COUNTIES MANUKAU HEALTH

Women's Health and Newborn **Annual Report**

2019-2020

1 Introduction

Table of Contents

Acknowledgements

The following people are acknowledged for their contribution to this report:

Adrienne Priday – Community LMC Midwife and AUT University Educator Midwifery

Alisha Clayton – Community LMC Midwife

Amanda Hinks – Maternity Service Development Manager

Andrea O'Brien – Data Analyst, Health Intelligence and Informatics

Anna Hawkins – Clinical Coordinator, Perinatal Services

Antonia Yelavich – Human Resources Business Partner WH

Bev Pownall – Team Leader, Lactation Support Services

Chris Mallon – Chief Midwife

Chrissie Sygrove – Perinatal Pregnancy Loss Nurse Specialist

Dr Christine McIntosh – General Practitioner Liaison CM Health and Senior Lecturer, Department of Paediatrics, Child and Youth Health, The University of Auckland

Debbie Davies – Perinatal Loss Midwife Specialist

Debra Fenton – Maternity Service Manager

Dr Gary Jackson – Director of Population Health, Counties Manukau Health

Heather Muriwai – Clinical Lead Advisor – Maaori Midwifery

Dr Heena Lakhdhir – Senior Medical Officer, Obstetrics and Gynaecology

Isabella G Smart – Midwife Manager, Women's Health Community Midwifery

Karen Boyle – Nurse Manager

Karlene Clarke – Clinical Midwife Specialist

Dr Katherine Sowden – Gynaecologist, Gynaecology Clinical Lead

Dr Kerrie Hides – Specialist Obstetrician and Gynaecologist

Dr Lesa Freeman – Patient Safety and Quality Assurance Lead

Lesley Maclennan – Clinical Midwife Coach

Dr Lindsay Mildenhall – Clinical Lead Neonates

Luisa Silailai – Consumer Advisor

Lyn Stark – Maternity Quality and Safety Coordinator

Maneet Kaur – consumer

Mary Burr – General Manager, Women's Health

Dr Maisie Wong – Neonatologist

Michelle Lee – Team Leader, Living Smokefree Service

Ngatepaeru Marsters – AUT Pasifika Midwifery Liaison Team

Paula Taylor – Manager, Stakeholder and Community Communications

Dr Pip Anderson – Public Health Physician

Dr Rachel Murray – Fellow

Dr Robin Cronin – Research Midwife Specialist

Rochelle Bastion – Service Development Manager, Child Health

Dr Sam Holford – O&G Registrar, Women's Health

Sarah Nicholson – Deputy Chief Midwife

Dr Sarah Tout – Clinical Director, Women's Health

Sharon Arrol – Data Analyst, Health Intelligence and Informatics

Stephanie Emma – Project Manager

Steven Tio – Clinical Quality Coordinator

Dr Sue Tutty – GP Liaison, Primary care

Talei Jackson – AUT Pasifika Midwifery Liaison Team

Tanya Wilson – Clinical Nurse Director, Women's Health, Professional Development Team Lead Kidz First and Women's Health

Thomas Epps – Improvement Advisor, Ko Awatea

Tina Higgins – SUDI Prevention Project Manager

Tish Taihia – Clinical Midwife Manager Nga Hau Mangere Birthing Centre

Vivienne Williams – Executive Assistant

CM Health would like to thank all the people whose photos have featured in this report including:

The Teariki, Riley, Silailai, Kaur, Arora, Paul, King-Hazel, Root, Bishton, Davison, Pahuja, Burton and Groenewald families/whaanau as well as the Consumer Advisor group, Smokefree whaanau, Te Rito Ora Starting Solids session attendees, Whaanau wahakura weavers, staff and stakeholders

List of Figures

List of Tables

List of Abbreviations

AUT	Auckland University of Technology
BMI	Body Mass Index
DHB	district health board
FTE	full-time equivalent
GAP	Growth Assessment Protocol
LMC	lead maternity carer
MCIS	Maternity Clinical Information System
NGO	non-governmental organisation
POAC	Primary Options for Acute Care
PPH	post-partum haemorrhage
SGA	small for their gestational age
SUDI	sudden unexplained death in infancy

Senior Leadership Foreword

Welcome to the "Women's Health and Newborn Annual Report" 2019-2020, and thank you to all those who have contributed. Not only to the published word, but for everything you all do every day caring for our community.

With COVID-19 being the focus of significant work over the last year, we would like to take the opportunity to thank the division for stepping up to the mark as we fluctuated between the various levels of lock down and for supporting each other and displaying the DHB values along that journey. This pandemic forced us to think differently about the way we deliver care, the need to look after one another and the important role our community plays in our care partnership. It also gave us the motivation to challenge our current ways of working and we see this reflected in some of the innovation described in this report.

As you will read, the report reflects this dedicated work in an ever increasing and demanding clinical workload whilst constantly seeking new initiatives across the breadth of care for women of all ages and their newborn.

This year the report is filled with pictures and real life stories from our community and we would like to acknowledge how Women's Health is leading the way with community engagement for CM Health. You will sense the growing involvement of women as consumers of our services as they become part of all aspects of planning and service delivery. We welcome this partnership and are strongly focussed on a deeper understanding of the needs of our culturally diverse community and acknowledge our commitment to Te Tiriti o Waitangi as the founding document of Aotearoa New Zealand.

It is also exciting to see the progression of joined up care between primary and secondary services for gynaecology, demonstrated by new primary care initiatives to improve access to care for women. With resource constraints and theatre access limited, maximising care in the community is paramount.

The Maternity Quality and Safety Programme (MQSP) plays an important role in raising the profile of the quality and safety of maternity services that women and whaanau receive to ensure, as far as possible, all babies get a great start to life. Our chapter on MQSP provides updates on current projects, the work completed by local multidisciplinary teams to identify and implement improvements to local maternity services, driven by local midwifery and medical leaders working with maternity consumers to improve the outcomes for women and their whaanau.

The report also provides us with an opportunity to publish some of our outcomes and also enables us to bench mark ourselves against other DHBs using the standard primip (a low risk, first time mother at term) by way of the clinical indicators. As only a third of our first time mothers are standard primips the information is depicted over the last few years for comparison and also presented by ethnicity.

We continue to be a strong, motivated team working passionately to deliver care within an environment of increasing demand and complexity. As reflected throughout the report, our Women's Health strategy is to support the provision of quality care which is woman centred, safe and equitable for all mothers, babies and whaanau.

Thank you all for your wonderful level of commitment to our mission during this challenging year.

MARY BURR
General Manager

DR SARAH TOUT
Clinical Director

CHRIS MALLON
Chief Midwife

▶ *Left to right, Chris Mallon, Mary Burr, Dr Sarah Tout*

Purpose of this Annual Report

The purpose of the CM Health's Women's Health and Newborn Annual Report 2019/2020 is to:

- be transparent and accountable to the women and whaanau we serve and the workforce and stakeholders who contribute to their care
- describe the unique and diverse population we serve
- provide information about the work we do, the services provided and the quality improvement work underway in the Counties Manukau area for women living and birthing in our district
- recognise the important work delivered by our maternity, gynaecology and neonatal services
- provide information about the women's health workforce, including quality improvement work relating to this workforce that is underway in Counties Manukau
- describe CM Health's work underway and progress towards addressing the Maternity Quality and Safety Programme recommendations which are driven by the priorities identified by the Perinatal and Maternal Mortality Review Committee and the National Maternity Monitoring Group
- benchmark our performance against the New Zealand Maternity Clinical Indicators and against ourselves over time
- describe the work planned, as identified in the Maternity Quality Improvement Workplan, to improve the quality and safety of maternity services to be delivered in 2021-2023
- provide the Ministry of Health with the contractually required information, as set out in Section 2 of the Maternity Quality and Safety Programme Crown Funding Agreement Variation.

Alignment with Key Strategic Documents

CM Health Healthy Together Strategic Plan 2015-2020

https://countiesmanukau.health.nz/assets/Uploads/CM-Health-Strategic-Plan-April-2016.pdf

The plan sets out CM Health's strategic goal to work with others to achieve equity in key health indicators for Maaori, Pacific people and communities with health disparities by 2020.

Whakamaua Māori Health Action Plan 2020–2025

Provides a clear direction for the Ministry, district health boards, whānau, hapū, iwi, and other key stakeholders to improve Māori health.

The implementation of the plan will be shared and owned across these groups, reflecting the responsibility of all New Zealanders to improve Māori health in Aotearoa.

The Ministry will progressively update Whakamaua to respond to the outcomes of the Health and Disability System Review, and ensure we are well positioned for recovery from the COVID-19 pandemic.

Our commitment to the Ministry's obligations under Te Tiriti o Waitangi has fully informed the development of Whakamaua and will continue to inform its implementation over the coming years. Progressing work in this kaupapa needs to involve ongoing engagement with and participation by whānau, hapū, iwi, and Māori communities.*

The New Zealand Maternity Standards

https://www.health.govt.nz/publication/new-zealand-maternity-standards

The New Zealand Maternity Standards provide guidance for the provision of equitable, safe and high-quality maternity services throughout New Zealand.

* Ministry of Health. July 2020. *Whakamvaua: Māori Health Action Plan 2020–2025.* Wellington: page v Dr Ashley Bloomfield Director-General of Health

National Maternity Monitoring Group Annual Report 2019

https://www.health.govt.nz/system/files/documents/publications/nmmg_2019_report_final.pdf

This report presents the activities and recommendations of the National Maternity Monitoring Group (NMMG) in their seventh year of operation, 2019/2020.

The NMMG oversees New Zealand's maternity system and provides a national overview of the quality and safety of our maternity services. The group was set up in 2012 as part of the Maternity Quality Initiative and reports to the Director-General of Health.

Perinatal and Maternal Mortality Review Committee Fourteenth Annual Report

https://www.hqsc.govt.nz/assets/PMMRC/Publications/14thPMMRCreport/report-pmmrc-14th.pdf

The Perinatal and Maternal Mortality Review Committee is an independent committee that reviews the deaths of babies and mothers in New Zealand.

Maternity Morbidity Working Group Third Annual Report

https://www.hqsc.govt.nz/our-programmes/mrc/pmmrc/publications-and-resources/publication/3837/

Data Notes

Through the CM Health Women's Health and Newborn Annual Report data is used from a number of sources and is provided for different populations.

The report essentially provides two views; that of the domiciled population (those women that live in Counties Manukau Health area) and the provider arm view (the population to whom CM Health facilities provides service to regardless of where those people live). Different data sources provide information about these two populations. Some of those data sources can provide both views i.e. a domicile and provider arm view while some can only provide a provider arm view. The majority of data is presented for the 2020 calendar year.

Data sources used in the report

The **CMH Data Warehouse** is a system used for reporting and data analysis. It is a central repository of integrated data from one or more disparate sources. Taking information from lots of sources and putting it all together makes it more cohesive, accurate and easier to work with. The maternity tables within the warehouse are comprised of MCIS, iPM, and ICD 10 coded data. IPM Theatre data has also been used within the report, similarly sourced from CMH data warehouse. Note: Some graphs are now shown from 2016, the first full year of data collection from MCIS.

The **National Minimum Dataset (NMDS)** is maintained by the Ministry of Health and is a national collection of publicly funded hospital discharge information, including clinical information, for inpatients and day patients. All hospital admissions during pregnancy are captured in this dataset, and birth events are recorded for both mothers and infants. It should be noted the district level analysis only captures births that occur in hospital (Z37); therefore homebirths and births that occur before arrival at hospital (e.g. in a car or ambulance) are not captured. The NMDS provides the clearest domicile view for CMDHB women as it includes birthing units outside CMDHB, and privately-managed birthing units.

The **National Maternity Collection (MAT)** data is derived from the National Minimum Data Set (NMDS), LMC claims for services provided under the Primary Maternity Services Notice, as well as data from Births, Deaths and Marriages collected by the Department of Internal Affairs. This is able to provide both a facilities and domicile view although there are limitations of the variables available for women receiving care from CM Health services compared to community LMC midwives.

The **Clinical Indicator** data are collated by the Ministry of Health. This information is presented as both Domicile, which relates to all women living in the CM Health district, or the Middlemore Hospital facility view. In 2020 the clinical indicator data is also presented as a CM Health facilities view.

Health Roundtable (HRT) produces a suite of customised briefing reports to assist in finding improvement opportunities by benchmarking across Australasian hospitals. The report provides an overview of maternity activity and performance and is based on the Casemix data and supplemented by the parity and neonate data provided by the health services. The Health Intelligence and Informatics team provide data to the maternity submission on an annual basis.

Throughout the CM Health Women's Health and Newborn Annual Report full titles have been used rather than acronyms where ever possible for ease of reading.

AUTHOR

DR GARY JACKSON
Population Health team, Counties Manukau Health

Our Population

Counties Manukau Health is one of 20 district health boards established under the New Zealand Health and Disability Act 2000 to plan and fund the provision of personal health, public health and disability support services for the improvement of the health of the population.

In 2021, CM Health provides and funds health and disability services to an estimated 601,000* people who reside in the Auckland, Waikato and Hauraki local authority districts. CM Health has the fastest growing population of any district health board in New Zealand and that population is both youthful and ageing.

Our population is diverse and vibrant with strong cultural values. Counties Manukau is home to New Zealand's second largest Maaori population and largest population of Pacific people, as well as fast growing Asian communities.

Across our district, the health and circumstances of our communities are not the same. Thirty-six per cent of our population live in areas of high socioeconomic deprivation (NZDep2018 deciles 9 and 10†). Over 123,000 children live in Counties Manukau, with almost half (approximately 45 per cent) living in areas of high socioeconomic deprivation. By 2025, our district is forecast to be 16 per cent Maaori, 22 per cent Pacific, 29 per cent Asian and 34 per cent European/Other ethnicity.‡ There are persistent gaps in life expectancy between Maaori and Pacific people, and others living in Counties Manukau.§ On the basis of the NZDep2018 measure, Otara, Mangere and Manurewa, home to many of our Maaori and Pacific communities, are the most socioeconomically deprived areas in our district.

Long-term mental¶ and physical conditions do not affect all groups in our community equally. Our population experiences relatively high rates of ill-health risk factors (such as smoking, obesity, hazardous alcohol use) that contribute to a 'package' of long-term physical conditions responsible for the majority of potentially avoidable deaths. The rate of hospitalisation for circulatory diseases for our Maaori communities is estimated to be 88 per cent higher than for non-Maaori.** Diabetes prevalence in adults is higher amongst our Pacific (16 per cent), Indian (11 per cent) and Maaori (10 per cent) communities, compared to European/Other (6 per cent).†† Increasing the number of people who are living smoke-free and free from the harms of hazardous alcohol use, improving nutrition and physical activity, and reducing obesity are all key to improving the health of our population.

* Unless otherwise referenced, population data is sourced from the district health board ethnic group population projections carried out by Statistics NZ for the Ministry of Health, October 2020 update.

† New Zealand Index of Deprivation (NZDep) is an area-based measure of socioeconomic deprivation. It measures the level of deprivation for people in each small area, based on nine Census variables. NZDep can be displayed as deciles or quintiles. Quintile 5, or deciles 9 and 10, represent people living in the most deprived 20 per cent of these areas.

‡ Due to numeric rounding totals can appear to exceed 100 per cent

§ Chan, W. C., Papaconstantinou, D., & Winnard, D. (2019). *Life expectancy in Counties Manukau – 2018 update*. Auckland: Counties Manukau Health.

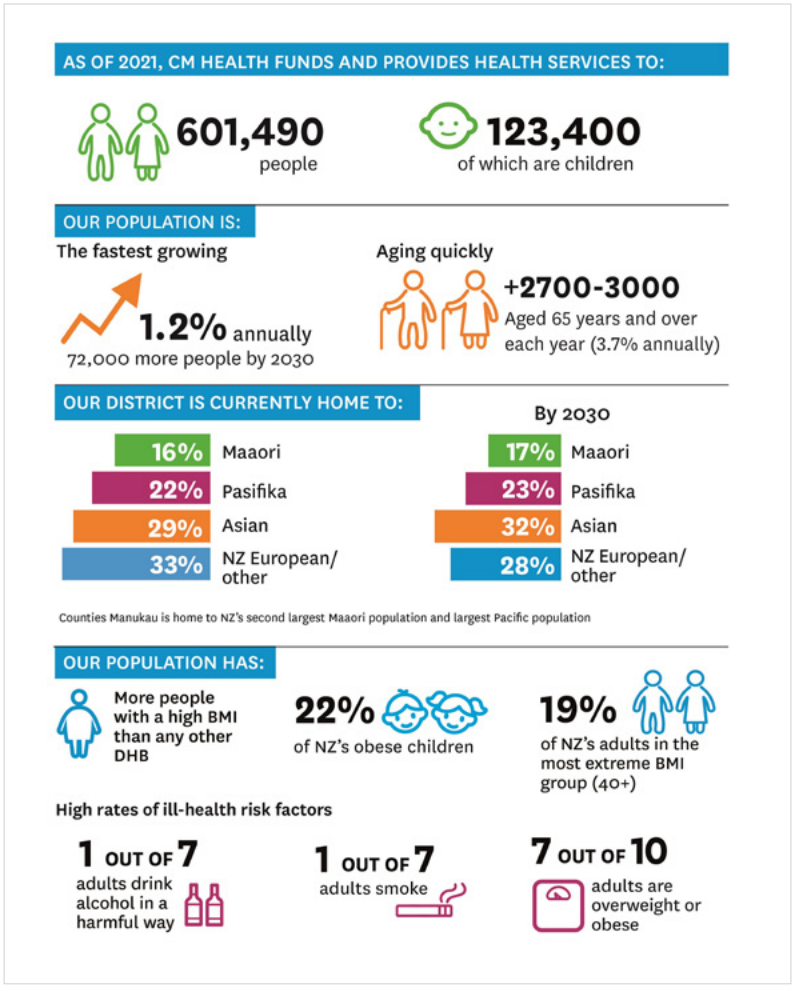
¶ Winnard, D., Papa, D., Lee, M., Boladuadua, S. et al. (2013). *Populations who have received care for mental health disorders.* Counties Manukau Health, Auckland

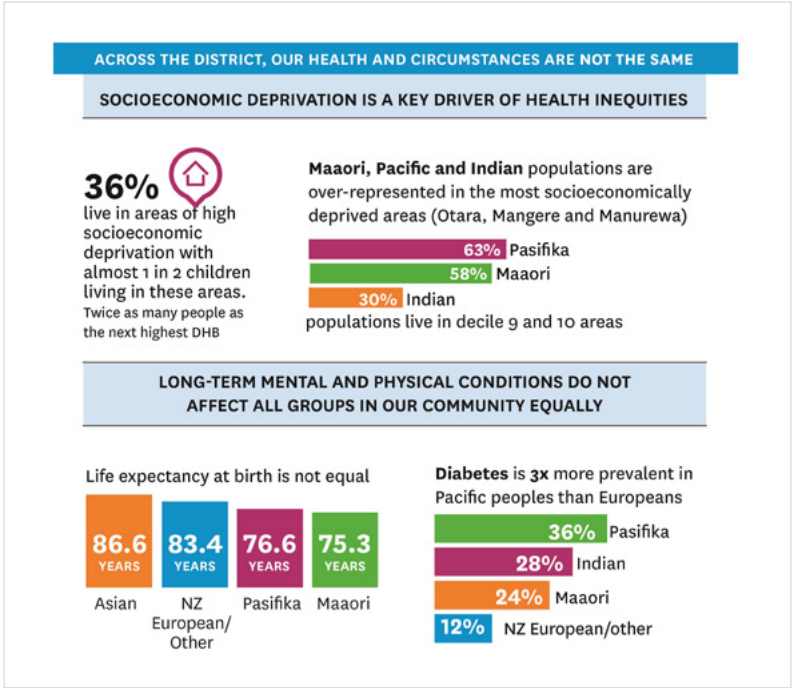
** Counties Manukau Health. Maaori Health Profile 2015. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare. Based on hospitalisation data 2011-2013.

https://www.countiesmanukau.health.nz/assets/About-CMH/Performance-and-planning/health-status/394c841b19/2015-counties-manukau-DHB-maori-health-profile.pdf

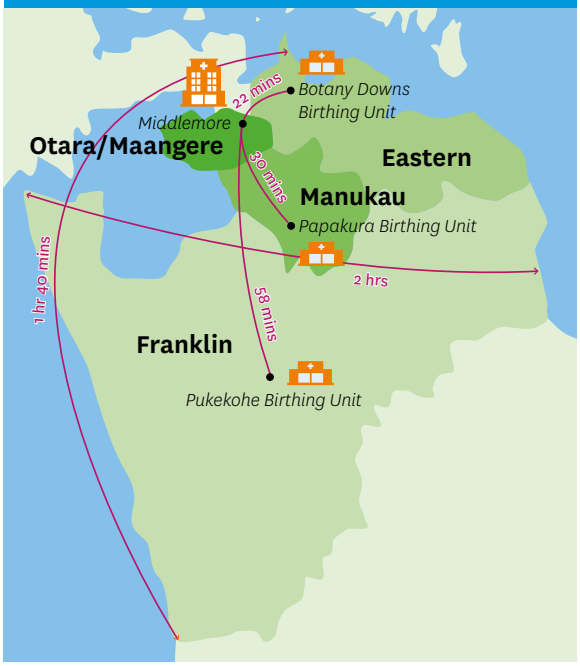
†† Chan, W. C., & Lee. M. (2020). Update on diabetes prevalence in 2019 based on laboratory results in the Auckland metropolitan region (from TestSafe). Auckland: Counties Manukau Health.

https://countiesmanukau.health.nz/assets/About-CMH/Reports-and-planning/Diabetes/2020-09-Updates_on_diabetes_prevalence_in_2019.pdf





Map displaying CM Health locality geographical boundaries, maternity facilities and travel times



▲ *Entrance to Middlemore Birthing and Assessment*

2 Division of Women's Health

Counties Manukau Health Division of Women's Health

Vision and Values 2020-2025

The Women's Health division at Counties Manukau Health recognises the role of the Maaori people as tangata whenua and Te Tiriti o Waitangi as the founding document of Aotearoa New Zealand.

Women are the central focus for all care activities at Women's Health.

Following extensive consultation with our women, whaanau, staff and the wider community, we have developed a vision and values for Women's Health.

The vision and values will support the development of a strategy to encompass all Women's Health's activities. Consultation is ongoing and the strategy will be a living document.

Vision

All women living in Counties Manukau have equitable access to woman-centred, compassionate, quality assured, evidence-based and culturally appropriate women's health care in a setting that suits their needs across the course of their life.

Our Values

Whakawhanaungatanga (connection)

Care is provided in a way that supports a woman's wairua and mana in the context of her needs and those of her whaanau. Women and their whaanau will easily access women's health services located as close to home as possible.

Wairua (spirit)

A woman's health needs are connected to her whaanau and wairua, and this is acknowledged and her mana respected.

Manaakitanga (kindness)

Women are actively supported to contribute to decisions that affect their mana and to avoid feelings of whakamaa (embarrassment). Principles of co-design underpin all consumer-related activities within Women's Health.

Kotahitanga (unity)

People who work in Women's Health are provided with a safe and respectful environment in which to learn and grow together. Care in Women's Health is coordinated across settings, services and disciplines, to maximise safety and wise use of resources.

Rangatiratanga (leadership)

The quality of women's health care and services must be measured, evaluated and co-designed with consumers of the service. Women's Health recognises the different health needs of priority populations, and the need to address gaps in services and target population groups whose health outcomes are poorer; in particular, reducing inequity for Maaori and Pacific women, and their babies.

AUTHOR

MARY BURR
General Manager, Women's Health

Women's Health vision and values

Over 2019/2020, we undertook extensive consultation to develop a vision and direction for the CM Health Women's Health division. This work included surveys, face-to-face workshops, strategy meetings and written feedback.

The themes that emerged strongly were the need for increased ring-fenced funding for Women's Health services, improved staffing to care for our women and babies, and increased equitable access to care using an individualised, culturally appropriate, woman and whaanau/fanau-centred approach to the provision of services. We heard about the need for fit-for-purpose facilities for all women's health services, including birthing and postnatal units that support whaanau and partners staying.

Strong themes also confirmed that Women's Health has "passionate, committed, resilient staff" who must be supported and valued.

For the important work of consumer engagement, we established a consumer group and include that group in our division planning day in October 2020. We will continue to develop this co-design pathway, drawing on close, essential relationships with women and their whaanau.

Our vision is that:

All *women living in Counties Manukau have equitable access to woman-centred, compassionate, quality assured, evidence-based and culturally appropriate women's health care in a setting that suits their needs across the course of their life.*

Our values highlight the foundations that underpin all our work, under the themes of:

- whakawhanaungatanga (connection)
- wairua (spirit)
- manaakitanga (kindness)
- kotahitanga (unity)
- rangatiratanga (leadership).

Our next step is to develop our strategy, which will be a living document that underpins all our activities in Women's Health for the next 3 years.

Some of the attendees of the Celebrating Women's Health Day, October 2020

AUTHOR

MARY BURR
General Manager, Women's Health

Women's Health Planning Day 2020

The Women's Health division held a successful planning session in Ko Awatea on 21 October 2020. The session was attended by 80 participants, from across all women's health professional groups, as well as eight consumers of our services.

The goals of the day were to progress a focus on equity of access to care, to design our future models of service delivery and review our facilities, our expectations and our culture. We sought the input of all the stakeholders present, giving us a great opportunity to design services that reflect the needs and expectations of all.

The session began with an update about inequity – how it has evolved, what it means and how it affects our women and whaanau. Keeping that conversation in mind, groups set about developing ideas and solutions to meet the challenges. Many ideas are exciting and innovative, some are relatively easy to deliver and some require wide-ranging system changes. We will now investigate all of the suggestions and ideas.

Gathering a consumer perspective on services

Great representation from consumers enabled us to gain the perspective of those using our services and we thank these women for taking the time to contribute. Their feedback was imperative to begin our co-design journey. Discussions centred on a number of questions facing newly pregnant women: *Where should they have their baby? Where to find information? What to expect? What choices did they have and what were their expectations?*

Our consumer participants told us information is gathered from many places – other women, word of mouth, family and midwives, who were often the main point of contact. They would be keen to have more opportunities for education throughout their pregnancy, to increase their knowledge and become more empowered through that knowledge.

They also reported that the midwifery shortage had affected women in the community, especially those due to birth between December and January each year, when it was very difficult to engage a midwife. More assistance in this area would be welcomed.

With respect to primary birthing facilities, women nice facilities, good street appeal, a restful environment with single rooms, an ensuite, birthing pools, bigger beds, partners able to stay, home cooked meals and approachable staff. Access to free parking was important. Consumers felt strongly that it was a woman's choice where to birth. They suggested that at Middlemore, birthing rooms should be on the ground floor with access to outside areas, such as gardens and open spaces, and should be away from the hustle and bustle of the hospital.

All participants thought a community hub with flexible clinic times, close to transport, with Whaanau Ora/Ola 'home' models would be excellent. Being handed over too soon after having their baby, especially for first-time mothers, was a concern for the group. More support postnatally would be helpful.

Reinforcing the need for top-class facilities

For other groups, there was a strong feeling that any new building at Middlemore Hospital must be purposed built and designed to cater for women and whaanau, with a well-designed layout for patient, whaanau and staff flow. There should be amenities that promote rest and relaxation, such as prayer and meditation rooms, music rooms, nature gardens, light and outdoor spaces. Perinatal loss and bereavement suites should also be protected and have appropriate support.

Because Middlemore is a secondary facility supporting complex obstetrics and gynaecology, it was important that first-class clinical spaces are designed, state-of-the-art equipment is in place, and there is seamless access to theatres and neonatal units. There must be enough theatre access to allow all women with gynaecology issues to be

treated. These spaces must co-exist alongside more flexible spaces to promote physiological birthing, with a number of participants suggesting a primary unit on or close to the site.

Designing buildings and facilities with staff welfare in mind was also raised as a key focus. Wellness and recreation facilities, such as a swimming pool, yoga and pilates rooms, a pool table in the staff room, coffee machine, hot desks and private spaces at night would be the ideal. The need for adequate work spaces and break rooms was highlighted, as were added extras such as a rooftop terrace and walking track. Availability of free parking was a constant theme through all responses for all sites.

When discussing access to care, the need to design culturally appropriate models of service delivery once again came to the fore, not only in terms of the facilities provided, but also through the removal of any barriers to accessing services; this requires a complete redesign of our models of service delivery to ensure they are culturally envisioned, women and whaanau-centred, and community led.

Looking at future options

As well as the rich feedback received above, comments were made that wider societal or funding changes, which promote health equity for all, are required. Relationships such as public, private and iwi partnership models for primary birthing could be explored.

A follow-up planning session will be held in April 2021 to ensure that all the suggestions and ideas form the first session are investigated and inform future planning.

▲ *Options for Maternity Care, CM Health 2019*

AUTHOR

AMANDA HINKS
Maternity Service Development Manager

LUISA SILAILAI
Consumer Advisor

Connecting and supporting our maternity consumers

Gathering consumer voice and contributions to our quality improvement projects and activities continues to be a priority for Women's Health. In particular, we use co-design as a methodology for putting consumers front and centre when designing our services, in recognition that consumers are the experts about their own health needs.

In March 2020, consumer advisor Luisa Silailai joined the Maternity Quality and Safety Governance Group (MQSGG), after previously collaborating with maternity services on a reducing alcohol harm project.

▲ *Luisa Silailai and baby Elijah*

I was recently welcomed on board the Maternity Quality and Safety Governance Group as a Consumer Representative. On 11th December 2019, I gave birth to my first baby at Ngaa Hau Birthing Unit in Mangere. I am passionate about women having the information and support they need to make informed decisions about their care that meets their cultural needs. Being on the MQSGG, which includes the Maternity Quality and Safety Programme projects, has been a good opportunity to look at the processes in place, keep what's working well and look for opportunities to continue to improve and ensure that women, their whaanau and community receive good quality care every time they interact with healthcare workers or services. Being on the group is a place that I can be heard, and bring forward experiences of pregnancy and birthing in Counties Manukau, including both the highs and learning opportunities. Pregnancy and giving birth are not conditions, and women and their whaanau are not 'patients'. They are being supported by healthcare services and workers for a normal, and often celebrated, part of life, which should be reflected in clinical practice.

– Luisa Silailai, Consumer Advisor

Luisa has contributed to the governance group's activity and work plan, providing influential insights into a woman's pregnancy journey – from finding a midwife and deciding where to give birth, through to seeking support with breastfeeding and weaning baby onto solids.

Luisa has provided a consumer lens and equity focus over our pregnancy information, and by using her experience suggested some small changes to support improved outcomes and experiences for women. For example, she suggested a 'top tips' list that prioritises practical information for parents, such as when to contact your midwife, the benefits of wool-blend blankets rather than polyester; as well as a one-page guide for birth and the first six weeks with safe sleep messages, timeframes for Well Child services and a contact number for Healthline.

Luisa has highlighted how women value revisiting questions about their mental wellbeing and alcohol consumption during their pregnancy, as life circumstances can change as the pregnancy progresses. She has suggested that all Well Child providers should text women when the handover from midwife to the care provider takes place, so the woman is not left waiting to hear after her midwife has completed her care.

Luisa will soon be joined by Talya Wilson, a mother of five tamariki whose youngest was born in November 2020. Talya will bring not only a rich background form her own birthing experiences, but also a wealth of community connections from her work as a youth pastor in Manurewa.

In October 2020, we invited eight consumer advisors to a Women's Health planning workshop (see photo below).

The workshop aimed to identify issues facing Women's Health, as well as potential solutions, by bringing the consumers of our maternity services and our workforce together.

Particular workshop themes were the workforce, the Women's Health building, and the future of primary birthing and facilities. To open the discussion, questions were posed about primary birthing, with the answers later placed into themes (See appendix 1). Themes that emerged focused on modernising the facilities, making the facilities family-focussed (as having a baby is not viewed as a medical event for families), increasing access to breastfeeding and parenting skills support (such as help with settling baby). One of the themes a consumer advisor shared was how highly valued kindness and compassion are, when shown by staff and midwives during the maternity experience. It was felt too much or misplaced bureaucracy, and time pressures have a detrimental effect on kindness and compassion, and this can profoundly affect a woman's and her whaanau's encounter with our service.

◀ *Consumer advisors, peepi and CM Health staff at the planning workshop*

Maternity staff care for Takanini local mum and newborn like family

Finding out you're pregnant 11,000 kilometres away from home maybe a daunting experience, but it was the complete opposite for 28-year-old Takanini local Maneet Kaur who was back in her hometown Bangalore, India attending her sister's wedding.

"It was an exciting time for my husband and I. I was at my mother's place, so it was great to find out while being surrounded by my family," Maneet says.

Trying to get back to New Zealand proved to be difficult

"I was only able to get back to New Zealand when I was almost six months into my pregnancy. By then the whole COVID-19 situation was at its peak, so it took me a while to get a flight back home," she says.

▲ *Maneet Kaur and baby Ajooni*

When Maneet was safely back home, things went much more smoothly when she was ready to give birth to her daughter Ajooni in July. Although she had a few complications with her birth, she gives credit to the staff at Middlemore Hospital and at the Papakura Birthing Unit for the great care they provided.

"I was really appreciative of the entire team at Middlemore and at Papakura. To me, they consider their work more than just a job. It's clear it's their passion," she says.

"I had to go in for a caesarean. I was so scared going into the operation room, but the staff would keep talking to me – they were very friendly, comforting and approachable."

After the birth, Maneet and baby Ajooni were transferred to Papakura Birthing Unit for their postnatal care.

"When I went to Papakura, all the staff there made me feel like I was at home. Whenever I was tired, a midwife would come in and help with baby, so I could sleep and rest. Whenever you called for them, within seconds they are there in your room. It's like your mother, aunty or grandmother being there for you – it's like a family," she says.

"The staff always checked to make sure I was on the right track, especially when it came to breastfeeding. It was quite difficult for me at the start, but they would come in every half an hour to check if I was able to breastfeed her and if I needed anything. I never had to worry if there was anything wrong because there was always staff coming in to do regular checks."

"My midwife Sandra was very good. When we found out there were going to be complications, she explained to me what was going on from the start."

Extended family and friends have rallied together to support the new family. "My husband and I have had a lot of help from his parents, extended family and friends. We were so fortunate to have so much support."

AUTHOR

DEBRA FENTON
Maternity Service Manager
On behalf of Women's Health Service, Operational and Clinical Managers

COVID-19 – Womens Health's response in March 2020

The Women's Health division, its managers and teams faced many challenges as they responded to the first COVID-19 level 4 lockdown in March 2020. One year on, and many of the processes adopted during that time have now become business as usual, as we continue to respond to new outbreaks and fluctuating national alert levels. Thanks to the team of 300+ across the division for their ability to adapt to uncertain times and ensure that the best care continued to be provided to the women and babies of South Auckland.

In February 2020, the world was confronted by the spread of the COVID-19 virus within all communities and the impact on New Zealand was evolving. By March 2020, the Women's Health management team had developed its own COVID-19 governance group and were preparing for the unknown impact on women who used our services in our hospital, birthing units and the community. Plans were well underway by the time the level-4 lockdown commenced on the 25 March 2020. During the lockdown, the entire midwifery workforce was connected through daily or weekly Zoom meetings to discuss the challenges that each area and individuals were facing and offer practical solutions.

The following are some of the challenges, responses and newly adopted practices that the various teams within Women's Health developed and faced.

Maternity wards

In our maternity wards, the focus immediately changed from business as usual to keeping women, babies and our staff safe. Once we had identified which vulnerable staff could not attend work during the level 4 lockdown, we started planning to source additional resources and personnel to cover rosters.

One of the main challenges was defining and applying a constantly evolving visitor's policy and keeping staff and security up to date with a consistent message. Numerous policies and processes were developed to guide staff on how to manage during lockdown, including caring for COVID-19 possible or positive women who required maternity care, defining 'red' zones and ensuring staff were well versed with 'black' isolation precautions. We were also busy acquiring and maintaining personal protective equipment (PPE) stock, and arranging training on techniques for donning, doffing and fitting masks. Staff were anxious and at times felt the information sent from national sources was too slow. The women's health management team worked hard to reassure staff and provide them with the correct protective equipment to be able to continue to provide care.

At times women expressed how isolated and frustrated they felt when their families were not able to visit, particularly after birth. However, most women understood the need for restrictive visiting rules. Food snack boxes for mothers were arranged by the maternity quality and safety coordinator and these were well received. The wards needed to increase the amount of baby clothes available for women who were not able to access their luggage. Car seats and pepi-pods were provided for those who needed them. However pepi-pods became hard to access, as the manufacturer closed down during lockdown.

Some women were reluctant to be transferred to a primary birthing unit, as visiting restrictions also applied in these facilities. Early and self-discharges increased. One positive aspect was that, with visiting restricted, staff were able to focus and spend more time with each woman, supporting her to care for her baby, and midwifery and nursing cares were provided in a timelier manner.

Lactation service

Using information from World Health Organisation and another district health board, a poster was produced in partnership with the quality and safety team about breastfeeding during COVID-19. This resource was then shared freely with other district health board lactation teams.

We also worked with our infection control clinical nurse specialist, using international evidence, to confirm that the virus was not transmitted via breastmilk, and that when storing breastmilk the container merely needed to be wiped with a recommended solution before it was transported.

A number of mothers asked for formula to be provided, especially at night when they were overtired and didn't have the usual partner and whaanau support available. A number of the mothers left the facility much earlier than they intended, because of the lack of family support, or because they missed their other children or had no-one to help look after them at home.

It was decided that lactation consultants and breastfeeding advocates should not enter any isolation room or go to other parts of the hospital without the approval of the manager. Instead, senior midwives in all areas managed lactation challenges that arose for any woman who possibly had COVID-19. All education sessions in the Clinical Training and Education Centre (CTEC) and workshops in Ko Awatea were cancelled, which may affect whether we can meet our requirements for "Baby Friendly Hospital Initiative" accreditation when this next comes due.

