, anecdote, and support for others, some of whom were clearly deeply hurting.

Much of the research discussion from which clinical changes could be made were around traditional Māori practice being facilitated/implemented in any clinical setting. One such practice was oriori (story telling waiata) sung in the labour and birth setting improving birth outcomes and maternal satisfaction of the birth experience. Like the oriori many of the methods to improve Māori maternal mental health as outlined by the Tangata Whenua presenters was about allowing space for the wāhine and whānau to engage in their culture to the degree of their journey. This included not assuming someone's journey had begun at all and inadvertent pigeonholing by Tangata Tiriti.

Other interesting discussion for future and ongoing research included assessment of the Edinburgh Postnatal Depression Scale, and reassessment/re-evaluation of protective factors for mental health, in the Māori context. Adjunct therapies such as mirimiri and romiromi, as well as practices such as weaving muka and wahakura were also discussed not only for their possible direct benefit to mental/physical health but as an additional connection back to culture.

Again, I am very grateful to have gone and believe I have become more cultural safe in my practice as a result of attending."

SUPPORTING HEALTHCARE PROVIDERS DURING AND AFTER COMPLEX CASES

There are a range of support services available to healthcare providers who are looking after women/people with complex maternal mental health issues and/or suicide cases.

- Te Whatu Ora Capital, Coast postvention (activities which reduce risk and promote healing after a suicide death) service, provide a review and support following a suicide.
- Critical incident debriefing is available on request to Te Whatu Ora Capital, Coast staff.

Midwives Paula Pila, Diana Valentine and Jenni Crowley outside the Tangatarua marae in Rotorua.

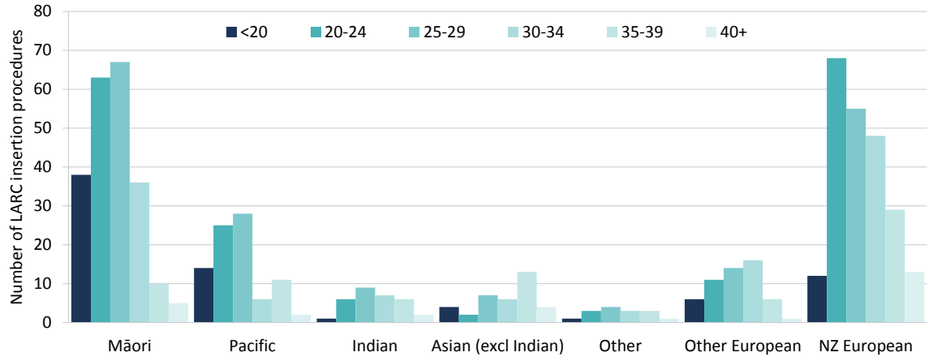
EQUITABLE ACCESS TO CONTRACEPTION

The need for equitable access to contraception was recognised and has been widened with funding gained for free contraception consultations. This service is available to all women/people aged 15-44 years who live in quintile five areas, or hold a community services card, through their GP. Women/people are also able to access free insertion and removal of long acting removable contraceptive (LARC) devices such as Mirena, Jaydess, and Jadelle from their GP.

Women/people under LMC care (Primary) are usually offered contraceptive advice by their LMC postnatally in the community, as the LMC has the best relationship with these women/people. Those women/people who had had input from secondary care have contraception discussed and offered prior to discharge. The GP and LMC are advised of the outcome of this discussion.

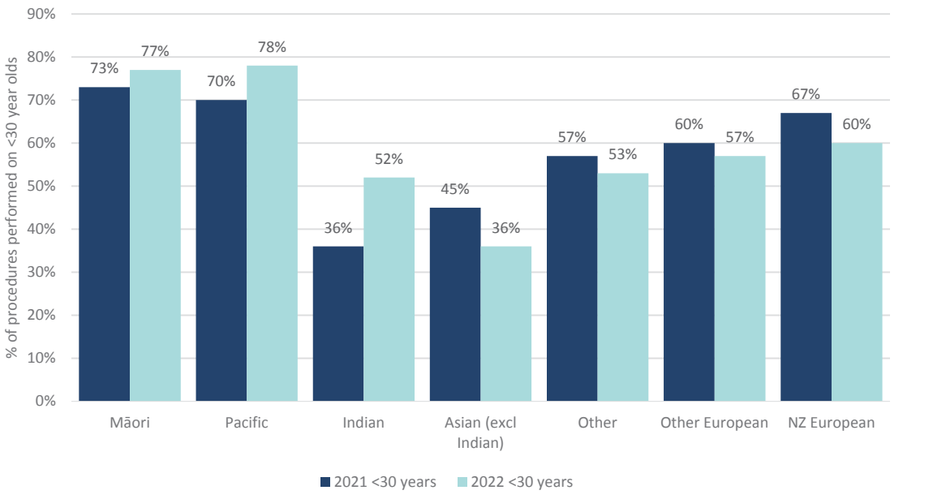
In 2022 there were 666 instances of women/people having a contraceptive device inserted during an inpatient admission, either through Te Mahoe (Termination of Pregnancy and Counselling Service) or Maternity specialty services.

Figure 2: **Age and ethnicity of women/people receiving LARC 2022**



The data shows that Māori (77%), Pacific (78%), European (59%), and Other (53%) women/people were more likely to have a LARC inserted at less than 30 years old, while Asian (57%) women/people were more likely to be 30 years or older. Although, as can be seen by the graph below, Māori, Pacific, and Indian women/people show a trend towards younger age at insertion, while all other ethnicities show a trend towards older age at insertion. Only the Indian ethnicity group has shifted from the majority at 30 years or more, to under 30 years of age at the time of insertion.

Figure 3: **Percentage of LARC insertions performed on <30 year olds by Ethnicity 2021 vs 2022**



PRETERM BIRTH

The Perinatal Maternal Mortality Review Committee (PMMRC) Twelfth Annual report noted live born babies from 23 to 26 weeks gestation had significant differences in survival between tertiary units in Aotearoa New Zealand.

There were significantly higher neonatal death rates for babies without congenital anomalies, of Māori, Pacific, and Indian mothers compared to mothers of Asian (excluding Indian), Other European, and New Zealand European ethnic groupings.

Wellington had good overall outcomes for these babies. Since 2020 there has been more consideration in the use of rescue dose steroids and our current policy on Antenatal Corticosteroid Administration has given more clarity around which gestations require administration as well as when to give a rescue dose.

The age group with the highest preterm birth rate was the under 20 year group, with 12.9% (down from 25.4% in 2021) of their births being preterm. This rate decreased to 7.4% (down from 13.0% in 2021) when restricted to Capital, Coast domiciled women/people. It is worth noting that overall pregnant women/people under 20 years account for only 1.9% of the birthing population, and as such these results are unlikely to be a true reflection of the population.

Looking at combined data from the last five years of Capital, Coast domiciled births, the groups with the highest rates of preterm birth are the under 20 years group (9.8%) and the 40+ years group (7.9%).

Women/People who had preterm births were more likely to report cigarette smoking at booking (12.1%) than women/people who had term births (4.7%).

PRETERM BIRTH AT TE WHATU ORA CAPITAL, COAST DISTRICT

In 2022, 306 women/people (9.5%) had a preterm birth at Capital, Coast. The preterm birth rate for Capital, Coast domiciled women/people was 6.4%, and 28.4% for women/people from other districts (interdistrict transfers).

Most preterm births occurred between 34 to 36 weeks gestation (53.6% of preterm births and 5.1% of all births).

The highest overall rates of preterm births were in Māori women/people (12.9%), followed by New Zealand European women/people (9.7%, a change from Indian in 2021). The highest preterm birth rate for Capital, Coast domiciled women/people was for Pacific women/people at 10.3% (a change from Māori in 2021). Looking at preterm birth rates of Capital, Coast domiciled women/people over the last five years, Indian and Māori ethnicities have the highest rates with 9.0% and 8.8% respectively.

Table 1: **Preterm birth rate for Capital, Coast domiciled women/people combined 2018-2022, by ethnicity group**

	<32 weeks		34 - 36 weeks		All preterm births	
Ethnicity	**%**		**%**		**% of total births of ethnicity**	
Māori	35	**1.7**	127	**6.1**	183	**8.8**
Pacific Peoples	28	1.9	77	**5.3**	**115**	8.0
Indian	32	**2.8**	60	**5.3**	**102**	**9.0**
Asian (excl Indian)	28	1.6	84	4.7	130	7.3
Other	12	**2.1**	**20**	3.4	40	6.8
Other European	26	1.4	84	4.4	121	6.4
NZ European	74	1.2	267	4.5	390	6.6
Total	**235**		**719**		**1081**	**7.3**

Table 2: **Preterm birth rate for Capital, Coast domiciled women/people combined 2018-2022, by age group**

	<32 weeks		34 - 36 weeks		All preterm births	
Age group	**%**		**%**		**% of total births in age group**	
<20	5	**1.8**	20	**7.0**	28	**9.8**
20-24	21	1.6	**55**	4.3	82	6.4
25-29	48	1.5	**155**	4.8	230	7.1
30-34	80	1.4	**257**	4.7	391	7.1
35-39	63	1.7	**187**	5.1	282	7.7
40+	18	**2.1**	45	**5.2**	68	**7.9**
Total	**235**		**719**		**1081**	**7.6**

A previous audit of preterm birth outcomes at Capital, Coast District was unable to show whether there was equity of access to optimising treatments and transfer for women/people birthing outside Wellington Regional Hospital as limited denominator data was available. There is currently consideration for developing a subsequent audit to investigate areas where we can further optimise preterm birth.

PLACE OF BIRTH

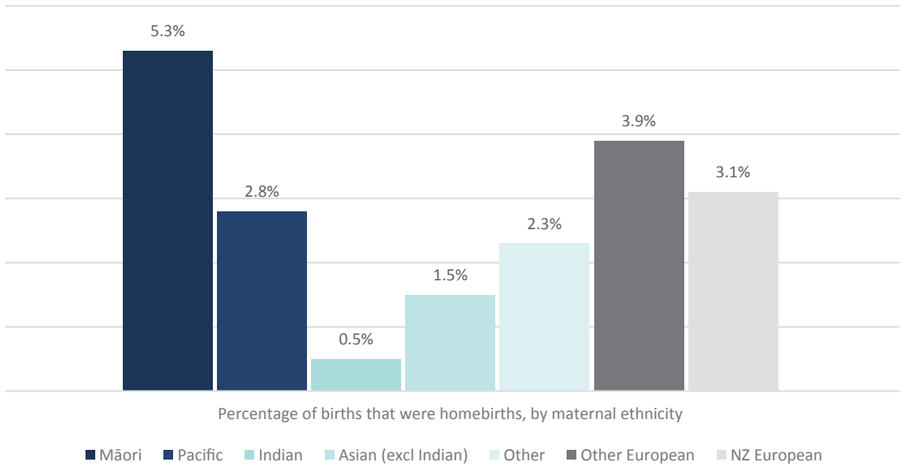
When pregnant in Aotearoa New Zealand, you are able to choose with your Lead Maternity Carer the location you wish to birth your baby – at home, a birthing centre or in hospital.

Capital, Coast are committed to supporting opportunities to optimise birth outcomes, and support place of birth options for the pregnant women/people. This includes supporting strategies for pregnant women/people who are well in pregnancy to access resources, which enable them to birth at home.

Homebirth is a safe choice for pregnant women/people who have no complications or risk factors that exclude birthing outside a hospital. Evidence shows that pregnant women/people who choose to birth at home or in a birth centre are more likely to have a normal birth, than those who give birth in hospital (Dixon, L., Prileszky, G., Guilliland, K., Miller, M., and Anderson, J. 2019).

Despite this, the homebirth rates nationally reported over the past 10 years, have continued to remain less than 4% of all births. Reported rates of homebirths have increased from 2.9% in 2016, to 3.6% in 2020 for Capital, Coast domiciled births.

Figure 4: **Capital, Coast District Domiciled homebirths 2016-2020, by maternal ethnicity**



Source: Ministry of Health Qlik Sense hub , accessed January 25, 2023

The data shows that the homebirth rate was highest amongst Māori (5.3%) and Other European (3.9%) pregnant women/people. Whereas, Indian and Asian (excluding Indian) were least likely to have a homebirth with rates of 0.5% and 1.5% respectively.

The reasons for low homebirth rates are complex and include, but are not limited to:

- community perceptions of homebirth by birthing pregnant women/people and their whānau
- lack of knowledge or choice of birthplace options offered during pregnancy
- consumer fear of lack of pain relief options at home
- inability for midwife to offer homebirth, due to availability of backup or access to suitable consumables/resources
- care provided by Community Midwifery Teams who provide antenatal and postnatal care only
- lack of reporting data on homebirth through current Capital, Coast District reporting.

In 2021, the district engaged in wide consultation with community stakeholders to identify strategies which could improve equity of access and outcomes, in particular for Māori, Pacific Women/People, and women/people with a disability. Stakeholders identified many of the barriers to homebirth, while also including the significant costs associated with the hire of pools and non-pharmaceutical pain relief options to support labour and birth at home.

In December 2021, the Te Whatu Ora – Capital, Coast and Hutt Valley Maternal and Neonatal System Plan was produced, which included a strategy to increase promotion and resourcing for homebirth for pregnant women/people in the Capital, Coast region, as a means of addressing some of the barriers the community has in accessing homebirth.

The strategy was further developed in 2022 to deliver a package of support for homebirth, and reduce some of the inequities that currently exist for pregnant women/people choosing to birth at home.

This included:

- amended booking letters sent to pregnant women/people in the region, to highlight homebirth as an option for birth choice
- providing funded birth consumables packs for midwives
- loan of hospital funded birth pools (including inflation/fill kit, pool liners, and cover) to support the use of water in labour and birth
- loan of transcutaneous electrical nerve stimulation (TENs) machines to increase access to non-pharmaceutical pain relief options
- loan of pulse oximetry machines, to allow homebirths to be offered monitoring in the first 24 hours to identify cardiac conditions in neonates – an option only currently afforded to those who birth in hospital
- to develop education aimed at LMCs to increase knowledge and communication strategies to facilitate primary birthing at home.

During late 2022, these strategies came to fruition, following the purchase of homebirth consumables and loan equipment which included: birth pools, TENs machines and pulse oximetry machines.

This equipment is accessed by the community through Lead Maternity Carers.

Where a homebirth is planned, birth kits are ordered, and loan equipment requested through an online loan agreement between the Te Whatu Ora-Capital, Coast and the LMC midwife. LMC midwives maintain responsibility for the equipment, which reduced some barriers and potential inequities of access due to loan fees and transportation costs.

While women/people under the care of the community midwifery team are unable to choose homebirth facilitated by employed midwives, a lead maternity carer who is able to provide this service can on occasion be identified.

Since the launch, use of this service by LMCs has been steadily increasing. With midwives reporting high client satisfaction following birth.

Follow-up is expected during 2023 to review community feedback of the service, and usage of the equipment. Wider promotion through the Pēpe Ora website and consumer information is also expected.

NATIONAL RECOMMENDATIONS

MATERNITY VITAL SIGNS CHARTS (MVSC) AND MATERNITY EARLY WARNING SYSTEM (MEWS)

Introduction of the Maternity Vital Signs Charts (MVSC) with Maternity Early Warning System (MEWS) embedded was implemented in two phases at Capital, Coast. In December 2019, phase one was launched, which included all maternity, gynaecology, and termination of pregnancy services at Wellington hospital, KMU and PMU. In January 2021 Phase two was launched across all other adult services at Capital, Coast as education was targeted differently for these groups. This has led to good acceptance of the MVSCs across the hospital.

Auditing of the phase one group has revealed good compliance with the MEWS scoring. The auditing process included direct verbal feedback to staff as part of the process, and this proved useful in correcting issues early. It was intended to audit the roll out of the hospital wide charts but it has been difficult to track those who are on other wards using the MEWS scoring for those who are pregnant or have be recently pregnant (within 42 days).

GROWTH DETECTION PROGRAMME (GAP) FOR SUSPICION AND DETECTION OF SMALL FOR GESTATIONAL AGE (SGA)

GAP is a program designed by the Perinatal Institute to improve detection of SGA babies. It has been linked to increased SGA detection, and a decrease in stillbirth in the UK (Hugh et al, 2021).

The Accident Compensation Corporation (ACC) has funded the national implementation of GAP across all districts in Aotearoa New Zealand. There has been steady improvement in detection of SGA at Capital, Coast throughout 2021 and 2022, compared to 2020 when the program officially started, and a champion appointed. Prior to this there was some use of the GAP software, but not full implementation of the program which involves education of all clinicians, quarterly reporting of outcomes, auditing of missed SGA cases, following of the national SGA guideline, and use of algorithms to risk assess and manage pregnancies.

The rate of SGA births at Capital, Coast was 12.4% in 2021 and was 12% in 2022. This is slightly higher than the usual 10% and could be indicative of the maternity population, as Capital, Coast is a referral centre, and the audit is not limited to women/ people domiciled in Capital, Coast District.

WHERE ARE WE NOW?

Reports show that in 2021, 100% of births had a complete GAP/GROW record. The number of babies born SGA (< 10th centile) was 11.6% of total births recorded, and 4.2%(2021) and 3.7%(2022) for severe SGA (< 3rd centile). Antenatal detection of SGA and severe SGA has improved since 2020; 42.5% for SGA babies, an increase of 7.2% from 2020 (1.2% above national average), and 61.6% for severe SGA (2.5% above national average).

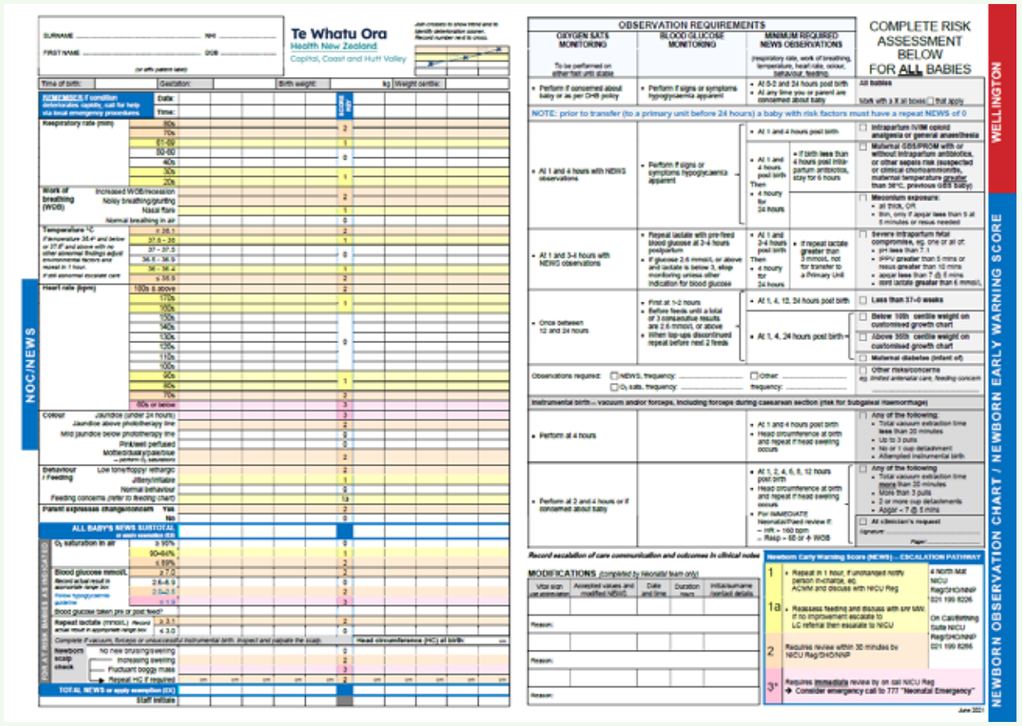
Reports show that in 2022, 96.6% of births had a complete GAP/GROW record. The number of babies born SGA (< 10th centile) was 12% of total births recorded, in 2022 antenatal detection of SGA and severe SGA; 37.1% for SGA babies, a decrease of 5.4% 2021 (5.8% below national average), and 55.8% for severe SGA (7.7% below national average).

NEXT STEPS

Auditing of cases where SGA was not detected antenatally continues. GAP provides a systematic review tool for collation of data from records collected by the GAP champion. This informs a comprehensive report provided by the Perinatal Institute for Capital, Coast to use for quality improvement. COVID-19 has impacted planned study days, however work continues to improve engagement with GAP education. Clinicians are encouraged to attend a full GAP workshop every 3 years, and an annual e-learning update.

NEONATAL OBSERVATION CHARTS (NOC) AND NEONATAL EARLY WARNING SCORE (NEWS)

The use of these charts within maternity is now being utilised routinely at Capital, Coast. In 2022, we updated to the latest national chart so that when folded it is easier to see what risk factors the newborn has to make sure the correct observations is occurring. This also allowed us to update the escalation pathways for Kenepuru Maternity Unit and Paraparaumu Maternity Unit which are primary birth units and need to escalate earlier to allow for the possible need to transfer into Wellington Hospital which has a NICU onsite. Given we were already using these chart within the service it was easy to educate staff on the changes.



MQSP PROGRESS REPORT 2021-2022

Detailed information about the projects in the following table can be found in the chapter: ‘He whakatutuki kia kairangi- Steps towards excellence’.

PROJECT STATUS

- Work has been completed and/or in business as usual phase
- Work is in progress/underway and nearing completion
- There is still a significant amount to achieve before completion

Table 3: **MQSP Project Progress Report 2021-2022**	**Status**
Optimising birth initiative	
Enhanced recovery after surgery care pathway	
Evaluation of a tailored approach to Antenatal Education Services	
Māori and Pasifika Midwifery Team	
Optimising preterm birth	
Hospital-wide implementation of maternity vital signs charts	
Establish a clinical pathway for pregnant women/people with identified placental implantation abnormalities	
Audit outcomes for pregnant women/people with placental implantation abnormalities	
Improving outcomes for Indian women/people	
Improving outcomes for women/people under 20 years	
Surveying women/people about their inpatient experience	
Postpartum Haemorrhage and Active Management of Third Stage of Labour	
Maternal Sepsis Pathway	
Neonatal Hypoglycaemia	

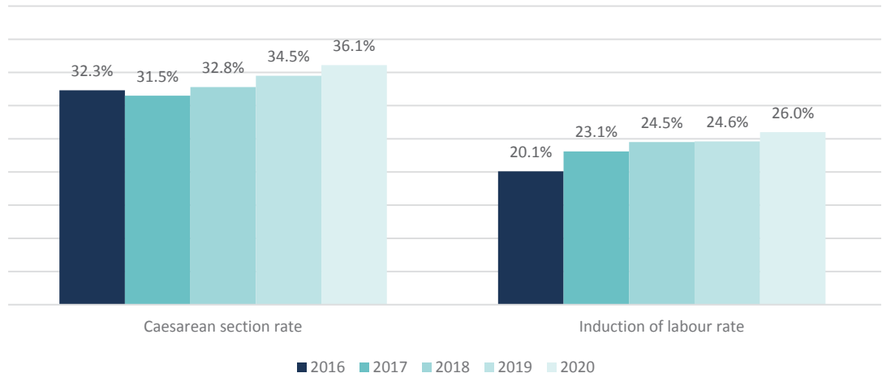
He whakatutuki kia kairangi

Steps towards excellence

OPTIMISING BIRTH INITIATIVE

The Optimising Birth Initiative was created in 2020 to interpret and respond to the rising rates of caesarean birth, and induction of labour at Capital, Coast.

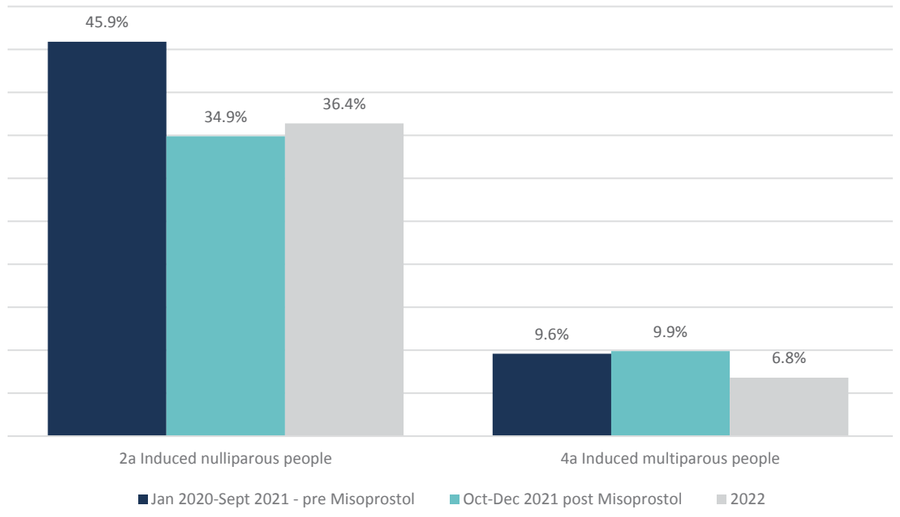
Figure 5: **Caesarean section and induction of labour rates at Capital, Coast District 2016-2020**



In 2019, Capital, Coast adopted the Robson 10 classification system to analyse birth outcomes according to a defined criteria. It became apparent during the analysis that the rates of caesarean birth were comparatively high in Group 1 (nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation in spontaneous labour), and Group 2 (nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced or were delivered by caesarean section before labour) with caesarean section rates of 20% and 50% respectively. This prompted a detailed audit focusing on these groups specifically. The audit revealed a number of areas for improvement in terms of service efficiency, but more importantly for women's/people's labour experience.

Following the audit, the maternity service updated their induction of labour policy in line with evidence based, national, and international best practice. One change of practice proposed was the introduction of misoprostol as the preferred induction agent, replacing the previously used dinoprostin gel. Cochrane reviews support misoprostol to be as safe as other cervical ripening methods, with a higher success of vaginal birth. In addition it is inexpensive and administered orally, whereby making multiple vaginal assessments unnecessary. In October 2021, oral misoprostol was introduced as an alternative to dinoprostin gel for cervical ripening. By the end of 2022, there had been a reduction in the caesarean section rate in Group 2a (nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced) since the introduction of Misoprostol.

Figure 6: **Caesarean section rates at Capital, Coast District for Robson groups 2a and 4a in 2021 and 2022**



We would again like to thank our colleagues in Te Whatu Ora – Te Pae Hauora o Ruahine o Tararua MidCentral for the support and advice they shared whilst we were adopting this new approach to induction of labour.

When looking at our data for Group 2a (induced nulliparous women/people) pre-misoprostol there were 801 births, 368 caesarean sections giving a 45.9% caesarean section rate, post-misoprostol combined (Oct 2021-May 2023) there were 809 births, 291 caesarean sections giving 36.0% caesarean section rate. The value of z is 4.0688. The value of p is <0.00001, meaning this reduction in caesarean section rate for 2a is statistically significant at p <0.05.

When we look at for the same timeframes Group 4a (induced multiparous women/people) pre-misoprostol there were 535 births, 48 caesarean sections giving 9.6% caesarean section rate, post-misoprostol combined there were 404 births, 34 caesarean sections giving 8.4% caesarean section rate. The value of z is 0.2989. The value of p is 0.76418. The change in caesarean section rate is not statistically significant at p <0.05.

NEXT STEPS:

In 2023 we planning to look at the following to hopefully further the improvement of outcomes;

Design a tool for booking IOL, to make sure the indications for an IOL are following policy to hopefully reduced the number of IOL

ROBSON 10 CLASSIFICATION:

The WHS continues to use Robson 10 reports to classify birth outcomes within Capital, Coast.

Although there was only a significant change for group 2a and not in the rest of the groups in the report for 2021-2022, we are hopeful that as we see the improvements in birth outcomes. The WHS will continue to monitor birth outcomes using Robson 10 and identify areas of further improvement.

Table 4: **Robson Classification 2022: Capital, Coast District**

Ref 1. Group size (%) = n of women/people in the group / total N women/people delivered in the hospital x 100
Ref 2. Group CS rate (%) = n of CS in the group / total N of women/people in the group x 100
Ref 3. Absolute contribution (%) = n of CS in the group / total N of women/people delivered in the hospital x 100
Ref 4. Relative contribution (%) = n of CS in the group / total N of CS in the hospital x 100

Group	Number of CS in group	Number of women/people in group	Group size - (Ref 1)	Group CS rate - (Ref 2)	Absolute group contribution to overall CS rate - (Ref 3)	Relative contribution of group to overall CS rate - (Ref 4)
1. Nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation in spontaneous labour	157	800	24.9%	**19.6%**	4.9%	**13.8%**
2. Nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced or were delivered by CS before labour	272	599	18.6%	45.4%	8.5%	24.0%
2a. Labour induced	187	514	16.0%	**36.4%**	5.8%	**16.5%**
2b. CS before labour	85	85	2.6%	100%	2.6%	7.5%
3. Multiparous women/people without a previous CS with a single cephalic pregnancy and ≥37 weeks gestation in spontaneous labour	19	667	20.7%	2.8%	0.6%	1.7%
4. Multiparous women/people without a previous CS with a single cephalic pregnancy and ≥37 weeks gestation who had their labour induced or were delivered by CS before labour	65	299	9.3%	21.7%	2.0%	5.7%
4a. Labour induced	17	251	7.8%	6.8%	0.5%	1.5%
4b. CS before labour	48	48	1.5%	100%	1.5%	4.2%
5. All multiparous women/people with at least one previous CS with a single cephalic pregnancy and ≥37 weeks gestation	330	427	13.3%	77.3%	10.3%	29.1%
5a. One previous CS	265	361	11.2%	73.4%	8.2%	23.4%
5b. Two or more previous CS	65	66	2.1%	98.5%	2.0%	5.7%
6. All nulliparous women/people with a single breech pregnancy	74	83	2.6%	89.2%	2.3%	6.5%
7. All multiparous women/people with a single breech pregnancy including women/people with previous CS(s)	52	56	1.7%	92.9%	1.6%	4.6%
8. All women/people with multiple pregnancies including women/people with previous CS(s)	47	60	1.9%	78.3%	1.5%	4.1%
9. All women/people with a single pregnancy with a transverse or oblique lie, including women/people with previous CS(s)	11	12	0.4%	91.7%	0.3%	1.0%
10. All women/people with a single cephalic pregnancy < 37 weeks gestation, including women/people with previous CS(s)	107	214	6.7%	50%	3.3%	9.4%
Total	**Total number CS**	**Total number people delivered**			**Overall CS rate**	
	1134	**3217**			**35.3%**	

ENHANCED RECOVERY AFTER SURGERY PATHWAY

The enhanced recovery after surgery (ERAS) pathway is well established and used at Capital, Coast. An audit of the pathway is ongoing, but has been delayed due to clinical need and critical staffing.

The ERAS Patient Information Booklet is currently being reviewed, before being translated into different languages to support the diverse ethnic groups cared for at Capital, Coast. We are close to having a finalised new booklet that will roll out mid-2023. The plan is to roll out the ERAS pathway across Hutt Valley District, so the booklet will be adapted to suit the needs Capital, Coast and Hutt Valley District.

PATIENT CONTROLLED ORAL ANALGESIA (PCOA) FOR ELECTIVE CAESAREAN SECTION

An audit conducted by colleagues at Hutt Valley in 2017 revealed that chronic post-surgical pain (lasting more than two months) occurred in as many as 55% of postpartum women/people. As part of a quality improvement project, problems were identified such as; poor rates of early mobility, delayed return to normal mobility, and high pain scores during inpatient admission.

An audit of clinical notes, and feedback found the following.

- Perceived practice by staff was not the same as the practice received by women/people, in regards to the timing of pain analgesia.
- Practice varies between staff when managing pain and inpatient recovery.
- Women/People missing a dose of prescribed analgesia occurred often.
- 90% of women/people stated they would have preferred to self-manage their analgesia.
- All staff agreed implementing PCOA would be a worthwhile improvement.

Patient Controlled Oral Analgesia (PCOA) has been implemented in different Districts around the country. We thank those at Hutt Valley for allowing us to adapt their guideline for use at Capital, Coast.

A small trial consisting of women/people undergoing elective caesarean section at Capital, Coast in 2021 concluded the following.