Birthing and assessment

It became routine to screen all women and whaanau on their entry to the hospital or birthing and assessment unit. Standard Ministry of Health questions were adapted for this purpose and incorporated in the national Maternity Clinical Information System (MCIS). Symptomatic women were cared for using appropriate precautions, including using isolation rooms which put significant strain on the birthing unit and the ward areas.

PPE and hand hygiene became a conscious part of everyday practice, and was supported by an education and training campaign. The birthing and assessment unit set up a buddy system while staff were donning and doffing their PPE, to ensure their technique was effective. The buddy also supported the midwife who was working in isolation to retrieve items out in the unit and to provide regular breaks. PPE stations were set up outside all rooms and procedure guidelines added to orientation folders. Long cuffed gloves replaced short gloves, as supplies increased. Storage space for PPE became a problem. Surgical hats were adopted to give staff further protection. One of the midwives received an organisational recognition for her efforts to make 80 surgical hats for the staff. A big challenge for the organisation was trying to keep up with the supply of surgical scrubs which all staff wanted to wear, changing out of them and showering before they left the unit.

Numerous policies, pathways and processes were developed for potential COVID-19 cases, including pathways for normal birth, emergency caesarean section, early epidural insertion, red zones in the birthing and assessment unit, and processes for transfer to the postnatal ward or neonatal unit. All resources were put up on the Women's Health COVID-19 page on the intranet for easy access.

Birthing and assessment received the first COVID-19 positive patient in the hospital. Staff quickly identified the case and followed effective infection prevention and control measures to keep staff and the woman and her whaanau safe. This case gave the service an early opportunity to measure pathways and processes, and make adjustments accordingly. The staff in the unit are committed to keeping up infection prevention and control precautions, while still placing women at the centre of care.

Community midwifery service

For the health board's community midwifery service, the planning stage for responding to the pandemic seemed endless, as the senior midwifery team scoped, designed and implemented new processes and pathways for all of the community maternity services.

To guide this work, we sourced international pandemic guidance documents, particularly from the UK, where maternity services were significantly impacted. Their generously published documents helped our community midwifery service get ahead of the game. We created our own PPE rules before either the Ministry of Health or CM Health gave guidance, to support our staff. Early intervention gave staff the confidence to continue to go out into the community for home visits and to provide care in clinics.

Out of 32 community midwifery staff, eight were classed as vulnerable workers and required to work from home. The remainder provided a service in the safest way possible for those staff who needed to work face to face. Due to the reduced workforce numbers, full PPE was adopted at all times. A number of new clinics were set up to bring women to the midwife where possible, minimising the uncontrolled risks present in home visits. Community health workers screened and controlled entry, helped clean clinics and helped the midwife with her PPE. The visiting midwives were set up with specific cars, equipment and cleaning protocols so that they could limit the transmission risks to other staff and their families.

Midwives from other areas of the service who could not work in direct patient care were set up with a midwifery role from home. These new staff had to be orientated and trained in community midwifery processes remotely. Electronic processes were implemented to arrange diagnostic tests for women at their local testing services. Community midwives began using Microsoft TEAMs and working from home for whole days on phone consults. ZOOM was used for meetings and work was allocated using electronic systems and processes for home-based work. We moved quickly to implement electronic referrals and removed as much paper as possible.

We are now using women's emails more than before and women want this. We continue to offer the choice of phone and video consults when we do not need to physically examine a woman. Home-based work allows midwives to be flexible in their hours, contacting women in evenings or weekends. Staff and women were keen to have this flexibility. It was the most safe and efficient way to contact and provide care to women during the lockdown.

As we know, the risk is not over, as the CM Health community midwifery service continues to care for pregnant women in isolation at hotels or in their homes in South Auckland. We have developed pathways for referring women safely for care at Middlemore Hospital, while they are in quarantine, and follow processes as required by the Ministry of Health for this group of pregnant women.

Primary birthing units and community lead maternity carer midwives

The primary units had similar challenges to the maternity wards in regards to PPE, staffing and visitors. PPE supplies were available and the units also offered home-birthing packs to community lead maternity carer midwives, which included neonatal ambu-bags, oxygen cylinders and PPE supplies. Lead maternity carers were asked not to come to the facilities to do postnatal checks or primary assessments, but rather to use the time to, where possible, work with women on their caseload in the community.

Clerical teams

All clerical staff who could work from home did so, after remote access was set up and phones issued. Obstetric and midwifery telephone consultations replaced some face-to-face appointments. This created considerable work for the clerical team, including altering appointment types, setting up new clinic codes for 'tele-health' consultations and re-entering women's details once further triaging had been completed by a doctor or midwife. Clerks also screened women by phone prior to any face-to-face appointments. Additional health and safety measures and restrictions were put in place in the maternity administration office, once we shifted to level 2, to enable physical distancing, good hand hygiene and tracking; these practices continue.

We also put in place contingency plans in case 50 per cent or more of the maternity clerks had to go into isolation. Physical distancing was encouraged by placing tapes in the reception area in the birthing and assessment unit. PPE, such as masks, goggles and gloves, were offered for the clerks to wear. Interviews were conducted via Zoom

Control measures were used to monitor the restricted visitors' policy, including wrist bands for key support people for labouring women, a support person list and a screening form for all visitors to the units. The policy caused some tension and frustration for both the clerks and the women and their families; however, the team managed challenging situations well. Overall, the visitor policy was welcomed and supported by the clerical and clinical teams, as it has created a better, quieter and calmer environment for our women, babies and staff members.

Obstetrics and gynaecology

The obstetric team responded promptly, working with the wider multidisciplinary team to develop pathways, procedures and resources. An emergency roster was created,

which enabled four teams of senior and registered medical officers to provide care for women who accessed our acute obstetrics and gynaecology services, while an elective team was rostered to ensure our urgent clinics and surgeries, including elective caesarean sections, could continue. Clinic appointments were triaged, with some converted to tele-health. This worked particularly well for some women and for doctors who were unable to work on site and made phone calls from home. Some tele-health has continued in Women's Health making calls from the clinic facilities although these are limited as most women assessed by our service require a physical examination.

Other services

Diabetes midwifery service: Maternity Quality and Safety Programme funding was used to produce five educational videos, with the videos completed in 4 weeks! This vastly improved women's choices about how to get information relating to diabetes, and provided more flexibly than attending our group education sessions, which were cancelled in the lock-down periods. We have kept this approach, as well as the ZOOM and phone consultations, along with using ZOOM for live education sessions.

Maternity assessment clinic: This clinic at Manukau Surgical Centre continued to operate throughout level 4, as monitoring for high-risk pregnancies needed to continue. All women were screened by phone before arriving at the clinic.

Te Rito Ora: This service could not be provided by home visit during the lock down periods, so changed immediately to phone and video calls to provide women with breastfeeding advice and support. Women received the change extremely well, liked it and felt supported. Our nutrition service offered sessions on starting solids for babies via ZOOM and the sessions became a huge hit! The Te Rito Ora Facebook page was also re-opened and used to distribute information to women. For the remainder of the year, ZOOM and video training was provided to staff, so they could develop nutrition and cooking demonstrations for use on Facebook and YouTube.

Obstetric and antenatal referrals service: This service continued to run at normal capacity from a midwife's home. The referral process became fully electronic, with communications made via phone, Zoom, email or app.

What we learned

At the time of the level 4 lockdown, it was crucial to reach a consensus on how to address a number of wide-ranging challenges in a short space of time and to reduce the amount of anxiety and uncertainty staff, women and their whaanau experienced.

The central and daily communication via senior management's Covid-19 update bulletin was really helpful, as it provided an easy-to-see alert to anything new. The response from the healthy together technology team was also extremely fast and helpful, providing resources such as SMART phones, laptops, Zoom and Citrix, and setting up new ways of working. Zoom was an excellent way to feel connected and included, and we continue to use it across the division to enable all teams to maintain communications.

All of the above initiatives and approaches represent a tremendous amount of work and would not have been possible without the entire workforce doing their best. Many were working long hours, being flexible, coming up with ideas and solutions, and being willing to put themselves at risk to care for women with symptoms of COVID-19, where needed. It is a proud moment, when we can all say that Women's Health's response was "a job well done".

AUTHOR

ALISHA CLAYTON
Community LMC Midwife

Home birth during COVID alert level 4.

Home birthing in a time of a world wide pandemic became more of an option for women across New Zealand in 2020. During COVID 19, alert level four, women in Counties Manukau DHB were restricted to one support person in a labouring room, and in alert level three, it was restricted to two support people. Although a necessary move to keep our team of five million from spreading the virus, it also produced several barriers for term women birthing in our facilities.

Maaori and Pacific families were most affected as they have huge cultural expectations within the birthing room that involve several family members being part of that experience, Whanaungatanga. Hua Ora promotes the spiritual and emotional well-being of both the wahine and her whanau and for Maaori women in particular this aspect of Turanga Kaupapa, was affected by the pandemic alert levels.

My experience within the home birthing practice, prior to the COVID19 pandemic, was limited to seconding my team on several occasions so I hadn't yet provided care for a woman choosing to home birth. I had offered it in terms of being part of a home birthing midwifery team and the intention was always there but in my first two years of practice I was not actively discussing this as an option for woman. I felt I wasn't yet ready to move purposely to that way of practice. However, had a woman suggested home birth as an option, either during the booking visit or throughout her pregnancy journey, I would have provided this for her and her whaanau.

Mia and James, whose names I have changed for confidentiality reasons, booked with me planning to birth at Pukekohe Birthing Unit. They were a young couple of Maori ethnicity experiencing their first pregnancy. We developed a wonderful partnership and the pregnancy remained normal.

COVID alert level 4 hit New Zealand in March 2020 and her estimated date of birth was in April 2020. Mia and James attended an antenatal appointment and as they were over 36 weeks gestation this visit was face to face. It was here they first raised the matter of whether having a home birth was an option for them.

I was taken aback but embraced this decision. We began discussing home birthing in more depth and it became clear that should their options be between birthing in a facility with only her partner present and birthing at home with all her support system, they would culturally prefer and need that home birth space. Mia and James were very young; this was important for them to have this experience to maintain and acknowledge Mana. We arranged a home visit the following week to prepare the whaanau and space.

I remember talking with my team that same day, explaining Mia and James were wanting a home birth now due to COVID 19; my first home birth! I felt nervous but also excited and really keen to move through this journey with Mia and James. I was all ready. I had an untouched home birth kit in my car boot. The following week I took one of my back up midwives to her home and carried out a home visit at 37 weeks. It was here it all became so real for not only me but Mia, James and their whaanau.

James' mother was very involved with the planning, providing everything they needed to source for the home birth. We as a team provided a birthing pool which was available for James to collect later that week.

I was very conscious of the remote rural location, as well as my own insecurities about my first home birth. I was worried about not having any phone signal if I needed it as well as the pure remoteness of having to get help if required. In reflection this is something everyone would have been aware of but this proved more concerning for me as a community LMC midwife in my third year of practice, supporting the first ever home birth under my care.

Mia went into labour at 38/40 weeks. Not entirely well prepared with only one home visit, I arrived to find Mia in strong labour and reassuringly with the space so very well set up. The whaanau did such a fantastic job with tarpaulin, towels, a wood fire burning and the birthing pool filling. Everyone was in the space providing Mia and James with such a great environment to be bringing their peepi into.

If they could be this ready then so could I! I was carrying in my un-touched home birth kit as my colleague also arrived. We had PPE gear, dispersed through Counties Manukau DHB, all ready to use during second stage.

Mia ended up having a lovely birth in the pool with James cradled in behind her, just as they had hoped for. They had trusted me to provide them with this safe birth at home and I had been able to support this choice made by Mia, James and their whaanau.

My colleague was fantastic support during my first home birth. The space was filled with love and joy for this wee baby and whaanau were in awe of this experience. Not only was this an incredible birthing experience but this wee girl we were expecting turned out to be a baby boy. The shock on our faces was captured by family taking photos.

It was important for Mia and James to have their whaanau involved and COVID 19 alert level 4 meant this was not possible in a Counties Manukau facility. In reflection, even though this home birth was sprung on me during a world wide pandemic, it was the best way for me to begin my home birthing journey as a community LMC midwife.

I will always remember this strange journey that COVID 19 provided us with and I am thankful for Mia and James who trusted me to provide this safe space for them. I have since been confident in actively offering this option for place of birth to women under my care and have had further home birthing experiences, with more planned for 2021.

Mia and James have since rebooked with me and are happily planning their second home birth. For Mia and her whaanau home birthing is now very much an option to be considered first because of the experience Mia has had. I am thankful that our profession can bring some joy in what was one of the hardest years we have ever had as a nation.

▲ *Alisha welcoming baby into the world.*

AUTHOR

LYN STARK
Maternity Quality and Safety Coordinator

MARY BURR
General Manager, Women's Health

Quality & Safety Structure

The Women's Health division has a number of committees, forums and roles that support quality, risk and safety; innovation, continuous improvement and excellence are the key areas of focus.

Our quality assurance activities include measuring, reporting and improving on the division's performance against care standards, key performance indicators and clinical indicators; ensuring controlled documents are current; and managing certification and audit processes. We maintain a focus on optimising patient safety, especially when reviewing adverse events and debriefing with women and whaanau after events have occurred.

The Women's Health Clinical Governance Group and the Maternity Quality and Safety Governance Group have a combined Maternity Quality Improvement Plan (see page 146). This provides transparency and oversight for the range of quality activities that occur across all areas of maternity services.

A Women's Health (Obstetric and Midwifery) Controlled Document Coordination Group provides a multidisciplinary approach to updating policies, procedures and guidelines and helps develop new controlled documents.

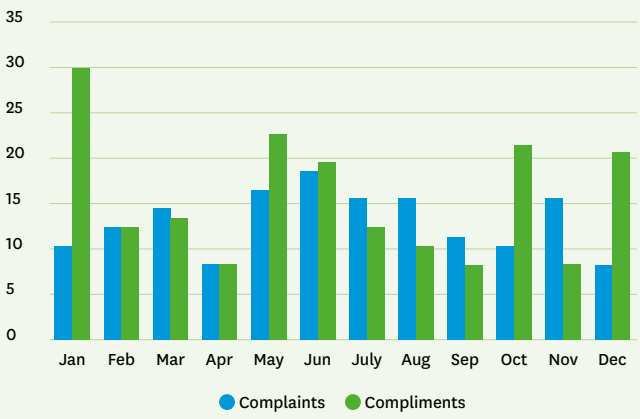
We established three groups during 2020 to improve our oversight and action for Women's Health quality and safety:

- the quality and risk manager re-instigated a monthly quality and risk forum to centralise all quality-related activities
- the deputy chief midwife and a senior medical officer initiated a multidisciplinary morbidity review forum
- the general manager commenced a monthly Women's Health complaints and incident trends meeting.

Overall, the compliments the division receives outnumber the complaints, as shown in Figure 1. We review both complaints and compliments to identify themes to understand what works well for women accessing our services, and identify opportunities to improve the care and services we provide.

FIGURE 1 ▼

Complaints and compliments received by Women's Health, January to December 2020



Other forums and meetings are held to discuss and share learnings. These include regular ongoing morbidity meetings, perinatal and maternal mortality meetings and serious adverse event presentations, group emails, brief summaries at shift change overs, access holders meetings and our Women's Health monthly eUpdate Koorero. This annual report also forms an important part of the learning loop related to our ongoing service development and continuous improvement.

Groups

Women's Health Clinical Governance Group

The Women's Health Clinical Governance Group is the divisional body mandated to discuss clinical departmental and hospital-wide issues and make decisions as required. This includes providing a forum for clinicians and management to discuss the performance and direction of the division; confirming new policies and reviewing existing policies; reviewing regular reporting of quality and risk, clinical efficiency and financial sustainability; setting the direction for future planning of facilities and the workforce; and ensuring

that departmental and staff credentials are current and maintained.

Women's Health Quality Forum

Re-instigated during 2020, this forum is held monthly and attended by all managers. The group is chaired by the quality risk manager and discusses quality-related activities; reviews reports and outcomes, including complaints and any trends in incidents or compliments; and considers the learning to emerge from adverse events and information from external parties that may be of interest to our division.

Women's Health complaints and incidence trends

Ward clinical leaders meet monthly to discuss any trends, successes or challenges that have arisen, and plan any mitigation strategies to resolve issues. Each success or challenge is shared in a supportive environment, with the group sharing ideas for continuous improvement.

Maternity Quality and Safety Governance Group

Formed in response to the Ministry of Health's Maternity Quality and Safety Programme, this group meets monthly and is chaired by the chief midwife. Its multidisciplinary membership consists of senior medical and midwifery clinicians and maternity management members from across the Women's Health sector, two community lead maternity carer (LMC) midwives (one urban and one rural), and two consumers. The group oversees a comprehensive programme for quality improvement in maternity services that aligns with the ministry's priorities for maternity, aims for equity of outcomes, and is driven by the needs of the Counties Manukau community.

Multidisciplinary maternal morbidity meetings

These bimonthly meetings are primarily educational meetings. They involve presenting two or three women's stories around a particular educational theme, followed by an evidence-based presentation on the management of complex cases. Summaries of key learning points are circulated within Women's Health for those unable to attend. In 2021, these meetings will also incorporate maternity morbidity data from our trigger list, along with any learning and recommended actions coming out of the maternity multidisciplinary morbidity review forum. The forum is guided by a modified version of the Health Quality and Safety Commission's maternal morbidity review toolkit, as recommended by the Maternity Quality and Safety Programme.

Midwifery Governance Group

The Midwifery Governance Group (previously known as the Workforce Group) is made up of community LMC midwives from the various areas within Counties Manukau, senior Counties Manukau Health midwives and managers, and representatives from the New Zealand College of Midwives and New Zealand Nurses Organisation. The group meets monthly and is committed to the ideals of the Te Tiriti o Waitangi and achieving equity. Its current focus is on finalising a framework for clinical governance for midwifery with women and whaanau at its centre. Its broader role is as a forum for midwives to work together to improve and be accountable for the quality and safety of the care they provide.

Maternity consumer advisors

We are committed to working closely with consumers of our services and are growing and developing these relationships at every opportunity. There was a great consumer representation at our planning day in October 2020 and we thank these women for taking the time to contribute. Their feedback was imperative for beginning our co-design journey as we review our maternity service strategy, with each participant contributing based on their overall experience. We plan to continue to develop this very valuable forum in 2021. In July 2020, we also welcomed a new maternity consumer advisor onto the Maternity Quality and Safety Governance Group.

Access holder's monthly meetings

The last 6 months of 2019 saw declining attendance at these monthly meetings, which need to be refreshed to ensure they continue to fulfil the needs of stakeholders. Although we adjusted the meeting start and finish times (to avoid traffic and school and kindergarten drop-offs) this failed to attract attendees. Early 2020 was affected by Covid-19, so the meetings were held using Zoom, which we then continued to use throughout 2020. In 2021, the meetings will be led by our chief and deputy chief midwife and will be held in a variety of settings, including the primary birthing units, with Zoom options still available, and the agenda will be driven by our LMCs.

GROW Primary Birthing Units Group

The GROW Primary Birthing Project is reviewing and updating CM Health's primary birthing strategy and facilities. The goal is to increase low-risk birthing, in primary units and culturally appropriate settings, through services that have been co-designed by women, whaanau and our community.

Induction of Labour Project

This group is reviewing the induction of labour process for women and the clinical work flows for staff, in the context of a rising number of women who are undergoing induction of labour driven by clinical complexity in CM Health facilities.

Roles

Clinical quality and risk manager Women's Health

This role is responsible for overseeing, coordinating and implementing quality initiatives, risk and incident management (including serious adverse event investigations); and for sharing learning and ways of working with key stakeholders to support the provision of high-quality patient care across all Women's Health services, in accordance with CM Health's vision and values.

Maternity quality and safety programme coordinator

This role supports the management and implementation of the Maternity Quality and Safety Programme across the CM Health district. The position involves participating in or leading projects that are part of our sector-wide maternity strategy, and covers service development, clinical leadership and communication of initiatives that improve maternity quality and safety. Continued funding and extension of the Maternity Quality and Safety Programme has allowed CM Health to retain the coordinator role, engage with consumers and community LMC midwives around quality and safety, and provide quality improvement initiatives and resources for the maternity workforce.

Service development manager maternity services

This role focuses on service development; drawing on quality improvement initiatives, co-design methodologies and stakeholder engagement to develop new services and adjust existing services to meet identified needs or gaps. There is a strong emphasis on both consumer involvement and stakeholder engagement with the aim of integrating and strengthening services between secondary and primary care.

Research midwife

In October 2020, CM Health became the first district health board in New Zealand to appoint a midwife to lead, support and promote the development of midwifery-led research. This new role recognises that midwifery care is strengthened through research undertaken by midwives and that this benefits women, babies and their whaanau. Other areas covered include providing input into guidelines and policies, and leading a journal club to raise awareness of current research and encourage evidence-based practice.

Perinatal loss roles

We have two important roles supporting women and whaanau experiencing perinatal loss, as we build our resources in this area. The perinatal loss midwife specialist coordinates the monthly perinatal morbidity and mortality meetings, attended by hospital staff, community-based clinicians and consumers. The recently appointed perinatal loss clinical nurse specialist will add further support in this vital area. Both roles provide continuity and support for women and their families who have experienced a perinatal loss, including facilitating access to counseling.

LMC midwife liaison

This role facilitates women's early engagement and registration with an LMC midwife, supports new-to-the-area and graduate community LMC midwives, and enhances collegial relationships between primary and secondary care. The role was vacated in March 2020. We are currently identifying what the role could offer in future, in terms of support and relationships with our LMC colleagues.

Health Intelligence and Informatics Team, Population Health Team and public health physicians

These teams provide data analysis and valuable resource support for Women's Health and towards maternity quality and safety.

AUTHOR

STEVEN TIO
Clinical Quality Coordinator

DR LESA FREEMAN
Patient Safety and Quality Assurance Lead

Trying to make sense of quality

Implementation of the Quality of Care Board

Counties Manukau Health wards each have their own quality of care board. The boards are a platform for showcasing a ward's overall performance through quality performance data. The quality boards also contain stories about patient experiences to demonstrate the quality of care received.

Until recently, there has been a lot of variation between the ward quality boards. In February 2020, a spot audit of 15 wards, showed that only 11 of the 15 wards had quality boards, and of these, only four boards displayed up-to-date quality performance data about their wards. In addition, the information and data displayed was not consistent or standardised across the wards, and the boards had no framework. There was no consistency in how the boards were named or the types of materials used to display the information (e.g. some wards used whiteboards, while others used corkboards).

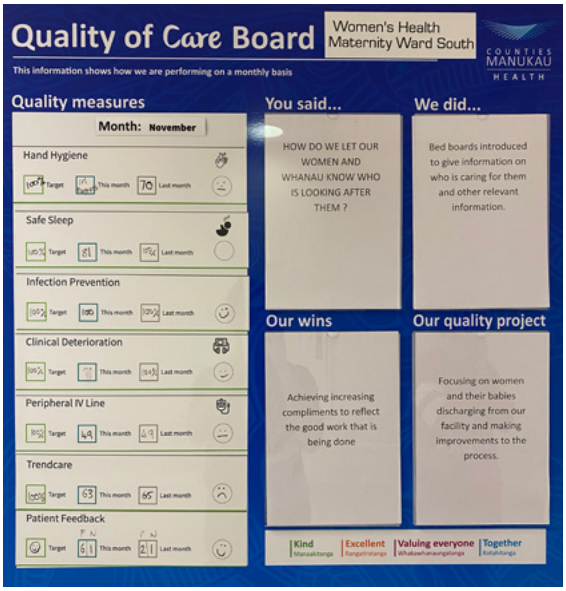
Following the audit, a Quality Board Project was initiated to address these issues. The project aimed to develop a standard CM Health Ward quality board that would engage staff, patients and their whaanau, and to ensure all wards had quality boards in strategic locations by November 2020. As a first step, a Quality Board Project Group was set up in April 2020, with representatives from the Surgical Anaesthetics and Perioperative Service, Medicine, Adult Rehabilitation and Health for Older People, Women's Health, Kidz First, Mental Health, and Quality divisions and services.

The project group members visited all of the wards within their division. They observed the current status of the wards' quality boards and sought input from the charge nurse managers and charge midwife managers on the proposed new CM Health Ward quality of care board. The group then developed a draft structure for the standardised board.

The project group also interviewed patients and their whaanau about the proposed board to determine what was relevant and meaningful to them. Twenty-eight patients and whaanau provided feedback from across five divisions, including Women's Health. The group also sought feedback from CM Health staff and received 121 comments and suggestions.

All of the feedback was reviewed and a quality board prototype developed. The feedback from patients and staff helped the project group develop a standard framework for the boards, with the flexibility of displaying different quality measures depending on wards' needs. The quality measures are magnetic and the wards can choose what key performance indicators they wish to display on the board. The prototype was trialled in a CM Health ward for 3 weeks, with staff, patients and whaanau invited to view and provide feedback on it before the organisational roll out.

The quality of care boards were installed in the Women's Health wards and birthing units in November 2020: see below. The boards have led to a more consistent approach for displaying quality information, with evidence of good involvement by staff in the audit activities and improvement initiatives.



The new Maternity South quality of care board

3

Our Maternity Services

2020

What makes Counties Manukau women unique

Highest Number of Birthing Women of Any DHB

8195 Counties Manukau resident women birthed in 2020 of which 83.25% birthed in Counties facilities and 85.7% at facilities in Counties Manukau.

7392 total of women who birthed in a Counties Manukau facility

+224 women birthed in a private provider facility

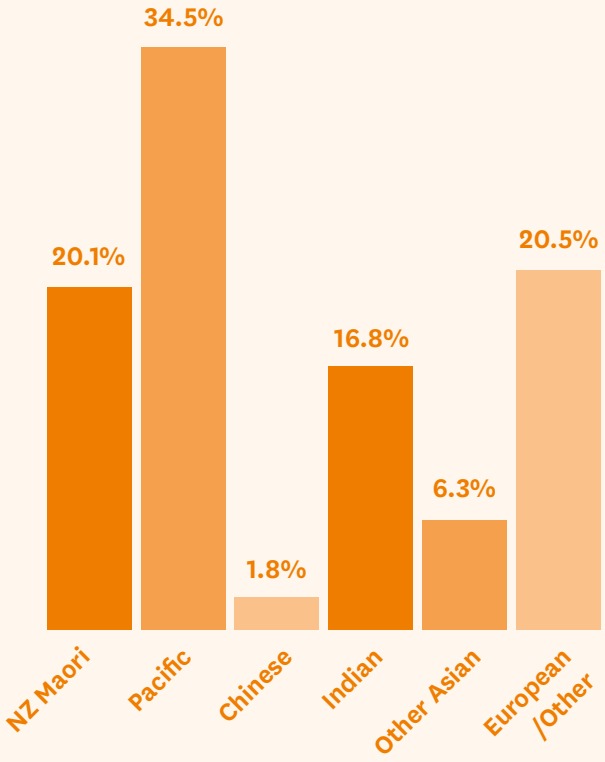
+ 111 women birthed at home

7727 women birthed within Counties Manukau – Total number of women CM Health is responsible to provide secondary care for if/when required

2457 women transferred from Middlemore Hospital for care after birth in CM Health Primary Birthing Units, closer to home

2414 women provided acute assessments in Birthing Units, closer to home

Vibrant and Diverse Birthing Population



Complex health and social needs – risk factors known to make birthing more complex

45% of women had a BMI over 30 (**obese**)

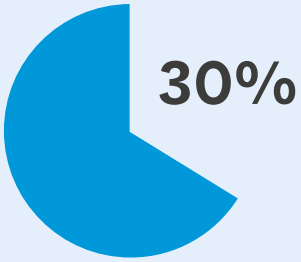
12.4% have gestational **diabetes mellitus** (GDM)

62% of Counties Manukau birthing women live in the most **socioeconomically deprived** areas.

12% **smoke** on admission for their birth

Increasing demand for secondary care

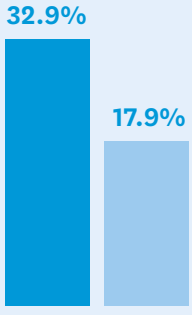
Estimated suitable for primary birth



2019-2020

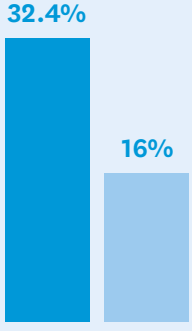
LSCS rates

Mostly due to increased number of emergency caesareans but also impacted on by subsequent ELSC in following pregnancies



IOL rates

Increase related to Reduced Fetal movement Guideline, SGA (small for gestational age) Guideline and increased complexity of women.



AUTHORS

DR GARY JACKSON
Director of Population Health, Counties Manukau Health

DR PIP ANDERSON
Public Health Physician

The Women we Serve

CM Health is responsible for providing maternity services for women who live within the Counties Manukau District Health Board boundary.

Most women (83–84 per cent) living in Counties Manukau choose to birth at CM Health facilities (Table 1). A woman living in Counties Manukau may birth at another facility for a range of reasons. One reason is if a woman has a community lead maternity carer midwife or an obstetric specialist who has an access agreement with another health board. There are a small number of women who are referred to Auckland District Health Board because of identified fetal complications, such as congenital heart disease, or severe maternal cardiac conditions. A woman may also birth at another facility if she goes into labour unexpectedly while away from home.

Birthing location rates have been largely steady over the past 6 years, with the main change being the opening of the Ngaa Hau Birthing Centre in Mangere. This opened in May 2019, and has created a significant upturn in primary births (see Figure 7).

The majority (93 per cent) of Counties Manukau women who birthed at another DHB's facility in 2020, birthed at an Auckland DHB facility. In 2020, 59 per cent of women living in Counties Manukau who birthed at an Auckland DHB facility lived in Howick and the eastern suburbs. Around a third were of European/Other ethnicity (38 per cent) and another third were Chinese (30 per cent).

The characteristics of women who live in Counties Manukau and birthed in 2019 and 2020 (regardless of where they birthed) are shown in Figure 3.

For flows the other way, based on the National Minimum Dataset, there were 396 women domiciled in other health board areas who used CM Health maternity facilities and services in 2020. This was mainly at Middlemore Hospital, and mainly from Auckland District Health Board (86 per cent, just over half of whom were from Otahuhu).

There has been a significant decrease in teenage births over the past 6 years, particularly in the European/Other group (Figure 2). Births to Maaori women aged under 20 were down nearly a quarter, while Pacific women had a more modest drop. This is an ongoing reduction, with Maaori and Pacific rates, once over 100 births per 1000 15-19 year old now down to 44 and 23 respectively. Asian and European rates are remarkably low at 3 per 1000 15-19 year old per year, similar to rates in Scandinavia, Netherlands and Switzerland.

TABLE 1 ▼

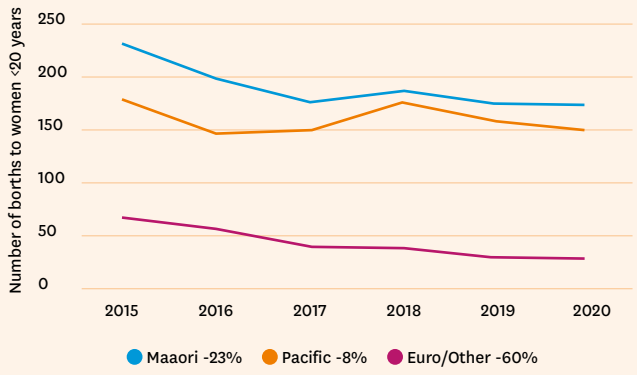
Location of birthing for Counties Manukau women, 2015 to 2020

	2015	2016	2017	2018	2019	2020	% change 2015–2020
CM Health facilities	6,698	6,721	6,706	6,808	6,932	6,815	3%
Waitemata facilities	48	64	60	60	65	53	7%
Auckland facilities	1,163	1,233	1,169	1,059	1,118	1,065	-11%
Elsewhere	88	79	74	79	151	262	350%
Total	7,997	8,097	8,009	8,006	8,266	8,195	2.7%
% CM Health	84%	83%	84%	85%	84%	83%	

Source: CM Health analysis of National Minimum Dataset, March 2021.
Notes: Estimates for late coding from primary maternity centres are included in 2020 figures. 'Elsewhere' includes the Ngaa Hau Birthing Centre in Mangere, which opened in May 2019.

FIGURE 2 ▼

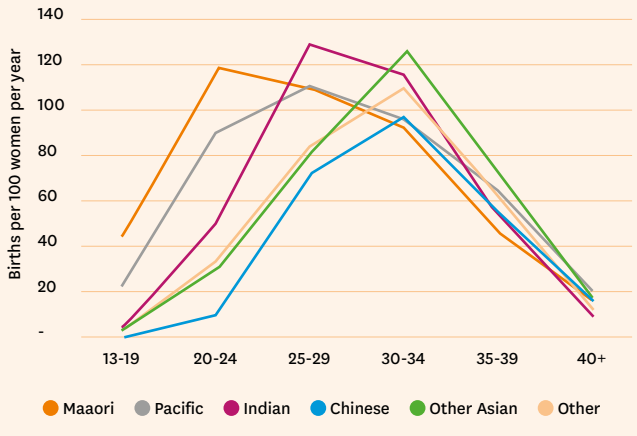
Birth numbers by ethnicity for women under 20 living in Counties Manukau



Maaori, Pacific and Indian women were more likely to birth at younger ages, with their highest numbers of births occurring in the 20 to 24, 25 to 29 and 25 to 29 age groups, respectively (Figure 2). The other ethnic groups were most likely to birth in the 30 to 34 age group.

FIGURE 3 ▼

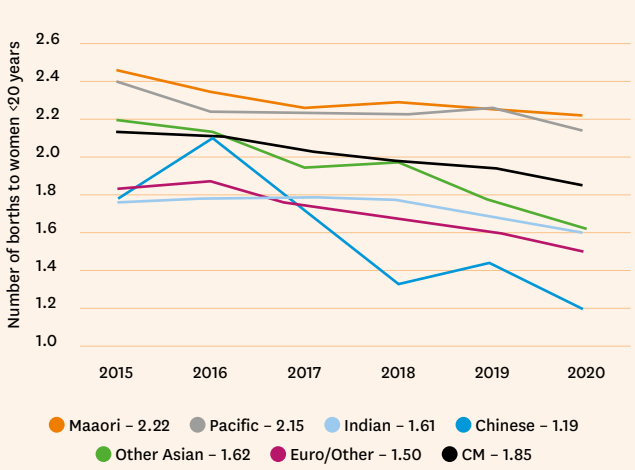
Births per 1,000 women by ethnicity and age, for women living in Counties Manukau, 2019 and 2020 combined



All ethnicities have seen a fall in fertility over the past 5 years Figure 3). Based on these fertility rates, the Maaori and Pacific populations are operating just over replacement levels, at 2.1-2.2 births per woman over their lifespan. The other ethnic groups are below replacement, with Chinese women in Counties Manukau having the lowest birth rate at 1.19 births per woman.

FIGURE 4 ▼

Total fertility rates for women living in Counties Manukau, 2015 to 2020



Note: Total fertility rate = number of births per woman over their reproductive life at the age-specific birthing rates for that year (using 2015 to 2020 primary health organisation enrolments as denominator). Figures denote the 2020 total fertility rate.

Of the women who live in Counties Manukau and birthed in 2020, 31 per cent were Pacific, 21 per cent New Zealand European/Other, 20 per cent Maaori, 16 per cent Indian and 6 per cent Chinese (Table 2 on page 36). It is important to note that ethnicity is prioritised.*

The most common ages to birth were 30 to 34 years of age (30.4 per cent of births), with this age group exceeding the 25 to 29 group for the first time (29.7 per cent). Just over one in ten women aged 25-34 living in Counties Manukau will give birth over the course of the year.

Nearly half the women (46 per cent) lived in NZDep2018 decile areas 9 and 10 (representing the most deprived 20 per cent of communities in New Zealand).

The largest number of births were to women living in the Manukau locality (45 per cent), which includes the fast-growing suburbs of Manurewa, Takanini, Papakura and Drury.

* The ethnicity of a person who has given multiple responses is assigned to a single ethnicity, in order to ensure that the total by ethnicity equals the total number of women. This means that if a woman identifies as having more than one ethnicity, only one ethnic group is assigned to her, with Maaori prioritised first, followed by Pacific, then Asian and then European.

TABLE 2 ▼

Demography of women living in Counties Manukau who birthed in 2019–2020, regardless of location of birth

ETHNIC GROUP	2019	%	2020	%
Maaori	1,606	19%	1,618	20%
Pacific	2,493	30%	2,512	31%
Indian	1,249	15%	1,300	16%
Chinese	541	7%	473	6%
Other Asian	554	7%	561	7%
Other	1,823	22%	1,730	21%
Total	8,266		8,195	

AGE GROUP	2019	%	2020	%
13-19	367	4%	366	4%
20-24	1,468	18%	1,422	17%
25-29	2,468	30%	2,434	30%
30-34	2,432	29%	2,493	30%
35-39	1,245	15%	1,229	15%
40+	286	3%	252	3%
Total	8,266		8,195	

NZDEP18 QUINTILE	2019	%	2020	%
1	880	11%	857	10%
2	1,036	13%	1,054	13%
3	1,042	13%	955	12%
4	1,466	18%	1,581	19%
5	3,843	46%	3,749	46%
Total	8,266		8,195	

LOCALITY	2019	%	2020	%
Eastern	1,647	20%	1,605	20%
Franklin	903	11%	959	12%
Mangere/Otara	1,930	23%	1,905	23%
Manukau	3,778	46%	3,725	46%
Unassigned	8	0%	1	0%
Total	8,266		8,195	

Note: Percentages may not total 100 per cent due to rounding.

Our Maternity Facilities

CM Health's birthing facilities are comprised of a secondary/tertiary maternity service located at Middlemore Hospital (MMH), which also provides primary birthing services for women residing locally. Also outlined is the CM Health Community Midwifery service which operates from Lambie Drive, Manukau.