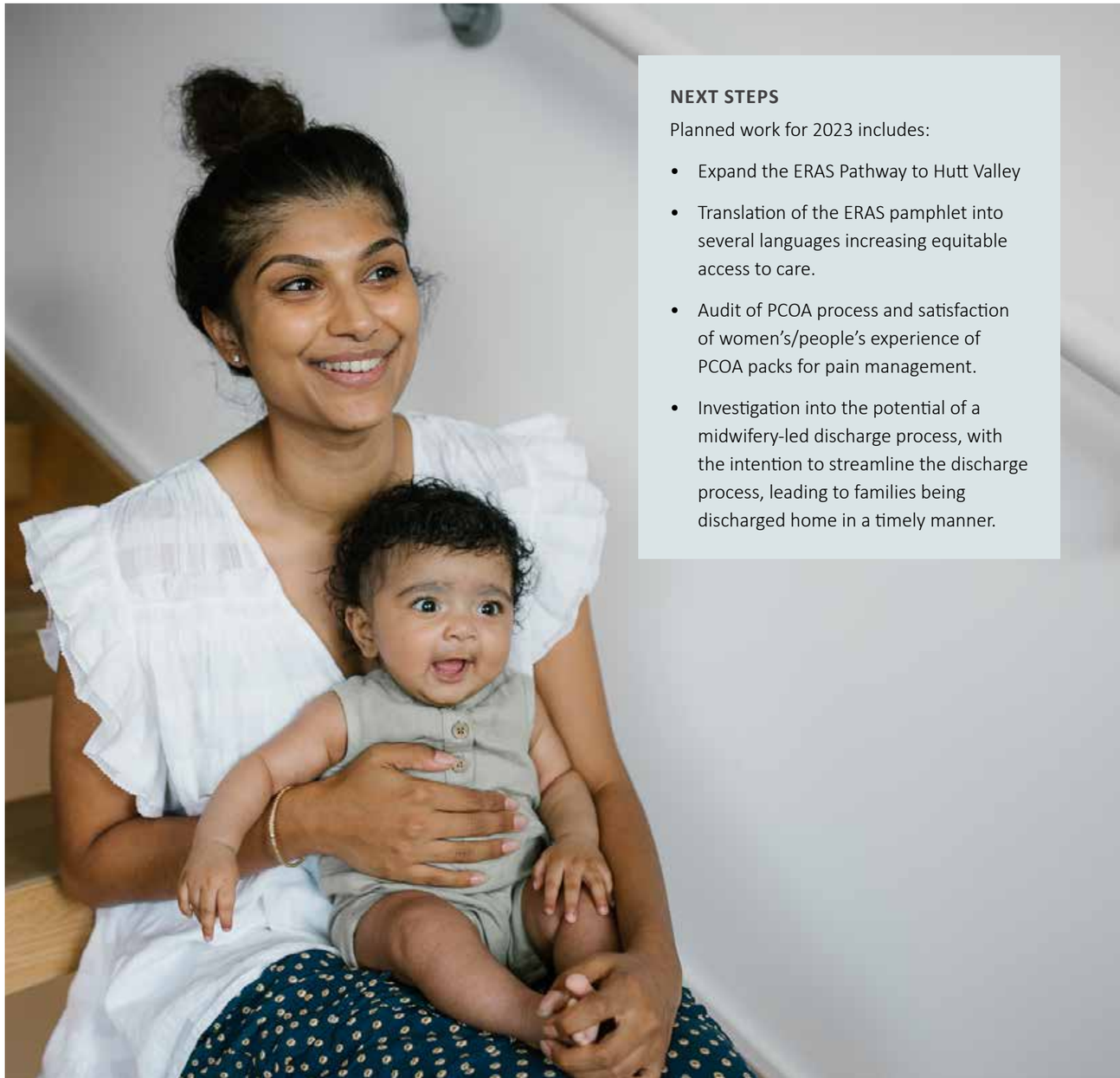
- The outsourced pharmacy PCOA process worked well
- Multimodal analgesia commenced in PACU as per agreed process.
- The need for further opioids to manage pain was reduced.
- No doses of prescribed analgesia were missed.
- There was reduction in pain scores experienced by the women/people.
- Staff have started to improve rates of completed pain scores assessments.

Feedback from the women/people was positive throughout the trial. They spoke of empowerment; easy to self-manage; not reliant of staff; and transitioning to home was easy.

Bedside cabinets in each of the rooms on the postnatal ward will be used for women/people to store their self-administering analgesia blister packs safely.

In October 2022, we rolled out the PCOA blister packs at Capital, Coast. Staffing resource within our inpatient pharmacy has meant we are having to outsource the making of PCOA packs. This means they can only be offered to women/people having an elective caesarean sections, as a script needs to be completed prior to surgery, allow the community pharmacy to make the blister pack and deliver it to our Birthing Suite. So these are now in use for most but not all elective caesarean sections. At the beginning of 2023 we will be doing an audit of our current process to identify where further improvements can be made.

We also have planned to undertake a satisfaction audit on those women/people that received a PCOA following their ELCS. We are also looking at other options for sourcing the PCOA packs in the hope that it may eventually be able to be an in-house process, which means we would be able to offer more women/people who give birth at Capital, Coast the opportunity to self-medicate.



NEXT STEPS

Planned work for 2023 includes:

- Expand the ERAS Pathway to Hutt Valley
- Translation of the ERAS pamphlet into several languages increasing equitable access to care.
- Audit of PCOA process and satisfaction of women's/people's experience of PCOA packs for pain management.
- Investigation into the potential of a midwifery-led discharge process, with the intention to streamline the discharge process, leading to families being discharged home in a timely manner.

TE WAI BEREAVEMENT PROCESS

The introduction of Te Wai is to honour the Māori traditional practice of using water when someone passes away. Te Wai represents the significance of water as the source of life and spirituality. In this context Te Wai signifies the ebbs and flows of one's life mimicking the natural flow of water and the ocean, linking women/people and the environment together as one.

In the end we become part of the ever-flowing waters of life. Introducing Te Wai supports this particular tikanga practice, making it accessible for when a bereavement has occurred.

The Te Wai bereavement symbol was created to acknowledge and notify staff that a death has occurred. Internationally bereavement symbols are associated with best practice within hospitals, supporting quality process with the patient and whānau journey. The death of a patient is a significant event for whānau and staff. Te Wai is delayed outside the room, and at the entrance to the staff station. Te Wai makes us more aware and mindful of our actions.

The Te Wai trolleys are available for use when, or if, whānau wish. Having water to wash over your hands or to cleanse yourself when leaving a space with a tūpāpaku (deceased person) in it, is normal practice in te ao Māori. The rationale behind this is to remove the tapu (sacred) of one area where there is a tūpāpaku, and safely enter into the next area that is noa (not sacred).

AHO PĒPI WRAPS

Aho Pèpi wraps were introduced to improve the bereavement process for whānau. The wraps are culturally appropriate and a beautiful addition to the resources kept in the Pohutikawa bereavement room. The resources support whānau to spend time with, and care for their pépe during this difficult time. These wraps are given to whānau to use for their pépe who are sadly in palliative care or have passed away. The Aho Pèpi wraps which were funded by the MQSP, are designed in Aotearoa New Zealand and are made from one hundred percent organic cotton. Aho work with production teams who practice kaitakitanga. The processes of creating the muslin wraps are both sustainable for the whenua, and also the people who grow and sew the materials.

OPTIMISING THE BIRTH ENVIRONMENT

Feedback from pregnant women/people and whānau in Birthing Suite identified an opportunity for the WHS to visually improve the birthing environment.

The design of a birthing room influences the physical and emotional outcomes of women/people, and therefore it stands to reason that displaying new imagery would be a step toward promoting a more comfortable and de-medicalised birth space. It is thought that nature imagery creates a positive impact on women/people and so scenes of Aotearoa New Zealand were chosen to create a means of distraction, relaxation, and comfort.

UPDATE OF VIRTUAL TOURS AND POSTNATAL EDUCATION CHANNEL

Virtual tours were created for Wellington Regional Hospital, Kenepuru Maternity Unit and Paraparaumu Maternity Unit to aid in making this a more manageable and less stressful experience. The content of the virtual tours has been updated to reflect our current maternity service with the following elements:

Voice overs – this is an important way to communicate important information and engages auditory learners.

Use of actors – following the same actor throughout the process will appeal to women/people who are visual and kinetic learners.

Subtitles – the virtual tours can now be translated in the following languages; English, Te Reo Māori, Samoan, Hindi, Mandarin, Spanish, and Arabic.

Wellington Regional Hospital: https://www.ccdhb.org.nz/our-services/maternity/giving-birth-at-our-hospitals/wellington-regional-hospital-birthing-suite/

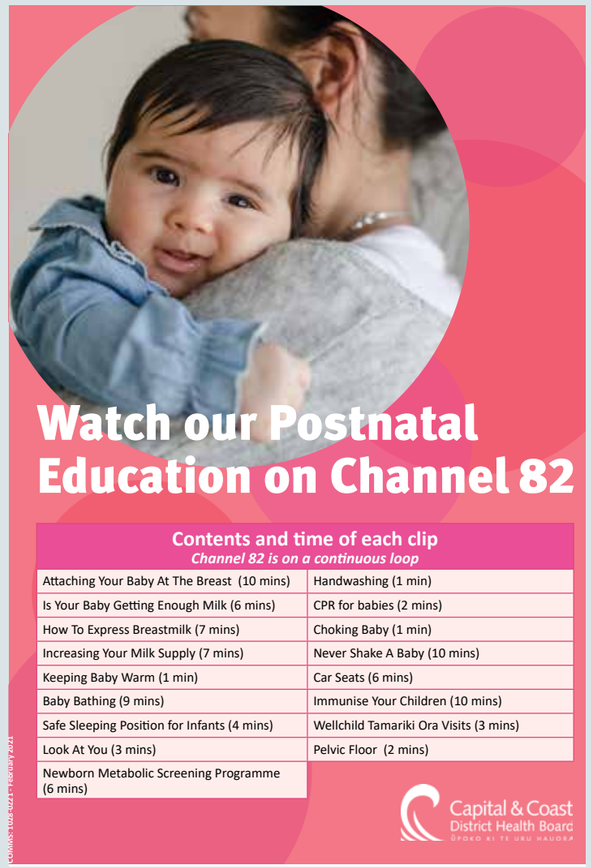
Kenepuru Maternity Unit: https://www.ccdhb.org.nz/our-services/maternity/giving-birth-at-our-hospitals/kenepuru-community-hospital-maternity-unit/

Paraparaumu Maternity Unit: https://www.ccdhb.org.nz/our-services/maternity/giving-birth-at-our-hospitals/paraparaumu-maternity-unit/

The postnatal education channel was also updated. The channel is available for women/people and whānau to watch during their stay on the postnatal wards. Content were updated to reflect current practices and recommendations, and the timings of each clip were reviewed to better engage viewers.

The channel aims to educate women/people and whānau on some of the following:

- Breastfeeding
- Pelvic floor exercises
- Health, safety, and hygiene for babies
- Safe sleeping
- Newborn screening and immunisation programmes
- Providing first aid to babies
- Shaken baby



EQUALITY FOR OUR POPULATION

HAPŪ WĀNANGA – TAILORED ANTENATAL EDUCATION

Hapū Wānanga is a kaupapa Māori antenatal education offering that has been developed nationally. In 2021, a small collective of Capital, Coast Māori midwives and the maternal health coordinator travelled to Te Awamutu to observe a well-established Hapu Wananga ki Tainui, and train with midwife Tamara Karu, and tāonga pūoro (traditional Māori musical instruments) expert Libby Gray, with a view to develop and deliver Hapū Wānanga education within the Wellington region.

Through MQSP and Capital, Coast and Hutt Valley Strategy Performance & Planning, it was agreed that the development of a prototype, 10 month programme would be procured to support this fledgling initiative.

By the end of 2021, the Hapū Wānanga programme had been fully developed, and the initial set of classes had supported 30 māmā and whānau to access culturally responsive, kaupapa Māori hapūtanga education alongside best practice clinical information about pregnancy, birth, and life with a new pēpi. We look forward to seeing how this programme develops and the impact that it will continue to have on the whānau that attend these workshops.

TE AO MARAMA MIDWIFERY

In June 2020, three self-employed LMCs based in Porirua ceased clinical practice. These three experienced midwives had a combined caseload of 215 pregnant women/people of which 61 were Māori, and 91 were Pasifika. Porirua has the highest birth rate of all Capital, Coast localities.

The Community Midwifery Team (CMT) acts as the provider of last resort for pregnant women/people who are unable to find a community based LMC. While the CMT provide a good service, the full cost for the CMT falls to the district. Pregnant women/people under the care of the CMT must birth at WRH and they do not have the same midwife throughout pregnancy, labour, and the postnatal period. Relying on the CMT to fill the gap of midwifery care for Porirua would increase cost to the District and would not ensure the best health outcomes or experience for Māori and Pacific mothers and babies.

The benefits of Māori and Pacific women/people receiving antenatal, intrapartum, and postnatal care through a Māori and Pacific Midwifery Continuity of Care Team are well understood. Investing in this team will also reduce the burden on the CMT and increase the number of births occurring in primary birthing facilities.

A proposal for the creation of a Māori and Pasifika Midwifery Team was put forward to planning and funding and an alternative model of care was approved, and in December 2020, Te Ao Marama Midwifery Tapui Limited was formed.

Te Ao Marama Midwifery has a kaupapa of improving birth outcomes for Māori and Pasifika whānau in the Porirua region and provides antenatal, labour, birth, and postnatal care for wāhine and pēpi.

Te Ao Marama is made up of a group of five experienced Māori and Pasifika midwives who share a passion for providing culturally safe and relevant midwifery care in their community. They prioritise birthing in the primary birthing unit which is based at their local hospital campus in Kenepuru Maternity Unit. This approach has multiple benefits including keeping low risk whānau out of a tertiary hospital, which in turn keeps them nearer to their support systems.

Te Ao Marama use a team care approach which means all five midwives are responsible for care, rather than just one individual. This aides in sustainability of the team and ensures the entire team has overview and input to care, adding depth to their service.

A strong part of Te Ao Marama's kaupapa is building up and future proofing the midwifery workforce, through supporting midwifery students. To this end, Te Ao Marama have students of all levels working alongside them. This is something they will not compromise on, therefore pregnant women/people and whānau are aware of this from the outset. This reinforces Te Ao Marama's commitment to training Māori and Pasifika students successfully through the midwifery programme, but more importantly it promotes a model of care that is culturally appropriate.

When choosing a site to set up the clinic, there were a few issues that needed consideration, to be mindful of equity. Te Ao Marama's purposefully sought out a location that was central to public access, yet allowed for privacy. The clinic is based on level four of North City Shopping Centre, a local shopping mall in Porirua. Other services that are located on the same floor as the clinic include Horizon Radiology and Family Planning.

Te Ao Marama have endeavoured to remove as many barriers as possible that could potentially prevent whānau from engaging with the service. Whānau who are unable to attend clinic appointments are offered home visits.

The measures of success for Te Ao Marama and Capital, Coast is multifaceted. Service objectives for Te Ao Marama include ensuring at least 80% of their caseload are Māori or Pasifika, improving pregnancy experiences and outcomes for Māori and Pasifika whānau, and providing flexible and culturally responsive midwifery care to women/people during their pregnancy.

Birthing at KMU has many benefits for Porirua based whānau. Primary birthing equates to less medical intervention, higher breastfeeding rates, and better health outcomes for whānau. It has the added benefit of being local so unnecessary travel is avoided, thereby reducing stress on whānau caused by fuel and parking costs, or by limited accessibility for those with no private transport.

Te Ao Marama will continue to build trusting relationships with other health and social support services in the community, in order to support pregnant women/people and their whānau. This includes breastfeeding services, Well Child / Tamariki Ora services, immunisations services, and other culturally appropriate services.

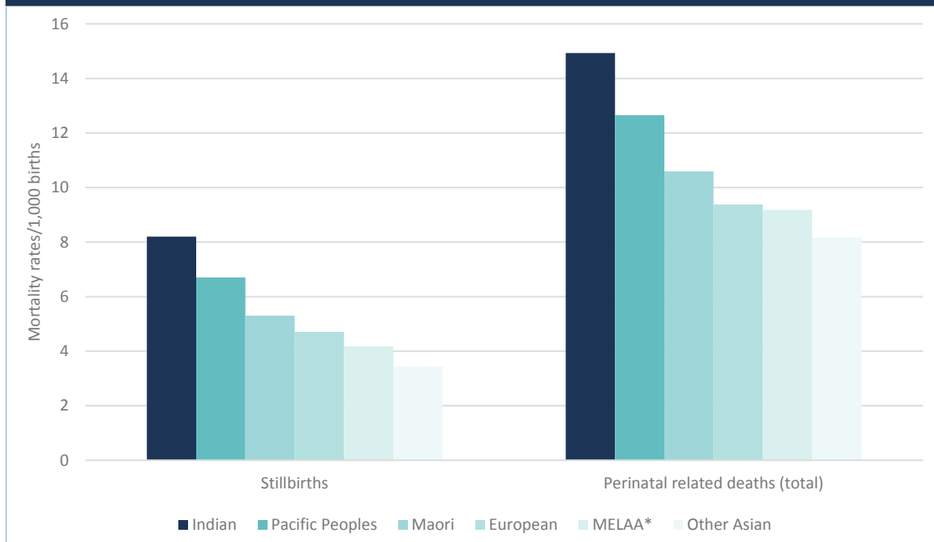
LOOKING AHEAD

Te Ao Marama's caseload is exceeding their service objectives, currently with 99% of pregnant women/people enrolled being Māori and Pacific. They are supporting all pregnant women/people to access other health providers, with currently 100% of women/people leaving their care being enrolled with a GP and Well Child Tamariki Ora provider. Te Ao Marama has so far supported five Māori and Pacific student midwives to succeed in their study. Māori and Pacific midwives are under-represented in the workforce, and we hope that Te Ao Marama's success will continue to attract and retain more into the profession. We look forward to seeing Te Ao Marama's further success and improvements on Māori and Pacific health outcomes, as they enter their first year as a team.