Middlemore Hospital provides 24-hour care for women requiring acute antenatal, labour and birth care, as well as high risk antenatal/postnatal inpatient care. A multidisciplinary team approach is taken involving many other medical sub-specialists such as anaesthetists, neonatologists, medical physicians, mental health teams and operating theatre and procedural suite personnel.

The primary birthing units, as well as being located closer to where women and whaanau live, provide women and their families with the option to use a purpose built pool for labour and/or water birth. Guidelines for admission to the three birthing units outline a woman's suitability. Many of the local community LMC midwives use the community birthing units as a base for their antenatal clinics and we continue to explore ways to offer more services for women and whanau from these units.

CM Health Community Midwives

The Community Midwifery Service based in Manukau delivers primary and specialist midwifery care to women who elect to have care provided by CM Health, those who are ineligible for care within New Zealand, and those who are unable to secure the services of a community LMC midwife.

Acting as 'named midwives', the service operates from 7.30am to 4.30pm, 7 days a week, every day of the year. Both locality-based clinic services and home visiting services are offered to women in the antenatal and postnatal periods. The service is actively involved in supporting research and quality improvement projects.

Staff

TOTAL BUDGETED FTE 38.65

This includes the Antenatal & Obstetric Referrals Service which has 3 Clinical Midwife Specialists and processed 4000 antenatal and 6500 Obstetric referrals over the last year.

1	Midwife Manager
2	Administrative staff who work 365 days a year
2	Area Community Midwifery Teams The majority of community midwifery team staff work part time
5	Associate clinical charge midwives
17.5	Locality community midwives
2-5	Graduate midwives on rotation

Specialist Teams

DIABETES IN PREGNANCY SERVICE

1369 total number of referrals received Jul 2019 - Dec 2020

1053 Gestational Diabetes Mellitus

28 Type 1 diabetes

278 Type 2 diabetes

10 Impaired glucose tolerance

2	Clinical midwife specialist
5	Clinical specialty midwives
1	Graduate midwife on rotation

AUCKLAND REFUGEE RESETTLEMENT CENTRE, MANGERE

1	CM Health employed community midwife

AUCKLAND WOMAN'S REGIONAL CORRECTIONS FACILITY

1	CM Health employed community midwife

MATERNAL FETAL MEDICINE

3	Clinical midwife specialists
1	Clinical Specialty Midwife

Community Health & Social Work Team

All full time

5	Community Health Workers
2.4	Social Workers

Antenatal referrals for DHB community midwifery care

1ST JULY 2019 TO 31ST DEC 2020

3,844

Birthing and Assessment

2019 Births total	2019 Assessments	2020 Births total	2020 Assessments
6805	**4507**	**6795**	**4248**

Middlemore Birthing and Assessment (B&A), provides primary birthing services for women residing locally; plus secondary maternity care where women or their babies experience complications that need additional maternity care involving obstetricians, paediatricians and other specialists; and tertiary maternity services for women and their babies who have highly complex clinical needs and require consultation with and/or transfer of care to a multidisciplinary specialist team.

The Birthing and Assessment Unit integrates the care it provides with the community midwives and the three primary birthing units located within Counties Manukau.

Staff TOTAL BUDGETED FTE 58.85

1	Midwife Manager
1	PA Administrator
12	Associate clinical midwife managers
49	Employed midwives
9	Registered nurses
11	Health care assistants
13	Ward clerks
	Bureau midwives

Over the 2018 year Women's Health has utilised an average of 17 FTE bureau midwifery staff per month.

80	Community LMCs who actively birth at the unit

Facilities

14	Birthing rooms
5	Flexi rooms – can be used as birthing rooms, and accommodate women
5	Assessment rooms – total of 7 beds (2 doubles)
1	Ultrasound room
1	Clinic room
1	Whaanau room

Maternity North

Maternity Ward North is a 23-bed postnatal ward providing care for women and babies requiring secondary obstetric or neonatal care, including babies transferred from the neonatal unit.

The midwifery and nursing team on Maternity North are highly skilled in delivering specialised care to all, but specifically to high-risk women and babies.

Staff
TOTAL BUDGETED FTE 38.11

3	Midwives including charge midwife manager and 2/3 graduate midwives
28	Registered nurses
6	Health care assistants

Facilities

23	Beds
7	Double rooms
9	Single rooms

Maternity South

Maternity South is a 22 bed ward providing care for postnatal women who require primary and secondary obstetric care or are in high risk categories. We also care for babies who require neonatal care or have been transferred from the Neonatal Unit.

The midwifery and nursing team on Maternity South are highly skilled in delivering specialised care to all women and babies.

Staff
TOTAL BUDGETED FTE 38.11

2	Midwives
29	Registered nurses
5	Health care assistants
1	Hospital aid

Facilities

22	Beds
8	Double rooms
6	Single rooms

Ward 21

Ward 21 is a 30 bed ward providing care for pregnant woman who have high risk pregnancies requiring inpatient care. We also care for women who have babies in the Neonatal Unit as well as woman with gynaecological conditions. We have a team of highly skilled midwives caring for our antenatal and postnatal women as well as a highly skilled nursing team that specialise in gynaecological care.

Staff
TOTAL BUDGETED FTE 39.4

16	Midwives
13	Registered nurses
5	Health care assistants and hospital aides

Facilities

30	Beds
2	Double rooms
6	Single rooms
5	4 bed rooms

Shared Resources

On both North and South Wards an excellent service is provided by the Lactation Support Service, made up of consultants and breastfeeding advocates, to ensure expert care and advice is provided to women initiating breastfeeding. A broad range of health professional teams including visiting physicians, pain team, physiotherapy, dietetics and maternal mental health services are available to provide input to the care on both wards, ensuring comprehensive and holistic care is provided to women, babies and whaanau.

6	Ward clerks
7	Lactation consultants, including a team leader
3	Breastfeeding advocates

Both maternity wards have a security officer present for 12 hours a day, to ensure the safety of women and babies.

Combined Inpatients

3	Antenatal episodes
5296	Post natal women birth and transfer episodes
5302	Total number of women
45.9%	% of all birth episodes discharged from Maternity wards who are post caesarean section
5227	Total baby episodes
707	Total post neonatal unit baby episodes

MATERNITY NORTH

408	Total post neonatal unit babies
8.0	Average length of stay days

MATERNITY SOUTH

299	Total post neonatal unit babies
4.8	Average length of stay days

WARD 21

1008	Antenatal episodes
10.57	Average length of stay hrs:mins
250	Postnatal episodes
14.57	Average length of stay hrs:mins
60	Gynaecology medical pregnancy hyperemesis
508	Gynaecology surgical & medical
13.56	Average length of stay hrs:mins

Botany Downs Birthing Unit

Births total **204**

Transfers in **1234**

Botany Downs Birthing Unit is also known as Whare Tapu. The conceptual meaning of Whare Tapu alludes to the most sacred beginning of life – the birth of a child.

Botany Downs Birthing Unit is a purpose-built facility built in 1992 located at 292 Botany Road, near the Botany Town Centre. In the unit, women are able to be supported by their families and significant others in a quiet and comfortable environment.

Many women who birth at Middlemore Hospital choose to transfer to Botany Downs Birthing Unit for their postnatal stay.

Staff TOTAL BUDGETED FTE 19.43

16	Community LMC midwives who actively birth at Botany Downs
21	Core midwives, including charge midwife manager
3	Community midwives
3	Registered nurses
2	Clerical administrators
4	Health care assistants
5	Team case loading midwives

Facilities

12	Resourced beds
15	Physical beds
3	Double-bed rooms
1	Three-bed room
6	Single postnatal rooms
5	Birthing rooms
2	Birthing pools
5	Clinic rooms

Papakura Birthing Unit

Births total **132**

Transfers in **892**

Papakura Birthing Unit is the oldest of the three birthing units and celebrated its 75th birthday in 2018. It is located in a historical farm house and came into being in 1958 following the takeover from the Auckland Area Health Board.

Papakura Birthing Unit is part of the community and generations of local whaanau choose to birth here. It is centrally located, close to the local township and public transport routes. It is also supported by a weekly obstetric clinic for secondary consultations and referral.

A recent investment by the DHB has provided an additional unit on site to accommodate more clinics.

Staff TOTAL BUDGETED FTE 17.99

19	Community LMC midwives who actively birth at Papakura
20	Core midwives, including charge midwife manager (3 on Maternity leave)
4	DHB community midwives
3	Clerical administrators
2	Health care assistants

Facilities

8	Resourced beds
9	Physical beds
2	Two-bed postnatal rooms
5	Single postnatal rooms
2	Birthing rooms
1	Birthing Room with Pool
4	Clinic rooms

Pukekohe Birthing Unit

Births total **254**

Transfers in **511**

Pukekohe Birthing Unit has long-established roots within the community of the Franklin District and Northern Waikato, encompassing north to Awhitu Peninsula, east to Kaiaua, south to Mercer and Waikaretu, and west to Waiuku and Port Waikato. In the unit, women are able to be supported by their families, whaanau and staff in a warm, friendly environment for their birthing and postnatal stay.

The Pukekohe Maternity Resource Centre, located within the birthing unit, provides women with information on pregnancy-related issues, free pregnancy tests, pamphlets, and a library of books and DVDs to hire. This centre is a base for community midwives and their clinics, with an obstetric antenatal clinic running weekly to provide local care for women who require a consultation with a doctor. This region is experiencing significant population growth.

Staff TOTAL BUDGETED FTE 13.74

17	Community LMC midwives who actively birth at Pukekohe
14	Core midwives, including charge midwife manager
2	DHB Community midwives
1	Registered Nurse
1	Enrolled nurse
3	Clerical administrators

Facilities

8	Resourced beds
10	Physical beds
1	Double-bed room
8	Single postnatal rooms
2	Birthing room with pools
3	Clinic rooms
1	Maternity Resource Centre

Community (Primary) and Hospital/Specialist (Secondary) Services in Counties Manukau

The following community and hospital/ specialist maternity services are available in the Counties Manukau area.

Community services available in Counties Manukau	
Community LMC Midwife	Community LMC midwives provide antenatal, labour and postnatal care using, primarily, a continuity of care model by the same midwife. Community LMC midwives (also referred to as self-employed or independent midwives) are contracted to the Ministry of Health to provide care in Counties Manukau, and birth women in their homes, at a birthing unit or at Middlemore Hospital. Community LMC midwives can also choose to provide community maternity care for women who require a hospital maternity service, e.g. diabetes in pregnancy. If pregnancy or birth complications occur, then care may be continued by their midwife with support from an obstetrician and/or a hospital midwif
CM Health Employed LMC Midwife	This service provides continuity of midwifery care throughout pregnancy, labour and the postnatal period, including home birthing. A CM Health employed midwife works within a case-loading team model to provide care as an 'employed' LMC. They primarily care for women who plan to birth at Botany Downs or Papakura birthing units, but also provide continuity of care if the woman needs to birth at Middlemore Hospital.
CM Health Employed Midwife	DHB-employed midwives who provide midwifery care services.
CM Health (DHB) Community Midwife	DHB community midwives provide antenatal and postnatal continuity of care for women living anywhere in the Counties Manukau area. They have locally based clinics and provide home visits. Five community health workers and one social worker are part of the DHB Community Midwifery Service, offering further support and assistance for women using the service. Clinical specialty midwives and clinical midwife specialists provide a range of care for women experiencing complex pregnancies. Midwifery care is also provided for the Auckland Women's Correctional Facility and the Refugee Resettlement Centre from this service. DHB community midwives are based centrally and at each of the three birthing units.
Private Obstetrician	Women can engage with a private obstetrician who uses CM Health facilities for birthing.

Hospital/specialist services available in Counties Manukau	
CM Health Employed Midwife	DHB employed midwives work within Middlemore Hospital, providing primary, secondary and tertiary* midwifery care as required, covering antenatal, intrapartum and postnatal care.
Diabetes in Pregnancy Service	For women with previous or newly diagnosed diabetes (Type I or II or gestational), hospital care is provided by a multidisciplinary team that includes an obstetrician, midwife, diabetes physician and dietitian. Community maternity care for these women may be provided by CM Health employed midwives or community LMC midwives.
Preterm Birth Clinic	CM Health launched its Preterm Birth Clinic in early 2019. Women with a past history of preterm birth, preterm premature rupture of membrane at or less than 26 weeks gestation, or major cervical surgery are seen in early pregnancy by an obstetrician and fetal medicine midwife at Middlemore Hospital.
Obstetric Medical Service/Maternal Fetal Medicine	Women with complex medical conditions during pregnancy are seen by the specialist obstetric medical team (obstetrician, medical physician and anaesthetist as required) at Manukau SuperClinic. These women are provided with midwifery care by either the women's LMC, DHB community midwife or a CM Health employed midwife specialist. Women with complex fetal conditions during pregnancy are seen by specialist obstetric and midwifery services at Middlemore Hospital.
Maternity Assessment Clinic	Opened in May 2019, the Maternity Assessment Clinic (MAC) is based at Manukau Surgical Centre. It offers a Monday to Friday day-time service and is staffed by a senior medical officer and a senior midwife. MAC provides antenatal out-patient monitoring and follow-up care for non-acute conditions and is by appointment only. The senior medical officer on site also provides advice and triaging for non-acute senior medical officer enquiries during clinic hours.
General Obstetrician Antenatal Clinic	Obstetric antenatal clinics run from Manukau SuperClinic, Papakura and Pukekohe and provide obstetric consultations for women referred by CM Health community midwives and community LMC midwives.
Maternal Mental Health Services	The team offers assessment, treatment and advice for women who have developed mental illness during pregnancy or up to one year after the baby is born. The team consists of mental health nurses, social workers, psychiatrists, clinical psychologists and occupational therapists with specialist knowledge and experience in this field.
Social Worker	This role navigates women and families who are under the care of a DHB community midwife towards social services in the community, depending on the family's needs. The social worker carries out assessments and facilitates liaison between various services, such as Oranga Tamariki, non-governmental organisations (NGOs), infant and maternal mental health, and the DHB community maternity services.
Lactation Support Services	DHB-employed lactation consultant specialists and breastfeeding advocates work alongside staff in Middlemore Hospital's maternity wards to support women to establish breastfeeding and meet Baby Friendly Hospital Initiative requirements.

* Highly specialised and complex midwifery care.

2020

Counties Manukau Health Birthing Community

Our community demographics are taken from CM Health's Maternity Clinical Information System (MCIS) and relate to births at CM Health facilities.

Deprivation NZ Quintile 5

62% of CM Health women are living in socioeconomically deprived areas.

Births

7392 women birthed in Counties Manukau facilities

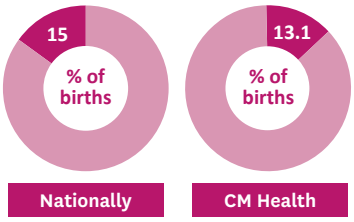
with **7471** babies born

111 (1.4%) women birthed at home

An average of 20 babies were born a day

Standard primip

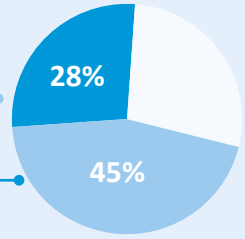
(expected low intervention rate and comparable across DHBs):



Body Mass Index (BMI) %

28% were a healthy weight

45% of CM Health women had a BMI over 30 (obese) at the time of registration



Smoking %

12% at first registration were smoking

Of the 12% of women:

91% were provided with brief advice and support to stop smoking

72% were referred to the stop smoking service

Birth by facility type

6795 (91.1%) births were at Middlemore Hospital

8.9% were at the community birthing units

Age

The highest percentage of CM Health mothers are in the **25–29 year age bracket** (2294), closely followed by **30–34 years** (2105)

Registration %

83.5% Overall registration with a community LMC midwife

Registration for all women, LMC and DHB community midwives in first trimester **59%**

Maternal ethnicity %

	LMC	CMDHB	TOTAL	% OF TOTAL
PACIFIC	2193	360	2553	35%
NZ EUROPEAN /OTHER	1326	189	1515	20%
NZ MAORI	1119	369	1488	20%
INDIAN	1081	161	1242	17%
OTHER ASIAN	364	99	463	6%
CHINESE	92	39	131	2%
TOTAL	6175	1217	7392	

AUTHOR

DR GARY JACKSON
Population Health team, Counties Manukau Health

Primary maternity in Counties Manukau 2013 to 2020

Midwife-led, primary birthing units play a significant role in CM Health's maternity services network.

They are intended to enable local women with low-risk pregnancies to deliver their babies close to home in a 'non-medicalised' environment. Low-risk women who labour and birth in primary birthing units have lower intervention rates (including Caesarean section) than comparable women who birth in secondary care units.

CM Health monitors trends in primary birthing. The trends discussed in this article are based on data from:

- the National Minimum Data Set* births data – data in this article is from 2013 to September 2020, with data projected to December 2020, shown by calendar year
- Nga Hau Birthing Centre totals supplied in January 2021
- Robson Group† analysis to allow the defining of births that had the potential to be primary.

The analysis examines births to women who reside in the Counties Manukau area and birth at facilities in the CM Health area. That is, it excludes ~1,100 Counties Manukau women who birth outside Counties Manukau each year (at Auckland City Hospital in the main), and women living elsewhere (mainly Auckland DHB) who birth at facilities in the Counties Manukau rohe (~400 per year). It allows a geographic comparison of the actual number of primary births in the area with the number that was potentially possible over the past eight years.

* National Minimum Data Set births data supplied by DHBs and collated by the Ministry of Health.

† Robson Group is a method of categorising births by risk based on pre-labour information. This can be estimated from NMDS data. Groups 1 and 3 are considered suitable for primary birthing.

Births at facilities in the CM Health area

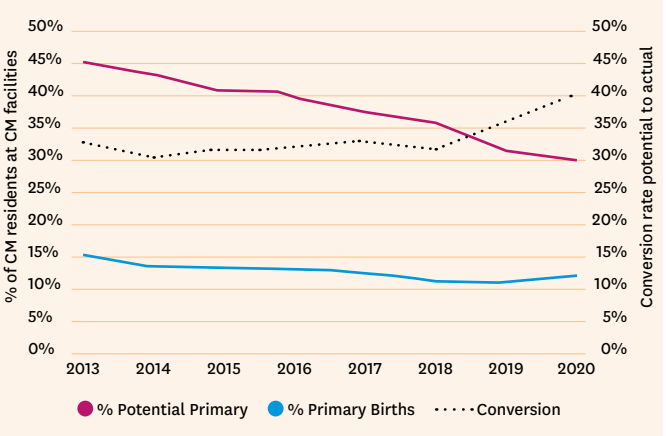
Birth numbers have been relatively static over the past eight years, rising around four per cent over that time. However, there has been a considerable fall (20%) in the number of births in primary units, although this has plateaued at around 11% of births over the past 3 years.

Compared to the 20 per cent fall in the number of primary births, there has been a 30 per cent fall in the number of births that would be considered potentially primary – that is in Robson Groups 1 and 3 Figure 5). Accordingly, the proportion of women considered suitable for primary birthing who did birth in a primary unit has actually increased somewhat. This 'conversion rate' held steady through to 2018, then increased as Nga Hau became operative (Figure 5).

This maintained conversion is likely to reflect both the enduring values and intent of Counties Manukau women, and the values, intent and marketing of primary birthing within the maternity systems. The result is a relatively stable or increasing conversion rate, maintaining the proportion of women suitable for primary birthing who actually use a primary facility.

FIGURE 5 ▼

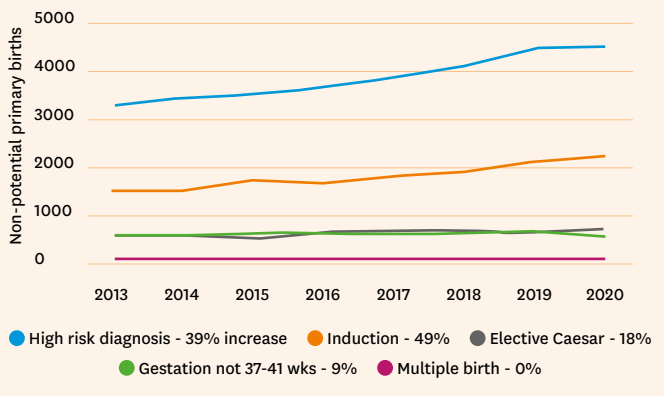
Potential primary and actual primary birth proportions, Counties Manukau women in CM Health facilities



The change in primary potentiality appears to be coming from high-risk diagnoses becoming more prevalent, leading to more inductions and elective caesarean sections (Figure 6). Multiple birth numbers (twins, triplets) are unchanged and change in gestation is not a major feature. In line with previous detailed neonatal modelling*, the high-risk diagnosis category is likely to be being led by obesity and diabetes in pregnancy.

FIGURE 6 ▼

Main reasons not included in potentially primary group – Counties Manukau women in CM Health facilities



Note: Each birth can fall into more than one category.

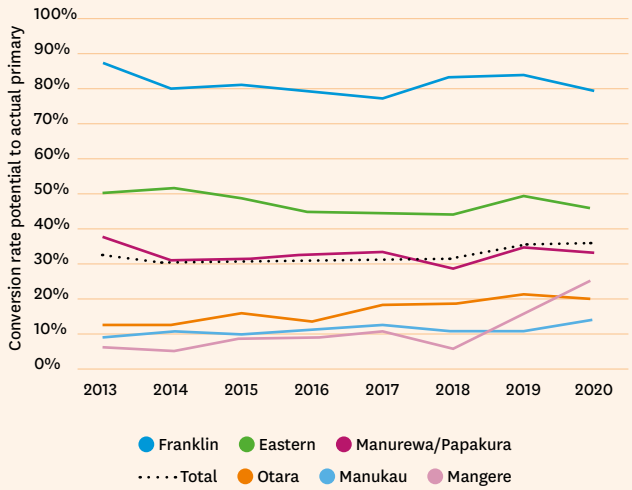
Births in CM Health area by locality

Based on the domicile of the women, areas with growing birth numbers at CM Health facilities are Franklin, Manukau, Manurewa and Papakura. The Eastern, Mangere and Otara areas had reducing numbers.

Franklin women had the lowest fall in potential primary births, implying the high-risk increases seen elsewhere in CM Health are not as prevalent in Franklin with its different ethnicity mix. The locality showed a consistent conversion rate of potential primary to actual primary births of 80 per cent or more (Figure 7). This is one of the highest in the country, and has led to Franklin being used as a maximum comparator for other primary unit analyses around New Zealand. Pukekohe Hospital is well established, has the valued Pukekohe Maternity Resource Centre, continuity of carer SMO clinics, and has a strong cadre of midwives garnering good community buy-in supporting local birthing.

FIGURE 7 ▼

Counties Manukau women in CM Health facilities by locality of residence – actual primary as a proportion of potential primary



While not as high as Franklin, rates for Eastern and Papakura† are very reasonable at 40 to 50 per cent, and comparable to many areas with primary birthing units around the country. These areas have managed to maintain their conversion rate despite their facilities being in need of renovation. The low rates for Manukau and Otara are typical for areas that do not have primary birthing units that are considered local.

Mangere residents started increasing primary birthing slightly before the introduction of the Nga Hau facility, albeit off the lowest base of any locality. The change really starting increasing once the new unit opened, rising to halfway to the Eastern locality conversion rate after little more than a year's operation (Figure 7).

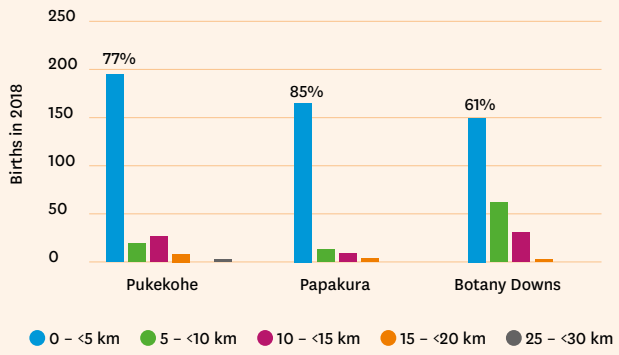
The new facility is associated with a significant increase in primary births, lending weight to previous analyses showing the geographic effect of primary birthing units (Figure 8). The majority of women birthing in primary units live within 5km of the unit in question.

* Parwaiz, M. (2019). *Clinical drivers of increased demand for the neonatal unit at Counties Manukau Health*. Auckland: Counties Manukau Health

† Not shown in this analysis, as it is combined with Manurewa. When analysed separately in the past, Papakura has equalled or bettered Eastern figures.

FIGURE 8 ▼

Births in CM Health primary birthing units, by distance of mother's residence to the unit

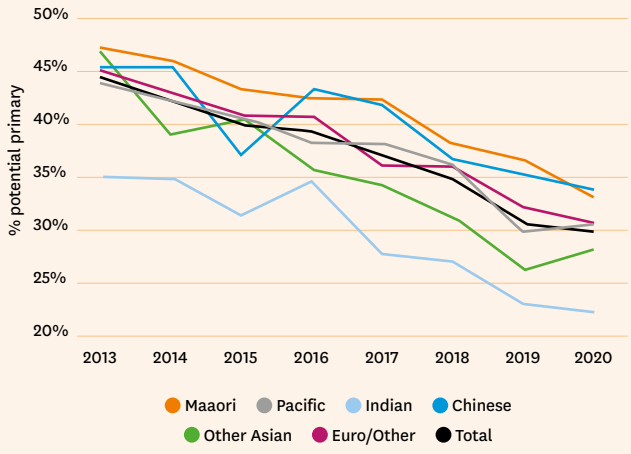


Births at CM facilities by ethnicity

Looking at potential primary births by ethnicity, all ethnic groups saw significant falls over the past 8 years (Figure 9). The proportion of births assessed as potentially primary was relatively similar across the ethnicities, apart from Indian women who had a lower rate. One might have expected Pacific women to have a similarly low rate, given their diabetes and weight-related concerns, but this was less apparent. It is likely that weight coding is incomplete in the National Minimum Data Set data being used here.

FIGURE 9 ▼

Counties Manukau women in CM Health facilities, by prioritised ethnic group – percentage of potential primary

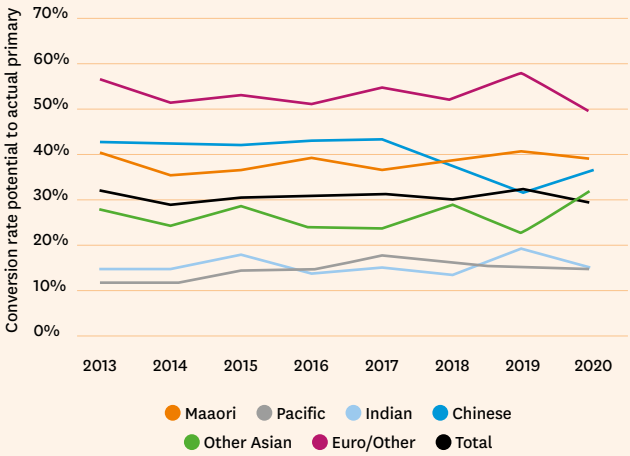


Note: Includes Middlemore, Pukekohe, Papakura and Botany facilities.

Of those births identified as being potentially primary, the European and Other group had the highest conversion rate to actual primary birthing at 50 per cent (Figure 10). Pacific and Indian women had the joint lowest rate of conversion at 15 per cent. No attempt has been made to disentangle ethnicity from geography at this stage, but there is likely to be an effect, for example with European and other ethnic groups forming a higher proportion of Pukekohe Hospital births. Conversion rates for each ethnicity have been relatively stable over the past 8 years, so the underlying causes of the declining primary birthing rate are not limited to one or two ethnicities.

FIGURE 10 ▼

Counties Manukau women in CM Health facilities by prioritised ethnic group – actual primary as a proportion of potential primary



AUTHOR

DEBRA FENTON
Maternity Service Manager

Bringing birth and other services closer to home

In previous years, this section has reported on initiatives that encouraged women to birth closer to home – that is, in a primary birthing unit in their community or in their home itself.

However, as we have explored ways to reverse the declining numbers of births occurring in primary birthing units, we have found the number of women possibly suitable for a low-risk birth has declined in our population*, from 45 per cent to 31 per cent, and that only 5 per cent† of these women live near one of the three Counties Manukau Health primary birthing units.

These figures illustrate the challenge of focusing only on birth volumes, as the primary measure of value for the primary birthing units. One-third of low-risk CM Health women continue to birth in primary settings, which is similar to previous years.

Given the rising complexity within our population, as well as continuing to promote low-risk women birthing in a primary birthing unit or at home, we will now also shift our focus on to the additional value these community-based units can provide. By bringing services closer to women's homes, and providing them with easier and more equitable access to the resources they need, we can help ensure the best possible outcome for women and their babies.

Who is birthing in primary birthing units?

Birthing numbers in our three primary birthing units have declined again this year; dropping from 10 per cent of total births in CM Health facilities in 2018/2019 to 8 per cent in 2020: see Figure 11 and Table 6 on page 49.

FIGURE 11 ▼

Births by location, 2010 to 2020

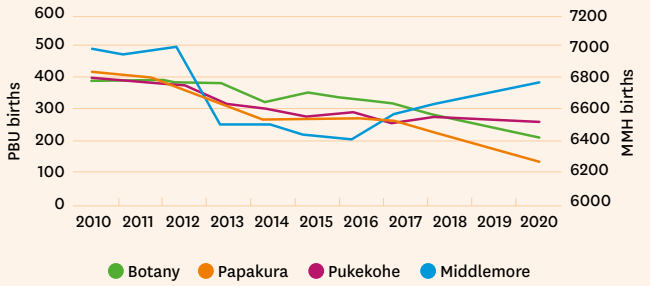
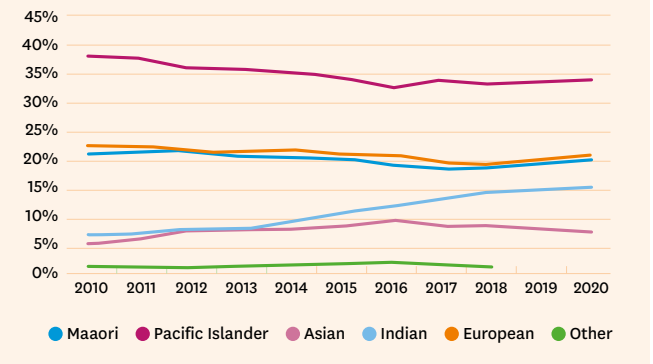


FIGURE 12 ▼

Ethnicity of women birthing at CM Health facilities, 2010 to 2020



Pacific and Indian women are least likely to be low-risk or use primary birthing units. However, there is a consistent rate of usage across all age groups (see Figure 12 and Table 7 on page 49), except for women over 40 years of age, which would be expected.

* Refer pgs. 43-45 *Primary maternity in Counties Manukau 2013–2020.*

† Data supplied by Andrea O'Brien, Business Analysis, Business Informatics and Intelligence Unit.

Residences of women birthing in primary birthing units

Women in the Franklin area are using a primary birthing unit the most, followed by women in Howick, Pakuranga and Botany who live near the Botany Downs Primary Birthing Unit, as shown in Table 8 on page 49.

Women least likely to use a primary birthing unit live in the Manurewa, Mangere, Papatoetoe and Otahuhu areas, as Middlemore Hospital is more likely to be their preferred facility, even if they are low risk. (Note that data for the private facility in Mangere is not included in this article.)

Carers for women birthing at primary birthing units

The split for women birthing at a primary birthing unit between those who are under the care of a community lead maternity carer (LMC) midwife and those under a district health board carer is similar to that for all women birthing at a CM Health facility, as shown in Table 9 on page 49. However, nearly all of the district health board carer births at Botany Downs Birthing Unit are under the care of CM Health-employed LMC midwives and make up 25 per cent of the total births at Botany.

Women birthing at Papakura Birthing Unit are also likely to be under the care of CM Health team midwives or CM Health-employed LMC midwives, due to difficulties faced by low-risk women in finding a community LMC midwife in their community so they can birth locally.

Forty-six community LMC midwives support women to birth in one of the three primary birthing units, from a total of 173 LMCs who have access agreements for a CM Health facility.

Other services offered at CM Health primary birthing units

Postnatal stay

Many women chose to have their postnatal stay closer to home. For those who initially require secondary or tertiary care at a base hospital, once their care has been transferred back to midwifery care, they can transfer to a primary birthing unit. Women benefit from the more relaxed environment in the units and are cared for by experienced primary care midwives and nurses.

Table 3 shows the numbers of women admitted and discharged postnatally from each of CM Health's primary birthing units. The average length of stay is additional to their postnatal stay at a secondary hospital before admission to the unit.

TABLE 3 ▼

Average length of postnatal stay at primary birthing units

POSTNATAL ONLY STAY	DISCHARGES	AVERAGE LENGTH OF STAY
Botany Birthing Unit	1,304	1.8
Papakura Birthing Unit	875	1.7
Pukekohe Birthing Unit	546	1.7
Total	2,725	1.7

CM Health community midwifery antenatal clinics and home visits

In addition to inpatient services, the community midwifery teams bring services closer to home by running clinics in the primary birthing units and providing home care. Table 4 shows the numbers of visits per facility in 2020.

TABLE 4 ▼

Visits by CM Health community midwives, by facility and visit type

FACILITY	TYPE OF VISIT	TOTAL
Papakura Birthing Unit	Clinic visits	2,780
	Home visits	172
Pukekohe Birthing Unit	Clinic visits	268
Botany Birthing Unit	Clinic visits	2,210
	Home visits	37
CM Health LMC midwife team	Team clinic visits	1,243
	Team home visits	55
Total		6,765

Over 6,700 antenatal visits were conducted by CM Health employed midwives within women's communities. Likewise, postnatal visits of women, from 24 hours post-discharge up to 6 weeks postpartum, were provided by CM Health community or case-load midwives who work from one of the three primary birthing units.

Inpatient acute assessments

The three primary birthing units also provide care to women who require acute midwifery assessments. These visits prevent, on most occasions, the need for women to attend Middlemore Hospital. Table 5 shows the number of women assessed per unit. This excludes women in labour and women who stay longer than 3 hours.

TABLE 5 ▼

Title				
ACUTE ASSESSMENTS	BOTANY BIRTHING UNIT	PAPAKURA BIRTHING UNIT	PUKEKOHE BIRTHING UNIT	TOTAL
Antenatal	309	672	789	1,770
Postnatal	48	43	41	132
Total	357	715	830	1,902

Other services provided

Other services provided at each of the three primary birthing units are as follows.

Botany

- Breastfeeding clinic; three CM Health staff at the unit have a lactation consultant qualification.
- Clinic facilities for 10 community LMC midwives.
- Frenotomy service.
- Hearing screening.
- Pregnancy testing, counselling and advice.
- Assistance for women to find a community LMC midwife.

Papakura

- Weekly obstetric clinic.
- Clinic facilities for eight community LMC midwives.
- Hearing screener who also promotes the unit within her local church and helps out around the unit with some tasks.
- Contraceptive service.
- Well Child provider clinics – Plunket have three Saturday morning clinics.
- Local community and school groups support the unit by providing gift and care packs, cards and new car seats for new mothers. Drury Kiwanis provide a birthday gift for Mum and baby on their birthday month.
- Pregnancy testing, counselling and advice.
- Assistance for women to find a community LMC midwife.

Pukekohe

- Pukekohe Maternity Resource Centre.
- Administration support and clinic facilities for 12 community LMC midwives.
- Weekly obstetric clinic.
- Hearing screening.
- Pregnancy testing, counselling and advice.
- Assistance for women to find a community LMC midwife.
- Local community groups provide knitting and other resources for new mothers.

The outlook for the future

Numerous challenges arise in seeking to increase primary birthing within Counties Manukau, such as rising numbers of pregnancy complexities and aging facilities. Ongoing activities and focus are needed in order to enable and support low-risk women to birth in a primary setting and ensure the best outcome for both mother and baby.

However, when bringing maternity services closer to home, along with birth, the focus also needs to be on other services than can be offered to women and whaanau within the context of primary maternity care. This will include developing and strengthening links with other women's and Well Child services to create a hub that attracts the community.

Women's Health currently has a dedicated project manager who is reviewing primary birthing for Counties Manukau women and, with the whole team, will continue to look for opportunities to strengthen the service delivery model of these facilities, which are closer to home for women and their whaanau.

TABLE 6 ▼

All births by location and ethnicity

ETHNICITY	MMH	BOTANY	PAPAKURA	PUKEKOHE	TOTAL	PBU	% OF BIRTHS AT PBU	% ETHNICITY
NZ Maaori	1312	38	64	74	1488	176	12%	20.3%
Pacific	2449	57	25	22	2553	104	4%	34.5%
Chinese	114	11	2	4	131	17	13%	1.9%
Indian	1203	15	8	16	1242	39	3%	15.6%
Other Asian	428	24	4	7	463	35	8%	6.4%
NZ European/Other	1289	59	31	136	1515	226	15%	21.3%
Total	6795	204	134	259	7392	597	8%	

TABLE 7 ▼

All births by location and age

AGE	MMH	BOTANY	PAPAKURA	PUKEKOHE	TOTAL	PBU	% OF BIRTHS AT PBU
<20 years	345	10	11	11	377	32	8%
20–24 years	1311	32	30	51	1424	113	8%
25–29 years	2104	70	39	81	2294	190	8%
30–34 years	1924	61	37	83	2105	181	9%
35–39 years	903	31	14	30	978	75	8%
40+ years	208		3	3	214	6	3%
Total	6795	204	134	259	7392	597	8%

TABLE 8 ▼

All births by location and domicile group

SUBURB	MMH	BOTANY	PAPAKURA	PUKEKOHE	TOTAL	PBU	% OF BIRTHS AT PBU
Botany	158	24	1		183	25	14%
East rural	178	16	2	7	203	25	12%
Franklin	647	2	8	232	889	242	27%
Howick	139	27			166	27	16%
Mangere	1026	8	2		1036	10	1%
Manukau	348	17	1	1	367	19	5%
Manurewa	1380	20	27	1	1428	48	3%
Otara	694	33	1	1	729	35	5%
Pakuranga	195	28			223	28	13%
Papakura	523	5	66	8	602	79	13%
Papatoetoe	676	6	1	1	684	8	1%
Takanini	398	5	24	2	429	31	7%
Otahuhu	196	5			201	5	2%
Other DHBs	237	8	1	6	252	15	6%
Total	6795	204	134	259	7392	597	8%

TABLE 9 ▼

All births in CM Health facilities, by location and carer type

MATERNITY PROVIDER	MMH	BOTANY	PAPAKURA	PUKEKOHE	TOTAL	PBU	% OF BIRTHS AT PBU
DHB	1113	63	34	7	1217	104	9%
LMC	5682	141	100	252	6175	493	8%
Total	6795	204	134	259	7392	597	8%

Notes: MMH = Middlemore Hospital PBU = Primary birthing unit

4 Our Midwifery Workforce

AUTHORS

SARAH NICHOLSON
Deputy Chief Midwife

CHRIS MALLON
Chief Midwife

ANTONIA YELAVICH
Human Resources Business Partner WH

Our midwifery workforce

In July 2019, the Women's Health division was established (separated from KidzFirst), and included a new midwifery leadership framework at Counties Manukau Health.

The move centralised two midwifery roles, the Maternity Service Development Manager and the Maternity Quality and Safety Coordinator which were previously based in the District Health Board's Planning and Funding division, which now sit in the Division of Women's Health. This has strengthened the links between our maternity quality and safety programme and our service development for maternity services.

A new Chief Midwife role was also introduced, enabling midwifery to work alongside other professional clinical groups at the executive leadership level of CM Health. This appointment is the first of its kind in New Zealand and illustrates CM Health's commitment to its midwifery workforce. The Chief Midwife is supported by a deputy, indicating the size and scope for professional midwifery development at CM Health.

In 2020 a specialist research midwife was also appointed at CM Health. The purpose of this role is to strengthen the midwifery research focus that underpins the care we provide. This appointment will enable CM Health to lead the way in midwifery focused research, and support midwives to participate in postgraduate research and further professional development.

Recruitment – graduate midwives

The CM Health graduate midwifery programme continues to be well regarded as a strong foundation for new practitioners joining the CM Health workforce.

The 15-month programme offers supported clinical experience in inpatient and community-based primary and secondary midwifery settings. This includes three 5-month placements in the Maternity Ward/Ward 21 (inpatient high-risk antenatal and postnatal care), the Birthing and Assessment Unit, and either a primary birthing unit or with the District Health Board's community midwives in Lambie Drive (antenatal and postnatal caseloads, excluding intrapartum). Feedback from midwives completing this programme continues to highlight its well-designed structure and support, which enable our graduate colleagues to develop a wide range of midwifery experiences.

Graduate midwives practising as community lead-maternity-carer midwives in Counties Manukau are also invited to join the midwifery graduate programme orientation and study days. These days enable graduate midwives to continue their pre-registration collegial relationships and foster a united workforce.

In 2020, we welcomed 22 employed and 12 community lead-maternity-carer graduate midwives.

> "I felt so supported, welcomed and part of the team. I talked to many of the new graduates and they had the best things to say about their experiences in the graduate program Middlemore offers. Having a program that is highly regarded by the staff, and being 15 months vs. some districts of a 9 month graduate program, this greatly influences my choice to come here"
>
> "I decided to work at Counties as I was treated well as a student and expected that to continue as an employee. The grant greatly helped as I had just finished a financially demanding 4 year degree. It helped me pay off my credit card; I bought some good shoes for work and then borrowed more for a reliable car!"

Recruitment – international midwives

International recruitment has continued during 2020 despite COVID-19, as midwifery is listed as an essential workforce. We have worked closely with international agencies who promote New Zealand midwifery careers across the world. We continue to interview and offer positions to midwives based in the UK and the US. Packages of support are individually tailored to assist with New Zealand practice requirements and relocation.

Recruitment – strategy 2021

In 2021, we will maintain a strong emphasis on midwifery recruitment and staff retention. Initiatives will focus on areas such as incentivising midwives to work full-time, and valuing those who are continuing to work long hours. We plan to develop opportunities to support midwives who travel to work from out of the Counties Manukau area. We also aim to facilitate structured career planning for permanent staff and student midwives, and are exploring the idea of a midwifery support worker role. Our intention is to phase these programmes in over the next 12 to 18 months.

Retention

Supporting midwives to stay in the profession involves a multifactorial approach. Working with midwives to enable sustainable working arrangements has been a key priority in 2020. The option of flexible rotations across various locations and wards has been a popular option for many midwives. Tailored shift patterns have enabled midwives who live outside of Auckland to continue to work at CM Health.

A wide variety of professional development opportunities at CM Health foster learning opportunities and career development for midwives. Our close links to AUT (Auckland University of Technology) and the established complex care course enable interconnected academic and clinical learning. The course is a postgraduate certificate programme, which encourages midwives to further their skills. We continue to support midwives on this postgraduate journey.

During 2020, a national career pathway framework for midwives has been developed and is near to completion. This Midwifery Employee Representation Advisory Service (MERAS) initiative will help midwives direct their career development to areas of interest. CM Health will continue to develop roles that fit within this framework to support and enhance career opportunities for midwives.

Employee engagement survey

CM Health undertook an employee engagement survey with all employees at the end of 2019 and into 2020. The survey's purpose was to help managers understand how engaged their staff are in the workplace and work towards having a fully engaged workforce, and to inform workforce development, workplace culture and employee wellbeing initiatives. During 2020, managers worked with their teams to develop action plans for fostering a working environment where employees are welcomed and feel safe.

Safe Staffing

In 2020 the Care Capacity Demand Management Program was introduced to the Women's Health division. This program aims to match a persons' need for care with the right staffing. The national Care Capacity Demand Management Programme is led by the Safe Staffing, Healthy Workplace unit in partnership with New Zealand's 20 DHBs, and health unions.

This program includes tools such as 'TrendCare'. This tool will enable midwives, nurses and allied staff to be able to measure staffing levels against acuity and use the data for acuity-based staffing. This is a significant change from the way we have historically managed workloads and staffing. TrendCare data and the national Multi-Employer Collective Agreement (MECA) entitlements will be used to generate a recommended roster and staffing levels for each ward. This will help provide timely, appropriate and safe care for patients and a healthier work environment for staff.

International Midwives' Day

Unfortunately, the COVID-19 lockdown in May 2020 interrupted planned celebrations for both the International Year of the Midwife and International Midwives 'Day.

Planning for International Midwives' Day 2021 is underway, and 4 May 2021 will see Ko Awatea filled with midwifery, as we showcase the fabulous midwifery care provided across Counties Manukau. Invitations to this event will be circulated nationally. The day will celebrate the amazing work our midwives are doing in hospitals and the community, and will provide a platform for recruitment, as we highlight to a national audience the midwifery opportunities here in CM Health.

AUTHOR

DR ROBIN CRONIN
Research Midwife Specialist

Midwifery-led Research In Women's Health

In 2020, Counties Manukau Health became the first district health board in New Zealand to appoint a midwife to promote and support midwifery-led research. This new role was in recognition that midwifery care is strengthened through research undertaken by midwives and that this benefits women, babies and their whaanau.

Current midwifery research

During 2020, CM Health midwife and newly appointed Research Midwifery Specialist Dr Robin Cronin undertook a New Zealand-wide survey to evaluate the 'sleep-on-side' public health campaign. The survey was a midwifery-led evaluation with a particular focus on women residing in the CM Health region, and led to Dr Cronin receiving the best presentation in the CM Health research showcase during 2020 Research Week.

The 'sleep-on-side' campaign was launched in 2018 in response to a meta-analysis undertaken for Dr Cronin's PhD and published in *The Lancet's EClinical Medicine*.* The campaign advised pregnant women that sleeping on their side from 28 weeks of pregnancy had half the risk of stillbirth compared with going-to-sleep on the back.

The key finding of the 2020 evaluation project was that most pregnant women had received sleep-on-side advice from their midwives, including over 250 women from the CM Health region. Women reported that they were able to settle to sleep on their side in the third trimester without major difficulty or worry: a reassuring response, given that a 2017 University of Auckland study reported that the supine position may be associated with up to 9 per cent of stillbirths in New Zealand each year.†

Dr Cronin's research itself arose from the first study on late pregnancy sleep position and stillbirth risk, undertaken by CM Health midwife Dr Tomasina Stacy.‡ As a result, CM Health midwives have been the first midwives in the world to share the sleep-on-side information with pregnant women.

Future research areas

In the next few months, we will be offering a survey to CM Health midwives to gain understanding of the existing midwifery research capacity, capability and culture. This information will be used to support future midwifery-led research in CM Health. The findings will inform our recently established Midwifery Journal Club, which supports midwives to undertake, present and discuss research that will help make a positive difference for our mothers, babies and their whaanau.

Other midwifery-led research projects in the pipeline include involvement in an international collaboration investigating the experiences of recently bereaved parents who suffered a pregnancy loss during the global COVID-19 pandemic. This research is being carried out in partnership with midwifery academic colleagues at Victoria University Wellington.

* Cronin, R. S., Li, M., Thompson, J. M., Gordon, A., Raynes-Greenow, C. H., Heazell, A. E., . . . Anderson, N. H. (2019). An individual participant data meta-analysis of maternal going-to-sleep position, interactions with fetal vulnerability, and the risk of late stillbirth. *EClinicalMedicine, 10*, 49-57. doi: http://dx.doi.org/10.1136/bmjopen-2017-020323

† McCowan, L. M., Thompson, J. M., Cronin, R. S., Li, M., Stacey, T., Stone, P. R., . . . Mitchell, E. A. (2017). Going to sleep in the supine position is a modifiable risk factor for late pregnancy stillbirth; Findings from the New Zealand multicentre stillbirth case-control study. *PLoS One, 12*(6), e0179396. doi: https://doi.org/10.1371/journal.pone.0179396

‡ Stacey, T., Thompson, J. M., Mitchell, E. A., Ekeroma, A. J., Zuccollo, J. M., & McCowan, L. M. (2011). Association between maternal sleep practices and risk of late stillbirth: a case-control study. *Bmj, 342*. doi: https://doi.org/10.1136/bmj.d3403

We are also planning a fetal movement survey that will focus on the women's views and knowledge of fetal movement and explore if these differ by ethnicity. We are particularly interested in the views and knowledge of Maaori, Pasifika and Indian women, as these ethnic groups are overrepresented in perinatal mortality, yet little is known about their perception of fetal movements.

On 4 May 2021, we are planning a day to celebrate our CM Health midwives. Our presentation will showcase midwifery with an equity lens. This will be followed by International Midwives Day on 5 May, which this year has the theme 'Follow the Data: Invest in Midwives.' This theme nicely sums up the future plans for CM Health midwifery research.

▲ *Dr Robyn Cronin, with Chris Mallon Chief Midwife and Ashley Bloomfield Director General of Health, receiving the award for the best presentation in the CM Health 2020 Research Week.*

AUTHORS

LESLEY MACLENNAN
Clinical Midwife Coach

ISABELLA G SMART
Community Midwives Midwife Manager

Clinical Midwife Coach – Community Midwifery Service

In 2020, Counties Manukau Health created a clinical specialty post of clinical midwife coach to support midwifery staff to develop and maintain their clinical skills and knowledge.

The post is an 18-month fixed-term secondment, in order to provide a 'proof of concept' and allow time to evaluate this proposed new role. The role involves supporting newly qualified and new-to-serivce staff in the clincial challenges they face when providing care for women experiencing clinical and social complexity in a community setting.

An initial task of the clinical midwife coach was to develop a Community Midwifery Knowledge and Skills Framework for all new midwifery service staff delivering clinical midwifery care in the community.

The framework provides a self-assessment tool to guide the midwife in her development as a community midwife. In particular, it:

- supports the midwife to meet the position description for employed community midwives at Counties Manukau Health
- helps the midwife to self-define her learning and development needs in her new role, and to complete the health board's Performance Development Review Programme and Quality and Leadership Programme.

The framework specifies the skills the midwife must develop to be confident and competent in a community-based role. Supported by her associate clinical charge midwife, preceptor and the clinical midwife coach, the midwife will reflect on the competencies and scope of practice set by Te Tatau o Te Whare Kahu Midwifery Council of Aotearoa New Zealand.

The Community Midwifery Knowledge and Skills Framework has been in use since April 2020. It is a living document and has been regularly adapted following user feedback. The framework is now in its 10th revised version, the community midwifery orientation booklet has also been updated to reflect the framework.

Developing clinical resources and providing direct coaching are also part of the clinical midwife coach role, as is assisting all community-based midwifery staff to become familiar with and out into practice any new or revised health board policies, guidelines, procedures and protocols. To this end, the clinical midwife coach has developed quick guides for midwives, providing guides to practice based on accepted guidelines. A new practice noticeboard has also been set up and the clinical midwife coach regularly updates community midwives on matter relating to clinical practice at the monthly staff meetings.

The clinical midwife coach has now supported seven midwives on the CM Health graduate programme during their community midwifery placement. To date, three of the midwives have been interviewed at the end of their placement (in September 2020) to ensure the clinical midwife coach role is working as intended. The framework was also revised based on their feedback. This process will continue with all graduates and new-to-service staff until the end of the secondment in June 2021. We are keen to learn if this new approach to supporting staff is valuable and improves staff confidence, satisfaction and retention in this challenging area of community midwifery care provision.

AUTHOR

HEATHER MURIWAI
Clinical Lead Advisor – Maaori Midwifery

Maaori Midwifery

He pou koorero
(statement of intention)

Ko te tumanako a tenei poaari he whakarato i teetahi o ngaa taupori Maaori nui, taupori Maaori matatini, puta noa i te motu. Ko te whakakikokiko i te mana-taurite hauora Maaori teetahi o aa maatou tino whaainga. Ko too maatou hiahia ko te whakamana, ko te whakatinana hoki i te wairua me ngaa maataapono o Te Tiriti o Waitangi hei tuuaapapa i taa maatou e whai nei, me te whakapono nui -maa te aata whakapakari i te ara whakawaiora Maaori e taea ai te whakatutuki i te mana taurite hauora moo te katoa

As a district health board, we serve one of the largest and most diverse Maaori populations in the country. Achieving Maaori health equity is a key priority for us. Our commitment to this is driven by our desire to acknowledge and respect the Treaty of Waitangi and our belief that if we are serious about achieving health equity for our total population, we must first strengthen our commitment and drive to accelerate Maaori health gain in our community.

(COUNTIES MANUKAU HEALTH 2020/21 ANNUAL PLAN)

It was with this intention as a focus that the position of clinical lead advisor, Maaori midwifery was created within the Maaori Health team. The position is a key senior midwifery leadership position, and Heather Muriwai (Tangahoe) was appointed to the role in July 2019.

The lead clinical advisor, Maaori midwifery supports CM Health's transition to a fully integrated whole-of-system approach that will ensure it becomes a leader in providing services to Maaori and whaanau.

Recruiting and retaining a Maaori midwifery workforce and achieving health equity are overarching goals for the health board. They will be achieved by:

- engaging with mana whenua and Maaori communities to establish strategic priorities for Maaori maternity and midwifery, and services for mama, peepi and tamariki
- building and maintaining strong external working relationships with non-governmental organisations, primary health organisations and tertiary education providers
- maintaining a strong focus on quality improvement that enables innovation and challenges practice
- optimising research opportunities with tertiary education partners to enable a research culture
- leading and engaging the sector on Maaori health and workforce issues at a national, regional and organisational level
- providing expert clinical advice.

In the past year, we have worked towards achieving these overarching goals in Women's Health by providing a strategic, operational and quality lens focusing on health equity and cultural safety across:

- Recruitment and retention – there are currently 38 Maaori midwives (both core and lead maternity carer) working across the Counties Manukau region. A Maaori Midwifery Forum has been set up, enabling these midwives to meet quarterly for whakawhanaungatanga and professional development. We have also actively recruited Maaori

midwives as part of a national midwifery recruitment drive (see poster on right).

- As of February 2021, there will be 90 Maaori midwifery students across the 4-year undergraduate Bachelor of Midwifery programme at AUT. These students are supported by the Pu Ora Matatini programme – a collaboration between AUT, CM Health and the Tindall Foundation, which provides pastoral support for the tauira.
- Education – the clinical lead advisor, Maaori midwifery provides education across Women's Health focusing on health equity and cultural safety in relation to our Treaty of Waitangi obligations.
- Contraception – we are working to improve access to contraception (in particular long-acting reversible contraception) for waahine Maaori using a clinically and culturally safe process.
- Sudden unexpected death in infancy (SUDI) prevention – we have instigated a SUDI Maaori caucus to specifically address the disproportionate number of Maaori SUDI cases.
- Child protection services and hospital-based Oranga Tamariki involvement – we seek to ensure that the views and solutions for child protection have had culturally safe lens applied, both at a regional and national level.

Poster targeting Maaori midwives, which appeared in national midwifery publications as part of a midwifery recruitment drive

Maaori Midwifery Research Symposium

One of the highlights of the past 12 months has been the Maaori Midwifery Research Symposium, which was held on 28 July 2020: see images overleaf.

At the symposium, Te Rau Ora, Ngaa Maia Maaori Midwives Aotearoa and CM Health presented a comprehensive proposal to the Ministry of Health and Health Workforce New Zealand to establish a National Maaori Maternal and Child Health Workforce Strategy. The strategy would ameliorate the Maaori health and workforce differences by expanding the Maaori maternal health care continuum.

Te Rau Ora developed the evidence through four pieces of work.

- Rapua te aronga-a-hine – a review of the literature about the Maaori midwifery workforce in Aotearoa. There is a wealth of Maaori research that substantiates the need for change to achieve equitable health and wellbeing for Maaori.
- Kimihia te aronga-a-hine – information was collected using a survey from the workforce tasked with caring for mama, peepi, tamariki and whanau.
- Whaia te aronga-a-hine a nga kaiwhakawhanau Maaori – a qualitative focus group looked at Maaori midwifery workforce needs in Aotearoa, as described by Maaori midwives.
- Whaia te aronga-a-hine nga mama – a kaupapa Maaori analysis was carried out of Maaori mama's shared experience of the maternity care workforce.

The symposium was also a platform for other learned waahine to present their valuable and informative hauora Maaori research.

- Hinewirangi Kohu-Morgan presented her work on spiritual health, which she defined as the capacity and ability to seek, experience, and express meaning and purpose in our lives from a te ao Maaori world view.
- Dr Naomi Simmond presented Ukaipo Mana Waahine, using the whakapapa and story of her tupuna Mahina-a-rangi while hapu.

Following the symposium, Te Rau Ora (with its partners) was offered the opportunity to develop an evidence base from which to inform workforce priorities, with a particular focus on Maaori women, babies, children and whaanau.

Midwifery Research Symposium

The provision of equitable and both clinically and culturally safe care for whaanau across Women's Health will continue to be a focus. This sometimes necessitates that we challenge long held view points and models of existing care. The wellbeing of our Maama and peepi demands that we do this. This will then ensure that we are fulfilling our commitment to acknowledge and respect Te Tiriti O Waitangi to therefore accelerate Maaori health gains in our community.

Participants at the Maaori Midwifery Research Symposium 2020

Flyer for the Maaori Midwifery Research Symposium

AUTHORS

NGATEPAERU MARSTERS
AUT Pasifika Midwifery Liaison Team

TALEI JACKSON
AUT Pasifika Midwifery Liaison Team

Pasifika midwifery workforce development

In 2014, Auckland University of Technology's (AUT) Head of Midwifery School, Dr Judith McAra-Couper, presented a joint venture proposal to Counties Manukau Health aimed at developing the Pasifika midwifery workforce.

The resulting initiative focuses on recruiting, retaining and supporting Pasifika midwifery students through the successful completion of their training and, in doing so, improving health outcomes for Pasifika mothers and babies.

The partnership between CM Health's Pacific health development team and AUT demonstrated a commitment to a shared vision, with the district health board initially funding a 0.2 full-time equivalent (FTE) Pasifika liaison position at AUT, which subsequently increased to 0.4 FTE.

The funding arrangement ended in November 2020. AUT acknowledges CM Health's generous partnership over the past 7 years, which has seen an improvement in all the strategic areas of Pasifika midwifery workforce development. The momentum has been gradual and undeniably forward, with significant recent improvements in enrolment numbers and retention. This has included the first male midwifery student of Maaori and Pasifika descent to enrol.

Highlights in 2020

The midwifery degree is now a 4-year course and the only midwifery training option on offer at AUT. In 2021 and 2022, there will be two graduating classes in March and December.

Talei Jackson joined AUT's Pasifika liaison team in February 2020. Her broad range of skills – clinical education, academic support and leadership – have been well used. Talei recently graduated with a master's degree focused on what enabled Pasifika midwifery students to successfully complete their studies.

Pasifika Midwifery Fono, November 2020
L-R: Patiariki Mitchell, Whitney Amadia, Nga Marsters, Vaimoana Lauaki, Vaisiliva Manuofetoa, Tania Khan, Nasi Valu, Talei Jackson and Rose Leauga

In early March 2020, we held a meet and greet for Pasifika students and their families, which was very successful and well supported by Pasifika midwives.

In November 2020, Pasifika Midwifery Fono was attended by Pasifika midwifery students along with AUT's Pasifika liaison team (see photo above).

Recruitment and retention

The upward trend in recruitment and retention of Pasifika midwifery students is due to many factors.

- We support applicants to be successful by reviewing enrolments and scrutinising declined applications. We make follow-up phone calls to applicants to discuss how to make their application successful in the following year and offer places to applicants where new information is provided. Although community-based recruitment was almost non-existent in 2020, due to the COVID-19 pandemic, some students made self-referrals or found out about the course through internal sources such as AUT's student hub.

- The Pasifika liaison team engages with most Pasifika first year students as one-on-one tutors. The team is well-positioned to identify students' needs and offer early support.
- The liaison team is also involved in developing and preparing for assessments, such as multi-choice questions, group presentations and curriculum changes, to include a more diverse way of learning.
- Students are provided with access to resources to support their studies, such as e-books, zoom tutorials, and (during the pandemic lockdowns) evening tutorials after children were in bed.
- Two Pasifika student reps give confidence to Pasifika students and act as their voice in the student body.
- The Pasifika students have become a cohesive group over the years – they have their village and are very supportive of each other.
- We tailor students' clinical experience and placements to be appropriate to their needs. For example, students may be placed with a Pasifika midwife, who is caring for a high caseload of Pasifika women or speaks the same Pasifika language as the student, thereby reinforcing their learning. These placements are an enriching experience for the students, the midwives and the women, and this is reflected in their feedback.

Current student numbers and experience

Table 10 shows the numbers of Pasifika midwifery students enrolled from August 2019 to December 2020.

Over this time, there was an almost 100 per cent increase in first year Pasifika midwifery students. In March 2020, five students moved from a 3-year to a 4-year degree and one was on leave. Four other students, previously noted as being on leave, did not respond that they were returning and have been removed from the student list. Four students graduated in July 2020.

Due to COVID-19, the first year cohort in 2020 had no clinical placements. However, they remained positive with their learning experience, despite the challenges of teaching and learning multiple topics over Zoom and the need for long periods spent in front of a screen. Their return to campus and simulation sessions was greeted with enthusiasm and gratitude by both the staff and students.

At the same time, second and third year students' placements were also interrupted and they learnt to be flexible. It was a time of vulnerability – for families receiving care and the midwives providing that care – but also of generosity for many. It was stressful, but provided life lessons for us all.

The future

AUT's relationship with CM Health is ongoing, as the health board welcomes Pasifika midwifery students into its services, and provides a safe passage for them to navigate their midwifery journey. Kindness is important as a retention strategy, and midwifery students return to CM Health to work as core or lead maternity carer and serve the community.

The passing of the funding baton is timely, as 2020 ended with a positive conversation with the Ministry of Health. The 2019 Wellbeing Budget to support Maaori and Pasifika midwifery workforce development is to be honoured. This represents an investment to improve health outcomes for those demographic groups statistically at the greatest risk of poor outcomes for their mothers and babies, which also includes Indian families.

We wish again to acknowledge and thank CM Health's Pacific health development team for their generosity as an AUT partner in growing the Pasifika midwifery workforce.

Ka mua, ka muri ~ looking back to move forward.

TABLE 10 ▼

Midwifery students August 2019 – December 2020

		AUGUST 2019	MARCH 2020	JULY 2020	DEC 2020
YEAR 1	4:4 year degree	10	8	19	18
YEAR 2	4:4 year degree	2	5	7	7
	4:3 year degree	8	7	-	-
YEAR 3	4:4 year degree	4		5	5
	4:3 year degree		6	6	6
	Students on leave	5	1	1	1
	Total students	29	28	38	37

5

Maternity Quality & Safety Programme

CM Health Local Project Diabetes

On Track

AUTHORS

DR HEENA LAKHDHIR
SMO, Obstetric Lead for the Diabetes in Pregnancy Service

THOMAS EPPS
Improvement Advisor, Ko Awatea

Diabetes in Pregnancy Improvement Project

The Diabetes in Pregnancy Improvement Project first launched in late 2019. It was identified that the current diabetes in pregnancy service was falling short of women's needs in Counties Manukau and that a change was needed. The focus for 2020 was on stabilising the diabetes in pregnancy clinics to create an environment where change was possible.

Much of our patient population has complex social determinates that result in challenging circumstances and inhibit their ability to engage with our services.* As a result, women with diabetes and their babies continue to face inequitable outcomes in pregnancy, in particular our Pasifika, Maaori and Indian women.

Following observations of the diabetes in pregnancy clinic, we undertook interviews, data analysis and workshops, from which the following key areas for focus were identified:

- low morale among staff and clinicians
- lack of awareness and education, low confidence in initiating and titrating treatments, and gaps in cultural competence to guide the best clinical approach and intervention
- long wait times at clinics, and a high rate of non-attendance and poor engagement for many of the highest risk women
- clinicians working in silos
- lack of adequate resources, i.e. staff, clinic rooms, equipment, aids to enable self-management for women, peer support groups
- lack of research from our unit and of literature to guide evidence-based practice
- a need to update knowledge, attitudes and practices to be more progressive, and use body positive, inclusive and non-judgemental approaches.

The improvement project took a multi-faceted approach to mitigate these issues. To start with, a project manager to work alongside the clinical lead was put in place to provide direction and support for the diabetes in pregnancy service and team. A cohesive and collaborative approach was used, so all team members started to feel valued, with meetings held to gain staff feedback and engagement.

Improving education and awareness

We then initiated education sessions to improve the confidence of clinicians and midwives in working with diabetes in pregnancy. A UK study† has demonstrated that doctors in training tend to have poor confidence levels in dealing with diabetes-related care issues and that ongoing local training is key. Our education sessions were held in the evening via Zoom to enable greater participation. These sessions will be ongoing.

Ongoing cultural education is also an important area in diabetes in pregnancy care. A study of Samoan mothers‡ has shown that cultural competence is vital, and that learning to pronounce people's names, friendly greetings and a non-rushed approach are important for gaining engagement.

Making the clinic fit for purpose

A large part of the project's work has centred around making the diabetes in pregnancy clinic fit for purpose.

The MOSAIc study§ showed that patients who are distressed about living with Type 2 Diabetes, and dissatisfied with aspects of their interactions with physicians, exhibited poor

* "I kind of gave up on it after a while, became too hard, closed my eyes, didn't want to know about it" – an adult with type 1 diabetes mellitus describes defeat in the context of low social support. Quoted from Ward, P., & Hill, K. (2019). *Health Expectations, 22*(2), pp. 254-261.

† Smith, C. J., George, J. T., Warriner D., et al. (2014). Differences in level of confidence in diabetes care between different groups of trainees: The TOPDOC diabetes study. *BMC medical education, 14*(1), p. 191.

‡ Ludeke, M., Puni, R., Cook L., et al. (2012). Access to general practice for Pacific peoples: A place for cultural competency. *Journal of primary health care, 4*(2), pp. 123-30.

§ Linetzky, B., Jiang, D., Curtis, B. H., et al. (2017). Exploring the role of the patient–physician relationship on insulin adherence and clinical outcomes in type 2 diabetes: Insights from the MOSAIc study. *Journal of Diabetes, 9*(6), pp. 596-605.

insulin adherence. Perceived physician inattention, lack of engagement and diabetes-related distress all directly affect insulin adherence and glyceamic control. These findings reinforce the need for a clinic where women's needs are addressed.

As part of this work, the multi-disciplinary team meeting/ high-risk meeting was shifted from the end to the start of the day, and held both in person and on Zoom. This enabled a wider representation of clinicians to attend and plan for the care of high-risk women attending the clinic, and the move has improved communication, teamwork and morale.

In addition, this year we have introduced a system where the lead diabetes obstetrician is present in the morning clinic as a clinic coordinator, providing oversight, trouble shooting, education and support for junior trainees.

We also identified a significant bottleneck for endocrinologist appointments, with demand outstripping our capacity. Capacity was increased by allocating an additional registered medical officer to the clinic's morning sessions; while demand was reduced by designing a revised care pathway for high- and low-risk patients, allowing resources to be reprioritised and enabling women to be seen and managed in a timely manner.

The new obstetric-led pathway is helping identify and care for women diagnosed with gestational diabetes mellitus who are considered suitable for obstetrician-led management, without necessarily needing to see an endocrinologist. Introducing the new obstetric-led pathway, demand for endocrinologist appointments has dropped from an average of 430 minutes per week to 264 minutes per week, as shown in Figure 13. Once we are confident that there will be no unintended consequences from the new pathway, it will be fully implemented.

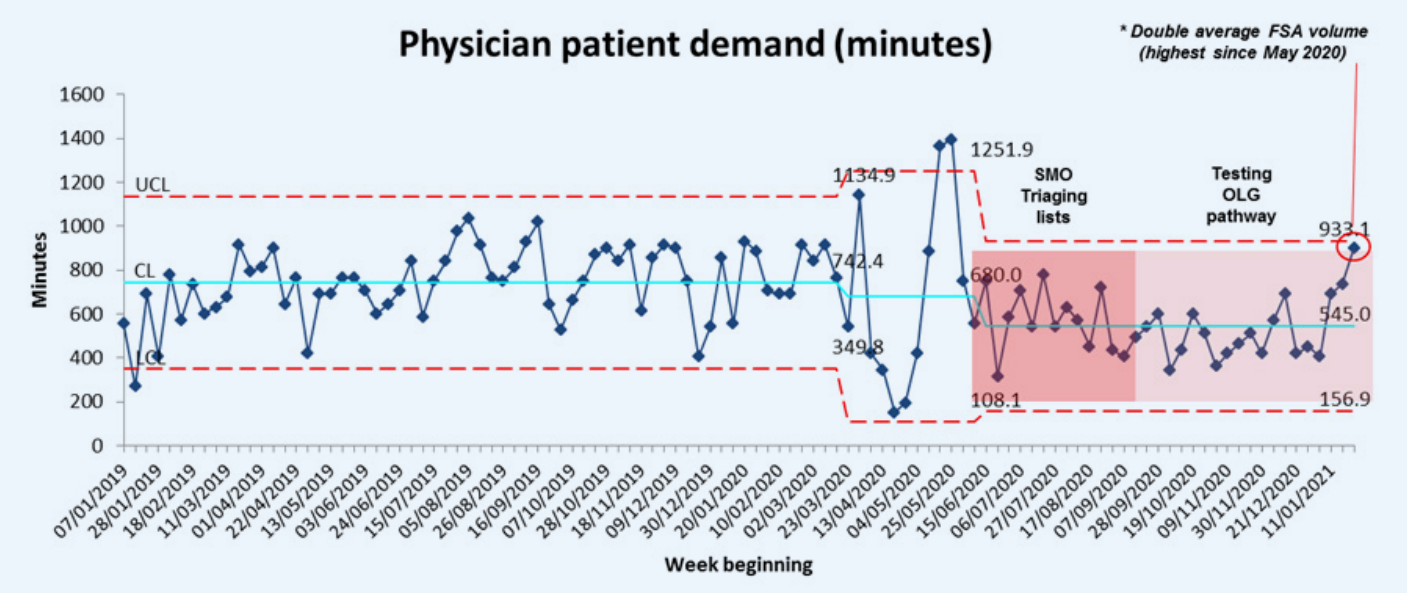
Another initiative that has helped increase capacity at the clinic is a continuance of the tele-clinics that were instigated during the COVID-19 lockdowns. The clinics were found to offer a helpful alternative for women who could not attend in person, as well enabling an additional 10 to 12 appointments per week for obstetricians.

We are also reviewing the clinic scheduling and appointment booking systems, and have allocated dedicated staff to the maternity administration team to arrange, trouble shoot issues with and optimise appointment bookings. Clinics are never overbooked, to ensure women are seen promptly and clinicians don't feel overburdened and disheartened.

When a woman does not attend her clinic appointment, staff will attempt to ring her and convert her in-person clinic appointment to a telephone appointment. If this isn't possible, the woman's lead maternity carer will be contacted to discuss what the barriers to attendance for this woman are. We have processes in place for women who repeatedly do not attend, such as a diabetes midwife visiting their homes, or engaging community health and cultural liaison

FIGURE 13 ▼

Demand for endocrinologist appointments, January 2019 to January 2021



workers, to attempt in every way possible to engage the women in care.

Improving service integration

The revamped morning meeting and having the diabetes lead being available as a coordinator have improved the coordination and integration of the services we offer.

As a further improvement, we would also like to see the maternity administrative clerk who organises follow-up appointments becoming part of the clinic, to improve integration in that area as well.

During the next year, we intend to focus on providing better integrated care for the highest-risk women, so that each visit provides maximum value to the woman. We plan to extend this integration to lead maternity carers and GPs for post-partum care, and to inpatient care, so that continuity is provided while the woman is admitted. We also aim to introduce preconception care and counselling in the near future.

Our particular focus for next year will be on women with type 2 diabetes. These women have a higher risk of perinatal and maternal mortality, and are twice as likely to be unable to attend our clinics as our type 1 and gestational diabetes mellitus women (23.92 per cent, 12.66 per cent and 12.06 per cent respectively).

Creating resources

The Diabetes in Pregnancy Improvement Project has been undertaken by existing diabetes service staff, with input from a Ko Awatea improvement advisor.

During the COVID lockdowns, we were created videos to enable information and training to be delivered virtually, without the need for in-person meetings. These videos continue to be a useful adjunct to care.

For in-patient management, we introduced the Libre scanning device for use with women who need multiple blood sugar measurements. Training and a guideline for the device have also been introduced., so staff feel confident use this new technology.

Undertaking research

Our obstetric research leads, Dr Charlotte Oyston and Dr Kara Okesene- Gafa who are associated with the diabetes service, have obtained a Heath Research Council grant to study the effective use of virtual clinics in comparison to usual methods of delivering care.

There is also a summer studentship currently underway in order to identify barriers for Pasifika women engaging in the care provide by the Diabetes in Pregnancy service. Following this, a research project will be started to gain insights from a focus group of women who attend the diabetes in pregnancy clinic, to obtain information about the approaches that work best for them.

For the future, we are hopeful that research grants (and their associated funding) may enable the clinic to introduce user-friendly devices to make blood glucose monitoring and treatment easier for women. Although such devices are readily available, they are not currently used by the clinic. The funding of this is an area to explore further as some of these devices would be useful for women most at risk, such as those with type 1 diabetes and young women with type 2 diabetes who would benefit from having better control of their blood glucose and consequently delaying the onset of long-term complications.

Encouraging body positivity

In the diabetes in pregnancy clinic, we aim to be inclusive and body positive.

A study by Vachon et al,* reported that, “A few participants spoke about their difficulties in accepting the diagnosis, in not seeing diabetes as something shameful and in learning to manage their emotions. They said they were often the target of prejudices and myths stemming from a lack of knowledge among those around them.”

This study reinforces staff observations that women attending the diabetes in pregnancy clinic often feel ashamed and judged, and that having a non-judgemental and supportive culture is essential to women’s engagement. Clinicians are encouraged to use positive encouragement, and discouraged from using words such as good sugar

* Vachon, B., Ai-Thuy, H., Breton, M., Quesnel, L., Camirand, M., et al. (2017). Patients’ expectations and solutions for improving primary diabetes care. *International Journal of Health Care Quality Assurance, 30*(6), pp. 554-567. DOI:10.1108/IJHCQA-07-2016-0106

values and bad sugar values, and from weight and food shaming, whether purposefully or inadvertently. Cultural sensitivity is also encouraged in relation to people's foods and relationships with food. We intend to provide ongoing education around this extremely important issue.

Identifying and overcoming barriers

Identifying barriers and enabling women to overcome them is key to successful engagement.

A major part of the Diabetes in Pregnancy Improvement Project has been identifying the barriers women experience in accessing our services and working with women and whaanau to surmount them. The diabetes in pregnancy clinic has a large number of women who identify as Pasifika, Maaori and Southeast Asian. Many of these women are from the most deprived areas and face social, economic and financial challenges. Some have additional challenges of domestic abuse and drug and alcohol abuse. Health literacy in some communities and language are also barriers to care.* Women with type 1 and type 2 diabetes face the challenges associated with chronic conditions, such as denial, burnout and diabetes distress.

In addition, the clinicians who work in the diabetes in pregnancy service face the challenge of striving to provide optimal clinical care when they are unable to address many of these social challenges. It is common for diabetes midwives to travel to women's houses to deliver medication, drive women to their appointments, book scans for them and rebook them when they do not attend. In the past year, the midwives, clinicians and diabetes in pregnancy service as a whole have shown great compassion and initiative, going above and beyond in order to surmount barriers and reduce poor outcomes. Time and again, they have saved lives by doing so.

For the future, a structured approach to reducing barriers is needed, with efficient coordination with other services. We are currently in discussions with psychology services about working with us to help women who have major psychological concerns, such as needle phobia, diabetes burnout and denial. We also need to build diversity in our workforce and aim to encourage culturally diverse clinicians to be part of the clinic.

We are now at the point where we have identified many of the roadblocks to care, and have a robust team that is enthusiastic and dedicated to providing excellent care for our women backed by a committed leadership. We also have a highly competent team collecting data and research. We are now ready to revisit the model of care and break the mould. Our new aim is to co-design, test and implement an alternative pathway for women with pre-existing diabetes to reduce the risk of adverse maternal and neonatal outcomes in 2021.