IMPROVING MATERNITY OUTCOMES FOR THE INDIAN COMMUNITY

The Thirteenth Annual Report from the PMMRC found that in Aotearoa New Zealand, Indian women/people had the highest rate of stillbirth, and they are the only ethnic group not to have had a significant reduction in the stillbirth rates since 2007. Indian mothers and babies are also over-represented in NICU admissions, emergency caesarean sections, and formula feeding. PMMRC have since called for all Districts to demonstrate how they are planning and implementing models of care that meet the needs of Indian women/people.

Figure 7: **Perinatal related mortality rates (per 1,000 births) by maternal prioritised ethnic group 2013-2017**



*MELAA = Middle Eastern, Latin American, or African.

Source: Thirteenth Annual Report of the Perinatal and Maternal Mortality Review Committee Reporting mortality and morbidity 2017

In 2021, Indian women/people made up 8.7% of the Capital, Coast District birthing population. At Capital Coast, classification of ethnicity is based off the New Zealand Standard Classifications. When referring to our 'Indian' population this includes; Indian (not further defined), Bengali, Fijian Indian, Indian Tamil, Punjabi, Sikh, Anglo Indian, Malaysian Indian, South African Indian and Indian nec (not elsewhere classified).

For the CMT, Indian women/people accounted for 14.5% of their caseload. In 2021, CMT midwife Clare Bardsley undertook an improvement project to develop a plan of action with specific recommendations of change. Steps of the improvement project included:

- Literature search around Vitamin D supplementation
- Discussion with members of Indian communities around care received
- Discussion with dieticians around dietary advice to prevent gestational diabetes
- Literature search around aspirin administration in first trimester to pregnant women/people whose only risk factor is Indian ethnicity

Findings included:

Mortality rates are higher amongst Indian women/people due to preterm birth, placental dysfunction, and antepartum haemorrhage. It is known that higher rates of complications in pregnancy such as diabetes, anaemia, and cholestasis may be a contributory factor. Despite this, it remains unclear what causes poorer outcomes amongst Indian women/people, with limited evidence on how best to address this within clinical practice.

A literature search to explore the efficacy of commencing aspirin in the first trimester for women/people who only have Indian ethnicity as a risk factor found limited evidence that this could reduce adverse outcomes.

A literature search exploring vitamin D supplementation in pregnancy, found promising evidence that offering supplementation to mothers of Indian, Māori and Pacific ethnicities could improve outcomes.

Projects are currently on the work plan to optimise preterm birth across all of our birthing population, and it is hoped that Indian pregnant women/people should directly benefit from these improvements.

The project finalised the following recommendations for change:

- Create a vitamin D guideline; which has since been fully implemented in 2022
- Further investigate the influence of ethnicity on gestational length variance
- Assess cultural appropriateness of information given to women/people, and improve availability of translated material
- Develop feedback mechanisms to improve our understanding of pregnant Indian women/people

Following informal discussions with Indian women/people cared for by CMT, feedback identified the following:

- Varying levels of expectation around care received
- Limited understanding of how the Aotearoa New Zealand maternity system works
- Women/People felt supported by antenatal and postnatal community care

Further feedback is needed to explore the above points in more depth, and help determine how best to improve our model of care to support Indian women/people. We will be exploring this in 2023.

VITAMIN D SUPPLEMENTATION IN PREGNANCY

There is growing evidence that vitamin D deficiency contributes to obstetric conditions such as gestational diabetes, pre-eclampsia, and intrauterine growth restriction (IUGR). Over 40% of women/people in Aotearoa New Zealand of childbearing age are deficient in Vitamin D. The Australian and New Zealand College of Obstetricians has recommended supplementation for pregnant or breastfeeding women/people considered to be at risk of deficiency.

In response to these recommendations, Capital, Coast looked to establish a Vitamin D guideline for pregnancy. The guideline is to be used by LMCs, hospital midwives, obstetricians, medical registrars and house officers, and GPs.

Recommendations in the guideline include;

- The importance of Vitamin D to be discussed with every woman/person at their booking appointment, including risk assessment
- Testing should only be considered for specific high risk conditions listed in the guideline
- Commence Vitamin D supplementation for those at risk of deficiency
- Toxicity is rare and occurs after several months of excessive and prolonged supplementation

The policy is now live but further education is required of all health care providers around this policy to improve usage. It is part of the 2023 plan.

INTRODUCTION OF MIDWIFE CLINICAL COACHES PROGRAMME

In 2021, as part of the Midwifery Accord the Manatū Hauora launched an initiative that would see a new midwife clinical coach role being introduced across Aotearoa New Zealand. The intention is to provide practical clinical education, demonstrating effective, evidence informed and culturally safe practice. Clinical coaches are charged with sustaining a safe learning environment which hopefully enhances staff retention and reduces staff stress. It is a responsibility, as coaches, to evolve their own practice, keep up to date, and to continue to develop collaborative skills.

The launch of this nationwide initiative included seedling funding for the midwife clinical coach role within maternity facilities. Senior midwives appointed in these roles will provide additional support to colleagues (including midwives who may be new to the service area, or new graduate midwives), as well as acting in a supervisory capacity for midwives who are renewing their practicing certificates after taking a break. We are fortunate to have been allocated 1.5 FTE for the role. This allowed use to appoint three midwife clinical coaches; Terry Wiffen, Paula Pila, and Eleanor Martin.

The midwife clinical coach team are a small ethnically diverse team with different skill sets and distinct communication styles. This diversity allows midwives to select the midwife clinical coach they would like to work alongside, or who best matches the skill set midwives are wanting to develop.

KEY STAFF TARGETED FOR COACHING ARE;

- Midwives and nurses who self-identify a need for a refresher in clinical skills or knowledge e.g. perineal repair
- Midwives wanting to develop a different skill set e.g. supporting physiological birth
- New graduate midwives
- New staff midwives and nurses
- Internationally registered midwives and nurses
- Return to practice midwives.
- Undergraduate students who will become graduate midwives.
- New maternity access agreement holders.
- Māori and Pacific midwives who may require additional cultural support

Midwives can self-refer to request coaching;

- Change of practice driven by new evidence
- Challenging or complex clinical presentations
- Physiological birth including water birth
- To devise a ‘support plan’ to use as evidence for your Quality Leadership Programme portfolio and annual appraisal.

IMPROVING FEEDBACK MECHANISMS – FACE-TO-FACE DISCUSSIONS

In 2020, the importance of obtaining consumer feedback was addressed and the consumer survey was redesigned in collaboration with the Māori Health Directorate. Focus was redirected towards the experience of Māori and Pacific women/people and their cultural needs and safety. The survey was translated into Te Reo, and a new card created to be placed in the Well Child book to make the survey accessible at a time convenient to the consumer. Despite this, there was, and continues to be poor survey participation.

In 2021, the WHS trialed a new approach of face-to-face discussions between the breastfeeding advocates and educators and Māori and Pacific women/people. It was thought that sharing feedback in a relaxed environment would build trust and transparency, and allow for more discussion and conclusions to be drawn. Questions were tailored towards identifying strengths and weaknesses within the service, and understanding more about how we could meet the cultural needs of Māori and Pacific women/people. Feedback for this approach was overwhelmingly positive but hindered by limited face to face contact during the COVID-19 pandemic.

Upon seeing the positive response to these face to face discussions, and once the COVID-19 response allowed for it, the WHS supported a student midwife internship through Kia Ora Hauora. One of our Māori student midwives is spending her summer break working within our inpatient service at Wellington Hospital obtaining feedback from consumers. From November 2022 to January 2023, she was able to facilitate in-depth discussions with Māori and Pacific women/people, maintaining a focus on meeting cultural needs and ways the service can improve this.

Looking to the future, the value of face to face discussions as a mechanism to gain more insight into the experiences of Māori and Pacific women/people within our service is clear. We plan to continue this work and are currently looking into a long-term solution to gain further feedback.

EDUCATIONAL TABLETS FOR PRIMARY MATERNITY UNITS

In 2022 MQSP funded 3 Surface Pro Tablets two were to replace the centralised DVD player in the Kenepuru Birthing Unit and one to replace the TV/DVD player on wheels at the Paraparaumu Birthing Unit.

The tablets have been loaded with approved educational content from the New Zealand Breastfeeding Alliance and the video content of the Global Health Media Project (GHMP)- these are short, live-action videos which offer clear, practical, step-by-step guidance in nearly 50 languages.

There are nearly 30 different GHMP videos many of which cover breastfeeding topics such as – positioning, attaching, breastfeeding in the first few hours, expressing, storage, cup feeding, skin to skin and nipple pain. The videos “bring to life “the health care information which makes it easy to understand.

The Tablets are proving to be very popular with women/people and whānau as well as the midwifery and nursing staff as they are easy to navigate and informative. Women are able to keep a tablet in their room therefore they can access the breastfeeding and postnatal educational videos and information at any time of the day or night. Often women/people are more receptive as they can use the tablet at their convenience – working through the information at a comfortable pace for them. Women/people are finding the real-life videos have the exceptional ability to show, close up detail, which aides them on their breastfeeding journey.

The tablets have also been useful for women/people in the antenatal period. When women/people come into the Birthing Units to be assessed they often have time to peruse the tablet. Capital, Coast antenatal information and videos are available as well as the GHMP series which covers topics such as what to expect in labour and birth, to newborn care and caring for yourself and your baby after birth as well as early childhood nutrition.

GUIDELINES AND AUDITS

NEONATAL HYPOGLYCAEMIA POLICY

A serious adverse event that resulted in failure to recognise a baby's initial and ongoing risks of hypoglycaemia prompted a systems analysis review to be undertaken. Subsequently, the 'Prevention and Management of Neonatal Hypoglycaemia' policy was updated in 2020, following a comprehensive literature search and multidisciplinary collaboration between maternity services and the neonatal intensive care team.

The scope of the policy was widened to include '**All newborn infants** being cared for in NICU or WHS facilities', the list of risk factors were updated, and additional clinical features of hypoglycaemia were added to the policy.

In 2021, an audit to assess levels of compliance to the policy was undertaken in collaboration with Victoria University of Wellington, Faculty of Health Summer Scholarship Programme. Babies audited included those prior to the change in hypoglycaemia policy and those post implementation of the new policy.

In 2022, the Neo-Check Clinical Audit – Prevention and Management of Neonatal Hypoglycaemia at Wellington Hospital Report was released. The report found that with implementation of the new hypoglycaemia policy in March 2021.

The audit shows that adherence to both clinical practice policies for the prevention and management of neonatal hypoglycaemia was poor. However, adherence to the policy has increased from estimated 4% in 2019 to an estimated 19% in 2021.

CONSIDERATIONS FOR PRACTICE:

The clinical practice policy for the Prevention and Management of Neonatal Hypoglycaemia in NICU and WHS is difficult to follow. The audit therefore recommend the current policy be reviewed in order to provide clarity for clinical staff. They also recommend current practice be reviewed against current evidence for screening babies at risk of neonatal hypoglycaemia.

Within the postnatal areas heel-lances for the measurement of neonatal hypoglycaemia are performed on point-of-care analysers which are known to be unreliable for the glucose concentration analyses in newborn babies. Therefore babies are receiving repeated painful heel-lances and at times unnecessary treatment, or alternatively suffer from unrecognised hypoglycaemia, placing them at greater risk of neurosensory impairment. We recommend all babies have BGC analysed on reliable cost-effective glucose oxidase analysers.

NEXT STEPS:

Planned work for 2023 includes:

- Review of prevention and management of neonatal hypoglycaemia policy across Te Whatu Ora – Capital, Coast and Hutt Valley maternity, NICU/SCBU areas.
- Complete a business case to get a more reliable point of care blood glucose machine.

PRE-TERM PRE-LABOUR RUPTURE OF MEMBRANES POLICY

The Spontaneous Rupture of Membranes (SROM) policy was updated and released in May 2021, following review. Pre-term pre-labour rupture of membranes (PPROM) occurs in 2% to 3% of pregnancies, but accounts for 30% of all preterm births.

Changes to this policy and related documents allowed for the different management options to be made available to women/people allowing for active management or expectant management depending on the clinical situation.

Outpatient management is now an option for women/people who have been inpatients for 72 hours, completed a course of intravenous antibiotics, and been assessed for signs of intrauterine infection. Those that meet the criteria are allowed to go home and are seen twice weekly for assessment, once in a secondary obstetric antenatal clinic and then by a midwife.

Although the policy contains the outpatient option and criteria, it is not currently being utilised to its fullest potential.

NEXT STEPS

Planned work for 2023 includes:

- Review the policy to make it easier to follow for clinical practice.
- Re-educate staff to changes in policy to encourage low risk women/people to be managed as outpatients.

CLINICAL PATHWAY FOR PREGNANT WOMEN/PEOPLE WITH IDENTIFIED PLACENTAL IMPLANTATION ABNORMALITIES

Globally the number of pregnant women/people with conditions where the developing placenta becomes abnormally attached to the wall of the uterus (womb) is increasing. This is thought to be due to the increasing caesarean section rate. The condition placenta accreta spectrum (PAS) is associated with a high risk of injury to the woman/person, including major blood loss, bladder or bowel injury, and hysterectomy. Careful antenatal consultation and planning is critical.

In 2020 the WHS has developed a multidisciplinary pathway for pregnant women/people with PAS disorders, to allow appropriate pre-birth planning and consultation. There was involvement of all key stakeholders in the development of the document, which is evidence based and adapted to the local environment.

NEXT STEPS

Planned work for 2023 includes:

- The treatment journey of the first ten women/people with PAS will be audited, following the implementation of the new policy.
- Send a copy of this document to Central Region Districts so that they can incorporate into their own policies as all women/people with PAS are likely to be referred to Capital, Coast.

POSTPARTUM HAEMORRHAGE (PPH) AND THIRD STAGE OF LABOUR POLICIES

In March 2022, Manatū Hauora released an updated National Consensus Guideline for Treatment of Postpartum Haemorrhage I Aratohu Tūtohu ā-Motu mō te Tumahu Ikura Whakawhānau Pēpi. Following the release we went about updating our policies at Capital, Coast to align with the national guideline and reviewed our third stage of labour policies as these are closely linked.

The third stage of labour policy was updated with the latest research and international recommendations. We are now using 10IU Oxytocin IM or IV OR 1ml Syntometrine IM for active management of the third stage of labour.

For a postpartum haemorrhage there are different definitions, a PPH is defined as blood loss of 500ml or more following vaginal birth (including assisted births) or 1,000ml following caesarean section birth. A severe PPH is blood loss of more than 2,000ml.

These changes to PPH definition, choice of ecbolic, and dosage were communicated widely in our newsletter, and email. They are also being taught on the mandated Emergency Skills Refresher Days.

Table 5: **Postpartum Haemorrhage Rate for each Robson group at Capital, Coast 01/12/2021 til 30/11/2022**

Total for Capital, Coast District				
Group	**Vaginal Birth (including assisted) Blood Loss ≥ 500mL**		**Caesarean Section Birth Blood Loss ≥ 1000mL**	
	Count	**Rate**	**Count**	**Rate**
1. Nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation in spontaneous labour	171	25.8%	26	16.3%
2. Nulliparous women/people with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced or were delivered by CS before labour	101	25.8%	47	16.8%
2a. Labour induced	101	29.5%	40	20.4%
2b. CS before labour	-	-	7	8.4%
3. Multiparous women/people without a previous CS with a single cephalic pregnancy and ≥ 37 weeks gestation in spontaneous labour	84	12.9%	5	27.8%
4. Multiparous women/people without a previous CS with a single cephalic pregnancy and ≥ 37 weeks gestation who had their labour induced or were delivered by CS before labour	37	15.6%	13	19.7%
4a. Labour induced	37	15.6%	4	25.0%
4b. CS before labour	-	-	9	18.0%
5. All multiparous women/people with at least on previous CS with a single cephalic pregnancy and ≥ 37 weeks gestation	32	33.3%	39	11.7%
5a. One previous CS	32	33.7%	30	11.3%
5b. Two or more previous CS	-	-	9	13.4%
6. All nulliparous women/people with a single breech pregnancy	3	30.0%	5	6.3%
7. All multiparous women/people with a single breech pregnancy including people with previous CS(s)	1	25.0%	15	25.4%
8. All women/people with multiple pregnancies including women/people with previous CS(s)	9	52.9%	9	19.6%
9. All women/people with a single pregnancy with a transverse or oblique lie, including people with previous CS(s)	-	-	5	50.0%
10. All women/people with a single cephalic pregnancy < 37 weeks gestation, including people with previous CS(s)	15	13.2%	28	24.6%
Overall Rate for Capital, Coast District	**453**	**21.3%**	**192**	**16.5%**

When looking at our PPH rates and comparing them to each Robson groups the highlighted boxes above show when the PPH rate had a statistical significant difference. More insight is needed into why there are these difference between the Robson groups and what can be further improved for these women/people.