* Faletau, J., et al. Falling into a deep dark hole: Tongan people's perceptions of being at risk of developing type diabetes. *Health Expectations: An international journal of public participation in health care and health policy, 23*(4), p. 837–845. DOI 10.1111/hex.13056. Disponível em: http://search.ebscohost.com.cmdhb.idm.oclc.org/login.aspx?direct=true&AuthType=cookie,ip,athens&db=mdc&AN=32441864&site=ehost-live&scope=site. Acesso em: 3 fev. 2021.

Implementation of NEWS/NOC as per national roll out

On Hold

AUTHOR

TANYA WILSON
Clinical Nurse Director, Women's Health, Professional Development Team Lead Kidz First and Women's Health

Neonatal early warning score – NEWS

The Counties Manukau Heath neonatal early warning score (NEWS) chart remains successfully embedded into all postnatal areas.

The chart was designed and developed by a multidisciplinary steering group in 2017 following a serious adverse event review, which recommended that an observation chart with

an early warning score be implemented.

The chart uses a quantifiable score to alert staff when a baby's condition is deteriorating, and provides guidance on the escalation pathway when a baby needs to be reviewed by the neonatal team or an emergency code should be called. A risk assessment undertaken for all newborns ensures that only babies who require ongoing monitoring and early warning scores are included in this screening.

The CM Health NEWS chart was produced at the same time as the national neonatal observation chart/neonatal early warning score (NOC/NEWS) project, but was implemented earlier. The project to produce the national NOC/NEWS chart was the work of the neonatal observation chart working group, itself a sub-group of the ACC neonatal encephalopathy taskforce group. After piloting the CM Health designed chart from September 2017, and following intensive face to face education, it was rolled out to all maternity areas in July 2018.

A multidisciplinary steering group has recently been established to consider whether there would be any benefits from introducing the national NOC/NEWS at CM Health. However, with Women's Health now being well embedded in the Maternity Clinical Information System and about to update to Badgernet Global mid year, the steering group is advocating for the National NOC/NEWS to be developed in electronic format before any decision about its implementation is made.

Encouraging low-risk women to birth at home or in a primary facility

On Track

AUTHOR

STEPHANIE EMMA
Project Manager

Primary birthing units and induction of labour

Two important projects focusing on primary birthing and induction of labour are underway in our maternity service, with a project manager appointed in November 2020 to oversee both.

The GROW Primary Birthing Project is reviewing and updating CM Health's primary birthing strategy and facilities. The goal is to promote low-risk birthing, in primary units and culturally appropriate settings, through services that have been co-designed by women, whaanau and our community.

The Induction of Labour Project is reviewing the induction of labour process for women and the clinical work flows for staff, in the context of a rising number of women who are undergoing induction of labour driven by clinical complexity in CM Health facilities.

The issues the projects address

CM Health's primary birthing facilities need to be updated and redesigned. To do this, we need to understand the current and future needs and aspirations of our birthing women, their babies, families, whaanau and fanau; with a co-design partnership an essential part of the process.

We are mindful that how we provide maternity care, the increased complexity of some of the birthing population and the expectations of our community have changed since our current primary birthing units were constructed. We also acknowledge that we need to address the current barriers to access, with a particularly strong focus needed on improving maternal access and health outcomes for Maaori and Pacific women.

Primary birthing units play a significant role in CM Health's maternity services network. They are intended to enable local women with low-risk pregnancies to deliver their babies in a non-medicalised environment, with a strong primary care focus, closer to home. The units are midwife-led, and support antenatal care, primary birthing and inpatient postnatal care.

Our maternity secondary care services at Middlemore are currently housed in the older Galbraith block and are increasingly stretched, in terms of both the acuity and complexity of the care they provide. By ensuring that primary birthing options meet the needs of the majority of birthing women, we will enable our secondary services to focus on the growing group of women with complexities who need a higher level of care.

The Induction of Labour Project recognises that the combination of risk factors faced by our population is driving the increased demand for secondary maternity care.

Most significantly, our Maaori and Pacific communities are inequitably affected by socioeconomic deprivation and its associated health risks, including obesity, diabetes and smoking.

The project aims to improve women's journey through the Birthing and Assessment Unit at Middlemore. It will streamline the induction of labour process, from when the procedure is booked electronically, through to the care provided during the actual induction and the length of a women's stay in the unit.

As part of the project, we will be reviewing an alternative method of inducing women using oral misoprostol. This method is now being used in some other units in New Zealand, and reported as leading to shorter induction times, some reductions in interventions required, including caesarean section, and improved women's satisfaction in the process. We anticipate running an initial pilot for a low-risk cohort, such as women undergoing induction because their pregnancy is overdue, with any changes carefully audited.

In summary, the changing expectations of birthing women, the strain on Middlemore's secondary services, and the current state of all of our maternity facilities, mean that we must consider all options to deliver better services in our primary birthing facilities, while also improving the quality and efficiently of our secondary services. It is crucial that these services support the needs and aspirations of our women, and are co-designed through strong engagement with our birthing community, to ensure that primary birthing in Counties Manukau in the future contributes to an inclusive and culturally sound birthing strategy.

Equitable access to post partum contraception, including regular audit

Achieving - Ongoing

AUTHOR

AMANDA HINKS
Maternity Service Development Manager

Increasing access to long-acting reversible contraception for postnatal mothers

Evidence* has shown that long-acting reversible contraception is acceptable to women and provides benefits that alternative methods of contraception do not necessarily afford, such as reliability, fit and forget, minimal side effects, and being easily reversible. Women's Health is committed to supporting postnatal mothers to access conversations about contraception and, if desired, long-acting reversible contraception either as an in-patient or through referral to a GP or contraception clinic.

The Women's Health maternity service division has been supporting access to funded long-acting reversible contraception for postnatal mothers since 2016. Initially, service provision relied on the availability of clinicians who were trained to insert long-acting reversible contraption, such as a Jadelle™. This meant that the service was ad hoc and women could not be guaranteed they would get the subdermal implant, which in turn made it difficult to discuss

* Best Practice Advocacy Centre NZ. (2019). *Contraception: Which option for which patient?* Retrieved from https://bpac.org.nz/2019/contraception/options.aspx

long-acting reversible contraption as an option during the antenatal period. During this period, postnatal mothers could be referred to GPs or Family Planning for long-acting reversible contraception, although non-attendance rates for such referrals were high, at two-thirds of the referrals.

In July 2019, the Ministry of Health introduced a Crown funding agreement to increase access to long-acting reversible contraception. Women's Health was awarded funding to strengthen equitable access to the contraception, and started employing nurses for this work in October 2019.

The objective of the funded service is to liaise with other women's and maternity health staff to support women within priority population groups to receive the following contraceptive services before they are discharged from secondary care:

- contraceptive counselling and education
- sub-dermal contraceptive implant (Jadelle™) insertion
- referral for an intrauterine contraceptive device or intrauterine system
- non-LARC contraception.

For maternity services the funding has enabled two full-time contraception registered nurse roles to be developed and employed. Together they provide a 7-day-a-week service, with an additional clinical nurse specialist available four days a week. To date, the service has provided an average of 45 sub-dermal contraception implants to postnatal mothers prior to discharge each month, which equates to approximately 540 per annum, and conducted 600 contraception conversations each quarter.

A clinical nurse specialist also provides clinical leadership to maternity nurses regarding contraception, and supports service and skills development for our current contraception nurses around long-acting reversible contraception. The clinical nurse specialist will also lead the development of a community clinic for removing long-acting reversible contraception, based at a primary birthing unit and enable women to access pre-conception advice and encourage them to returning to the unit to find a lead maternity carer for their antenatal care.

Access to post-placental intrauterine contraception devices and systems

As part of our commitment to increasing access to long-acting reversible contraception for women birthing in our maternity services, at CM Health obstetricians have been actively offering to insert intrauterine contraception devices and systems (IUCD/IUS) in women, after both vaginal births and elective (not emergency) caesarean sections.

Eighty-eight women elected to have an IUCD inserted after an elective caesarean section over a 12-month period, with 59 of these women residing in a quintile 5 area (67 per cent) and 44 identifying as Maaori or Pasifika (50 per cent), indicating that this form of contraception is acceptable to our priority populations.

Insertion of a post-placental IUCD/IUS after a vaginal birth can occur up to 48 hours after the birth or 4 weeks following the birth. We plan to have skilled inserters available at other birthing sites, such as primary birthing units, so this service can be offered to more postnatal mothers.

Informing women and whaanau about the devices

To introduce and socialise the post-placental IUCD procedure posters and an accompanying pamphlet were designed using consumer input.

The posters and pamphlets were circulated to antenatal clinics, lead maternity carers and district health board midwives to display and hand out when the subject of contraception is discussed. Examples of the pamphlets and poster are shown overleaf.

Figure 14 and Figure 15 on page 71 show the number and demographic make-up of the women who received an IUCD or IUS following an elective caesarean section in the 6 months from 1 July to 31 December 2020. The demographic data reflects the birthing population at Counties Manukau Health, which has seen an increase in the birth rate to Indian women over the past 2 years.

Audits to track device expulsion rates have been set up. However, it can be difficult to maintain direct contact with women, and a different way of accessing this information is required, so that we can accurately gauge the effectiveness of insertion immediately post-birth.

▼ *Information pamphlet for women and whaanau explaining the post-placental intrauterine device procedure.*

Post Birth:

You have had an IUCD placed.

Yours is called: _____

It works as a contraceptive until: _____

After insertion

A few women feel light-headed and nauseous, this is usually short lasting.

There is a small risk of pelvic infection. If you have any lower tummy pain that does not go away, fever, heavy bleeding or vaginal discharge which may have a smell then you should contact your doctor. IUCD's do not prevent sexually transmitted diseases. Using condoms will help reduce the risk of infection.

IUCDs and breastfeeding

Placement of an IUCD immediately after birth has not been shown to interfere with breastfeeding.

Postpartum Care

After the IUCD is placed, you will receive normal postpartum care. The IUCD may make your periods heavier, (once they return after the birth) longer and a bit more crampy/painful for a few months before it settles. Paracetamol is the most common treatment for pain. If bleeding continues to be heavy or persistent please see your GP.

When will I be safe from pregnancy?

It is advisable to use another type of contraception e.g. barrier (condoms) until 6 weeks after insertion when the correct IUCD position can be checked by your GP.

Follow-up

Please make an appointment to see your GP 6 weeks after IUCD insertion to check the position of the IUCD and trim the strings. This visit is **free** to eligible women. Please check your eligibility with your GP..

In the unlikely event of having a positive pregnancy test please see your GP so an early scan can be organised due to the risk of an ectopic pregnancy.

Checking the IUCD after your period.

After every period you must check the strings are still in the right place by inserting two fingers into your vagina and feeling for them.

If you cannot feel them, the IUCD may have fallen out. It is important that your GP checks this. If the IUCD has fallen out, you will be able to get pregnant.

If your IUCD falls out, contact your GP.

We recommend not having intercourse until the strings have been shortened.

DO NOT PULL ON THE STRINGS.

COUNTIES MANUKAU HEALTH

Department: Women's Health	Last updated: September 2020
Approved by: Clinical Director Women's Health	Next review date: September 2022
Owner: WH Obstetric Clinical Practice Group	Version 1

Intrauterine Contraception Device Insertion, following vaginal birth

Information for pregnant Women and Whanau

COUNTIES MANUKAU HEALTH

Women's Health Division

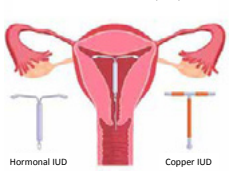
What is an intra-uterine device?

An intrauterine device (IUCD) is a very effective type of birth control that is made of a T-shaped plastic rod that stays in your uterus (womb).

There are multiple types of IUCDs available:

- Copper IUCD: no hormones, effective for 10 years
- Hormonal IUCD (**Mirena®**) contains a low dose of a progestin (a hormone), effective for 5 years.

Intrauterine Device (IUD)



Hormonal IUD Copper IUD

Once the IUCD is placed, it prevents pregnancy in over 99% of women who use it.

The Copper is toxic to sperm preventing them from fertilising an egg. The Hormones in the Mirena cause the lining of the womb wall to thin preventing the (embedding) implantation of an embryo.

The IUCD can be removed at any time by your GP or Family Panning Clinic if you decide to have another pregnancy.

What is a Post partum IUCD?

Post partum IUCD insertion is a convenient, safe, and effective way of starting birth control after having your baby.

Following the vaginal birth of your baby (which may also include a ventouse or forcep delivery) and the delivery of your placenta (whenua/afterbirth) an IUCD can be placed by the doctor.

How does PPIUCD placement compare to IUCD placement in the clinic?

IUCDs placed 10mins to 48hrs after delivery of the placenta have a 27% (27 out of 100 people) risk of it falling out.

If the IUCD moves it maybe uncomfortable and will not provide birth control. It will need to be removed.

PPIUCD placement may be more comfortable to place compared to an IUCD placed in clinic, because as the cervix will be open and there will be pain relief if needed.

Placement of an IUCD immediately after birth has not been associated with increased rates of infection, damage to your uterus (womb), or bleeding after delivery.

PPIUCD insertion is a safe and convenient way for you to begin birth control.

Are there reasons for not placing a PPIUCD?

Most women can have an IUCD. Women with the following will not be able to receive an immediate IUCD but this will be discussed with you:

- Heavy vaginal bleeding following the birth
- Suspected infection in the womb or untreated sexually transmitted infection
- Uterine abnormalities (womb).

If an IUCD cannot be placed immediately post birth, talk to your midwife about how you can be referred for an IUCD insertion at a later date, or about alternative methods which may suit you.

FIGURE 14 ▼

Ethnicity of women opting for IUCD /IUS insertion following elective caesarean section, 1 July to 31 December 2020

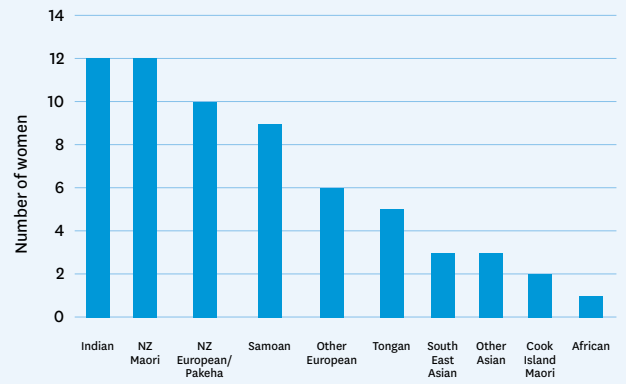


FIGURE 15 ▼

Number of women opting for IUCD /IUS insertion following elective caesarean section, 1 July to 31 December 2020

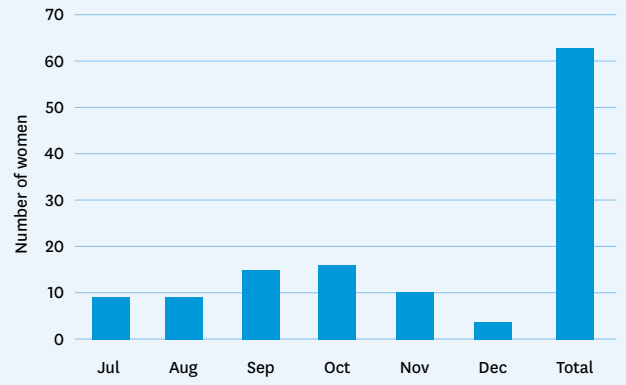
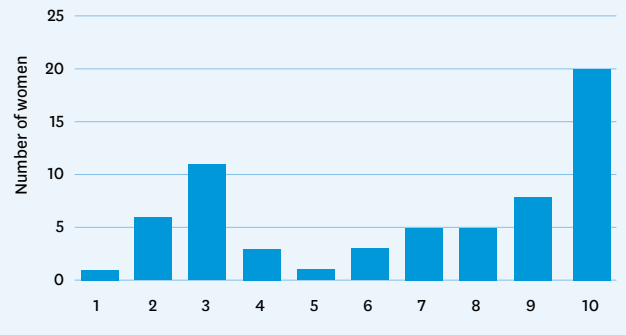


FIGURE 16 ▼

Domicile of women opting for IUCD /IUS insertion following elective caesarean section, 1 July to 31 December 2020



▲ *Poster informing women and whaanau about the post-placental IUCD option.*

Health literacy to support making contraception choices

Women report not having been aware of the options and valuing the nurses' provision of unbiased information, which they can then use to support their decision-making. They also value being able to have their partner or a whaanau member present during these conversations.

The nurses appreciate having dedicated time to discuss all options with postnatal mothers and being able to provide a method of contraception before the woman is discharged home. To support postnatal mothers with decision-making in this immediate postpartum period, nurses use visual aids of devices and have access to language appropriate information.

Posters to raise awareness of the options and services available have been developed, aimed at all women, postnatal mothers and health professionals, as shown overleaf.

▲ *Poster to raise awareness of contraception options and services*

Antenatal discussions about contraception

From 1 July 2020 to 31 December 2020, we carried out a small pilot to explore how acceptable antenatal discussions about contraception were for women and whether they supported decision-making. The aim of the pilot was to support postnatal mothers to access the contraception of their choice and to avoid duplication of information or women feeling pressured.

The contraception decisions women in the priority populations made after a consultation with the contraception nurse service during the pilot identified that 28 per cent (n=137) of women residing in a quintile 5 area accepted a subdermal implant before they were discharged home; compared with 51 per cent (n=247) of women in the same priority group who opted for a non-long-acting reversible contraceptive method.

As a result of the feedback gathered, we have set up a process enabling pregnant women to be referred throughout their antenatal period to the contraception nurse service, using the maternity clinical information system. This has enabled the contraception nurses to provide tailored information in a timely way, which meets the women's individual contraception needs.

The figures also indicate that 66 per cent (n=315) of women residing in quintile 5 areas opted to be discharged with no contraception devices.

Access to funded vasectomy

Vasectomy has been available as a funded contraception option at Counties Manukau Health since 2015. Vasectomy is recognised as a safe, effective and timely option for people who have completed their family.

Providing this service supports women who might otherwise require a surgical procedure, with the associated recovery period and consequences. Although access to funded long-acting reversible contraception is now a viable alternative option to a tubal ligation, for some women and their partners, a vasectomy is a more acceptable method.

From July 2019 to June 2020, funding was provided for 132 vasectomies. Men receiving the funded procedure must reside in the CM Health catchment area, be eligible for publicly funded health services, and be certain their family is complete. In addition, their partner must be either currently or during the previous 6 months have received care under CM Health maternity services; or be seeking a termination of pregnancy; or be seeking a tubal ligation.

AUTHOR

DR SUE TUTTY
GP Liaison, Primary care

Long-acting reversible contraception

In April 2019, the Ministry of Health made funding available for initiatives aimed at decreasing the rates of unplanned pregnancy, increasing equity of access to contraception for low-income women and those living in deprivation, reducing poor health outcomes associated with an unplanned pregnancy, and supporting women to make decisions about their fertility.

CM Health decided to use this funding to provide long-acting reversible contraception (LARC) services for Maaori and Pacific women, and women living in quintile 5 areas and with community services cards. Six workstreams were formed: five are described below, with the sixth (maternity services) described in a previous section.

Overall, there has been a delayed uptake of LARCs services to date. However, the services are now gaining momentum, as primary care responds to this contract. In the next year, we hope to see increased community awareness of LARCs, and for all women who choose this form of family planning, to be able to access the LARC of their choice.

Primary care contracts

CM Health worked with PHOs to make LARC as widely available as possible for the priority population of women we had identified. Any GP or practice nurse working in Counties Manukau or seeing CM Health patients can access funding for LARC insertions, providing they have been credentialed to provide this service.

From July 2019 to June 2020, 232 LARCs were inserted in primary care and 442 conversations held with women about the service. Of the women seen, 49 per cent were Pasifika, 26 per cent Maaori and 54 per cent were from quintile 5 areas.

The roll out of the LARC contract has been slower than we anticipated, with the work significantly interrupted by COVID-19 pandemic. However, a steady stream of health professionals continue to request training and credentialing.

The aim is for every large practice to be able to offer LARC to its patients and for every small practice to be able to refer to another GP who is a LARC inserter, if they are unable to offer the service themselves. Work still needs to be done with the PHOs to achieve this level of coverage.

On 1 December 2020, we extended the priority population for the service to include all women who have ever been engaged in secondary mental health services or the community drug and alcohol service. The criteria for claiming for conversations was also expanded to include all health practitioners, in order to increase the awareness of LARCs in the community.

Mangere clinic

Throughout 2020, the Mangere clinic has run as a drop in and booked contraception clinic for women needing LARC. The emphasis has been on serving our priority population, but the service has not been exclusive to this group.

From July 2019 to June 2020, 119 LARCs were inserted at the Mangere clinic and 170 conversations were held. Of the women seen, 67 per cent were Pasifika, 15 per cent Maaori and 78 per cent were from quintile 5 areas.

The Mangere clinic is staffed by GPs with an interest in women's health, with nursing support provided by the cervical smear nurses. By training the nurses working at the clinic to also complete the insertions, it has been possible to reduce the wait for women if the clinic becomes busy.

The clinic was closed during level 3 and 4 lock down, but has otherwise been consistently booked. Unfortunately, the non-attendance rate has been high, particularly among new mums; in future, additional funding will be used to provide social work support to assist the women to attend.

The Mangere clinic is also our training facility for LARC insertions, and over the past 12 months there has been a full schedule of GPs and nurses requesting training at the clinic.

This has expanded our primary care workforce available to carry out insertions, and helped ensure the quality of the service provided at CM Health. The training process continues until the trainee has mastered the appropriate insertion procedure and is confident to carry it out without supervision in their own workplace. Trainees frequently attend the training more than once, until they feel sufficiently confident.

Youth health

Although, there was insufficient funding to provide LARC services for all women under 25 in Counties Manukau, we used some of the funding for the Youth Health service to educate health professionals working in schools about LARCs and to employ a nurse to do LARC insertions.

This nurse is a designated prescriber in community health, who delivers a mobile contraception and sexual health service to schools, alternative education facilities and teen parent units. She has also been working with private training establishments and running a drop in clinic at Youthline half a day a week. Due to the volume of work, we have also been funding an additional nurse for 6 months, using some underspend money.

From January 2020 to December 2020, 129 LARCs were inserted by the Youth Health team and 1525 conversations had by nurses working in schools. Of the young women seen, 27 per cent were Pasifika and 39 per cent Maaori.

Evaluation

As a new work programme within CM Health, it is essential that we carefully evaluate the LARC contract to ensure it is providing a culturally appropriate and cost-effective service. To date, the LARC evaluation has secured ethics and locality approval, and the data collection phase is due to begin. The evaluation will involve direct observations, document review, surveys and in-depth interviews with women and staff.

Communications

The communications strategy for the LARC contract has two main focuses: information for health professionals, and information for women and their whaanau. The aim is the same for both groups: to raise awareness of LARC, so women of all ages are offered the full range of choices in managing their fertility.

The following posters are two examples of the communications we have produced.

We are also developing a series of vignettes about LARCs as cultural competency teaching aides for health professionals.

Equitable access to primary mental health services

On Track

AUTHOR

ANNA HAWKINS
Clinical Coordinator, Perinatal Services

Maternal and infant mental health

Counties Manukau Health's maternal and infant mental health services are specialist, district-wide, secondary mental health services.

Maternal mental health provides mental health treatment from the first trimester of pregnancy, and up to 12 months postpartum, for woman with moderate to severe mental illness. Infant mental health works with infants, parents and caregivers where there are significant concerns regarding an infant's social, emotional and behavioural development. The teams work together, providing specialist assessment and intervention to facilitate healthy bonding and attachment between mothers and infants, in the context of maternal mental health concerns.

For all mental health services in CM Health, including maternal and infant services, referrals in the past year have reflected the significant impact of the COVID-19 pandemic in providing additional psychosocial stressors that are impacting on mental health and distress.

Notably, the lockdowns led to reduced social supports for whaanau who already had significant needs. Routine referrals decreased in lockdown level 4, as people were less likely to access primary care and other sources of referrals, while the acuity of the referrals that were made increased. Referral data indicates that there was a significant increase in referrals to maternal mental health services in September to December 2020, compared to the same period the previous year.*

From July 2019 to December 2020, we have focussed on the following areas for maternal and infant mental health service development.

Aligning infant and maternal mental health services

We have continued to consolidate the alignment of the previously distinct maternal and infant mental health services. The current focus is on reviewing the referral criteria for infant mental health services, to ensure those infants most in need of secondary services have ready access. In addition, we are trialling a referral process whereby infants who are co-admitted with their mothers to the Mother Baby Unit at Starship Hospital (as psychiatric inpatients) are offered follow-up by the infant mental health team. The aim is to ensure any disruption to the attachment bond, due to severe mental illness, is assessed.

Increasing cultural responsiveness

Both the maternal and infant mental health teams have been increasing their cultural capabilities. A crucial part of this has been building working relationships with the Rapua Whaioranga Maaori clinical cultural liaison service, and Faletoa Pacific clinical cultural liaison services; including facilitating their direct involvement in cultural assessments and consultation, through contributing to clinical discussions at multidisciplinary team meetings.

Continuing education, consultation and liaison

In September 2020, the Midwifery Guidelines for Maternal Mental Health were launched with a series of workshops co-facilitated by CM Health's community midwifery service, the associate charge midwife and clinical coordinator, and clinicians from the maternal mental Health team. The workshops provided education on perinatal mental health concerns, referral criteria and guidance on referral quality, plus discussion around engaging tangata whaiora with services.

In 2021, the maternal mental health team plan to produce a referral pathway infographic, based on the guidelines to

* Referral data Maternal Mental Health 2018-2020. Information Patient Manager iPM. 2018-2020.

further clarify the process for midwives referring to mental health services.

We have heard from midwives that there needs to be prompter liaison when women are seen by the maternal mental health service. We have developed an audit tool to review care and coordination planning between the service and midwives, with the aim of liaison occurring within 4 weeks of referral. This audit will be conducted every 3 months beginning in 2021.

A survey has also been completed by a sample of midwives about their educational needs. The results will be used to inform the content of the annual education days for maternal and infant mental health services, to ensure these learning needs are specifically addressed.

Ongoing audit and review of MEWS & trigger tool

Commencing 2021

AUTHOR

DR KERRIE HIDES
Obstetrician and Gynaecologist

Early warning systems support staff to recognise acute illness and deterioration and respond rapidly

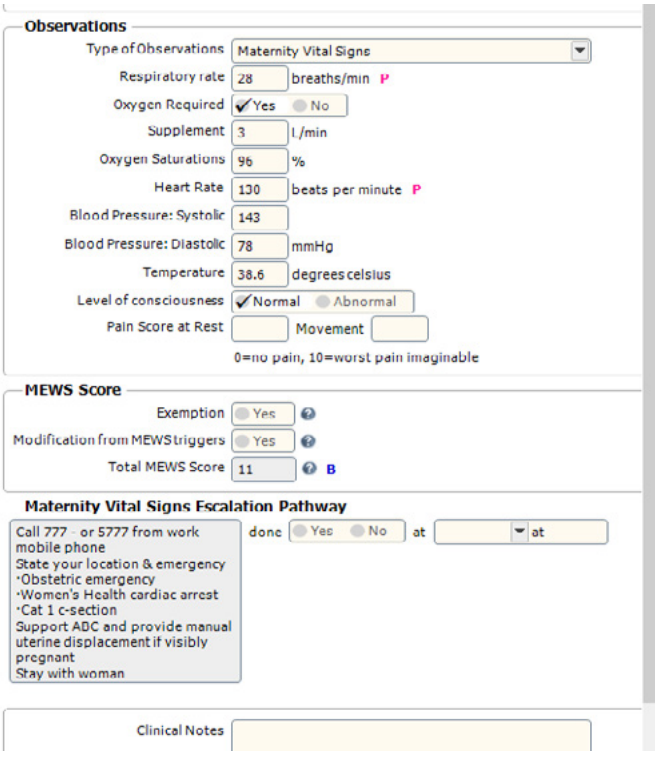
In Counties Manukau Health, we introduced a maternity early warning system (MEWS) chart in our maternity clinical information system (MCIS) in 2020 (see next page). Using a standardised MEWS chart supports clinical judgement and best practice, particularly in cases with increasing complexity. MEWS scores are organised into four categories with 10+ being the most urgent.

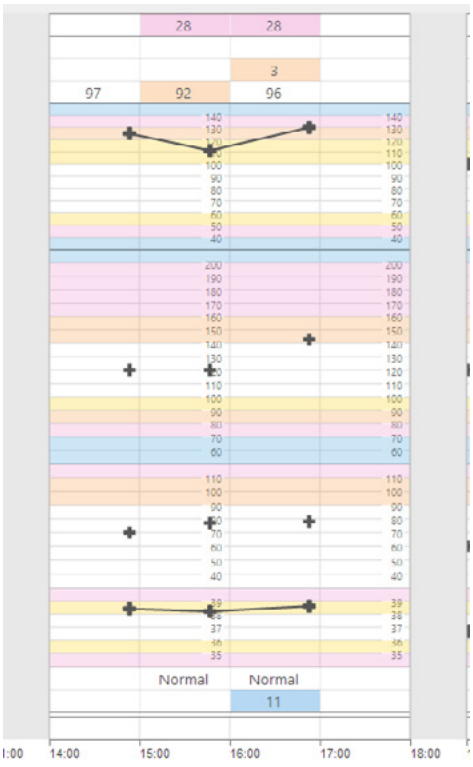
The MEWS is used alongside a comprehensive escalation pathways plan, which is automatically populated according to the patient's MEWS score, as shown on next page. The pathways appear automatically for both community and primary birthing unit locations and Middlemore Hospital inpatients.

Together, these documents ensure timely recognition of and response to physiological deterioration, and provide clear direction on what actions to take. They are supported by a MEWS policy, which details the standards for measuring and recording vital signs, calculating the MEWS score and using the escalation pathway.

Education on using MEWS was delivered through PROMPT training, using a role play, and is included in the annual update training for midwives. It is also covered during the nurses in maternity study day. Maternity case note reviews have consistently demonstrated excellent use of the MEWS escalation pathway.

In 2021, we will be looking at MEWS outcome measures as part of our maternal morbidity audit statistics.





◀ *MEWS chart on the MCIS (left) and the graph this populates (right), in this case with a score of 10+*

THIS CHART IS FOR PREGNANT OR RECENTLY PREGNANT WOMEN ONLY (WITHIN 42 DAYS)

ESCALATE CARE FOR:
- **ANY WOMAN YOU, THEY OR THEIR FAMILY ARE WORRIED ABOUT, REGARDLESS OF VITAL SIGNS OR EARLY WARNING SCORE**
- **ACUTE FETAL CONCERN**

Mandatory Obstetric escalation pathway
Primary Birthing Unit

Total Early Warning Score (MEWS)	Action	
MEWS 1-4	• Manage pain, fever or distress • Inform Charge/Senior Midwife • Discuss increased observation frequency one hourly or more frequent with Charge/Senior Midwife • Document in notes	
MEWS 5-7 Acute illness or unstable chronic disease	• Inform Charge/Senior Midwife • Call Consultant within 30 minutes • Plan for transfer to MMH ***Call Registrar if Consultant unavailable***	• Increase observation frequency to at least every 30 min. • Document in notes
MEWS 8-9 *or* any vital sign in Pink Zone Likely to deteriorate rapidly	• Inform Charge/Senior Midwife immediately • Call Consultant immediately • Prepare for urgent transfer to MMH ***Call Registrar if Consultant unavailable***	• Increase observation frequency to at least every 15 min. • Document in notes
MEWS 10+ *or* any vital sign in Blue Zone Immediately life threatening critical illness	• Call (1)111 for urgent ambulance transfer to MMH • Call Consultant urgently • Inform Charge/Senior Midwife in B&A • Support ABC and provide manual uterine displacement if visibly pregnant • Stay with woman	

A full set of vital signs with corresponding MEWS must be taken and calculated each time at the frequency stated in hospital policy. If there is no timely response to your request for review, escalate to the next coloured zone.

Modification to Maternity Early Warning Score (MEWS) Triggers

THIS CHART IS FOR PREGNANT OR RECENTLY PREGNANT WOMEN ONLY (WITHIN 42 DAYS)

ESCALATE CARE FOR:
- **ANY WOMAN YOU, THEY OR THEIR FAMILY ARE WORRIED ABOUT, REGARDLESS OF VITAL SIGNS OR EARLY WARNING SCORE**
- **ACUTE FETAL CONCERN**

Mandatory Obstetric escalation pathway
Middlemore

Total Early Warning Score (MEWS)	Action	
MEWS 1-4	• Manage pain, fever or distress • Discuss increased observation frequency with Charge Midwife/ Nurse • Consider discussion with House Officer/Registrar if concerned • Document in notes	
MEWS 5-7 Acute illness or unstable chronic disease	• Inform Charge Midwife/Nurse • House Officer or Registrar review within 30 minutes • PAR Team notification ***Call Consultant if House Officer/ Registrar unavailable***	• Increase observation frequency to at least every 30 min. • Document in notes
MEWS 8-9 *or* any vital sign in Pink Zone Likely to deteriorate rapidly	• Charge Midwife/Nurse review immediately • Registrar review within 20 minutes • PAR Team review within 30 minutes ***Call Consultant if Registrar unavailable*** ***If NO medical review within 20 minutes escalate to Blue Zone 777***	• Increase observation frequency to at least every 15 min. • Document in notes
MEWS 10+ *or* any vital sign in Blue Zone Immediately life threatening critical illness	• Call 777 – or 5777 from work mobile phone • State your location & emergency - Obstetric emergency - Women's Health cardiac arrest - STAT caesarean section • Support ABC and provide manual uterine displacement if visibly pregnant • Stay with woman	

A full set of vital signs with corresponding MEWS must be taken and calculated each time at the frequency stated in hospital policy. If there is no timely response to your request for review, escalate to the next coloured zone.

Modification to Maternity Early Warning Score (MEWS) Triggers

▲ *Escalation pathways generated from MEWS charts, for community births and primary birthing units (left) and Middlemore Hospital (right)*

Reduce preterm birth and neonatal mortality

On Track

AUTHOR

DR HEENA LAKHDHIR
Senior Medical Officer, Obstetrics and Gynaecology

Preterm birth clinic

Preterm birth is defined as birth before 37 completed weeks' gestation (up to 36 weeks and 6 days), and is one of the most significant causes of perinatal morbidity and mortality. The incidence of preterm births is between 5 and 10 per cent in most developed countries.

Prevention of preterm birth has the potential to reduce adverse outcomes, and involves identifying high-risk women and providing intervention to reduce the risk of preterm birth.* Identifying high-risk women is particularly important, as the risk of experiencing a preterm birth after one and two previous preterm births is 15 per cent and 41 per cent respectively.†

CM Health launched its Preterm Birth Clinic in early 2019. The clinic is located at Middlemore Hospital, and is a dedicated clinic to review women who have a history of:

- preterm birth or preterm premature rupture of membrane at, or less than 26 weeks
- previous second trimester losses
- major surgery to their cervix, such as a cone biopsy or multiple large loop excision of the transformation zone (LLETZ) treatments.

Women who have a history of preterm birth later than 26 weeks are reviewed in the general obstetric antenatal clinics.

The Preterm Birth Clinic is managed by an obstetrician with a special interest in preterm birth, and ultrasound scanning, and a fetal medicine midwife. It provides a streamlined service which includes taking women's histories to identify risk factors for preterm birth, monitoring the cervical length by transvaginal ultrasound, and providing immediate preterm birth prevention interventions, such as a cervical cerclage or progesterone‡ pessaries as required. Education on modifiable risk factors for preterm birth, such as smoking, sexually transmitted disease and being over-weight, are also addressed during the clinic.

Most women are seen fortnightly at the clinic, with the final visit made at 23 to 24 weeks. At the exit visit, some women may receive a QUiPP test (a clinical decision-making aid based on previous outcomes for the woman, quantitative fetal fibronectin values and cervical length). Women who are at high risk for an early preterm birth (despite treatment) will receive prophylactic steroids to reduce the risk of perinatal complications.

Women appreciate the wrap-around care the clinic provides, and the continuity of care and oversight during the first 24 weeks of pregnancy. For many, the scans and pictures of their babies provide reassurance and affirmation that their pregnancy is progressing well.

The clinic also provides opportunity for training in scanning and cervical length surveillance. This will enable us to extend the service to more women. Both the clinic's obstetrician and fellow are currently completing a Diploma in Diagnostic Ultrasound Training.

Feedback to date from women and their lead maternity carers has been very positive, and we hope to continue to provide this service and expand it in the next few years.

---

* https://edu.cdhb.health.nz/Hospitals-Services/Health-Professionals/maternity-care-guidelines/Documents/GLM0027-Preterm-Labour-Birth.pdf

† Mercer BM, Goldenberg RL, Das A, et al. The preterm prediction study: a clinical risk assessment system. *Am J Obstet and Gynecol* 1996; 174:1885-9.

‡ There is good evidence that progestagenic agents, such as 17Hydroxy progesterone and natural progesterone reduce the risk of preterm labour. See, *Tocolysis for women in preterm labour*. RCOG-Green-top Guideline 1b February 2011.

Monitor key maternity indicators by ethnicity to identify variations in outcomes & improve areas where there are differences in outcome *Achieving*

Co-design models of care to meet the needs of Indian women *Begun*

AUTHOR

DR HEENA LAKHDHIR
Obstetric Lead, Diabetes in Pregnancy Service

Measures to improve perinatal outcomes in women of Indian ethnicity

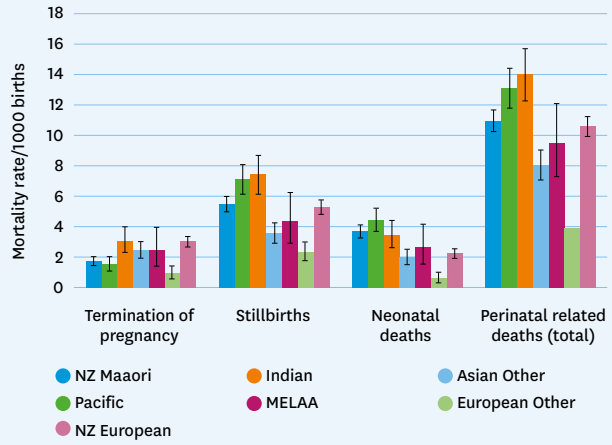
Perinatal outcomes for women of Indian ethnicity is a priority for the Women's Health division at Counties Manukau Health.

The 2018 Perinatal and Maternal Mortality Review Committee report showed a significant overall reduction in perinatal-related deaths in Aotearoa/New Zealand since 2007, as well as a significant reduction in fetal and early neonatal deaths.

However, babies of Indian women continued to be over-represented in the mortality data. When considered by prioritised ethnic group, neonatal mortality rates are significantly higher for babies born to Indian, Pacific and Maaori mothers, compared with babies with New Zealand European mothers, as shown in Figure 17.

FIGURE 17 ▼

Perinatal related mortality rates (per 1,000 births) by baby's prioritised ethnic group, 2014 to 2018



For Indian mothers, the perinatal deaths rates were higher due to preterm birth, placental dysfunction and antepartum haemorrhage.

Reasons for high perinatal loss rates

It is unclear what causes the higher perinatal death rates in babies of Indian women. One hypothesis is that the higher rates of coexisting medical conditions – such as diabetes (including gestational diabetes), hypothyroidism, anaemia, cholestasis and possibly an earlier maturation of the placenta – are having a negative impact.

Another possibility, raised in the context of Australian research*, is that many Indian women are recent migrants to New Zealand, and a period of acculturation may be needed before outcomes improve. Despite this, it remains an urgent priority for CM Health to support these women.

Although we have some indication of what may be driving the poorer outcomes, there is currently little evidence available to guide best practice in addressing it. Dr Heena Lakhdhir, a CM Health obstetrician and gynaecologist of Indian origin, is looking to address this lack. Dr Lakhdhir is an advisor for a research project being conducted by PhD student Esti De Graf at Auckland University that is evaluating the causes for the disparity. It is hoped the project may provide some answers.

* Mozooni, M., Preen, D. B., & Pennell, C. E. (2020). The influence of acculturation on the risk of stillbirth in migrant women residing in Western Australia. *PLOS ONE, 15*(4): e0231106.

Quality improvement initiatives

CM Health serves a large number of Indian women. During 2020, 15.6 per cent of our birthing population (1242 women) identified as being Indian. Addressing the higher perinatal death rate is a priority for Women's Health, and there are several quality improvement initiatives underway within CM Health that will help women of Indian ethnicity. Some of the main ones that should have a positive impact on perinatal outcomes are listed below.

- Indian women are over-represented in both the diabetes in pregnancy and the preterm birth clinics, and both services are evolving to better meet their needs. The dietician at the diabetes clinic provides advice suited to an Indian diet and for specific dietary needs (for example, vegetarian diets that are often high in carbohydrates).
- Health-board-wide campaigns to encourage pregnant women to sleep on their side and education them around fetal movements will both help reduce the risk of still birth.
- Last year, an educational session to increase cultural awareness of Indian practices around birthing was run for the charge midwives at CM Health. Participants found the session very useful, and more teaching sessions are planned. With a better understanding of cultural practices, we can improve Indian women's engagement and satisfaction with our maternity services. Ongoing research, training and education in this area will remain important measures for improving outcomes.

Co-design models of care to meet the needs of women <20 years

On Track

AUTHOR

ROCHELLE BASTION
Service Development Manager, Child Health

Start Well Maangere

The South Auckland Social Wellbeing Board was established in 2016 to support whaanau experiencing challenging life circumstances and multiple life stressors. The board's particular focus is on children aged 0 to 5 years and their whaanau. This focus recognises the importance of a child's early years in supporting a 'best start' in life and the lasting impact that early life experiences have on a child's future.

The board started its Start Well prototype in November 2017. Start Well is a home-visiting initiative supporting mothers under the age of 20 in South Auckland, with support given from pregnancy through to when their child is aged 5. Counties Manukau Health, Oranga Tamariki, Family Start Maangere, Plunket and the Ministry of Health were all involved in establishing the prototype.

Start Well uses a key and co-worker model, driven by the reality of the mother and whaanau, and using both clinical nurse specialist and social work expertise. It aims to support the health and social needs of whaanau experiencing multiple life stressors (such as housing insecurity, poverty, addiction) by taking a strengths-based approach. It is a style of practice and a way of working that prioritises relationship and whaanau partnership, while also providing professional expertise and system knowledge. The aim is to optimise long-term holistic wellbeing by providing intensive, flexible and whanau-led support.

From its inception, Start Well has received referrals from any source. Of the mothers referred to Start Well, the majority are referred by a district health board midwife. The second most common source of referrals was from other whaanau members, such as a sister, mother or grandmother of a young mother or self-referrals through word of mouth. The prototype is now closed for referrals.

Since the prototype began, the Start Well team have worked intensively with 199 individual mothers, children and wider whaanau members, with other wider whaanau members also being supported as part of an inclusive whaanau approach. Of the 37 mothers who have engaged with the service at any time since November 2017, 31 mothers remained engaged as of July 2020, with the majority of these being Maaori and Pasifika young mothers.

Lessons learnt

An interim learning report for Start Well will be completed shortly by the South Auckland Social Wellbeing Board. It includes both qualitative and quantitative data reflecting the experiences of whaanau. Whaanau voice has shown that whaanau are very supportive of the way in which Start Well operates and that the relationship-based approach that underpins the service is highly valued. The prototype has enabled a deep understanding of the challenges facing young mothers living in South Auckland, including housing instability, substance use, financial challenges, family violence and intergenerational trauma, as well as barriers to care, current service gaps and opportunities to strengthen cross-agency working.

An example of one measure being used to understand the impact of the Start Well way of working, along with other measures, is Acuity. To quantify the level of complexity and stressors facing whanau, the Start Well team developed an acuity tool that combines the assessment of health and social complexity on a scale of 1 to 5, with 5 being the highest level. Average acuity scores for the total Start Well cohort have shown a downward trend in acuity over time, and in many instances, this mirrors a reduction in the reported stress experienced by mothers and whaanau.

Where to from here?

The intention is that Start Well will continue for a further 2 years, until the initial group of children turn 5 years old.

This time will be used to further develop the Start Well prototype, including strengthening its cultural responsiveness; adapting and introducing a play-based programme (ENGAGE) for parents to do with their child to support their executive function development; and continuing to build understanding of the impact that this way of working has on the health and wellbeing of whaanau, with particular attention to the developmental outcomes for children. The intention is to share learning from the protype across the wider 'early years' system to improve understanding and help agencies provide support that better meets the needs of whaanau experiencing multiple life stressors.

▼ *Start Well Team (2020)*

Interdisciplinary fetal surveillance education for all clinicians invoved with intrapartum care *Progressing*

Use of the Health Equity Assessment Tool (the HEAT) to assess services for the impact of health equity *Introduced*

Cultural competency workshops for all Maternity Service staff *Ongoing*

AUTHOR

HEATHER MURIWAI
Clinical Lead Advisor – Maaori Midwifery

Cultural safety education

Cultural safety across Women's Health will move into an exciting new phase once our revision of the Tikanga Best Practice Framework is completed. The framework will be the basis for all cultural safety education at Counties Manukau Health.

The revision is expected to be complete in early 2021, at which point a proposal with options for workshops, courses, online modules and face-to-face education will go to the Women's Health clinical governance group via the Maternity Quality and Safety governance group. Funding from the Maternity Quality and Safety Programme has already been allocated for this work, with the education roll-out expected in mid-2021.

The professional development team will need to be expanded to include a specialist Maaori educator, responsible for developing and delivering the cultural safety education programme. Education in this area has already started though, including:

- presentations on use of the HEAT tool to the:
  - midwifery workforce group
  - Women's Health planning workshop on 21 October 2020
  - clinical governance group
- a New Zealand College of Midwives cultural safety workshop (Birthing Across Cultures) for the senior midwifery and management group
- Treaty of Waitangi and equity workshops for new nursing staff working across Women's Health.

Implementation of HQSC maternal morbidity review toolkit and SAC rating (maternal & NE case review)

Achieving

AUTHORS

SARAH NICHOLSON
Deputy Chief Midwife

DR KERRIE HIDES
Obstetrician and Gynaecologist

Health Quality and Safety Commission maternal morbidity review toolkit and severity assessment code rating

During the latter half of 2020, Women's Health planned for the implementation of the Health Quality and Safety Commission's maternal morbidity review toolkit and severity assessment code (SAC) ratings* for SAC 3 & 4 morbidity reviews.

The Perinatal and Maternal Mortality Review Committee had previously recommended use of these tools, and their introduction was the result of multidisciplinary enthusiasm for and commitment to quality improvement.

The implementation of the guidelines and ratings has led to the development of a new Women's Health quality improvement review process, commencing in January 2021. The process aims to systematically review cases of morbidity to consider the range of factors that may have affected the woman's care, and either directly or indirectly contributed to the event.

A multidisciplinary team will review cases of maternal morbidity that have been triggered through specific coded maternity events. We have compiled the following list of events that will trigger reviews: the list has been developed with reference to the national Health Quality and Safety Commission trigger list recommendations.

CM Health morbidity trigger list for case review

- Third- and fourth-degree tears.
- Organ trauma during lower segment caesarean sections.
- Unplanned return to the operating theatre, within 24 hours following birth.
- Postpartum haemorrhage with blood loss greater than 2.5 litres.
- Pulmonary embolism during admission or within 42 days of postnatal discharge.
- Sepsis requiring higher level care or Intensive Care Unit admission.
- High acuity postnatal care (requiring a prolonged stay on the birthing unit, greater than 24 hours).
- Unanticipated admission to the Neonatal Unit for longer than 24 hours.

To pilot the new review process, during 2021 the team will review one selected trigger per quarter, with the findings and recommendations from the review presented at a quarterly morbidity meeting.

A case summary will also be completed using the Health Quality and Safety Commission's national toolkit and template. Anonymised case summaries can then be presented, and learnings discussed at the quarterly meetings. Learnings will also inform education and quality improvement initiatives such as safety briefings at staff handover and access holder meetings and be included in Koorero, the Women's Health monthly e-update.

We look forward to further developing this initiative and reporting on its outcomes in next year's Women's Health Annual Report.

* https://www.hqsc.govt.nz/assets/MMWG/PR/Review-toolkit-foundational-document-pdf-final.pdf

Implementation of Hypertension guideline, with a review/re-stock of medications to ensure easy availability & administration in acute care settings *Well Progressed. Expected Mid 2021*

Establish a clinical pathway for women with identified placental implantation abnormalities *Achieved*

AUTHOR

DR KERRIE HIDES
Specialist Obstetrician and Gynaecologist

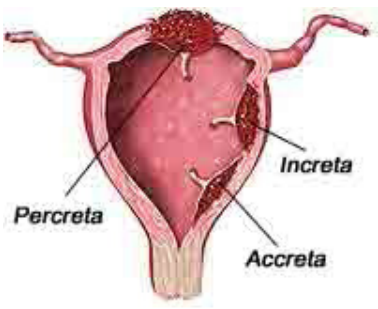
Establishing a clinical pathway for women with placental implantation abnormalities

Placenta praevia and placenta accreta are types of abnormal implantation of the placenta (placentation) that can result in life-threatening maternal haemorrhage and a significant risk of maternal morbidity.

Abnormal placental locations (see below) include:

- placenta praevia (previously known as major placenta praevia) – where the placenta lies directly over the internal cervical os; incidence is 1 in 200 pregnancies (at the third trimester)
- low-lying placenta (previously known as minor placenta praevia) – where the placenta is located less than 20mm from the cervical os (at > 16 weeks' gestation)
- placenta accreta spectrum – where the placenta invades the endometrium (accreta), myometrium (increta) or right throughout the uterus to the peritoneum or beyond to other organs (percreta). The most commonly invaded organ is the bladder.

▼ *Abnormal placental locations*



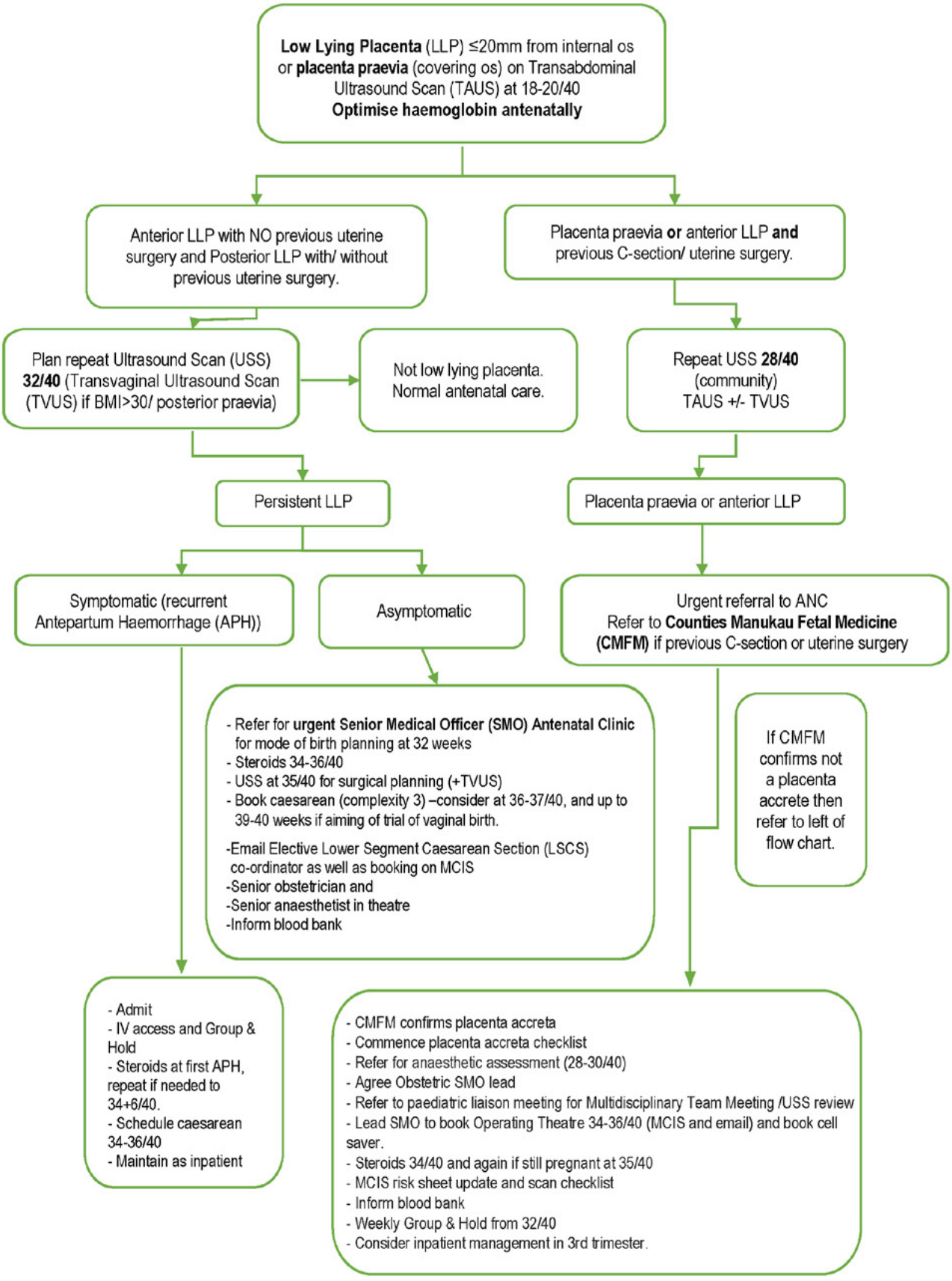
The incidence of placenta praevia and accreta continue to increase, due to rising caesarean section rates, advanced maternal age and the use of assisted reproductive technology. The timely, coordinated management of placenta praevia can reduce blood loss at birth and ultimately save mothers' lives.

The CM Health placenta praevia and placenta accreta guideline* was finalised and circulated in November 2020 and sets out a clear pathway for action when an abnormal placental location is identified (see overleaf). It covers from what to do when a woman is found to have a low-lying placenta through to how to coordinate care for a patient with a confirmed or suspected placenta accreta. The guideline promotes consistent and effective care for pregnant women with placenta praevia and placenta accreta, in order to limit the significant risk associated with these conditions.

Key aspects of the pathway include the early identification of abnormal placentation, followed by a prompt referral to an obstetric specialist. Multidisciplinary team involvement in the women's ongoing management is essential, with a lead obstetrician identified for all women with confirmed placenta accrete, and a checklist completed to facilitate safe patient outcomes. Multidisciplinary coordination of care is vital for optimising these outcomes.

* https://mcusercontent.com/433a74994ee32b4dca67cf27b/files/e3adde6c-45d6-4e42-8cae-d7d41857212c/Placenta_Praevia_and_Placenta_Accreta_11_11_20.pdf

▼ *Antenatal diagnosis and management flowchart*



Establish septic bundle kits to address human factor components, such as stress in high-acuity settings *Progressing*

Establish clinical pathways across primary and secondary/tertiary care to enable earlier recognition and treatment of sepsis *Achieved*

AUTHOR

DR KERRIE HIDES
Specialist Obstetrician and Gynaecologist

Sepsis in pregnancy and the puerperium

Sepsis is a leading cause of maternal morbidity and mortality worldwide. During pregnancy and the puerperium, women are particularly susceptible to a rapid deterioration in condition if they develop an infection. Each hour that antibiotics treatment is delayed creates a measurable increase in the risk of maternal mortality.

To enable sepsis to be recognised and treated earlier, Women's Health has developed a clinical guideline on sepsis management in pregnancy*. The guideline covers the signs and symptoms of sepsis and the importance of using the Maternal Early Warning Score chart to identify acutely deteriorating patients.

The guideline promotes the Ministry of Health's Sepsis 6 + 2 steps for responding to sepsis.

GIVE 3

- High-flow oxygen
- IV fluids
- IV antibiotics

TAKE 3

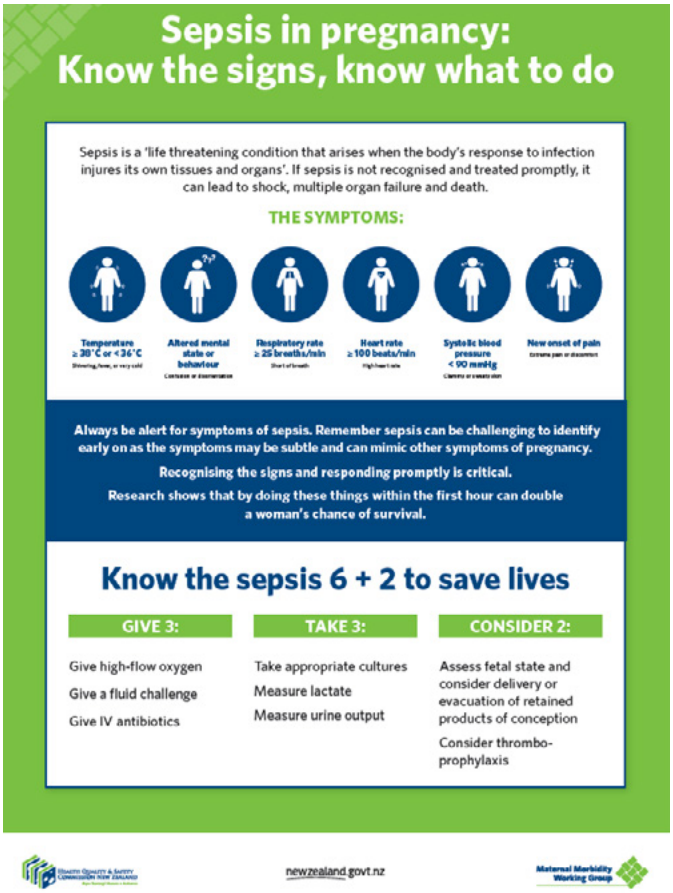
- Blood cultures
- Lactate
- Urine output

CONSIDER 2

- Fetal condition
- Thromboprophylaxis

We have incorporated this key message in our PROMPT training by including a sepsis scenario in our regular multidisciplinary team training sessions. This addition has received excellent feedback from training participants, and increased staff awareness of sepsis as a potentially life threatening condition.

The next step is to establish septic bundle kits, which we will be working on during 2021



* https://mcusercontent.com/433a74994ee32b4dca67cf27b/files/45dba0fe-66be-4d2f-88e3-140a5e379773/Sepsis_Management_in_Pregnancy_and_Postpartum_Guideline.pdf_10_10_19.pdf

AUTHORS

DR GARY JACKSON
Population Health team, Counties Manukau Health

DR SARAH TOUT
Clinical Director, Women's Health

ANDREA O'BRIEN
Data Analyst, Health Intelligence and Informatics

LYN STARK
Maternity Quality and Safety Coordinator

Clinical Indicator View of Women Birthing at CM Health

January to December 2018 & 2019

This section of our annual report is dedicated to the MoH clinical indicators. Many of these are based on the "standard primip" which reflects low risk women and therefore should be able to be used as a comparison for outcomes across DHBs. It has been produced to give us a clearer understanding of the women birthing in our Counties Manukau facilities, and their outcomes.

This knowledge leads to a deeper consideration of the women we serve and their needs. Having an accurate picture is essential to monitoring outcomes and making meaningful changes to guide quality and improvement of services and practice.

Accurate contemporaneous information input into MCIS by the carer is invaluable. Using MCIS fields and narratives allows for more precise measurement by our Clinical Coders who are required to interpret clinical documentation. The accuracy of information entered reflects the quality of the reports we prepare. We now have five complete years of clinical information from MCIS we are able to access.

Ministry of Health Clinical Indicators show either Middlemore Hospital births or CM Health domiciled women, however does not reflect all CM Health facility births. We have chosen to report on all births at CM Health facilities which includes the outlying birthing units, to give a complete view of CM Health's facility birthing outcomes.

We have also elected to compare these outcomes from across the last few years to see whether we can identify any trends and to reflect on our areas for improvement. We are committed to striving for equity across our populations and as can be seen from the ethnicity graphs also provided there is variation across ethnic groups.

This data will be the basis for some of our planned work for 2021. An area we are particularly interested in prioritising is postpartum haemorrhage.

A 'standard primipara' is a woman expected to have an uncomplicated pregnancy.

Intervention and complication rates for such women should be low and consistent across hospitals and DHBs. These women are a sub-set of the general maternity population and are not representative of all birthing women in CM Health. BMI is not included as a risk factor. Standard primiparae are women aged 20–34 years old at the time of giving birth who are giving birth for the first time at term (37–41+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 interventions.

YEAR	ALL WOMEN	ALL MULTIPARAE	NON-STANDARD PRIMIPARAE	STANDARD PRIMIPARAE*	=	% OF ALL BIRTHS
2019	7526	4627	1911	988	=	13.1%
2018	7384	4541	1807	1036	=	14.0%
2017	7361	4624	1689	1048	=	14.2%
2016	7230	4559	1598	1073	=	14.8%

* The more accurate number of primiparae varies from previous reports due to using parity from MCIS. Prior to this only gravida was available.

TABLE 11 ▼

Standard Primip Birth Location

	BOTANY BIRTHING UNIT	PAPAKURA BIRTHING UNIT	PUKEKOHE BIRTHING UNIT	MIDDLEMORE HOSPITAL
2019	55	30	55	848
2018	55	33	62	886
2017	62	46	57	883

NZ Maternity Clinical Indicators

https://www.health.govt.nz/publication/new-zealand-maternity-clinical-indicators-2018

TABLE 12 ▼

Standard Primip BMI (excludes those without BMI)

	BOOKING BMI	PRIMARY BIRTHING UNIT	MIDDLEMORE HOSPITAL	PRIMARY BIRTHING UNIT	MIDDLEMORE HOSPITAL
2019	<35	132	725	94.3%	85.9%
	35-39	6	66	4.3%	7.8%
	>40	2	53	1.4%	6.3%
2018	<35	146	771	98.6%	87.3%
	35-39	2	72	1.4%	8.2%
	>40		40	0.0%	4.5%
2017	<35	153	777	93.9%	89.2%
	35-39	9	59	5.5%	6.8%
	>40	1	35	0.6%	4.0%

In 2019 86% of standard primips birthing at MMH had a BMI <35 (725 women). If we include BMIs between 35-39, 94% of women birthing at MMH have a BMI <40 (791).

FIGURE 18 ▼

Registration with DHB or LMC in the first trimester of pregnancy by ethnicity (2017-2019)

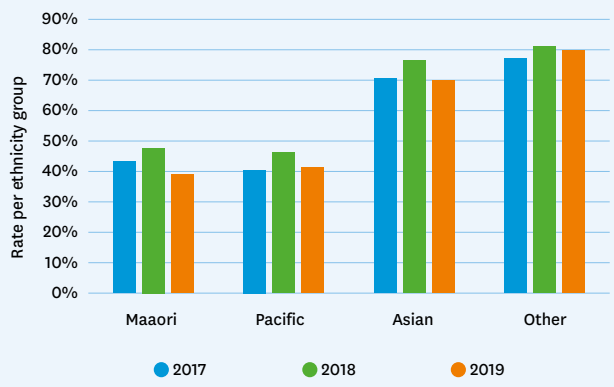


FIGURE 19 ▼

Standard primiparae who have a spontaneous vaginal birth by ethnicity (2017-2019)

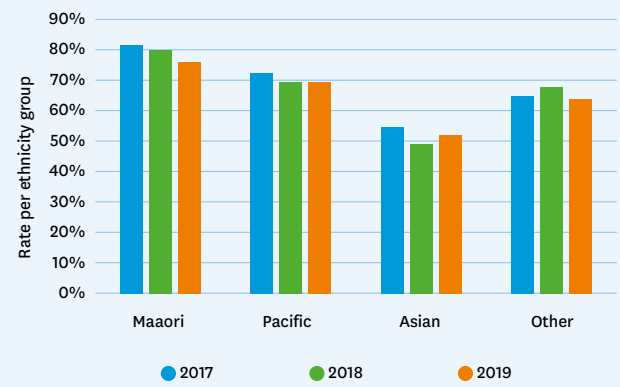


FIGURE 20 ▼

Standard primiparae who undergo an instrumental vaginal birth by ethnicity

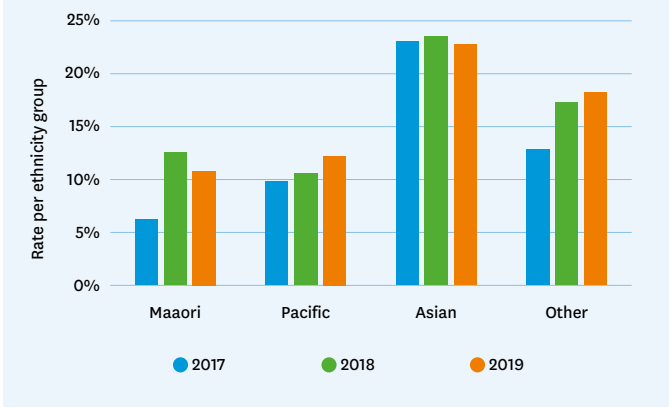


FIGURE 21 ▼

Standard primiparae who undergo caesarean section by ethnicity

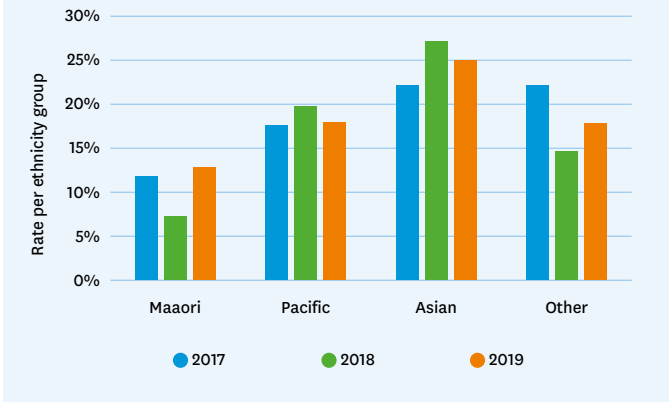


FIGURE 22 ▼

Standard primiparae who undergo induction of labour by ethnicity

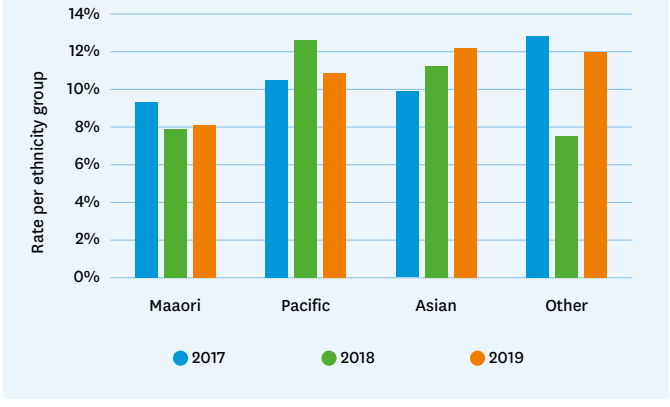


FIGURE 23 ▼

Standard primiparae with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) **Includes vaginal birth only by ethnicity

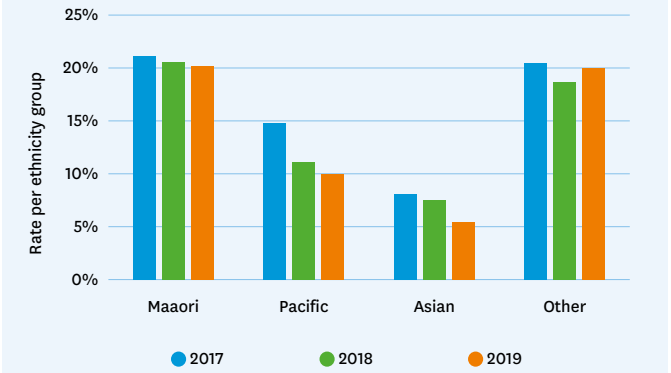


FIGURE 24 ▼

Women having a general anaesthetic for caesarean section by ethnicty

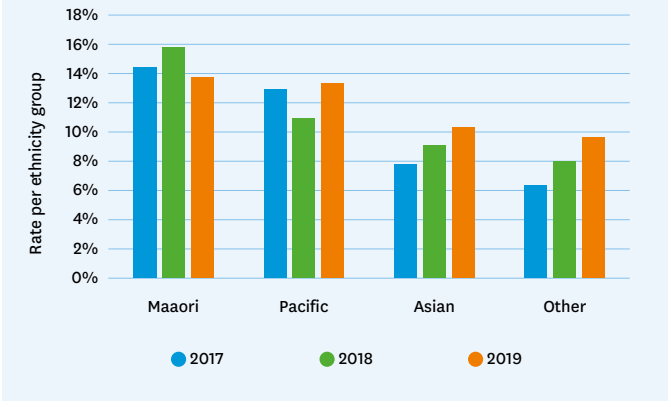


FIGURE 25 ▼

Women requiring a blood transfusion with caesarean section by ethnicty

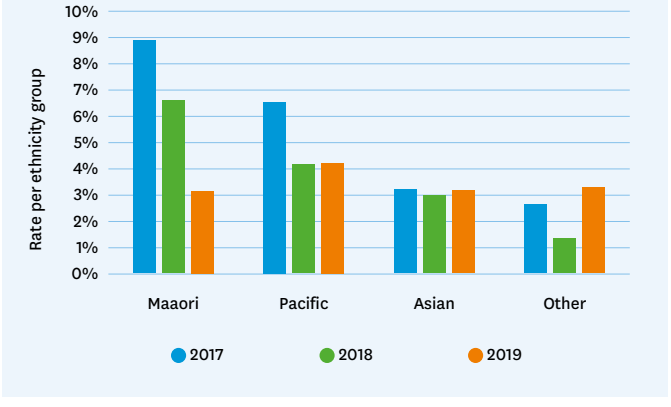


FIGURE 26 ▼

Women requiring a blood transfusion with vaginal birth by ethnicity

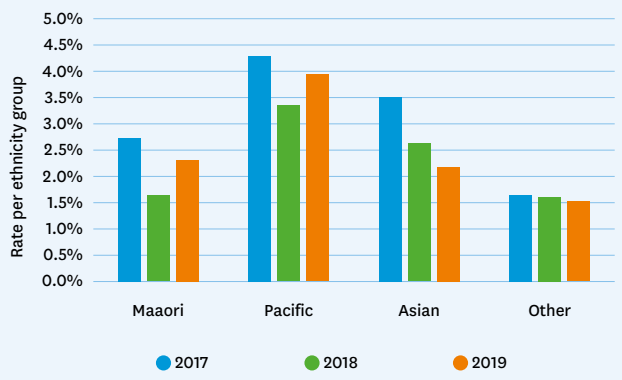


FIGURE 27 ▼

Maternal tobacco use during the postnatal period by ethnicty

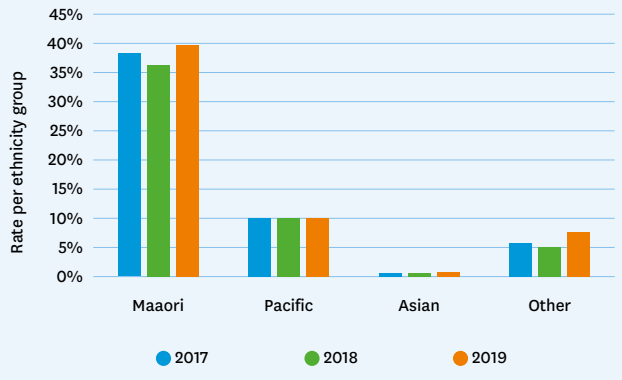


FIGURE 28 ▼

Preterm birth (liveborn babies 20-36 weeks gestation) by ethnicty

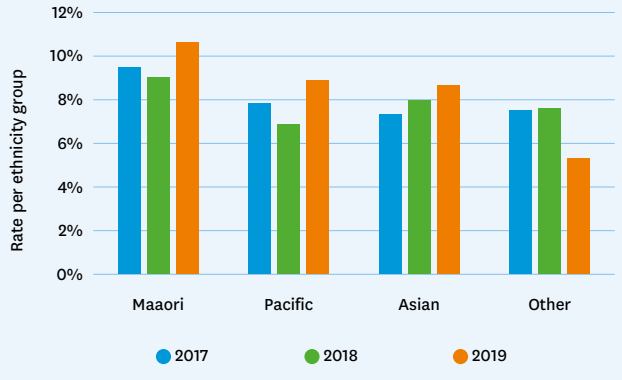


FIGURE 29 ▼

Small babies at term (37–42 weeks' gestation) by ethnicty

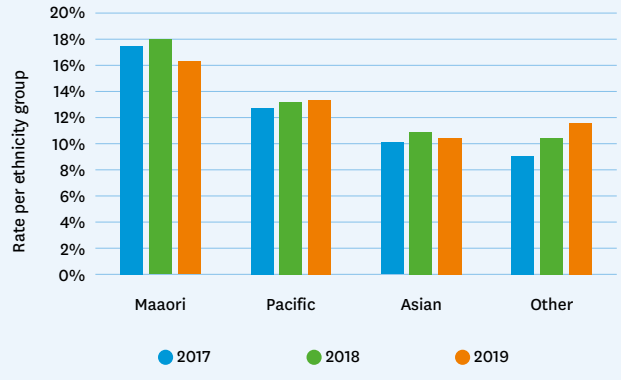


FIGURE 30 ▼

Small babies at term born at 40–42 weeks' gestation by ethnicty

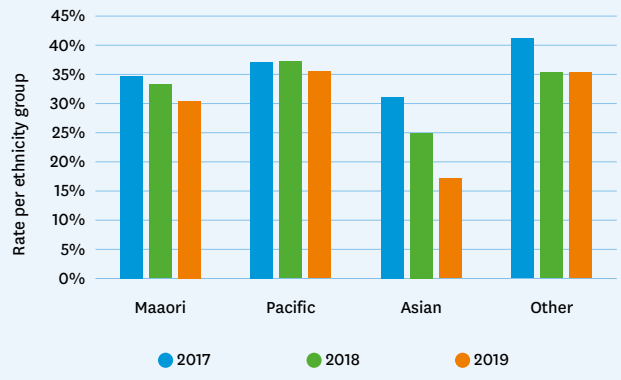


TABLE 13 ▼

Comparing CM Health 2019 Clinical Indicators with the previous year

	CMH 2017	CMH 2018	CMH 2019	
CI 1: Registration with DHB or LMC in the first trimester of pregnancy	55.3%	60.8%	55.0%	Registration with DHB or LMC
CI 2: Standard primiparae who have a spontaneous vaginal birth	66.5%	63.7%	63.8%	
CI 3: Standard primiparae who undergo an instrumental vaginal birth	14.2%	16.9%	16.8%	
CI 4: Standard primiparae who undergo caesarean section	19.3%	19.4%	19.4%	
CI 5: Standard primiparae who undergo induction of labour	10.7%	10.3%	11.1%	
CI 6: Standard primiparae with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) **Includes vaginal birth only	15.1%	13.3%	12.4%	
CI 7: Standard primiparae undergoing episiotomy and no 3rd- or 4th-degree perineal tear **Includes vaginal birth only	28.3%	34.9%	33.9%	
CI 8: Standard primiparae sustaining a 3rd- or 4th-degree perineal tear and no episiotomy	4.8%	4.8%	4.3%	
CI 9: Standard primiparae undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear	2.2%	3.4%	3.4%	
CI 10: Women having a general anaesthetic for caesarean section	10.2%	10.5%	11.7%	
CI 11: Women requiring a blood transfusion with caesarean section	5.1%	3.6%	3.5%	
CI 12: Women requiring a blood transfusion with vaginal birth	3.2%	2.5%	2.7%	
CI 13: Diagnosis of eclampsia at birth admission	0.04%	0.05%	0.01%	
CI 14: Women having a peripartum hysterectomy	0.05%	0.12%	0.03%	
CI 15: Women admitted to ICU and requiring ventilation during the pregnancy or postnatal period	0.08%	0.05%	0.05%	
CI 16: Maternal tobacco use during the postnatal period	12.3%	11.8%	13.3%	Limited to smoking updates 1-14 days PN
CI 17: Preterm birth	8.0%	7.8%	8.5%	
CI 18: Small babies at term (37–42 weeks' gestation)	12.4%	13.1%	13.0%	CMH uses MCIS birthweight centile (denominator excl missing centiles)
CI 19: Small babies at term born at 40–42 weeks' gestation	35.8%	33.3%	30.6%	CMH uses MCIS birthweight centile (denominator excl missing centiles)

Compared with CMH 2018

Indicates improvement or no change from 2018

TABLE 14 ▼

Comparing CM Health 2019 Clinical Indicators with NZ 2018 rate

	NZ 2018	CMH 2019	
CI 1: Registration with DHB or LMC in the first trimester of pregnancy	72.7%	55.0%	
CI 2: Standard primiparae who have a spontaneous vaginal birth	64.7%	63.8%	
CI 3: Standard primiparae who undergo an instrumental vaginal birth	17.0%	16.8%	
CI 4: Standard primiparae who undergo caesarean section	17.2%	19.4%	
CI 5: Standard primiparae who undergo induction of labour	7.8%	11.1%	
CI 6: Standard primiparae with an intact lower genital tract (no 1st- to 4th-degree tear or episiotomy) **Includes vaginal birth only	26.5%	12.4%	
CI 7: Standard primiparae undergoing episiotomy and no 3rd- or 4th-degree perineal tear **Includes vaginal birth only	24.6%	33.9%	
CI 8: Standard primiparae sustaining a 3rd- or 4th-degree perineal tear and no episiotomy	4.5%	4.3%	
CI 9: Standard primiparae undergoing episiotomy and sustaining a 3rd- or 4th-degree perineal tear	2.1%	3.4%	
CI 10: Women having a general anaesthetic for caesarean section	8.5%	11.7%	
CI 11: Women requiring a blood transfusion with caesarean section	3.0%	3.5%	
CI 12: Women requiring a blood transfusion with vaginal birth	2.1%	2.7%	
CI 13: Diagnosis of eclampsia at birth admission	0.03%	0.01%	
CI 14: Women having a peripartum hysterectomy	0.06%	0.03%	
CI 15: Women admitted to ICU and requiring ventilation during the pregnancy or postnatal period	0.03%	0.05%	
CI 16: Maternal tobacco use during the postnatal period	9.4%	13.3%	Limited to smoking updates 1-14 days PN
CI 17: Preterm birth	7.5%	8.5%	
CI 18: Small babies at term (37–42 weeks' gestation)	3.1%	13.0%	CMH uses MCIS birthweight centile (denominator excl missing centiles)
CI 19: Small babies at term born at 40–42 weeks' gestation	29.9%	30.6%	CMH uses MCIS birthweight centile (denominator excl missing centiles)

Indicates CMH performing surpassing NZ rate

Early pregnancy midwifery care

AUTHOR

ADRIENNE PRIDAY
Community LMC Midwife and AUT University Educator Midwifery

It is well documented that stillbirth and neonatal mortality are significantly higher for women who live in areas of high deprivation and are associated with late access to midwifery care.