Table 6: **Postpartum Haemorrhage Rates for the seven prioritised ethnicities at Capital, Coast District 01/12/2021 til 30/11/2022**

	Vaginal Birth (including assisted) Blood Loss ≥ 500mL	Caesarean Section Birth Blood Loss ≥ 1000mL
Māori	21.4%	25.5%
Pacific	22.7%	14.5%
Indian	27.6%	12.8%
Asian (excl. Indian)	20.3%	15.2%
Other	20.3%	12.5%
Other European	20.4%	16.2%
New Zealand European	20.4%	15.9%
Overall Capital, Coast District	**21.3%**	**16.5%**

When looking at the PPH rates for the seven prioritised ethnicities, and comparing them with the overall PPH rates at Capital, Coast. Māori who had a caesarean section in the year prior to the change in policy 25.5% had a PPH. The difference in rate compared with the overall rate, is statistical significant with the value of z is 2.7238. The value of p is .00652. So the result is significant at $p < .05$. The plan is to explore the reasons for this more in 2023.

NEXT STEPS

Planned work for 2023 includes:

- Monitor the PPH rate
- Identify other areas for improvement
- Audit the PPH that have occurred since the change in policy

MATERNAL SEPSIS PATHWAY AND PROTOCOL

The Maternal Sepsis Pathway and Protocol have been BAU at Capital, Coast since 2019. In 2022, we reviewed our Maternal Sepsis Pathway as there was a change in the antibiotic recommendations from the Infectious Disease Team. This was done at the same time as Hutt Valley was about to roll out their sepsis pathway, this allowed us to develop a district wide protocol with localised pathways. So staff rotating between sites will have the same protocol to follow reducing the potential for errors.

NEXT STEPS

Planning work includes:

- Create template for an audit of outcomes jointly with Hutt Valley
- Audit outcomes since roll out 2019-2022 for Capital, Coast and Hutt Valley District

ROUTINE ANTENATAL ANTI-D PROPHYLAXIS GUIDELINE

Routine Antenatal Anti-D Prophylaxis (RAADP) between 28 and 34 weeks of gestation is recommended for Rhesus negative women/people by RANZCOG and the New Zealand Blood Service (NZBS). Pregnant women/people who have a Rhesus negative blood type are at risk of developing antibodies against Rhesus positive fetal red blood cells, if there is cross over of fetal cells into the mother's circulation (sensitisation). This can affect the baby in the current or future pregnancies. Provision of Anti-D both during sensitising events in pregnancies and postnatally for Rh- women/people significantly reduces the risk of sensitisation and subsequent effects on the baby.

An audit was completed of the RAADP Clinic in Wellington Hospital to see if it was equitable and found that there are no differences according to ethnicity. However, as rates of Rhesus negativity are lower in Māori, Pacifica and Asian women/people, it is likely that the sample size was not sufficiently powered to detect any differences. Although the ethnic groups themselves had no statistically significant differences in RAADP administration, it was noted that residents of Mana were particularly less likely to get the full regime of RAADP, and Mana's Māori and Pacifica populations are significantly higher compared to the overall Aotearoa New Zealand Populations. The recommendations from this were;

- Consider an Anti-D Clinic at Kenepuru Hospital
- Consider non-hospital-based administration sites for Anti-D
- Online documentation on MAP of RAADP administration
- Survey of LMC's identifying barriers to Anti-D provision

In 2022 we developed a second antenatal prophylactic Anti-D clinic at Kenepuru Hospital in Porirua to help reduce the burden of having to travel to Wellington on whānau. This clinic runs once a week from the Kenepuru Maternity Unit, women's/people's LMC are able to refer them into this service to get a booked appointment. We reviewed and updated our Anti-D Immunoglobulin Administration and Kleihauer Testing Protocol to reflect this change and outlined the process to obtain Anti-D for all of our maternity facilities. As well as having a clear pathway for Prophylactic Anti-D.

NEXT STEPS

Planning work includes:

- Work with ICT to develop and upload online documentation
- Consideration of non-hospital-based administration sites for Anti-D
- Survey LMC's to be able identify any other barriers to RAADP

THE HEALTH EQUITY ASSESSMENT TOOL (HEAT)

The Health Equity Assessment Tool (HEAT) aims to promote equity in health in Aotearoa New Zealand. It consists of a set of 10 questions that enable assessment of policy, programme or services interventions for their current or future impact on health inequalities. The questions cover four stages of policy, programme or service development:

1. Understanding health inequalities
2. Designing interventions to reduce inequalities
3. Reviewing and refining interventions
4. Evaluating the impacts and outcomes of interventions.

HEAT is a flexible tool that can be used in its entirety or, alternatively, selected questions or group of questions can be asked for specific purpose. For example, questions one to three can promote the consideration of health inequalities and their causes, while question five can assist with assessing a policy, service or programme's responsiveness to Māori.

The HEAT questions can be used to provide a quick overview of potential issues and gaps in policies, services and programmes, such as gaps in information or stakeholder involvement. Alternatively, more in-depth responses to the HEAT questions can assist in developing an evidence base for policy, service and programme development and/or evaluation.

Here at Te Whatu Ora – Capital, Coast we are starting to use this tool more regularly as we setup our projects and review our policies within the improvement work to make sure that we are not adding to the health inequalities that already exist. Instead working to improve these inequalities and make sure that our programme is responsive to Māori and their whānau.

LOOKING AHEAD TO 2023

A detailed copy of the MQSP work programme 2020-2021 can be found in: 'Appendices', under the section 'Appendix 1 – MQSP action plan 2020-2023'.

IMPROVING UNDERSTANDING OF PREGNANT WOMEN/PEOPLE UNDER 20 YEARS OF AGE

Although pregnant women/people under 20 account for a minority of the Capital, Coast birthing population (1.9% in 2022), they are at significantly higher risk of adverse outcomes related to preterm birth and intrauterine growth restriction, and are more likely to benefit from smoking cessation and the promotion of timely antenatal care access, than any other age group.

In the following table, clinical indicators in women/people under 20 years group are highlighted to show if the results are statistically significantly different from the average Capital, Coast woman/person. Due to small annual sample sizes, the differences failed to reach significance for most indicators. Increasing the sample size to a five year period showed that this group are statistically significantly different to the average Capital, Coast domiciled woman/person in most areas.

The data for the table below comes from Capital, Coast's Clinical Indicator Qlik application and shows data for the 2020 calendar year for Capital, Coast resident women/people. It is not possible to present 2021 data due to changes to the Maternity Notice which came into effect in November 2021.

The changes caused the Manatū Hauora pause updates on their Maternity Qlik application. At the time of writing, the data has still not been updated, and as the Manatū Hauora data feeds into our Qlik application, there is no data past October 2021.

Indicators 2-9 are not included as the standard primapara woman/person has to be at least 20 years of age. Indicators 13-15 are not included due to small numbers.

Table7: **New Zealand Maternity Clinical Indicators 2020, by District of residence, showing Capital, Coast under 20 years group compared to the Capital, Coast average**

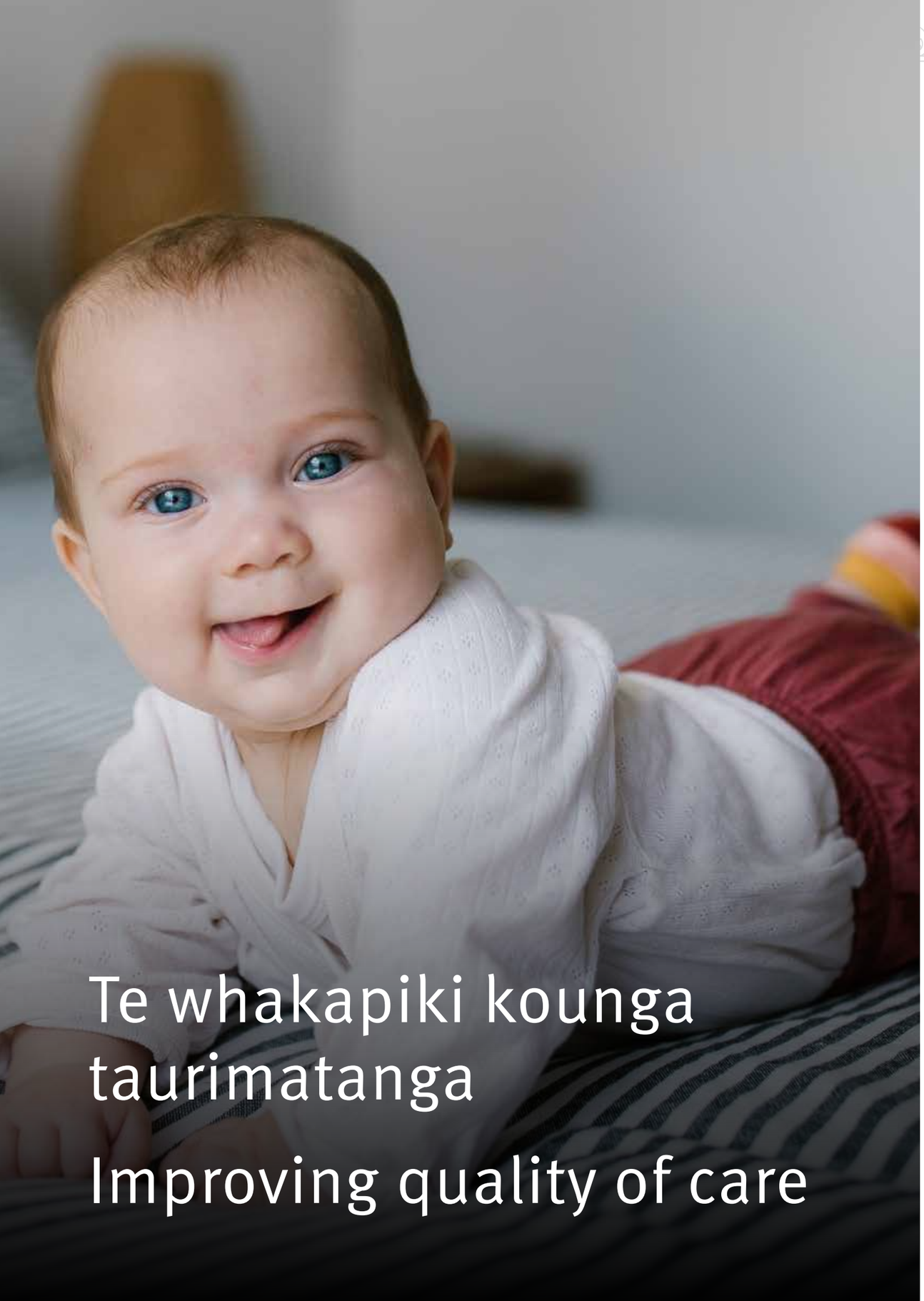
Clinical indicators: Capital, Coast District under 20 years group compared to the Capital, Coast average		**2016-2020**	
		Capital, Coast	**<20 years**
1	Registration with an LMC in the first trimester	**76.4%**	**50.6%**
10	Women/People having a general anaesthetic for caesarean section	**7.1%**	**15.6%**
11	Women/People requiring a blood transfusion with caesarean section	**3.1%**	**3.1%**
12	Women/People requiring a blood transfusion with vaginal birth	**1.9%**	**2.8%**
16	Maternal tobacco use during postnatal period	**5.4%**	**23.0%**
17	Preterm birth	**7.5%**	**10.5%**
18	Small babies at term (37–42 weeks' gestation)	**2.9%**	**6.8%**
19	Small babies at term born at 40–42 weeks' gestation	**31.0%**	**52.4%**
20	Babies born at 37+ weeks' gestation requiring respiratory support	**2.7%**	**1.6%**

The results of this table are reflected in national findings of the Twelfth Annual Report from the PMMRC, which found that although the number of mothers under 20 had halved from 2007 to 2016, there was a significant increase in perinatal related mortality in this age group.

The PMMRC recommended that Districts prioritise addressing equitable outcomes for women/people under 20, by co-developing acceptable and safe methods for them to access and engage with care.

Planned improvements include;

- Improve understanding of pregnant women/people 20 years or younger
- Explore barriers in accessing maternity services
- Develop a strategy to engage with this group of women/people and ensure appropriate antenatal education is offered
- Ensure all pregnant women/people under 20 years are being risk assessed for;
    - Smoking cessation
    - Sexually transmitted, and urinary tract infections
    - IUGR
- This programme of work will use the HEAT tool to provide an equity lens



Te whakapiki kounga taurimatanga

Improving quality of care

NEW ZEALAND MATERNITY CLINICAL INDICATORS

Clinical indicators give an opportunity for Districts and local maternity stakeholders to identify areas for further investigation and potential service improvement.

The New Zealand Maternity Clinical Indicators show key outcomes for each District's region, and secondary and tertiary maternity facilities.

Data is presented in the report in two ways.

- By District of residence: this data is intended to provide the District's with information relevant to their usually resident population.
- By facility of birth: this data is intended to allow for the monitoring of trends over time at the facility level.

Data for these indicators were extracted for all pregnancies and live births recorded on the National Maternity Collection (MAT) dataset. MAT integrates maternity-related data from the National Minimum Dataset (NMDS) and LMC claim forms submitted to and compiled by the Manatū Hauora.

Clinical indicators are monitored by comparing data for a defined subgroup of women who are considered to be 'low risk'. This group is referred to as the 'standard primiparae' (SP) group.

A 'standard primiparae' is defined as 'a woman aged between 20 and 34 years at the time of birth, having her first baby at term (37 to 41^{+6} weeks gestation) where the outcome of the birth is a singleton baby, the presentation is cephalic and there have been no recorded obstetric complications that are indications for specific obstetric intervention'.

The 'standard primiparae' represents a woman expected to have an uncomplicated pregnancy. Intervention and complication rates for such women should be low and consistent across all hospitals nationally. Standard primiparae represent approximately 15% of all births but this proportion varies across DHBs.

The following page shows results for Capital, Coast as a whole and by each ethnic group, for the year 2020 (New Zealand Manatū Hauora, 2022). The table and commentary is based on the clinical indicator results by District of residence. The data can also be seen here: https://www.health.govt.nz/nz-health-statistics/health-statistics-and-data-sets/new-zealand-maternity-clinical-indicators-series

OVERVIEW OF CAPITAL, COAST VS AOTEAROA NEW ZEALAND RATES

In the table below, the Capital, Coast rate is compared against the Aotearoa New Zealand National rate and the clinical indicators are highlighted to show if the Capital, Coast rate is statistically significantly different to the Aotearoa New Zealand rate. The Capital, Coast data is further broken down by ethnicity to show how that ethnicity compares to the Aotearoa New Zealand National rate (whole of Aotearoa New Zealand, all ethnicities), and is again highlighted to show if the rate is significantly different from the Aotearoa New Zealand rate. While some indicators have what appear to be significant differences in rates, small sample sizes can mean the differences fail to reach statistical significance. Indicators 13-15 are not included due to small numbers.

Table 8: **New Zealand Maternity Clinical Indicators 2020, by DHB of residence, showing Capital, Coast ethnicities compared to the whole of New Zealand**

	Clinical indicators: Capital, Coast rate compared to the New Zealand rate	Capital, Coast ethnicity groups compared to the New Zealand national rate (whole of NZ)						
		New Zealand Rate (%)	Capital, Coast Rate (%)	Māori Rate (%)	Pacific Rate (%)	Indian Rate (%)	Asian (excl Indian) Rate (%)	European /Other Rate (%)
1	Registration with an LMC in the first trimester	74.1	80.4	70.6	50.4	83.3	82.4	87.8
2	SP who have a spontaneous vaginal birth	62.1	60.1	67.6	77.3	51.7	52.5	58.1
3	SP who undergo an instrumental vaginal birth	19.2	23.6	18.3	6.8	34.5	21.3	26.9
4	SP who undergo caesarean section	17.6	15.3	12.7	15.9	13.8	24.6	14.0
5	SP who undergo induction of labour	9.2	5.4	1.4	6.8	13.8	4.9	5.4
6	SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy)	26.7	17.6	27.4	16.2	0.0	2.2	20.0
7	SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear	26.1	31.2	16.1	18.9	48.0	34.8	34.6
8	SP sustaining a 3rd- or 4th-degree perineal tear and no episiotomy	4.3	4.4	1.6	10.8	8.0	8.7	2.9
9	SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear	2.1	3.9	1.6	0.0	4.0	6.5	4.6
10	Women having a general anaesthetic for caesarean section	7.8	7.4	6.8	9.4	9.9	6.0	7.1
11	Women requiring a blood transfusion with caesarean section	3.4	3.1	6.1	2.8	9.9	3.0	1.5
12	Women requiring a blood transfusion with vaginal birth	2.4	2.1	1.2	1.5	2.9	4.7	1.9
16	Maternal tobacco use during postnatal period	8.6	5.1	18.1	10.3	0.0	0.0	1.7
17	Preterm birth	7.9	8.5	10.1	7.6	11.7	8.3	7.5
18	Small babies at term (37–42 weeks' gestation)	3.0	2.7	2.6	3.3	9.0	2.6	1.7
19	Small babies at term born at 40–42 weeks' gestation	29.6	32.5	40.0	30.0	26.3	44.4	29.2
20	Babies born at 37+ weeks' gestation requiring respiratory support	2.7	2.9	2.9	1.3	3.3	2.3	3.3

CLOSER CONSIDERATION OF CLINICAL INDICATORS

Indicator One; Registration with an LMC in the first trimester is driven by the Indian, Asian (excluding Indian), and European/Other ethnicity groups, who all have higher than average rates of early registration. Although we have seen increases in the rates of registration in the first trimester in Māori and Pacific women/people in recent years, we still have work to do to enable early registration. Over a ten year period at Capital, Coast the rates of first trimester booking increasing by 32.5% for Māori and 24.3% for Pacific women/people.

Indicator Two; SP who have a spontaneous vaginal birth is not significantly different for the district as a whole, but when broken down by ethnicity, we see a significantly higher rate of vaginal births among SPs in Pacific women/people. 2020 saw the commencement of the Optimising Birth Project which aims to optimise the birth of the nulliparous woman/person. This project will hopefully improve Capital, Coast rates in indicator two.

Indicator Three; SP who undergo an instrumental vaginal birth is significantly higher in Capital, Coast women/people, driven by both Indian and European/Other ethnicities, but particularly Indian women/people, with rates of 34.5%. Conversely, Pacific women/people had significantly lower rates than the rest of the country (6.8%).

Indicator Five; SP who undergo induction of labour has improved from our 2018 statistics. While the district as a whole wasn't significantly different from the rest of the country, the district now has a significantly lower rate of induction overall, and Māori and European/Other women/people have significantly lower rates than the rest of Aotearoa New Zealand. The Indian group no longer has significantly higher than the rest of the country. When we implemented Robson classification and looked at optimising birth, we did a lot of work around re-education on the indications for IOL, this has helped with the improvements seen in indicator five.

Indicator Six; SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy), and **Indicator Seven; SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear** are all driven by the Indian ethnicity group, although the rates vary significantly year on year due to small numbers so caution must be exercised. The MQSP working group devised initiatives to improve access to warmed towels for the perineum during birth to mitigate the need for an episiotomy. Education on perineal protection is ongoing. There has been significant training in the diagnosis of perineal injury over recent years and pictorial aides were introduced to enable accurate diagnosis documentation. This may have impacted the rates of 'intact' genital tract diagnoses. MQSP work has been undertaken in recent years and new initiatives are ongoing. The rates of undertaking an episiotomy may be influenced by the mode of delivery, that is, higher assisted deliveries compared with caesarean sections will influence the data. While indicator six is unchanged, indicator seven has improved slightly from our last reported rates for Asian (excluding Indian), and European/Other, with both groups now failing to be significantly different from the rest of Aotearoa New Zealand. However, the Indian group has increased further, from 41.9% to 48.0%.

Indicator Nine; SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear is now significantly higher for the whole of Capital, Coast, driven by the high rates in the Asian (excluding Indian) and European/Other ethnicity groups, with the Asian (excluding Indian) group having a rate more than three times higher than the average New Zealander. Interestingly, the Indian ethnicity group, while having a higher rate than the Aotearoa New Zealand rate, now fails to reach significance.

Caution needs to be executed when studying indicators six through to nine, as small numbers can confound the results.

Indicator Sixteen; Maternal tobacco use during postnatal period shows Indian, Asian (excluding Indian), and European/Other ethnicities having significantly lower rates of smoking than the national average. This data shoes us the populations where we may need to target our smoking cessation support towards. It also shows that we need to work on our smoking cessation support for everyone.

Indicator Seventeen; Preterm birth and **Indicator Eighteen; Small babies at term (37-42 weeks' gestation)**, while not statically different for Capital, Coast, Indian women/people have higher than average rates in both indicators, and have rates three times higher than average for indicator eighteen (9.0%). Meanwhile, the European/Other ethnicity group has significantly lower rates of small babies born at term (1.7%). The high rates of small babies at term indicate the importance of access to scanning for growth, especially at term.

EQUITY WITHIN CAPITAL, COAST

While it is good to see how Capital, Coast compares nationally, to know whether we are equitable in our outcomes, we need to compare each ethnicity against the average for the district. Ideally we would like there to be no significant differences between any of the ethnicities. In the following table, the ethnicity columns show the rate for each ethnicity compared to Capital, Coast rate (all ethnicities). Once again, the clinical indicators are highlighted to show if the indicator is statistically significantly different from the Capital, Coast average. Again, while some indicators have what appear to be significant differences in rates, small sample sizes can mean the differences fail to reach statistical significance. Indicators 13-15 are not included due to small numbers.

Table 9: **New Zealand Maternity Clinical Indicators 2020, by district of residence, showing Capital, Coast ethnicities compared to the Capital, Coast rate (%)**

Clinical indicators: Capital, Coast ethnicity groups compared to the Capital, Coast rate (%)		Capital, Coast Rate (%)	Māori Rate (%)	Pacific Rate (%)	Indian Rate (%)	Asian (excl Indian) Rate (%)	European /Other Rate (%)
1	Registration with an LMC in the first trimester	80.4	70.6	50.4	83.3	82.4	87.8
2	SP who have a spontaneous vaginal birth	60.1	67.6	77.3	51.7	52.5	58.1
3	SP who undergo an instrumental vaginal birth	23.6	18.3	6.8	34.5	21.3	26.9
4	SP who undergo caesarean section	15.3	12.7	15.9	13.8	24.6	14.0
5	SP who undergo induction of labour	5.4	1.4	6.8	13.8	4.9	5.4
6	SP with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy)	17.6	27.4	16.2	0.0	2.2	20.0
7	SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear	31.2	16.1	18.9	48.0	34.8	34.6
8	SP sustaining a 3rd- or 4th-degree perineal tear and no episiotomy	4.4	1.6	10.8	8.0	8.7	2.9
9	SP undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear	3.9	1.6	0.0	4.0	6.5	4.6
10	Women having a general anaesthetic for caesarean section	7.4	6.8	9.4	9.9	6.0	7.1
11	Women requiring a blood transfusion with caesarean section	3.1	6.1	2.8	9.9	3.0	1.5
12	Women requiring a blood transfusion with vaginal birth	2.1	1.2	1.5	2.9	4.7	1.9
16	Maternal tobacco use during postnatal period	5.1	18.1	10.3	0.0	0.0	1.7
17	Preterm birth	8.5	10.1	7.6	11.7	8.3	7.5
18	Small babies at term (37–42 weeks' gestation)	2.7	2.6	3.3	9.0	2.6	1.7
19	Small babies at term born at 40–42 weeks' gestation	32.5	40.0	30.0	26.3	44.4	29.2
20	Babies born at 37+ weeks' gestation requiring respiratory support	2.9	2.9	1.3	3.3	2.3	3.3

CLOSER CONSIDERATION OF CAPITAL, COAST CLINICAL INDICATORS BY ETHNICITY

The areas of inequity, (where one or more groups has a more desirable outcome, and one or more groups has a less desirable outcome in the same indicator) are indicators one, two, three, six, seven, eleven, twelve, sixteen, and eighteen. Some of these indicators contain small numbers and the data changes from one year to the next. The main areas where there seems to be consistent inequity appear to be **Indicator One; Registration with an LMC in the first trimester**, and **Indicator Sixteen; Maternal tobacco use during postnatal period.**

While Capital, Coast has high rates of early registration with an LMC when compared to the whole of Aotearoa New Zealand, there is disparity between ethnicities within Capital, Coast. There is work to be done to facilitate early booking of Māori and Pacific women/people registering with an LMC in the first trimester. There is a need to design programs to support lowering rates of tobacco use by the Māori and Pacific women/people birthing at Capital, Coast. MQSP focus on the optimisation of care for young Māori women/people is planned.

The most advantaged ethnicity is the European/Other group who are better off in four indicators and have no indicators where they are worse off than the average Capital, Coast birthing woman/person. Pacific women/people are more advantaged in **Indicator Two; SP who have a spontaneous vaginal birth** and **Indicator Three; SP who undergo an instrumental vaginal birth**, due to higher than average rates of spontaneous vaginal birth and corresponding low rates of instrumental birth. Māori women/people have a low episiotomy rate **(Indicator Seven; SP undergoing episiotomy and no 3rd- or 4th-degree perineal tear)**, while Indian and Asian (excluding Indian) women/people have low rates of intact perineum **(Indicator Six; SP with an intact lower genital tract [no 1st- to 4th-degree tear or episiotomy])**. Indian women/people have higher than average rates of small term babies (indicator 18) while European/Other women/people have significantly lower rates.

SOURCES OF GUIDANCE FOR MQSP WORK PROGRAMME

PERINATAL EDUCATION MEETING THEMES

Te Whatu Ora – Capital, Coast hold monthly perinatal mortality education meetings with multidisciplinary input. These meetings bring together obstetric, midwifery and neonatal staff for case reviews. The aim of these meetings is to provide an opportunity for learning, discuss practice, and identify areas for systems improvement. Other disciplines involved include, anatomic pathology and genetics services. These groups provide valuable advice, assisting with the formal PMMRC perinatal death classification process that informs the information collated in the PMMRC annual reports. This multidisciplinary collaborative approach is in keeping with PMMRC's overall theme of 'Working together across the system towards zero preventable deaths or harm for all mothers and babies, families and whānau'.

By theming case reviews we identify educational topics that relate to the cases presented, providing learning and discussion about issues in the context of clinical cases. This facilitates shared learning and insight, provides directions for possible improvements to care, service delivery, and better meets the needs of whānau who have suffered a perinatal loss.

In 2021/2022 meeting themes included:

- COVID-19- Managed Isolation and Quarantine (MIQ)- provision of local services to meet the needs of women/people in MIQ facilities and measures to escalate care
- Identifying growth restriction in babies and provision of ongoing growth surveillance using GROW charts and scanning services
- Management options for women/people with previous small for gestational age babies
- Peri-viable birth management and care provision for whānau
- Obstetric decision making around preterm delivery with baby in breech position
- Ultrasonography services in maternal fetal medicine
- Management of complex pregnancies including complications of twin pregnancies, babies with cardiac anomalies, and understanding idiopathic hydrops
- The role of genetic services in investigations and providing input for families with identified or potential genetic issues
- Neonatal encephalopathy including hypoxic ischemic encephalopathy identification, management, and harm reduction.
- Diaphragmatic hernia and implications for respiratory support
- Identification of uterine rupture
- Management of shortened cervix and use of progesterone, including peri-viable management
- Placental pathology associated with pre-eclampsia
- Early antenatal bleeding and subchorionic haemorrhage
- 23 week baby births, NICU expectations for mortality and morbidity and sharing expectations with parents

We continue to look locally at ways to improve service delivery to sustain appropriate uptake of best practice investigations. We continue to strive to ensure that those whānau that experience the loss of a baby can expect to have as much information as possible for planning any future pregnancy.

MULTIDISCIPLINARY MEETINGS

Multidisciplinary maternity and gynaecology education sessions relating to practice occur monthly.

In 2021/2022, some of the topics included;

- Management of wound infections
- Inclusivity in childbirth services
- Preterm labour guideline update
- Pregnant women/people's experience of using virtual reality in labour
- C*Steroid trial and updates
- Optimising birth: misoprostol and labour management
- Violence in the home
- Wellbeing
- Anti-D immunisation in pregnancy
- COVID-19 in pregnancy
- Vitamin D in pregnancy
- Post Caesarean Section analgesia
- Postpartum Haemorrhage/Massive Haemorrhage Pathway
- Decreased Fetal Movement
- Progressing gender-inclusive perinatal care in Aotearoa: Preliminary research findings
- ACC Birth Injury Cover
- Allegories on Race and Racism

MORBIDITY AND MORTALITY MEETINGS

Morbidity and Mortality Review Meetings were held on a monthly basis and alternated between Maternity and Gynaecology.

Adverse outcomes were reviewed and speakers from the WHS presented cases, latest research, and developed recommendations to minimise future morbidity risks. Involved members from other specialties were also invited to attend. Presentations included case studies of major PPH's, postnatal seizures, continued bleeding following balloon insertion, eclamptic seizure despite magnesium sulphate, fourth degree tear, postpartum cardiomyopathy and return to theatre case studies.

Outcomes included:

- An education session on 'Management of Migraine in Pregnancy'
- Encouraging medical teams to complete 'Recommendations for Next Pregnancy' at discharge
- Employment of obstetric physician for management of medical disorders in pregnancy
- Inclusion of woman/person's requirements for BP support to theatre sign out
- Ensuring regular review of woman/person if there is delay going to theatre

Meetings were attended by clinical staff and LMCs. Findings were reported through clinical governance framework, and to staff through department communication channels.

PERINATAL AND MATERNAL MORTALITY REVIEW COMMITTEE

The PMMRC provides a comprehensive reporting system on perinatal and maternal death, a network of nationally linked coordinators, and a framework for assessing cases with the aim of reducing perinatal deaths while continuously improving the quality of systems and policy.

The committee reviews the deaths of babies (from 20 weeks of pregnancy to 28 days after birth) and women/people who die as a result of pregnancy or child birth, and advises on how to prevent such deaths.

In December 2022, The Fifteenth Annual Report of the Perinatal and Maternal Mortality Review Committee | Te Pūrongo ā-Tau Tekau mā Rima o te Komiti Arotake Mate Pēpi, Mate Whaea Hoki was released with the aims to:

- provide epidemiological analysis of perinatal mortality from 2007 to 2020, maternal mortality from 2010 to 2020 and neonatal encephalopathy from 2010 to 2020
- monitor and track trends and disparities to identify areas for improvement
- stimulate discussion around appropriate areas for further research
- provide information on outcomes by year and the appendix containing 2019 tables and figures can be used as a marker in time for future reference
- focus on previous, critical recommendations that must be embedded into policies, protocols, consensus statements, guidelines and practices to reduce these deaths.

KEY FINDINGS

Ethnic, deprivation and age inequities persist in all findings. Ethnic, deprivation and age inequities persist in all findings. The health system continues to fail:

- Māori
- Pacific peoples
- Indian populations
- those aged under 20 years
- those living in areas of high deprivation,

All of whom experience worse perinatal outcomes than those of New Zealand European ethnicity.

Neonatal encephalopathy rates remain static with no significant improvement. While it is recommended that all babies with moderate neonatal encephalopathy receive magnetic resonance imaging (MRI), this is not being achieved.

Wāhine Māori, Pacific women and women in higher deprivation areas suffer a disproportionate burden of maternal mortality.

Increased risk of maternal mortality is correlated with women aged 40 years and over.

Wāhine Māori were 2.91 times more likely to die by suicide as a direct result of maternal mortality than women of New Zealand European ethnicity in the 2006–2022 period.

NATIONAL MATERNITY MONITORING GROUP

The NMMG plays a key role in the implementation of the maternity standards and oversees the quality and safety of Aotearoa New Zealand's maternity services at a local, regional, and national level. They provide strategic advice to the Manatū Hauora on priorities for national improvement based on the national maternity report, nationally standardised benchmarked data, and the audited reports from district service specifications. Annually Districts are provided a national overview of the quality and safety of the Aotearoa New Zealand maternity sector, and advised of priorities for local improvement.

MATERNAL MORBIDITY WORKING GROUP

The PMMRC established the Maternal Morbidity Working Group (MMWG) to investigate maternal morbidity. The vision created by the MMWG is 'better outcomes for mothers in Aotearoa New Zealand', with an aim to 'to improve the quality and experience of maternity care for women/people, babies, families and whānau, informed by robust, consistent, reportable and women/people-centred maternal morbidity review'.