Finding a lead maternity care midwife can be challenging for women, which can delay decision-making and result in their not being registered with a midwife in the first trimester of pregnancy.*

Many women in the Counties Manukau Health region confirm their pregnancy at their GP practice, and subsequently find themselves lost traversing between the GP and midwifery services. Research† has confirmed the need for these women to be supported in early pregnancy to find a midwife.

As a result, two early pregnancy midwifery care clinics have been established by Ady Priday, both co-located at GP practices, one in Otara, the other in Mangere. Midwife Linda Burke has since established two early pregnancy clinics, one in Mangere the other in Papatoetoe. These midwifery-led services have proved to be very popular and have addressed many of the needs of women early in their pregnancies. The service also extends to home visiting women who have challenges with transport.

At the clinics, women are provided with information about maternity services and the options available for birthing, i.e. home birth, primary birthing units, hospitals (Middlemore and Auckland) and private obstetric care. Also discussed, is the latest research about the benefits, for healthy low-risk women, of commencing their birthing process at a primary birthing unit. Experience shows that women appreciate a midwife discussing this information with them, and that it helps women to understand and take-up the primary birthing unit option. In the past 18 months, in Ady Priday's Otara and Mangere clinics alone, 36 per cent of women have opted for a midwife who cares for women at a primary birthing unit.

Another real benefit of this service is that it allows women to speak openly about their preferences for a midwife and birthing facility, something that is not possible when they are phoning around to see if a midwife has space and find out more about that midwife. To have the confidence to ask qualifying questions, so that women can establish if they want a particular midwife, is easier when facilitated via an early pregnancy service.

Within the early pregnancy midwifery care service, women are provided with an holistic health assessment, obstetric history review, numerous screening options, and bloods and ultrasounds, as required.

Most women are seen between 6- and 9-weeks' gestation, and get to see their permanent lead maternity carer within the next couple of weeks. Some women will experience miscarriage over this time, and the service is able to provide more supportive care when this happens. Some women have heard about these clinics via word of mouth and attended very late in their pregnancy care. We would like to think they have felt safe to ask for our support at such a late stage in their pregnancy, and we assist them with immediate care requirements and an urgent referral to a employed hospital or lead maternity care midwife.

Another aspect of the service is that we provide information and discussions about keeping healthy in pregnancy. This can include referrals to smoking cessation, social work support and dietary support, among other things.

All information gathered from assessments, as well as the women's wishes and records of the keeping healthy discussions are accessible, via the Maternity Clinical Information System, to the women's ongoing midwife.

Accessing and engaging with early midwifery care is a complex process, shaped by the life influences of women and the support they are offered to find a lead maternity carer. The early pregnancy midwifery care service focuses on the needs of the women, and helps them find and enlist a midwife who suits their desires and needs. This is a woman-centred service that starts each woman on a midwifery-focused childbirth journey, as close as possible to the confirmation of her pregnancy.

---

* Priday, A., & McAra-Couper, J. (2016). A successful midwifery model for a high deprivation community in New Zealand: A mixed methods study. *International Journal of Childbirth*, *6*(2), 78-92. DOI:10.1891/2156-5287.6.2.78

† Priday, A. (2018). *A daunting journey: Accessing a lead maternity care midwife.* Master's thesis. Retrieved from https://openrepository.aut.ac.nz/bitstream/handle/10292/12356/PridayAD.pdf?sequence=3&isAllowed=y

AUTHOR

DR SUE TUTTY
GP Liaison, Primary care

Supporting a high-quality first antenatal visit

This is an exciting time in the history of New Zealand's health system, with considerable work being done to review maternity services and the health and disability system as a whole. A central theme to this work is the importance of team-based care, with open communication and information flow between general practice, midwives, secondary care and non-government organisations. The aim is to enable the best possible outcome for women in any interaction they have with a health professional.

First contact pregnancy information packs

CM Health has been producing pregnancy packs for over 5 years. During that time, the packs have evolved and their content grown.

It continues to be a challenge to provide all the information that women need at the beginning of their pregnancy, without including so much that the clinician cannot cover it in a reasonable appointment time. Each pamphlet in the pack is a discussion resource for a topic that needs to be covered in that first antenatal visit.

The pregnancy packs are also one of the few ways that we can provide consistent information for the majority of women at the beginning of their pregnancy. There is a steady demand for them from GPs and midwives in the community.

In 2020, we re-examined how acceptable the packs were for women, with a midwife interviewing 31 women about how they had received and used the pack. Among the 31 women interviewed, 26 had been given a pack, and 5 had not. Of those who had received the pack, 17 had been given it by their midwife and nine by their GP. Most (16) had had the pack discussed with them during their antenatal visit, and had also read the pamphlets at home (18). Fifteen of the interviewed women thought we should continue to provide the packs (the balance of the women were either not asked or did not answer this question).

Although the number of women involved was small, it was encouraging to see that most women were being given a pack and were using the pamphlets, discussing them with their midwives and reading them at home. Several women commented that the packs are particularly useful for first-time mums. Eventually the packs will be changed to an electronic format, but for now, it appears they are still useful in their current format.

New pamphlets produced

Two new pamphlets have been produced in the past year. One is on syphilis and responds to the current syphilis epidemic. The other takes a more medical focus, and aims to provide health professionals and women with information on interventions that can be made early in a pregnancy to improve its outcomes: for example, reducing the risk of pre-term birth by ensuring swabs and urine are checked early in pregnancy, engaging early with the midwife to consider cervical length monitoring, and starting aspirin early in the pregnancy if a woman has had a previous small-for-dates baby. Entitled 'Caring for your Taaonga', the pamphlet emphasises the special place of the baby in the discussion.

Best Start pregnancy

The early pregnancy assessment tool has been renamed 'Best Start'. The tool's rollout is being supported by the National Hauora Coalition as part of their Gen 2040 campaign, with additional funding for Maaori wahine. The tool was officially launched on 25 August 2020 with a webinar hosted by the Goodfellow unit, and has since been rolled out nationally, with over 400 practices across New Zealand now having access to the tool.

Best Start supports practice nurses and GPs carry out a comprehensive first antenatal visit. It provides guidance on multiple topics and advice on how to ask some questions. It

will also set recalls and facilitate referrals. Because the tool is web-based, the information is then available to other health professionals. An early audit of the tool's use showed that a recall had been added for Boostrix immunisation in 100 per cent of the cases.

Un-booked women

To reduce the number of un-booked women requiring urgent care, or attending to give birth, and the poorer outcomes associated with this, we have put a process in place to help women find a midwife.

The process is initiated by GPs, who refer women to the maternity service, which then helps them find a suitable midwife.

Responsibility for the woman's care remains with the GP, until care has been transferred to the midwife. Unless the GP can guarantee that the woman will engage with a midwife, by a follow-up contact, the GP is asked to refer the woman to the maternity service at the first visit, stating clearly on the referral that it is for midwifery care. Where it is identified that this has not occurred the GP will get a phone call to remind them of this process.

6 General Quality Improvement

AUTHOR

PAULA TAYLOR
Manager, Stakeholder and Community Communications

Social media channels

CM Health's social media channels continue to grow and are now an integral part of our wider communications strategy to promote maternity, women and children's health messages to the Counties Manukau population.

Facebook is our primary social media platform, with close to 22,000 followers who are mostly female, aged 25 to 65+ years, and representative of our diverse communities in the Counties Manukau rohe. The CM Health Instagram site is also growing its followers, with a demographic of mostly young women aged 25 and younger.

Support and engagement with content on these two platforms are high. Posts that promote early engagement with a midwife, build awareness of and participation in programmes that support healthy eating, pregnancy and child birth classes, safe sleep/wahakura giveaways and promotion of the three birthing units in Counties Manukau are particularly popular.

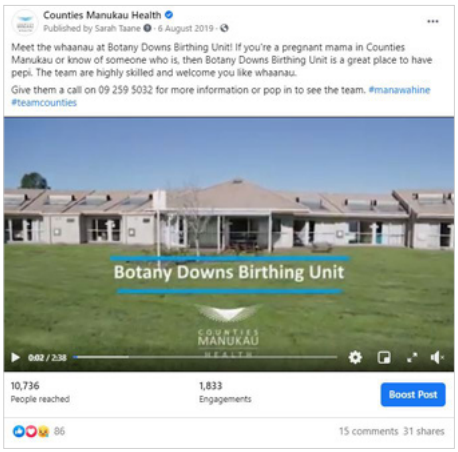
Our content is warm and engaging and reflects the values of not only CM Health but also the wider community. The concepts of manaakitanga, service to others and pride in our community are reflected in the content, and this encourages other organisations and individuals working in health and social services in the Counties Manukau area to share our content on their own channels, and in doing so expands our reach.

Promoting our community birthing units

An example of a social media campaign CM Health undertook in late 2019 was the promotion of our community birthing units.

The CM Health communications team worked with the maternity team to promote our three units. This promotion took a digital approach through social media tiles, posters and three promotional videos, one for each unit. These were shared across the CM Health social media channels, as well as with key community stakeholders (e.g. local community groups).

The birthing unit webpage on the CM Health website was also updated, as the campaign drove people to the webpage where they could access more information. The videos of the birthing units had good engagement across our social media channels. To view all the resources and videos, visit the community birthing units webpage: www.countiesmanukau.health.nz/birthing-units, or follow the links below.



▲ *Video promoting Botany Downs Birthing Unit: see https://vimeo.com/344933344*

▲ *Video promoting Papakura Birthing Unit: see https://vimeo.com/313918438*

▲ *Video promoting Pukekohe Birthing Unit: see https://vimeo.com/369474964*

AUTHORS

DR GARY JACKSON
Public Health Physician

DR PIP ANDERSON
Public Health Physician

Weight management in pregnancy

Being overweight or obese at the start of or during pregnancy is a recognised risk factor for a number of complications, including gestational diabetes, pre-term and post-term birth, induction of labour, caesarean section, macrosomia, stillbirth, and neonatal and maternal death.*

Maternal obesity also increases the risk of childhood and adult obesity later in the life of the fetus.† Analysis of neonatal care admissions at CM Health suggest obesity, and hence diabetes, are key drivers and help explain why neonatal bed days are rising faster than birth numbers would have suggested.‡

The increasing rates of obesity in the general population are equally present in women birthing at CM Health facilities. Any body mass index (BMI) of 30 or more is likely to have a considerable impact on demand for clinical services, with increasing risks as BMI rises over 35.

Obesity classes are now being used to describe obesity, in a move away from terms such as morbid obesity, which were felt to be stigmatising.§ Over the past 12 years, the percentage of women who are a healthy weight or overweight has been trending downward at around 1 per cent per year, while percentages in obese class II and III have been trending upwards (see Figure 31).

TABLE 15 ▼

Classification BMI Range

CLASSIFICATION	BMI RANGE
Underweight	<18.5
Normal range	18.5 - 24.9
Overweight	25 - 29.9
Obese class I	30 - 34.9
Obese class II	35 - 39.9
Obese class III	≥40

In 2020, data collected for women booking at a CM Health facility showed 1.1 per cent of women with a known BMI were underweight; 28.6 per cent had a normal BMI; 25.5 per cent were overweight and 44.8 per cent were obese.¶ Nearly a quarter (24.4 per cent) of women booking in 2020 had a BMI of 35 or over (obese classes II and III), with class III, the group at most risk, the fastest growing group.

The distribution of BMI varies by ethnicity (see Table 16 and Figure 32), with 28.8 per cent of Maaori women birthing at CM Health facilities in 2020, who had a known BMI, being overweight; and 51.5 per cent being obese. For Pacific women, the figures were 17.9 per cent and 72.1 per cent; while for all other women, 30.4 per cent were overweight and 21.8 per cent were obese. The high and growing rates of obesity, in particular class II and III obesity, drive the increasing diabetes in pregnancy rates.

Addressing obesity is a challenging issue, not least because evidence suggests that the interventions that are most likely to have the biggest impact sit at central government level. Issues such as the wider food and exercise environment, the availability and cost of healthy food, and the formulation of food and beverages, eg sugar content, are significant factors

* Jackson, C. (2011). *Perinatal mortality in Counties Manukau*. Manukau: CM Health. Retrieved from: https://cmhealth.hanz.health.nz/search/Pages/results.aspx?k=catherine%20jackson

† Rooney, B. L., Mathiason, M. A., & Schauberger, C. W. (2011). Predictors of obesity in childhood, adolescence, and adulthood in a birth cohort. *Matern. Child Health J.*, 15(8):1166-75.

‡ Parwaiz, M. (2019). *Clinical drivers of increased demand for the neonatal unit at Counties Manukau Health*. Manukau: CM Health.

§ Jackson *op. cit.*

¶ Note that women with an unknown BMI (65 bookings in 2020; 0.9 per cent) were excluded from the denominator.

TABLE 16 ▼

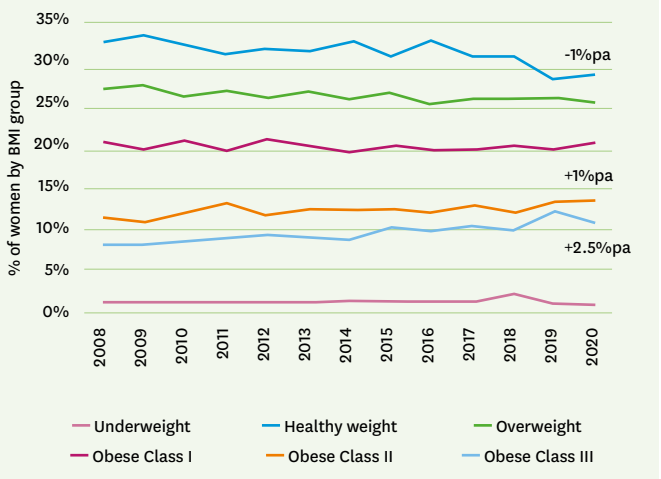
Booking BMI by ethnicity, for all births at CM Health facilities, 2020

BOOKING BMI	NZ MAAORI	PACIFIC	CHINESE	INDIAN	ASIAN OTHER	EUROPEAN/ OTHER	TOTAL
<18	4	9	2	38	10	11	74
18-24	285	245	91	603	271	574	2,069
25-29	424	453	30	388	141	458	1,894
30-34	382	607	7	164	30	255	1,445
35-39	207	601	1	30	7	136	982
40-44	116	370		13	3	53	555
45-49	35	163		4		20	222
50-54	16	56				4	76
55-59	2	24				1	27
>60		8					8
Unknown	17	17		2	1	3	40
Total	1,488	2,553	131	1,242	463	1,515	7,392

Source: Maternity Clinical Information System. Extracted by Health Intelligence and Informatics 2021.

FIGURE 31 ▼

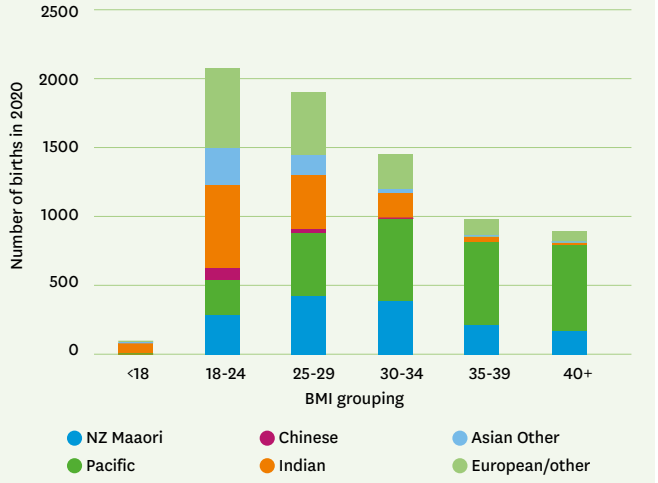
Percentage of women by weight class, 2008-2018



Source: Maternity Clinical Information System. Extracted by Health Intelligence and Informatics 2021.

FIGURE 32 ▼

Booking BMI by ethnicity, 2020



Source: Maternity Clinical Information System. Extracted by Health Intelligence and Informatics 2021.

that sit outside the health sector and beyond an individual's control.**

CM Health continues to provide and promote its 'Healthy Weight Change in Pregnancy' cards, which are designed to work alongside the Ministry of Health's *Guidance for Healthy Weight Gain in Pregnancy*††, and are available for maternity carers and pregnant women to use. The importance of discussing weight gain in pregnancy continues to be socialised to our maternity workforce and integrated into antenatal care provision. Work continues on developing the diabetes in pregnancy service.

** Swinburn, B. A., Sacks, G., Hall, K. D., McPherson, K., et al. (2011). The global obesity pandemic: shaped by global drivers and local environments. *Lancet,* Aug 27: 804-14.

†† Ministry of Health. (2014). *Guidance for healthy weight gain in pregnancy*. Wellington: Ministry of Health.

AUTHOR

MICHELLE LEE
Team Leader, Living Smokefree Service

Smokefree

Promoting smoke-free pregnancies is a key initiative, which could have a major impact on improving health outcomes for infants born to women living in Counties Manukau.

Smoking during pregnancy is associated with a number of adverse pregnancy outcomes, including miscarriage, placental abruption, intrauterine growth restriction, premature delivery and stillbirth.* In addition, smoking during pregnancy has been associated with an increased risk of neonatal death, particularly as a result of sudden unexplained death in infancy.

Of all the women birthing at CM Health in 2020, 12 per cent (917) were smoking at the time of their admission for birth. This is a decrease in prevalence of 2 per cent compared to last year, and a reduction of 143 women smoking from last year.

There were marked ethnic differences in the smoking statistics, with 38 per cent of Maaori women identified as currently smoking (1 per cent lower than the previous year), compared to 9 per cent of Pacific Island women (3 per cent lower than the previous year), and 4 per cent of European, Asian and other women; see Table 17.

Smokefree maternal incentive programmes

The Smokefree Pregnancy Incentives Programme has been operating in Counties Manukau since 2013, and continues to achieve high success rates.

In 2020, 218 women successfully stopped smoking with the service, compared to 160 in 2019. (Women's smoke-free status is validated by carbon monoxide testing). Just over half (53 per cent) of these successful smoke-free pregnancies are Maaori, 34 per cent Pacific and 13 per cent other ethnicities.

In addition, the Smokefree Postnatal Incentives Programme has been running since 2017 to help women avoid a relapse to smoking following their birth.

Some key results for the programmes in 2020 are given below.

- We received referrals for approximately 70 per cent of the women who were recorded as smoking at the time of booking with a midwife: 60 per cent of referrals were for NZ Maaori and 30 per cent Pacific women.

* US Department of Health and Human Services. (2014). *Surgeon General's report: The health consequences of smoking—50 years of progress*. Retrieved from http://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf

TABLE 17 ▼

Number of women, by smoking status and ethnicity, who birthed at a CM Health facility, 2020

SMOKING STATUS	NZ MAAORI	PACIFIC ISLAND	EUROPEAN/ OTHER	ASIAN	TOTAL
Currently smoking	563	221	120	13	917
Non-smoker	863	2,252	1,334	1,782	6,231
Unknown	62	80	61	41	244
Total	1,488	2,553	1,515	1,823	7,379

- We received around 20 more referrals than in 2019, but a significantly higher number of waahine were assessed. This was partially due to the programmes using more phone assessments, after these were introduced during COVID-19 alert levels 3 and 4. In total, 484 assessments were completed in 2020, compared with 338 in 2019.
- A total of 218 waahine hapuu successfully stopped smoking with the programme; an increase of 60 more waahine hapuu being smoke-free at 4 weeks, compared with 2019. We achieved an 85 per cent quit rate for all ethnicities.
- There was a larger focus on addressing holistic and wellbeing needs. For example, we referred 264 women for safe-sleep devices, 52 for healthy housing assessments, 119 for breastfeeding support, 19 for antenatal classes, 115 for free dental appointments and 24 women who had continue to drink during pregnancy were provided with support to stop.
- There was a 20 per cent increase in whaanau enrolling to support hapuu maamaa.

We wish to give a huge acknowledgment to whaanau taking on this wero, and winning and allowing us to be part of their journey.

Proactive referring

Our proactive referral approach has result in us receiving referrals for approximately 70 per cent of the pregnant women in Counties Manukau who smoke.

Under this approach, all referrers are encouraged to refer all women who smoke, and allow the Smokefree service to have the longer conversation with women about stopping, using motivational interviewing to encourage engagement. In 2020, a greater number of GP practices sent through lists of waahine hapuu who smoke, enabling us to engage with women who either had not accepted a referral from their midwife or had not disclosed their smoking status. This led to 53 extra referrals being received and 24 extra women successfully becoming smoke-free.

AUTHOR

AMANDA HINKS
Maternity Service Development Manager

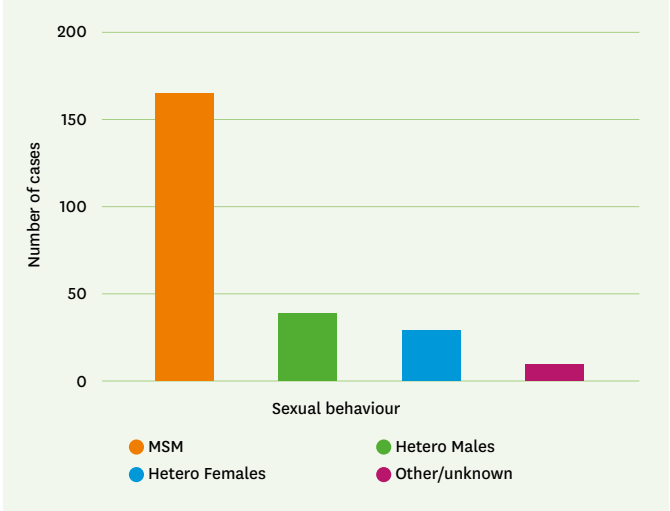
Preventing congenital syphilis

Syphilis is a sexually transmitted infection caused by the spirochete *Treponema pallidum*. The prevalence of syphilis has been increasing in New Zealand and worldwide since 2006, mainly in men who have sex with men, but also more recently in the heterosexual population.

Figure 33 indicates the number of syphilis cases in 2019 in the Auckland region (which incorporates the Waitemata, Auckland and Counties Manukau Health District Health Board regions).

FIGURE 33 ▼

Infectious syphilis cases in Auckland region in 2019, by sexual behaviour, as notified to ESR



Source: https://www.esr.cri.nz/our-services/consultancy/public-health/sti/

In the Auckland region, there were 82 reported cases of syphilis among heterosexual females during 2019. In 2018, there were three reported cases of congenital syphilis, with another two under investigation, and in 2019 there were two cases with an additional one under investigation. Figure 34 shows trends in reported syphilis cases since 2013.

The Institute of Environmental Science and Research (ESR) has commented that the increase in syphilis infection among heterosexuals and in congenital syphilis suggests that transmission is now occurring among groups that have not been considered high risk in recent years.*

Awareness, active detection and appropriate treatment of syphilis infection are critical for pregnant women, as the disease can be passed from mother to child during pregnancy. Syphilis infection is associated with poor pregnancy outcomes, such as stillbirth (in up to 40 per cent of untreated cases), pre-term birth and intrauterine growth restriction, as well as significant neonatal morbidity and mortality.

If detected early, syphilis is treatable using a course of intramuscular antibiotics, and antenatal screening for syphilis to prevent congenital infection at birth is an integral part of antenatal care in New Zealand.

Figure 35 shows the increasing burden of syphilis infection in the Counties Manukau Health region. This increase can be partially attributed to a mix of risk-taking social behaviours (which are in turn linked to social circumstances and experiences), high levels of social and economic deprivation, a population that has more people aged 20 to 29 than the national average, and the lack of access to sexual health services for those residing in rural areas.

Honouring Te Tiriti o Waitangi and equity

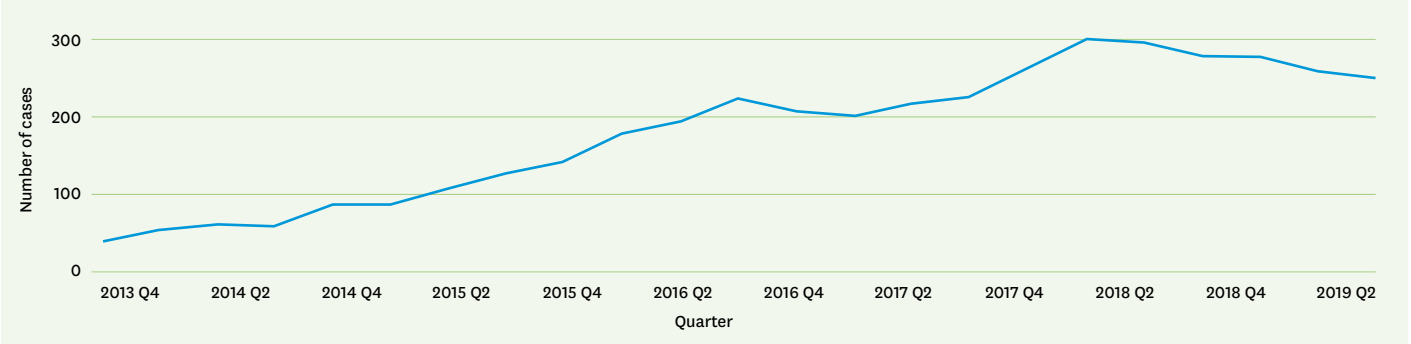
A recent audit† of syphilis cases in the Counties Manukau Health area during 2018 and 2019 identified inequities for our Maaori women in accessing their first syphilis screening blood test, and for our Pacific mothers, with respect to subsequent syphilis infection rates being elevated. If pregnant women are screened early then it enables

* Institute of Environmental and Scientifc Research. (2021). *Sexually transmitted infection (STI) surveillance*. Retrieved from https://www.esr.cri.nz/our-services/consultancy/public-health/sti/

† Wilson, B. (2021). *Opportunities to prevent mother to child transmission in Counties Manukau: An audit*. Auckland: Counties Manukau Health.

FIGURE 34 ▼

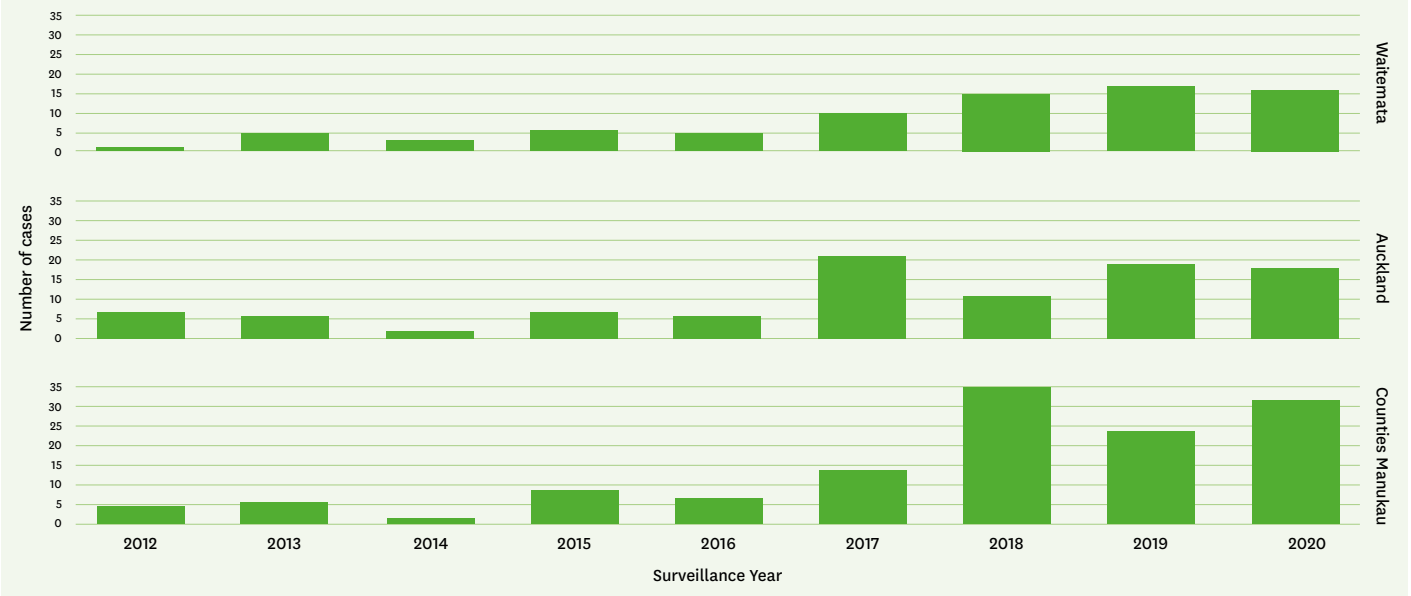
Infectious syphilis cases in Auckland Region, 2013 to 2019, as notified to ESR



Source: https://www.esr.cri.nz/our-services/consultancy/public-health/sti/

FIGURE 35 ▼

Cases of syphilis among females aged 15 to 49 years, 2012 to 2020, by district health board



Source: Auckland Sexual Health Regional data

appropriate timely treatment and a reduction in the risk of congenital syphilis.

The audit found that in 2018 and 2019, 62.2 per cent of Maaori and 61.5 per cent of Pacific women were tested for syphilis by the end of their first trimester, compared to 89.5 per cent of Asian and 86.9 per cent of New Zealand European and Other ethnicities.

Delayed access to testing is likely to reflect broader inequities in these women's engagement with healthcare services around pregnancy. For example, registration with a lead maternity carer by 14 weeks gestation in Counties Manukau Health is 38 per cent for Maaori women and 41 per cent for Pacifica women, compared to 78 per cent for European women.

For CM Health's Pacific community, the audit found Pacific women were disproportionately affected by syphilis, representing approximately 34 per cent of the total maternity cohort but 63 per cent of maternity syphilis cases.

Steps to reduce the risk of congenital syphilis

CM Health is taking actives steps to reduce the risk of congenital syphilis, including:

- introducing a clinical guideline that advises three screening points for syphilis during pregnancy and removes previous criteria for re-screening to widen access
- the laboratory adding a comment advising re-testing for syphilis when a women returns a positive sexually transmitted infection result during pregnancy
- developing a pamphlet to explain what syphilis is and the reasons for screening, and including it in pregnancy information packs (see opposite)
- developing a poster with consumer input to be used alongside the pamphlet, and circulating it to primary health organisations and midwives to display in their clinical areas (see right)
- contributing to a regional response taskforce to tackle regional inequities in infection rates and access to care for syphilis.

We wish to acknowledge Public Health Physician Karen Bartholomew, Public Health Physician Catherine Jackson, Public Health Registrar Bridget Wilson, and CM Health Women's Health GP Liaison Sue Tutty for their background data, audits and recommendations regarding reducing congenital syphilis.

▲ *Syphilis poster for display in clinics*

Where can I get more information about syphilis?

Talk to your Midwife or GP.

Phone **0800 739 432** Monday to Friday to discuss booking an appointment with one of the Auckland Sexual Health Clinics located in:

Central Auckland
Greenlane Clinical Centre, Bldg 7 Level 3, Greenlane West

North Shore
418 Glenfield Rd, Glenfield

South Auckland
12 Waddon Place, Mangere

West Auckland
Totara Health Level 2, 1 McCrae Way, New Lynn

Or visit our website ***www.ashs.org.nz*** for more information around opening hours.

www.ashs.org.nz

Protect yourself and baby from syphilis

Talk
to your midwife, doctor or nurse.

Test
with a simple blood test.

Treat
Medicine will help you and baby.

Testing and treatment are **confidential and free**. All pregnant women can be offered testing more than once during their pregnancy. ***For more information, talk to your midwife, doctor, nurse or local sexual health clinic on 0800 739 432.***

COUNTIES MANUKAU HEALTH

Department: Women's Health	Last updated: December 2020
Approved by: Clinical Director Women's Health	Next review date: December 2022
Owner: WH Obstetric Clinical Practice Group	Version 1

COUNTIES MANUKAU HEALTH

What is Syphilis?

Syphilis can harm pregnancies and unborn babies.

What is Syphilis?

Syphilis is a sexually transmitted disease that is easily treated with antibiotics. Since 2000, syphilis rates have surged worldwide. Syphilis is back in Auckland with 2018 seeing the highest rates of syphilis in over 30 years. Currently all pregnant women are routinely offered and tested for syphilis once during pregnancy by their GP or Midwife. In Counties Manukau the test can be offered a further two times during pregnancy. This is to reduce the risk of untreated syphilis causing health problems for both mother and baby.

How do I get tested for syphilis?

Syphilis is tested for by a simple blood test. It is part of the routine blood tests taken at the first pregnancy check but sometimes the infection can be missed by the first test.

Why should I be tested?

If the mother is infected with Syphilis it can spread to the unborn baby. This can result in stillbirth, miscarriage or being born with the infection. An infected baby may be born without symptoms but could develop them within a few weeks and could become very ill. Appropriate treatment of the mother during pregnancy will prevent the baby being born with syphilis.

If you have questions please talk to your Midwife or GP. All information that you share is confidential.

What are the symptoms?

The challenge with syphilis is that 50% of people with syphilis do not have symptoms and so aren't aware they have it. Syphilis goes through several different stages. While the stages have different symptoms, syphilis may not cause noticeable symptoms or even any symptoms at all.

What happens if I have a positive test during pregnancy?

You will be advised about your test result by your Midwife or GP and referred to the Auckland Sexual Health service. The Auckland Sexual Health service will arrange further testing to confirm the stage of the illness, treatment and arrange contact tracing of sexual partners. This is important so your sexual partners can be tested and treated. Your information is confidential.

How is Syphilis treated?

You will need injections of an antibiotic called penicillin.

- Appropriate treatment of the mother during pregnancy will prevent the baby being born with syphilis.
- The blood tests which screen for Syphilis can stay positive for months or years after the disease has been successfully treated, but this is nothing to worry about as it does not mean that you are still infectious.

Talking to partners

If you have been diagnosed with syphilis your sexual partners or contacts must be advised to attend their doctor or local Sexual Health Clinic. Some people feel embarrassed, scared or angry when they or their partner has a sexually transmitted infection (STI). This is common and OK. Do not let these feelings stop you from getting medical help or telling your partner. Anyone who is having sex can get an STI. If you need help contacting your partner(s) or are worried about this, talk to the doctor or nurse at the Sexual Health Clinic for advice. Your health and safety is important.

Talk
to your midwife, doctor or nurse.

Test
with a simple blood test.

Treat
Medicine will help you and baby.

◀ *Syphilis pamphlet included in pregnancy information packs*

AUTHOR

KARLENE CLARKE
Clinical Midwife Specialist

Maternity Clinical Information System

The National Maternity Clinical Information System (MCIS) was rolled out throughout Women's Health maternity services in October 2015. The implementation followed recommendations from the CM Health external maternity care review in 2012 and was part of a national programme to create a national electronic maternity record.

CM Health was one of the first district health boards to adopt the MCIS (which is known as BadgerNet) and has played a leading role in many of the changes and improvements made to the system over the past 6 years.