TE TĀHŪ HAUORA - HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

The Te Tāhū Hauora patient deterioration programme aims to reduce harm from failures to recognise or respond to acute physical deterioration for all adult inpatients by July 2021. The programme works with hospitals to establish recognition and response systems for managing the care of acutely deteriorating patients.

PMMRC RECOMMENDATIONS

The recommendations for Te Whatu Ora – Health New Zealand districts from PMMRC can be found within The Fifteenth Annual Report of the Perinatal and Maternal Mortality Review Committee | Te Pūrongo ā-Tau Tekau mā Rima o te Komiti Arotake Mate Pēpi, Mate Whaea Hoki https://www.hqsc.govt.nz/assets/Our-work/Mortality-review-committee/PMMRC/Publications-resources/15thPMMRC-report-final.pdf

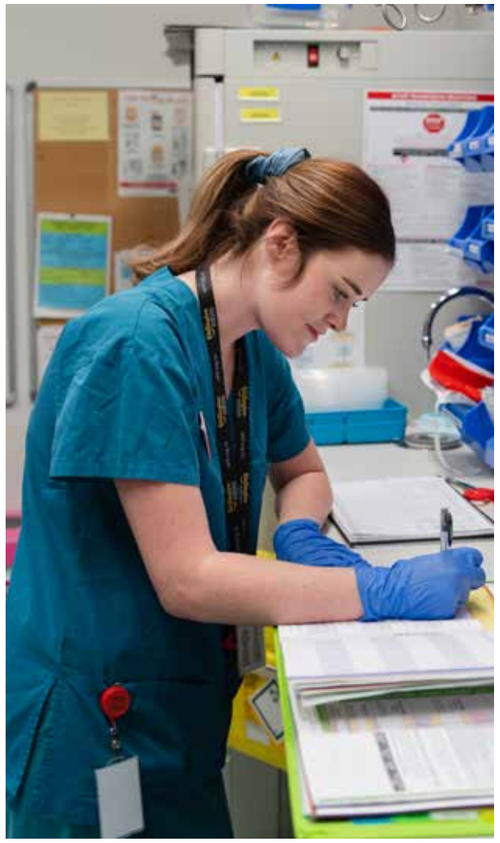
NMMG RECOMMENDATIONS

The NMMG oversees Aotearoa New Zealand's maternity system and provides a national overview of the quality and safety of our maternity services. The NMMG Annual Report presents work conducted during 2019 and its priorities and work programme for the coming year (2020). The 2019 report underscores maternal mental health, access to maternity ultrasounds, and equity of access to long-acting reversible contraception, access to community-based primary maternity care/primary birthing and work force /cultural competency issues as areas to focus on in their work programme.

The 2020 work plan highlights priority areas for the districts and Manatū Hauora to focus on in the coming year, this is the latest report published. https://www.health.govt.nz/system/files/documents/publications/nmmg_2019_report_final.pdf

MMWG RECOMMENDATIONS

The Maternal Morbidity Working Group reviews the health care women received when they were very unwell during or after their pregnancy. Their group is made up of health professionals who look after pregnant women/people during and after their pregnancy and two consumers (women/people who are not health professionals). Their purpose is to make maternity care better for Aotearoa New Zealand women/people. They were set up by the Perinatal and Maternal Mortality Review Committee and report to Te Tāhū Hauora- Health Quality & Safety Commission on maternal health. Their latest report can be found https://www.hqsc.govt.nz/assets/Our-work/Mortality-review-committee/PMMRC/Publications-resources/MMWGAnnualReport2018.pdf



ADVERSE EVENTS

Adverse events are any 'event with negative or unfavourable reactions or results that are unintended, unexpected or unplanned'. Adverse events or near misses are reported in an effort to increase patient safety by examining the situation in which the event took place.

A total of 461 reportable events were generated in the WHS during 2021, with 116 (25%) events being categorised as Maternal/ Childbirth, the next highest category was Staffing with 99 (21%) events, followed by Clinical Care/Service/Coordination with 78 (17%) events, and Staff and Others Health and Safety with 53 (11%) events.

A total of 459 reportable events were generated in the WHS during 2022, with 162 (35.3%) events being categorised as Maternal/ Childbirth, the next highest category was Staffing with 86 (18.7%) events, followed by Staff and Others Health and Safety with 51 (11.1%) events, and Clinical Care/Service/ Coordination with 49 (10.7%) events.

SERIOUS ADVERSE EVENTS - SEVERE (SAC1) AND MAJOR (SAC2)

The Severity Assessment Code (SAC) is a numerical rating which defines the severity of an adverse event and as a consequence the required level of reporting and investigation to be undertaken for the event. (Source: https://www.hqsc.govt.nz/assets/Our-work/System-safety/Adverse-events/Publications-resources/Guide_to_the_National_Adverse_Events_Policy_2017_WEB_FINAL.pdf)

Across the WHS in 2021, there were three reportable events that were considered as severe (SAC 1) and two as major (SAC 2) events. Each event was fully investigated by review teams, with any learnings applied to reduce the risk of a similar event occurring.

Across the WHS in 2022, there were three reportable events that were considered as severe (SAC 1) and two as major (SAC 2) events. Review of one of the events is ongoing, and the other two events were fully investigated by review teams, with any learnings applied to reduce the risk of a similar event occurring.

Some of the recommendations included: a request for patient permission to use case studies to improve teaching experiences in relation to placental abruption, establishing and implementing a formal guideline for optimal management of placental abruption, improving awareness of identifying and managing risks for Multi Drug Resistant Organisms.

Ngā Āpitihanga
Appendices

APPENDIX 1 – MQSP WORK PROGRAMME

In 2023 we plan to combine our work plan with Hutt Valley as we are now a combined district and this will allow us to work on project across all site at Te Whatu Ora – Capital, Coast and Hutt Valley.

Table 10: **MQSP Work Programme 2020-2023**

Project No.	Improvement Initiative	• Objective / Descriptor /Actions	Planned delivery
1	**Optimising Term Birth**		
1.1	Appoint a project manager	• Appoint a project manager for six months fulltime to progress all optimising term birth projects by June 2020	Complete
1.2	Robson 10 reporting	• Utilise the Robson 10 classification system for reporting and categorising all pregnant women/ people	Complete
		• Assess and improve current data collection where required	
1.3	Literature review	• Review literature and actions which have reduced the caesarean section rate in other maternity services around Aotearoa New Zealand	Complete
1.4	Audit outcomes for Group 1 and Group 2A women/people	• Over a two month period, review the outcomes of all women/people in group 1 and group 2a whose birth resulted in a caesarean section	Complete
		• Identify recurring themes and areas requiring further investigation	Complete
		• Consider what, if any, alternative actions / management of care may have been required	
		• Present findings of initial audit to upcoming hui	Complete
		• Assemble a midwifery, and obstetric team to review the outcomes of group 1 and group 2a women/ people	
		• Embed regular auditing of outcomes into business as usual	
1.5	Hui for providers of maternity care	• Present the Robson 10 classification system to all	Complete
		• Advise of work being undertaken on ERAS pathway (see project 1.7)	
		• Present findings of group 1 and group 2a audit for the months of May and June 2020	
		• Call for interested providers of healthcare to join a time-bound working group on optimising birth	
1.6	Consider potential effectiveness of manual rotation from occiput posterior (OP) to occiput anterior (OA) for women/ people with cervical dilation over 8cm	• Prospective audit of current rates of OP and obstructed labours resulting in caesarean section	Yet to commence
		• Promote awareness of this labour management option	Ongoing
		• Increase training in this procedure	

1.7	Develop an ERAS pathway for women/people having elective caesarean sections	• Agree on a pathway with midwifery, obstetric, anaesthetic leads, and LMCs including private obstetric LMCs	Complete
		• Promote ERAS pathway and undertake relevant education	
		• Amend written information given to women/people	Ongoing
		• Introduce patient controlled oral analgesia	Completed
		• Investigate potential of midwifery-led discharge process, streamlining the process, leading to timely discharge	Planning
		• Translate the ERAS pamphlet in to different languages to promote equitable access to care	2023
1.8	Setting the scene for future pregnancies	• Develop a robust process where women/people whose birth has resulted in a caesarean section are advised of their likelihood of achieving a vaginal birth in a future pregnancy, before leaving hospital inpatient services	2023
1.9	Develop maternity key performance indicator (KPI) dashboard	• Develop a maternity dashboard inclusive of clinical indicators which is visible to all providers of maternity care	Complete
		• The Qlik application will likely be used to provide this data	
1.10	Primipara induction of labour (IOL)	• Improve/reduce primipara IOL rates	Yet to commence
		• Design a tool for IOL indications, optimal process and decisions for caesarean sections	
2	**Optimising Preterm Birth**		
2.1	Explore alternative model of care options for women/people presenting with preterm pre-labour rupture of membranes (PPROM)	• Audit number of women/people admitted to Capital, Coast with PPROM in 2018	Complete
		• Consider the possibility of caring for women/people with PPROM in the community, or (if from out of town) in a motel near the hospital	
		• Consider initial inpatient stay of up to 72 hours. If the woman/person is not in labour after 72 hours and all is well, discharge from hospital.	
		• Follow up care – twice weekly, shared care arrangement, between obstetric and community midwifery team	
		• Education of all health care providers	Ongoing
		• Consider who best to contact in case of emergency	Complete
		• Develop brochure and screening tool for women/people to use in the community	
2.2	Preterm birth referrals	• Improve the antenatal screening and referral process for women/people at risk of preterm birth	Ongoing
		• Establish a structured triage process	
		• Modify the discharge summary information sent to women/people, LMCs, and GPs about the importance of early referral in future pregnancies	Complete
		• Develop a standardised letter regarding aspirin use in pregnancy	
		• Create an information sheet regarding preterm birth signs and symptoms	
		• Consider a preterm birth outpatient clinic	Not progressing
2.3	Preterm birth management audit	• Audit preterm births that occurred within Capital, Coast facilities in 2018. Include audit of steroids for lung development, and magnesium sulphate administration for neuroprotection	Complete
		• Consider another audit for more in-depth data to determine whether there was equity of access to optimising treatments, this would be done by prospective collection of data at both Wellington and referring districts	Planning
		• In collaboration with NICU, determine 23 – 26 weeks survival rates	Ongoing
2.4	Create guideline that includes treatment of ROM inclusive of preterm birth management	• Create spontaneous pre-labour rupture of membranes guideline (PROM) that includes pre-term PROM (PPROM), to provide recommendations for management	Complete
		• Create preterm labour management algorithm to coordinate care according to gestation	
		• Create PPROM outpatient management form, to enable self-monitoring for signs of infection	
3	**Maternal Outcomes**		
3.1	New Zealand Maternity Clinical Indicator seven, standard primipara with episiotomy, without mention of third or fourth degree tear	• Aim to reduce our rates of third and fourth degree tears	Yet to commence
		• Audit the Capital, Coast data on clinical indicator seven	
		• Practice improvement in episiotomy method, with training	
		• Perineal support education	
3.2	Develop a DHB wide maternal sepsis pathway	• Improve identification of sepsis early, and action timely care	Complete
		• Develop a policy on maternal sepsis, inclusive of signs, symptoms, and immediate treatment	
		• Develop a one page sepsis pathway checklist	
		• Create sepsis grab boxes/trolleys and implement a process to restock them after use	
		• Offer education to providers of maternity care	
		• Re-audit outcomes in 2021	2023- Planning

3.3	Following implementation of the charts in maternity, the maternity vital signs chart will be rolled out across Capital, Coast District	• Roll out maternity vital signs chart for use on women/people who are pregnant or recently pregnant (within 42 days), on medical, surgical, and mental health wards	Complete
		• Provide comprehensive education to each of the ward educators, senior nurses and doctors preceding this roll out	
3.4	Audit compliance of maternity vital signs chart in maternity sector	• Audit compliance with use of the chart and use of escalation pathways	Complete
		• Implement action plan if audit results show non-compliance issues	Not required
3.5	Hypertension in Pregnancy	• Update to District Wide Hypertension in Pregnancy Guideline that aligns with the updated National guideline released Oct 2022	Ongoing
		• Roll out and educate about updated policy	
4	**Neonatal Outcomes**		
4.1	New Zealand Maternity Clinical Indicator 20, term newborns requiring respiratory support	• Aim to reduce the rate of term newborns requiring respiratory support	Yet to commence
		• Formalise GAP/GROW contract and appoint to this role	Complete
		• Detailed initial GAP/GROW mandatory training carried out by the Perinatal institute via Zoom	
		• Undertake retrospective audit of 500 births from 2017 to gain baseline rates of SGA births	
		• Continue to offer annual education in fetal surveillance education to all maternity care providers free of charge	Business as usual
		• Continue regular PROMPT days for the multidisciplinary team. Encourage LMC attendance at primary birthing unit education days.	
		• Encourage multidisciplinary engagement with the monthly morbidity and mortality meetings	
		• Encourage multidisciplinary attendance at the perinatal education meetings	
4.2	Neonatal encephalopathy (NE) outcomes	• Reduce the number of newborns born at Capital, Coast District with NE	Ongoing
		• Use the PMMRC process and continue ongoing audit of all babies diagnosed with NE	Business as usual
		• Introduce newborn observation chart and newborn early warning score to maternity	Complete
4.3	Implement the roll out of the nationally agreed NOC/NEWS newborn observation charts	• Appoint a NOC/NEWs champion	Complete
		• Provide face to face and online education packages	
		• Purchase additional equipment to enable accurate newborn observations	
		• Agree on go-live date of 19 October 2020	
		• Implement DHB wide	
		• Updated to latest NOC/NEWS charts	Completed
4.4	Neonatal Hypoglycaemia	• Update to District-Wide Neonatal Hypoglycaemia Policy following recommendations on Neo-check clinical audit	Planning
		• Complete case to acquire blood gas analyser for more acquit blood glucose levels on neonates	Planning
4.5	Newborn Enrolment Form	• Scoping and review of Newborn Enrolment Form compliance	2023
5	**Improving Equity**		
5.1	Understanding the needs and outcomes of woman/people 20 years and younger	• Improve our understanding of pregnant women/people 20 years and younger	2023
		• Audit their birth outcomes	
		• Engage stakeholders to explore difficulties or barriers to accessing LMCs and maternity services	
		• Develop strategies to further engage with this group	
5.2	Smoking	• Reduce the number of Māori and Pacific women/people smoking during pregnancy	To be reviewed
		• Engage with young Māori and Pacific women/people to explore the barriers to them stopping smoking during pregnancy	
		• Revisit and re-promote nicotine replacement therapy with staff	
5.3	Survey women/people about their inpatient experience	• Seek to find ways we can improve our services	Ongoing
		• Create an easily accessible feedback survey, which women/people or whānau can complete on an iPad or by scanning the QR code	Complete
		• Results will be audited monthly	Business as usual
		• Staff will be notified of feedback pertaining to their area	
5.4	Build a culturally appropriate workforce	• The ethnic diversity of our workforce should reflect that of the women/people we care for	Ongoing
		• Develop a midwifery Māori and Pacific continuity of care team to provide care for Māori and Pacific women/people, especially those with complex needs	Complete

5.5	Cultural competency programme	• Improve our workforce's cultural appropriateness and awareness	Ongoing
		• Facilitate education opportunities	
		• Arrange a guest speaker to complete a series of talks on cultural issues	Complete
		• Include specific cultural feedback on patient feedback surveys	
		• Survey Indian women/people about the model of care required	Ongoing
5.6	Safe sleep	• Aim to reduce the rate of SUDI	Ongoing
		• Continue to promote the availability of safe sleeping advices to providers of maternity care and pregnant women/people	
		• Provide wahakura and pepi pods when needed	
		• Aim to meet the MOH target for wahakura/pepi pod distribution	Complete
5.7	Monitor key maternity indicators by ethnicity to identify variations in outcomes and improve areas where there are differences in outcomes	• Create Qlik application showing maternity clinical indicators which can be filtered by ethnicity	Complete
		• Examine maternity clinical indicators by ethnicity to identify variations	Ongoing
5.8	Reduce the high number of adverse maternal and fetal outcomes for our Indian maternity community	• Improve our understanding of pregnant Indian women/people	Ongoing
		• Audit their birth outcomes	Complete
		• Develop a plan of action with specific recommendations of changes and actions	
		• Create an ongoing project team to implement and monitor actions	
		• Recruitment within the Indian community for a Maternity Consumer Representation of the MQSP governance group	
		• Create a vitamin D guideline	
		• DHB-specific addendum to national gestational diabetes testing guideline to be created	2023
		• GROW charts usage encouraged for community team midwives	
		• Further investigation needed on influence of ethnicity of gestational length variance and guidelines following this	
		• Indian breastfeeding peer support counsellors to be recruited	
		• Review of handout material given to maternity clients to assess cultural appropriateness and possibility of translation.	

5.9	Community Midwifery Team Consumer Feedback Platform as part of Maternity and Neonatal System Plan (MNSP) (Capital, Coast and Hutt Valley)	• Develop a new consumer feedback platform for Community Midwifery Team that includes ability to feedback about specific midwife with QR code as per MNSP forums	Yet to commence
6	**Bereavement Midwife**		
6.1	Investigate the possibility of employing a bereavement midwife	• Engage stakeholders to explore difficulties or barriers to accessing LMCs and maternity services	Yet to commence
		• Develop strategies to further engage with this group	
		• The bereavement midwife will be the point of contact for women/people to prevent them having to re-tell their story multiple times.	
6.2	Te Wai Bereavement Symbol Process	• Introduction of Te Wai. Te Wai is a bereavement symbol that has been created to notify staff that a patient has passed.	Complete
		• Introduction of the Te Wai trolley's into 4 North Maternity and Birthing Suite	
7	**NMMG Recommendations**		
7.1	NMMG recs for 2020 relevant to MQSP (1)	• Encouraging low-risk women/people to birth at home or in a primary facility	Ongoing
		• Promotion of primary birthing facilities	2023
7.2	NMMG recs for 2020 relevant to MQSP (2)	• Equitable access to post-partum contraception, including regular audit	2023
7.3	NMMG recs for 2020 relevant to MQSP (3)	• Equitable access to primary mental health services	Complete- BAU
		• Maternal mental health referral & treatment pathway	
8	**MMWG Recommendations**		
8.1	MMWG (Subgroup of PMMRC) (1)	• Implementation of Hypertension guideline, with a review/re-stock of medications to ensure easy availability & administration in acute care settings	Complete
8.2	MMWG (Subgroup of PMMRC) (2)	• Use of the Health Equity Assessment Tool (the HEAT) to assess services for the impact of health equity	Complete
8.3	MMWG (Subgroup of PMMRC) (3)	• Establish a clinical pathway for pregnant women/ people with identified placental implantation abnormalities	Complete
9	**PMMRC Recommendations**		
9.1		• Pregnant women/people who are admitted to hospital for medical conditions not related to pregnancy need to have a specific pathway for perinatal care	Yet to commence

APPENDIX 2 – DEFINITIONS

This report includes maternal and infant data pertaining to women/people giving birth to babies at and beyond twenty weeks gestation at any of the three birthing facilities in the Capital, Coast area. Also included are those women/people who were booked to give birth at a facility but had an unplanned home birth or gave birth en route to a birthing facility.

A monitoring and audit programme of the Perinatal Information Management System (PIMS) maternity database includes daily and monthly checks, with queries and corrections made on key data fields.

Assumptions applied in the analysis of maternity data:

- the maternal age was calculated as at the time of the birth
- all babies born from 20 completed weeks of pregnancy, or weighing over 400 grams at birth if the gestation is unknown are included
- for multiple pregnancies, only one mode of birth has been assigned to the mother, with the mode prioritised to the mode of highest intervention
- maternal obstetric and caesarean history was determined from the 'parity' and 'caesarean history' data fields in PIMS

ETHNICITY REPORTING

Reporting of ethnicity is complex and different systems are used in various reports.

The Aotearoa New Zealand Manatū Hauora uses a prioritised ethnicity group classification system (Manatū Hauora Ministry of Health, 2010). This system is used when an individual chooses multiple ethnicities based on their preferences or self-concept. The classification system then determines the ethnicity group value for multiple ethnicities using a hierarchical system of 21 ethnicity descriptions. This is based on the following priority: Māori, Pacific Peoples, Asian, other groups except Other European, New Zealand European. Tables within this report have grouped New Zealand European, Other European, and Other Ethnicities together as a combined number where Manatū Hauora nationwide data is used. Indian women/people are separated out from Other Asian women/people to reflect the growing disparity of outcomes for Indian women/people.

Table 11: **Prioritised ethnicity groups**

Ethnicity group	Ethnicity	Priority order (MOH)
Māori	Māori	1
Pacific Peoples	Tokelauan	2
	Fijian	3
	Niuean	4
	Tongan	5
	Cook Island Māori	6
	Samoan	7
	Other Pacific Island	8
	Pacific Island not further defined	9
Other Asian	Southeast Asian	10
	Chinese	12
	Other Asian	13
	Asian not further defined	14
Indian	Indian	11
Other	Latin American/Hispanic	15
	African	16
	Middle Eastern	17
	Other/Not stated	18
Other European	Other European	19
	European not further defined	20
NZ European	New Zealand European	21

ABBREVIATIONS AND DEFINITIONS

Table 12: **Abbreviations**

ACC	Accident Compensation Corporation
BAU	Business as usual
BFHI	Baby friendly hospital initiative
CMT	Community midwifery team
CS	Caesarean section
CTG	Cardiotocograph
DDU	Diploma of Diagnose Ultrasound
ELCS	Elective caesarean section
ERAS	Enhanced recovery after surgery
FTE	Full time equivalent
GAP	Growth Assessment Protocol
GHMP	Global health media project
GP	General practitioner
GROW	Gestational related optimal weight
HEAT	Health Equity Assessment Tool
HQSC	Health Quality and Safety Commission
ICT	Information and communication technology
IM	Intramuscular
IOL	Induction of labour
ISSN	International standard serial number
IUGR	Intrauterine growth restriction
IV	Intravenous
KMU	Kenepuru Maternity Unit
KPI	Key performance indicator
LARC	Long-acting reversible contraceptives
LMC	Lead maternity carer
MAP	Medical app portal
MAT	National maternity collection
MEWS	Maternity Early Warning Score
MFM	Maternal Fetal Medicine
MHAIDS	Mental Health, Addictions and Intellectual Disability Service
MIQ	Managed isolation and quarantine
MMWG	Maternity Morbidity Working Group
MQSP	Maternity Quality & Safety Programme
MRI	Magnetic resonance imaging
MVSC	Maternity Vital Signs Chart
NE	Neonatal Encephalopathy
NGO	Non-governmental organisations
NICU	Neonatal Intensive Care Unit
NIPT	Non-invasive prenatal testing
NMDS	National minimum dataset
NMMG	National Maternity Monitoring Group
NOC/NEWS	Newborn Observation Chart/Newborn Early Warning Score
NZ	New Zealand
NZBS	New Zealand Blood Service
OA	Occiput anterior
OP	Occiput posterior
PACU	Post anaesthetic care unit
PADA	Perinatal Anxiety & Depression Aotearoa
PAS	Placenta accrete spectrum
PCOA	Patient controlled oral analgesia
PIC	Primary intrapartum care
PIMS	Perinatal Information Management System
PMMRC	Perinatal and Maternal Mortality Review Committee
PMU	Paraparaumu Maternity Unit
PPH	Postpartum haemorrhage
PPROM	Preterm Pre-labour Rupture of Membranes
PROM	Pre-labour Rupture of Membranes
PROMPT	Practical Obstetric Multi-Professional Training
QR	Quick response
RAADD	Routine antenatal anti-D prophylaxis
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
SAC	Severity Assessment Code
SCBU	Special care baby unit
SGA	Small for Gestational Age
SMMHS	Specialist Maternal Mental Health Service
SP	Standard primiparae
SROM	Spontaneous rupture of membranes
SSB	Safe sleep bed
SUDI	Sudden Unexplained Death in Infancy
TENs	Transcutaneous electrical nerve stimulation
WHS	Women's Health Service
WRH	Wellington Regional Hospital

Table 13: **Definitions**

Body mass index	A measure of weight adjusted for height.
Dashboard	A modern analytics tool to monitor healthcare KPIs in a dynamic and interactive way
Deprivation	A lack of the types of diet, clothing, housing and environmental, educational, working and social conditions, activities and facilities which are customary in a society
Domicile	A woman's/person's usual residential address
Ethnicity	The ethnic group or groups that women/people identify with or feel they belong to
Jadelle	A hormone releasing sub-cutaneous implant
Jaydess	A hormone releasing intra-uterine device
Kairaranga	Traditional weaver
Kaupapa	Topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative.
Manatū Hauora	Ministry of Health
Mirena	A hormone releasing intra-uterine device
Misoprostol	A synthetic prostaglandin medication used to induce labour
Morbidity	The consequences and complications (other than death) that result from a disease
Multidisciplinary team	A multidisciplinary team involves a range of health professionals working together to deliver comprehensive health care
Normothermia	The maintenance of normal core body temperature
Nulliparous	Has not given birth previously
Pākehā	New Zealander of European descent
Parity	The number of previous pregnancies that were carried to 20 weeks
Pēpi	A baby or infant
Qlik	An end-to-end cloud data integration and data analytics application
Robson 10	A classification system by which all perinatal events and outcomes can be compared
Tamariki	Children
Tertiary	Specialised consultative health care, usually for inpatients and on referral from a primary or secondary health professional
Wahakura	A woven flax bassinet for infants up to 5-6 months of age
Wānanga	Teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence
Whānau	Extended family, family group, a familiar term of address to a number of people

APPENDIX 3 – DATA SOURCES

The information in this report has been sourced from the following database systems:

- Te Whatu Ora – Capital, Coast District Business Intelligence and Analytics Unit
- Te Whatu Ora – Capital, Coast District patient management system
- Perinatal Information Management System (PIMS)
- Te Whatu Ora – Capital, Coast District Maternity Clinical Indicators (PIMS) Qlik application
- Te Whatu Ora – Capital, Coast District Maternity Clinical Indicators (Manatū Hauora) Qlik application
- Manatū Hauora Report on Maternity web tool
- Manatū Hauora Qlik Sense Hub

APPENDIX 4 – REFERENCES

Capital & Coast District Health Board, 2022. ***CCDHB Annual Report 2020-2021.*** [Online]. Available at: https://www.ccdhb.org.nz/news-publications/publications-and-consultation-documents(0b99f6de-dbee-4988-8cc2-8c9e69b563b3)/2020-2021-ccdhb-annual-report-signed.pdf

Te Tāhū Hauora- Health Quality & Safety Commission New Zealand, 2017. ***National Adverse Events Reporting Policy 2017.*** [Online]. Available at: https://www.hqsc.govt.nz/assets/Our-work/System-safety/Adverse-events/Publications-resources/National_Adverse_Events_Policy_2017_WEB_FINAL.pdf

Manatū Hauora - Ministry of Health, 2002. ***Breastfeeding: A guide to action***. [Online]. Available at: www.health.govt.nz/publication/breastfeeding-guide-action

Manatū Hauora - Ministry of Health. 2011. ***New Zealand Maternity Standards: A set of standards to guide the planning, funding and monitoring of maternity services by the Ministry of Health and District Health Boards***. [Online]. Available at: https://www.health.govt.nz/system/files/documents/publications/nz-maternity-stds-sept2011.pdf

Manatū Hauora - Ministry of Health, 2022. ***New Zealand Maternity Clinical Indicators: background document.*** [Online]. Available at: https://www.health.govt.nz/system/files/documents/publications/nz-maternity-clinical-indicators-background-document-oct2022.pdf

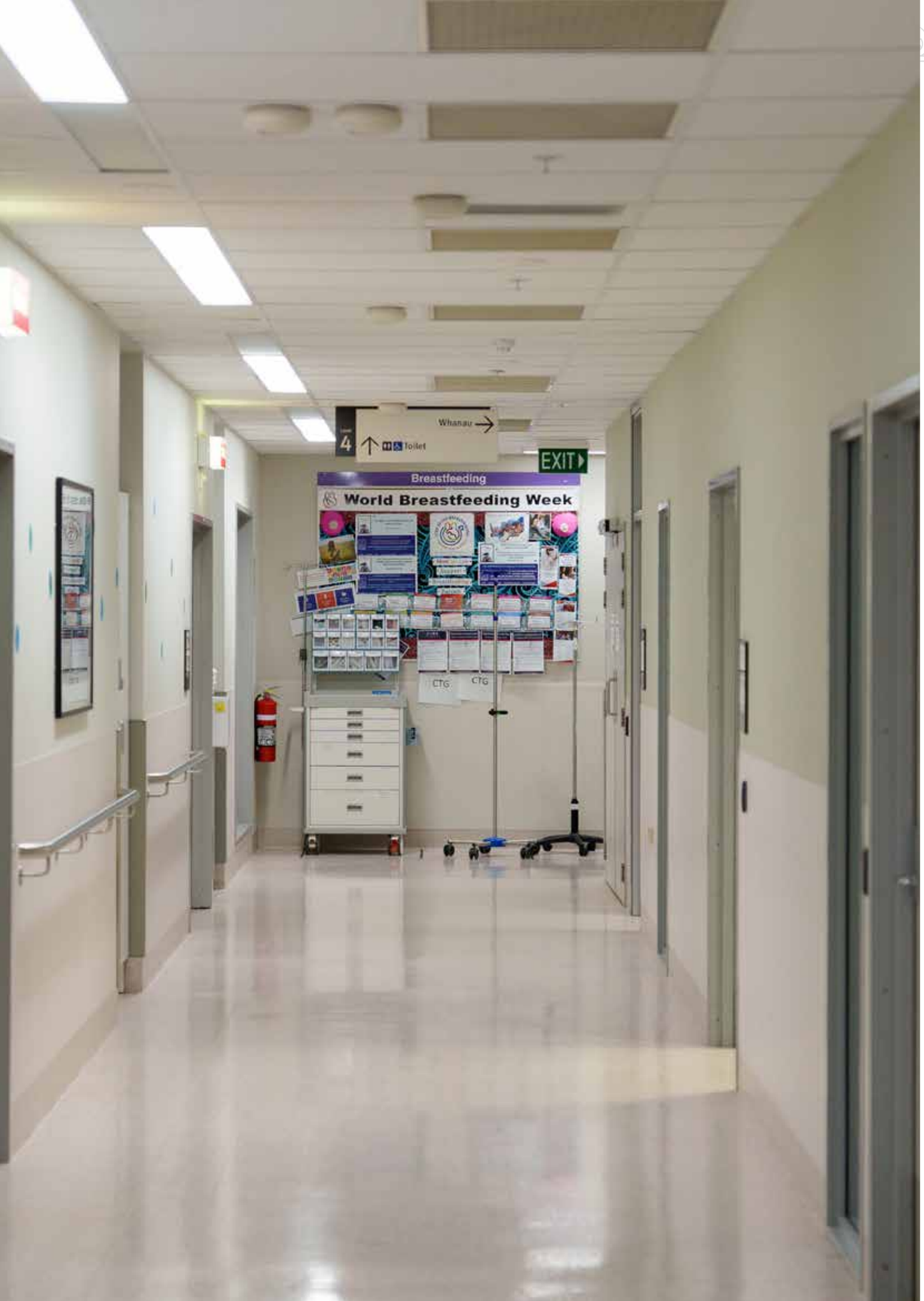
Manatū Hauora - Ministry of Health, 2022. ***New Zealand Maternity Clinical Indicators***. [Online]. Available at: https://www.health.govt.nz/publication/new-zealand-maternity-clinical-indicators-2019-and-2020

Manatū Hauora - Ministry of Health, 2022. ***Report on Maternity web tool.*** [Online]. Available at: https://www.health.govt.nz/publication/report-maternity-web-tool

Perinatal & Maternal Mortality Review Committee, 2022. Fifteenth Annual Report of the Perinatal and Maternal Mortality Review Committee I Te Pūrongo ā-Tau Tekau mā Rima o te Komiti Arotake Mate Pēpi, Mate Whaea Hoki: Reporting Mortality and Morbidity 2020 I Te Tuku Pūrongo mō te Mate me te Whakamate 2020. [Online]. Available at: https://www.hqsc.govt.nz/assets/Our-work/Mortality-review-committee/PMMRC/Publications-resources/15thPMMRC-report-final.pdf

Perinatal & Maternal Mortality Review Committee, 2018. Twelfth Annual Report of the Perinatal and Maternal Mortality Review Committee: Reporting mortality and morbidity 2016. [Online]. Available at: https://www.hqsc.govt.nz/assets/Our-work/Mortality-review-committee/PMMRC/Publications-resources/12th-PMMRC-report-final.pdf

World Health Organisation, 2017. Robson Classification: Implementation manual. [Online]. Available at: https://www.who.int/publications/i/item/9789241513197


Whanau
4
Toilet
EXIT
Breastfeeding
World Breastfeeding Week
CTG
CTG


“Me mahi tahi tātou, mo te oranga o te katoa”
“We must work together for the wellbeing of all”
- Māori proverb