With the support of the Healthy Together Technology team, we are now embarking upon a major upgrade to the system view and functionality of the system, by transitioning to the BadgerNet Global View. This change will occur in May 2021.

This upgrade will bring us in line with the enhanced functionality available in the UK version of BadgerNet, including many features that will benefit users and promote safe and transparent care for our women and whaanau. The new system is process-based, incorporating the use of 'smart' forms, which will allow for improved workflows. The MCIS team have been busy developing training plans for all our users, and will be rolling out comprehensive education in the form of online learning packages and face-to-face teaching sessions.

Also this year, CleverMed (the developers of BadgerNet) and the Ministry of Health have collaborated to enable maternity-related data to be reported to the National Maternity DataMart. This means that specific reporting data is now automatically sent from BadgerNet to the Ministry of Health database.

Work has also been completed with maternity providers Expect and Solutions Plus to enable an interface with BadgerNet; the interface creates a MCIS record and populates that record to a health board's booking list. This has helped to reduce the number of paper bookings that CM Health receives each month and ensures timely notification of a woman's booking with a community lead maternity carer midwife.

Amidst all the disruption 2020 brought, CM Health saw the introduction of a number of new electronic systems, including the Maternity Early Warning Score (MEWS) system, Trendcare and MedChart. These have all successfully been rolled out and users have embedded them into their daily clinical practice.

A recent rollout has seen BadgerNet made available on just under 6000 PCs and devices throughout CM Health, making it available wherever a woman or baby may be.

The MCIS team are excited about the upgrade to BadgerNet this year. We look forward to engaging with our 800-plus users here at CM Health and sharing all the new features that the global view has to offer us.

▲ *MCIS Team. L-R Florella Keen, Karlene Clarke, Michelle Neustroski, Hayley Gill, Jasmine Sampson*

AUTHOR

AMANDA HINKS
Maternity Service Development Manager

Supporting equitable access to ultrasound scans during pregnancy

Over the past 2 years, Counties Manukau Health has increased access to pregnancy ultrasound services within the district health board, against a backdrop of decreasing private provision and increased demand.

The main challenges facing the health board relate to access for pregnant women to timely ultrasound scans, and the quality assurance of those scans, against pregnant women with complex and changing clinical needs and social complexity..

Scan provision

Pregnancy ultrasound scanning services are an integral part of a woman's pregnancy, as they can support clinical decision-making and subsequent management of pregnancy, which are vital for supporting a healthy pregnancy and birth.

Pregnant women in New Zealand can chose to have certain ultrasound scans as part of their routine antenatal care:

- a screening scan for chromosomal abnormalities at 12 weeks (12+6/40) to measure the fetus's nuchal fold (alongside a maternal serum blood test for biochemical markers)*
- an anatomy scan between 19 and 21 weeks to screen fetal structures.

Maternity care and pregnancy related scans for eligible women are funded by the Ministry of Health.

The CM Health Radiology Department provides access for some secondary and tertiary-level ultrasound services, but is unable to complete primary ultrasounds as part of routine antenatal care. Private providers fill this gap, with the scans funded by the Ministry of Health under Section 88 of the Primary Maternity Services Act (2007).

However, the ministry has not increased the payment for these scans since 2007 and, since 2016, private providers have been charging a top-up fee to compensate. This additional fee is paid by CM Health for those women who are unable to afford the extra charge (referred to as a co-payment).

Funded co-payment scheme

The co-payment scheme for scans was set up to address inequities arising from the social and economic deprivation experienced by 63 per cent of the Counties Manukau birthing population and the need to improve equitable outcomes against a backdrop of a higher than national average perinatal mortality rate.

The scans that currently attract co-payment support are the first trimester screening scan and later anatomy scans, as well as scans for women who require surveillance for previous or current pregnancy complications.

Women who qualify for the funded co-payment are those identified as in financial need, or those with a Community Services card.

Figure 36 indicates that all scan types have experienced an increase in demand for funded co-pays over the past 2 years, with scans for growth assessment the most commonly requested scan to be funded. This is understandable given the poor pre-conception health and co-morbidities of pregnant women in CM Health and the evidenced-based guidelines regarding growth assessment used by midwives. Antenatal surveillance of intrauterine growth aims to detect growth restricted foetuses which can face increased risk

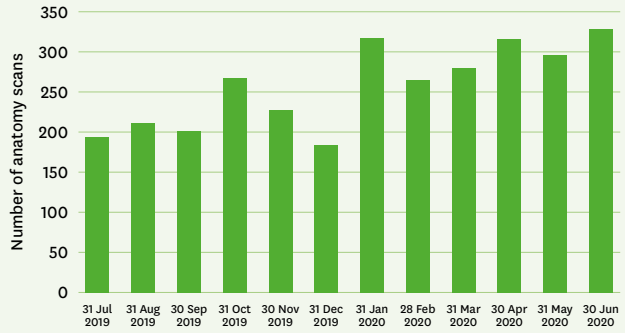
* The New Zealand Ultrasound Scan Guidelines (Ministry of Health, 2019) now recommend a first trimester scan can be undertaken without the need for the nuchal measurement and maternal serum screen.

of stillbirth.[†] Ultrasound scans support the diagnosis and surveillance of these pregnancies.

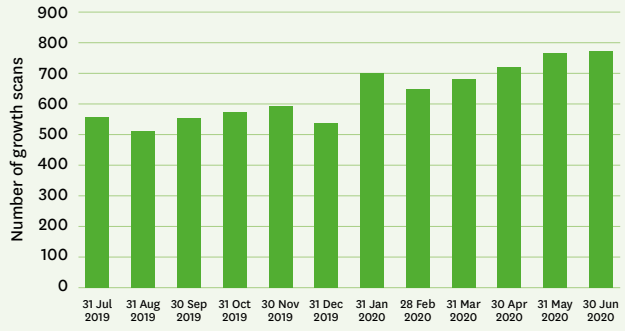
FIGURE 36 ▼

Demand for scans, by scan type, July 2019 to June 2020

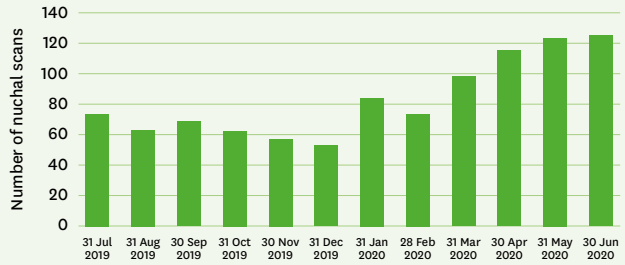
3081 ANATOMY SCANS IN 2019-20
COMPARED TO 2007 SCANS IN JAN-DEC 2018



7599 GROWTH SCANS IN 2019-20
COMPARED TO 5864 SCANS IN 2018



995 NUCHAL SCANS IN 2019-20
COMPARED TO 560 SCANS IN JAN-DEC 2018



Equity

In 2017, the National Maternity Monitoring Group recommended "…we also support work to reduce barriers to access for all women and work that seeks to fully understand the way that women access primary maternity ultrasounds". The group's function is to monitor all maternity services with an equity lens and against the New Zealand Maternity Standards.

The aim of CM Health's funding for co-payment has been to reduce inequity. When private providers first introduced the co-payment, women told their midwives that they were not able to afford the fee and therefore would not have the scan.

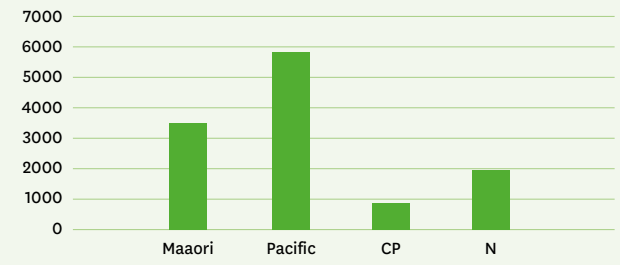
Evidence shows that Maaori women aged 20 and under have poorer pregnancy and birth outcomes[‡] than New Zealand European women, and that engagement in early pregnancy care for Maaori women in 2018 was 43 per cent compared to 80 per cent for New Zealand European women.This indicates more needs to be done to support Maaori women into early pregnancy care. Removing financial barriers will support this.

Priority groups

Figure 37 indicates the numbers of women in priority groups who accessed co-payments for pregnancy scans from July 2019 to June 2020. The demographic fits with those of our birthing population.

FIGURE 37 ▼

Women accessing co-payments for scans, by ethnicity, July 2019 to June 2020



† Ego, A., Monier,I., Skaare, K., & Zeitlin, J. (2020). Ultrasound in Obstetrics and Gynaecology, 55(5), pp. 613-620. Retrieved from https://doi.org/10.1002/uog.20414

‡ Twelth Annual Report of the Perinatal and Maternal Mortlaity Review Committee: Reporting mortality 2016 (2018) Wellington:Health Quality & Safety Commission https://www.hqsc.govt.nz/assets/PMMRC/Publications/12th-PMMRC-report-final.pdf accessed 11/2/2021

Clinical assessment data indicated that, during the first 6 months of the 2019/2020 contract year, 72 per cent of women accessing funded co-payments resided in quintile 5 areas and 20 per cent resided in decile 1 to 4 areas (see Figure 38). Of these women, 56 per cent identified as Pasifica and 34 per cent as Maaori (see Figure 39).

The data can be analysed to identify the number of women who are community service card holders (see Figure 40). Eligibility for a community service card indicates a certain household income and is a social determinant indication for health outcomes.

Access and quality

Demand for pregnancy ultrasound scanning services is very high. Although a barrier to access has been removed through the co-pay scheme, pregnant women in Counties Manukau are still having to find transport to community-based private ultrasound scan providers outside of their health board boundary. Some private providers have reduced their capacity for pregnancy related scanning, further decreasing access for pregnant women in rural areas, while others have changed their criteria for scanning multiple pregnancies.

By having to use multiple private providers, the quality of pregnancy scanning can be affected by the variance. After recommendations from the National Maternity Monitoring Group in 2017, the Ministry of Health in consultation with the sector produced the NZ Ultrasound Scan Guidelines in an effort to reduce this variation.

FIGURE 38 ▼

Women accessing co-payments for scans, by quintile, July to December 2019

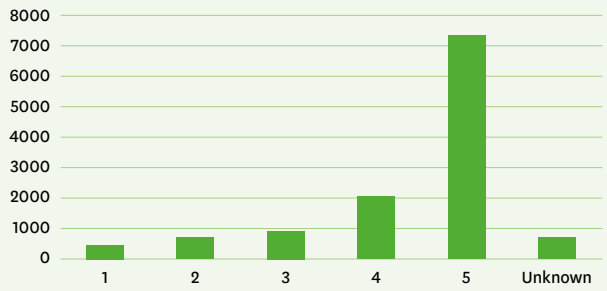


FIGURE 39 ▼

Women accessing co-payments for scans, by ethnicity, July to December 2019

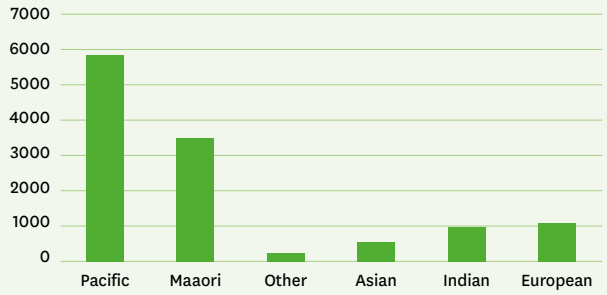
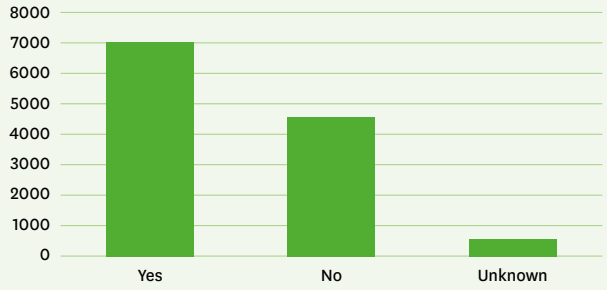


FIGURE 40 ▼

Women accessing co-payments for scans, by community service card holder status, July 2019 to June 2020



AUTHOR

ISABELLA G SMART
Midwife Manager Maternity Assessment Clinic

Maternity Assessment Clinic (MAC)

The Maternity Assessment Clinic was opened in May 2019, with the purpose of coordinating women's care when they develop complexities during pregnancy that require monitoring and assessment. Women who experience non-acute complexities are referred to the clinic by medical staff.

The Maternity Assessment Clinic is open Monday to Friday from 8am until 4.30pm, and is staffed by a consultant or fellow in obstetrics, a senior midwife and a maternity care assistant. The clinic has on-site ultrasound scanning and cardio tocograph facilities, and provides non-acute pregnancy care on an out-patient appointment basis. By providing these services, the clinic frees up staff time in the Birthing and Assessment Unit to focus on acute care provision.

In the clinic, care plans are devised and agreed with the woman and her midwife to ensure the best possible pregnancy outcomes. The plans are completed in the woman's electronic maternity record and are clearly visible to all carers involved with the woman. Counties Manukau Health has developed an innovative maternity care assistant role, to provide both clerical and clinical support within the clinic.

In the first 12 months after the Maternity Assessment Clinic opened, it provided 1,847 appointments. From the outset, the clinic aimed to ensure that women and whaanau using its services can find easy, free parking, are seen at a specified time and have continuity in their care planning. This has been achieved and user feedback has been very positive: many women have asked to come back and birth their baby in our clinic due to the calm and welcoming atmosphere and kind, respectful staff! The attendance rate in the clinic's first year was over 96 per cent. Table 18 shows all outcomes from clinic appointments in the first year.

TABLE 18 ▼

Outcomes from Maternity Assessment Clinic appointments, May 2019 to April 2020

OUTCOME	NUMBER	PERCENTAGE
Follow-up appointment at Maternity Assessment Clinic	1,115	60.37%
Discharged to midwife	367	19.87%
Admitted to hospital	121	6.55%
Induction of labour arranged	105	5.68%
Did not attend	69	3.74%
Inpatient	35	1.89%
Birthed	22	1.19%
Rescheduled	8	0.43%
Cancelled	5	0.27%
Total	1,847	100.00%

Most of the demand (69.3 per cent) in the clinic's first year was for monitoring and care planning for women with babies who appeared small for their gestational age. The clinic's role in providing continuity of care and clearly communicated care plans for these at-risk babies is particularly important.

Blood pressure related issues were the next highest clinical reason for a referral to the Maternity Assessment Clinic, with 255 women (13.8 per cent) seen in the first year. Table 19 shows all of the reasons that women attended the clinic in its first year of operation.

TABLE 19 ▼

Reasons for attendance at Maternity Assessment Clinic, May 2019 to April 2020

REASON	NUMBER	PERCENTAGE
Small for gestational age (SGA)	1,280	69.30%
Hypertension	154	8.34%
Pre-eclampsia toxaemia (PET)	101	5.47%
Twins	65	3.52%
Preterm premature rupture of membranes (PPROM)	63	3.41%
Obstetric cholestasis	51	2.76%
Senior medical officer review	32	1.73%
Steroids	24	1.30%
PET/SGA	15	0.81%
Oligohydramnios	13	0.70%
SGA/PET	9	0.49%
Reduced fetal movements	9	0.49%
Previous stillbirth	7	0.38%
Polyhydramnios	6	0.32%
Hypertension/SGA	5	0.27%
SGA/Obstetric cholestasis	4	0.22%
PET/PPROM	3	0.16%
Obstetric cholestasis/ PET	3	0.16%
SGA/Placenta praevia	3	0.16%
Total	1,847	100.00%

Data relating to the Maternity Assessment Clinic, for the 18 months from 1 July 2019 to 31 December 2020 is given in Table 20 to Table 24.

An important point to note is the clinic's continuing low did-not-attend rate (95 per cent of women attend their scheduled appointments). During 2021, we will explore the factors that are contributing to the higher non-attendance rate for Maaori women to see if we can improve this statistic and to ensure appointment outcomes are being coded correctly.

Also notable is that women who attend the Maternity Assessment Clinic for monitoring pregnancy complications tend to experience good outcomes.

The slightly higher percentage of neonatal deaths after a live birth experienced by women under the clinic's care relates to the at-risk nature of the pregnancies being monitored and the fact that more babies are born prematurely due to their risk factors.

TABLE 20 ▼

Attendance at Maternity Assessment Clinic, 1 July 2019 to 31 December 2020

VISIT TYPE	ATTENDED	DID NOT ATTEND	TOTAL
Follow up	1,458	67	1,525
First Specialist Appointment	822	52	874
Total	2,280	119	2,399

TABLE 21 ▼

Attendance rates for the Maternity Assessment Clinic, by ethnicity, 1 July 2019 to 31 December 2020

ETHNIC GROUP	ATTENDED	DID NOT ATTEND	DID-NOT-ATTEND RATE	TOTAL
NZ Maori	397	49	11.0%	446
Pacific	690	50	6.8%	740
European	334	8	2.3%	342
Asian	276	2	0.7%	278
Indian	529	10	1.9%	539
Other	54		0.0%	54
Total	2,280	119	5.0%	2,399

TABLE 22 ▼

Comparative ethnicities for women attending the Maternity Assessment Clinic and all births, 1 July 2019 to 31 December 2020

ETHNIC GROUP	VOLUME AT CLINIC	VOLUME PERCENTAGE	ALL BIRTHS	ALL PERCENTAGE
NZ Maaori	151	17%	2,224	20%
Pacific	278	32%	3,844	34%
European	133	15%	2,103	19%
Asian	79	9%	925	8%
Indian	202	23%	1,854	17%
Other	22	3%	223	2%

TABLE 23 ▼

Comparative birth outcomes for women attending the Maternity Assessment Clinic and all births, 1 July 2019 to 31 December 2020

BABY OUTCOME	VOLUME AT CLINIC	VOLUME PERCENTAGE	ALL BIRTHS	ALL PERCENTAGE
Antepartum still birth	1	0.1%	88	0.7%
Intrapartum still birth		0.0%	17	0.1%
Live birth	907	99.0%	11,666	98.3%
Live birth, neonatal death	8	0.9%	71	0.6%
Total	916		11,863	

TABLE 24 ▼

Comparative birth gestations for women attending the Maternity Assessment Clinic and all births, 1 July 2019 to 31 December 2020

BIRTH GESTATION	MATERNITY ASSESSMENT CLINIC	MATERNITY ASSESSMENT CLINIC PERCENTAGE	ALL BIRTHS	ALL PERCENTAGE
20–29	12	1%	195	2%
30–36	140	16%	836	8%
37+	713	82%	10,142	91%
Total	865		11,173	

AUTHOR

ISABELLA G SMART
Maternal Fetal Medicine Midwife Manager

Maternal and Fetal Medicine Midwifery Team

The Maternal and Fetal Medicine (MFM) Midwifery Team was established in June 2018 to provide a community-based service that bridged the gap in the coordination and delivery of care for women with complex pregnancies.

A key part of the new service was a collaboration between Counties Manukau Health and Auckland University of Technology to develop a structured orientation and education pathway for midwives working in the MFM field, known as the MFM complex care course. After being introduced at CM Health the course is now available to midwives throughout Aotearoa and has set a standard for postgraduate study in the area of MFM midwifery.

The MFM midwifery team consists of specialist and speciality midwives who have all completed postgraduate studies. The team offers direct antenatal and postnatal continuity of care for a caseload of women with complex maternal medical and/or fetal medicine needs.

The MFM midwives also act as a resource for their health board and self-employed midwife colleagues, providing a shared-care MFM pathway for women who develop additional risk factors during pregnancy. The majority of women seen by the team remain under the care of their chosen midwife, while receiving additional support from a MFM midwife.

The MFM midwifery team works in partnership with the Obstetric Medical Clinic and the Counties Manukau Fetal Medicine Unit.

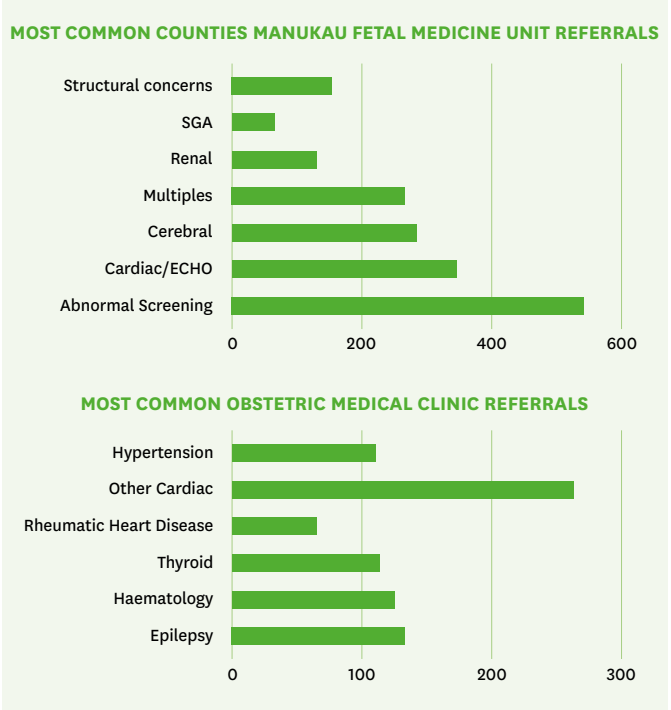
Within the Obstetric Medical Clinic, MFM midwives work alongside obstetricians, physicians and anaesthetists, and attend the weekly obstetric clinic to offer Boostrix and flu vaccines for women who attend for appointments, making it easier for women to access these vaccinations during pregnancy.

The Counties Manukau Fetal Medicine Unit runs Monday to Friday at Middlemore Hospital. Within the unit, the MFM midwifery team support both women and their MFM colleagues, including specialist fetal medicine obstetricians, neonatologists and social workers. MFM midwives assist with clinical procedures, and provide individualised information and support so that women and whaanau who attend the clinic are fully informed about their care.

Between July 2019 and December 2020, MFM midwives supported 1,854 women attending appointments at the Counties Manukau Fetal Medicine Unit, as well as the 1,246 women seen at the Obstetric Medical Clinic. The reasons for these women's referrals varied, as shown in Figure 41.

FIGURE 41 ▼

Reasons for referrals for women supported by MRM midwives, July 2019 to December 2020



Three maternal and fetal medicine for midwives study days were planned in 2020. MFM midwives have a wealth of experience in primary, secondary and tertiary care provision, and a wide knowledge of maternal and fetal medicine conditions and complications, which we aimed to shared during these days. Unfortunately, the study days were affected by COVID restrictions and only one was able to be delivered, with 15 midwives attending. Two more education days are scheduled for 2021. The sessions aim to demystify complex conditions and provide information, written resources, advice and tips on appropriate, evidence-based midwifery management. The team also produced handy sized guidelines and reference cards for midwives to use.

The MFM midwifery team will continue to develop and improve the services it offers to women and colleagues over the coming year. There are plans to update and improve information leaflets for women and whaanau on common conditions, and to update the clinical guidelines and procedures for colleagues. In addition, the MFM online Google Drive resource for qualified and student midwives will be developed further this year.

A new venture planned for 2021 is to produce a video for women and whanau about the team's service and common conditions. As a team, our focus is on providing innovative and responsive approaches to pregnancy care to address health inequity and improve long-term outcomes for women and their families.

▲ *Maternal and Fetal Medicine Midwifery Team Specialist Midwives left-right: Dee Miles, Lisa McTavish, Anne Mariner and Hayley Angus*

AUTHOR

DR SAM HOLFORD
O&G Registrar, Women's Health

Surgical site infection (SSI)

Surgical site infection (SSI) is a leading reason for women presenting to hospital following caesarean birth or open gynaecologic surgery.

In late 2018, Counties Manukau Health published a guideline promoting use of suction wound dressings (specifically prophylactic incisional negative pressure wound therapy or piNPWT) in an effort to reduce hospital readmissions due to SSI. Although the dressings had previously been available at clinician discretion, the new guideline directed that piNPWT should be used for all women undergoing caesarean birth or laparotomy, who had a BMI ≥40 kg/m2 or with multiple risk factors for SSI.

A concurrent study looked at the impact that use of piNPWT had on presentations to hospital following open surgery within the Women's Health service, and aimed to identify any reduction in presentation to hospital with SSI or non-infected wound complications, following implementation of the guidelines.

Use of piNPWT in obstetrics and gynaecology

The external evidence for the use of piNPWT within obstetrics and gynaecology is heterogenous and conflicting. Recently published systematic reviews reach opposing conclusions about the efficacy of piNPWT for caesarean birth (Yu *et al* 2018, Smid *et al* 2017). Subsequent studies have not identified a population for which there is a clear benefit of piNPWT.

During the study, electronic medical records were reviewed for all hospital presentations, within 30 days of primary surgery, where the responsible clinician was an obstetrician or gynaecologist. Data was collected about open surgeries untaken from 1 January 2018 to 31 August 2019 (but excluding a four-month period during the implementation of the guideline). Total readmission costs for each patient were derived using national district health board costing standards with links to the hospital general ledger.

During the 16-month study period, there were 10,056 hospital births at Counties Manukau Health. Of these, 28 per cent were by caesarean, of which 48 per cent involved women with obesity. At least 47 per cent of the 263 gynaecology laparotomies carried out over the same period also involved women with obesity. For women undergoing caesarean birth, 14 per cent of those eligible received piNPWT prior to the implementation of the guidelines, compared with 54 per cent after implementation. For laparotomy, 14 per cent received piNPWT pre-implementation, compared to 69 per cent post-implementation.

Among all of the women who underwent a caesarean or laparotomy prior to the implementation of the piNPWT guideline, 5 per cent presented to hospital within 30 days with SSI (Table 25 on page 117). Run charts showed there was no change to this outcome after implementation (Figure 42 on page 116). No change was also observed in caesarean or gynaecology subgroup analyses. Likewise, no change was evident in presentations with non-infected wound problems or a composite of SSI and wound problems.

A light reduction in the median length of women's stay during readmission with SSI or non-infected wound complications was observed post-implementation, but this was not statistically significant. The combined readmission costs for SSI and wound problems increased from $215,025 to $355,954, which does not include the $38,160 spent on piNPWT after implementation of the guidelines. No statistically significant differences in median costs of readmission were identified.

Of those presenting with SSI following caesarean, 82 per cent had a registration BMI >25 kg/m2, and 32 per cent ≥40 kg/m2; Eighty-seven per cent of non-infected wound problems were in women with a BMI >25 kg/m2, and 39 per cent ≥40 kg/m2.

For planned (elective) caesarean births, Maaori and Pasifika women were over-represented with SSI following caesarean (Table 26 on page 117). Maaori accounted for 14 per cent of caesareans, but 25 per cent of hospital presentations with

SSI. Thirty-three per cent of caesareans were for Pasifika women, who accounted for 42 per cent of SSI presentations.

For every woman who was readmitted with SSI and subsequently treated with a vacuum dressing or piNPWT, all treatments were successful (the woman did not present again). Notably, where a treatment dressing was applied on the ward, without a return to theatre (nine cases), these were also successful.

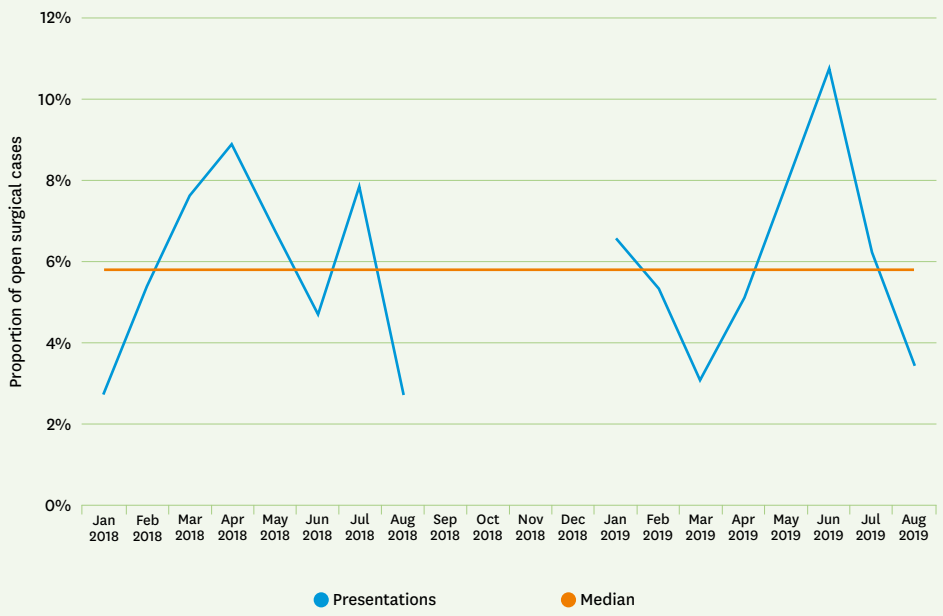
Study outcomes

Overall, the study results did not support the current guidelines supporting the use of piNPWT, as no significant reductions in hospital presentations were observed. What the study did do, is reaffirm the increased risk of SSI and wound problems associated with obesity, and caesareans carried out in the second stage of labour.

Opportunities to prevent and manage SSI were also identified. Vaginal preparation with antiseptic may reduce SSI, as may a more selective approach to surgical debridement. Treatment (rather than prophylaxis) with piNPWT may lead to shorter readmissions and costs.

FIGURE 42 ▼

Presentations to hospital with SSI or wound problems within 30 days of primary surgery, pre- and post-implementation of the piNPWT guideline



	SSI + wound issues %	SSI+wound median
Jan-18	2.7%	5.8%
Feb-18	5.3%	5.8%
Mar-18	7.6%	5.8%
Apr-18	8.8%	5.8%
May-18	6.7%	5.8%
Jun-18	4.7%	5.8%
Jul-18	7.8%	5.8%
Aug-18	2.7%	5.8%
Jan-19	6.5%	5.8%
Feb-19	5.3%	5.8%
Mar-19	3.1%	5.8%
Apr-19	5.1%	5.8%
May-19	7.7%	5.8%
Jun-19	10.7%	5.8%
Jul-19	6.2%	5.8%
Aug-19	3.4%	5.8%

REFRENCES

Yu, L., Kronen, R. J., Simon, L. E., Stoll, C. R., Colditz, G. A., & Tuuli, M. G. (2018). Prophylactic negative-pressure wound therapy after cesarean is associated with reduced risk of surgical site infection: a systematic review and meta-analysis. American Journal of Obstetrics and Gynecology, 218(2), 200-210.

Smid, M. C., Dotters-Katz, S. K., Grace, M., Wright, S. T., Villers, M. S., Hardy-Fairbanks, A., & Stamilio, D. M. (2017). Prophylactic negative pressure wound therapy for obese women after cesarean delivery: a systematic review and meta-analysis. Obstetrics & Gynecology, 130(5), 969-978.

TABLE 25 ▼

Post-operative hospital presentations with SSI and wound problems, and treatments received.

	PRE-IMPLEMENTATION N (%)	POST-IMPLEMENTATION N (%)
PRESENTATION REASON		
Presented for any reason	181 (12)	178 (11)
SSI	73 (5)	84 (5)
Superficial	44 (3)	55 (3)
Deep	8 (1)	6 (0)
Organ space	21 (1)	23 (1)
Wound problem (non-infected)	12 (1)	11 (1)
SSI + wound problems	85 (6)	95 (6)
TREATMENT		
Antibiotics given	125 (9)	125 (8)
Return to theatre	14 (1)	13 (1)
Interventional radiology	3 (0)	1 (0)

TABLE 26 ▼

Demographic associations with hospital presentation with SSI and wound problems following caesarean birth.

	MATERNITY POPULATION	CAESAREAN	SSI	WOUND PROBLEM (NON-INFECTED)	SSI + WOUND PROBLEMS
ETHNICITY		n (%)	n (%)	n (%)	n (%)
Maaori	20%	390 (14)	25 (19)	0 (0)	25 (17)
Pacific island	29%	908 (33)	56 (42)	6 (40)	62 (42)
European/Other	24%	571 (20)	16 (12)	2 (13)	18 (12)
Indian	14%	557 (20)	23 (17)	2 (13)	25 (17)
Asian	13%	280 (10)	10 (7)	2 (13)	12 (8)
BMI					
Underweight	1%	33 (1)	1 (1)	1 (7)	2 (1)
Normal weight	25%	735 (26)	24 (18)	2 (13)	26 (17)
Overweight	31%	671 (24)	24 (18)	3 (20)	27 (18)
Class 1 obesity	20%	527 (19)	24 (18)	5 (33)	29 (19)
Class 2 obesity	12%	392 (14)	21 (16)	1 (7)	22 (15)
Class 3 obesity	10%	416 (15)	40 (30)	3 (20)	43 (29)

AUTHOR

ISABELLA G SMART
Midwife Manager, Women's Health Community Midwifery

Te Rito Ora Breastfeeding and Infant Nutrition Project

Te Rito Ora is a Ministry of Health project, managed within CM Health, which is funded on an annual decisional basis. The aim of the project is to provide a free breastfeeding, baby feeding and adult nutritional support service to mothers and whaanau of babies aged 0 to 2 years in Counties Manukau. Our target groups are Maaori, Pasifika and Asian people, although we do not reject any referrals for help within our area.

Te Rito Ora has an 0800 free phone number for anyone to use, so that people can refer themselves, and an easy internal CM Health E-referral system. In additional, all midwives can refer to us directly through a woman's electronic maternity record. We have five Kaitipu Ora support workers and one full-time lactation consultant.

Breastfeeding

We offer in-home, in-person antenatal breastfeeding advice and education, practical breastfeeding support to new mothers and lactation consultant input in complex breastfeeding situations. We developed ZOOM, phone and video breastfeeding consultations to help mothers continue to breastfeed during COVID restrictions. As a result, our contact with women has remained fairly constant, with 193 enrolments and 429 total contacts in the 6 months from January to June 2020 (compared with 251 enrolments and 469 contacts from July to December 2019. We also continued to offer in-person lactation consultant visits when clinically required throughout the time of COVID restrictions.

Figure 43 shows the total number of referrals to Te Rito Ora by ethnicity for the 6 months from July to December 2020. For those referrals identified as 'Blanco', no referral course was identified.

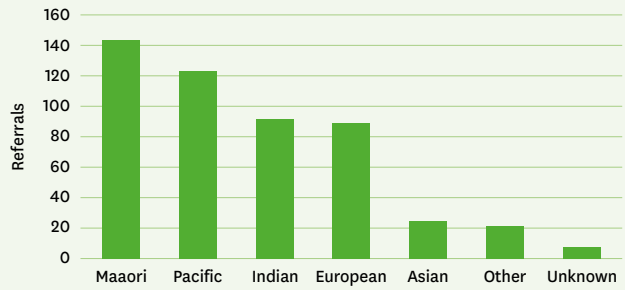
Over the past 6 months, Te Rito Ora has hosted a breastfeeding and nutrition open day a Te Wānanga o Awanuiārangi, attended local community events, open days, festivals and forums, gave a CM Health webinar, restarted our Facebook page and networked with more than 25 local organisations. We also tried to initiate a breastfeeding peer group, but this was affected by COVID restrictions and community wariness of attending group sessions with strangers. We will try again in 2021.

Nutrition

Our nutritional education and practical support help families create healthy first foods for weening. We also deliver adult cooking skills sessions for people on a budget. We promote healthy ingredients, adapting favourite foods to reduce fats, sugars and salts, and increase people's intake of vegetables and fruit. In 2020, we have added working directly with pre-schoolers into our approach.

FIGURE 43 ▼

Referrals to Te Rito Ora by ethnicity, July to December 2020



Starting solids

Our starting solids sessions provide practical skills and knowledge about baby's first foods on weening, and aim to enable families to make healthy fresh choices instead of relying on pre-packaged baby foods. Due to COVID restrictions, in 2020 we developed ZOOM sessions, which proved popular; we intend to continue these sessions to complement our in-person sessions.

In the 6 months from July to December 2020, we held 11 sessions and saw 129 mums. There were eight in-person group sessions, two Zoom sessions, a library session called Learning Food Through Play (more are planned in local libraries) and a practical session on preparing weening foods, at a teen pregnancy service where we also promote breastfeeding.

Adult cooking and nutrition sessions

Over the past 6 months, we set up regular sessions to teach adults about cooking and nutrition, working with a project for people returning into our community from prison (both women with or without babies and men). In total, 89 men and 77 women attended five 2-hour sessions held in October, November and December 2020. We also held two 2-hour sessions to promote breastfeeding and nutrition at the local Gurdwara with 25 Sikh women and established contacts with the teen pregnancy units at local high schools to deliver services in 2021.

Pre-schoolers

Healthy eating habits are best begun early, so we have expanded our work to include pre-schoolers and their carers. In the last 4 months of 2020, we worked with three early learning centres in Papakura, Manurewa and Weymouth, and engaged with 84 pre-schoolers in interactive sessions. During the sessions, the pre-schoolers learnt about healthy eating and built positive relationships with fruit and vegetables. They were given take-home resources for their parents to encourage and reward vegetable and fruit intake. We will be expanding this work in 2021.

Starting Solids group talk with Aleshia from Te Rito Ora

7 Gynaecology

AUTHOR

MARY BURR
General Manager

Improving women's gynaecological health at CM Health

Gynaecological Services at CM Health provides acute and planned general medical and surgical gynaecology management, minimal access surgery and non-tertiary cancer services, urogynaecology (including urodynamics, colposcopy, hysteroscopy and contraception), and manages early pregnancy complications and loss services.

Our data shows that our activities are increasing year on year. In addition, we know there is unmet need in our community. While our highest priority is to provide expert and timely care for critically or acutely unwell women, and for those with life threatening conditions such as cancer, many women also suffer from less urgent but debilitating and restrictive conditions that impact on their lives and those of their whaanau. At present, we are unable to provide treatment for all these women. Other women are experiencing considerable delays in their surgical management, due to the number of patients we are servicing and limited resources, particularly related to theatre access at Middlemore Hospital.

The Ministry of Health's Faster Cancer Treatment timeframe targets are also currently being affected by delays in diagnostic procedures, such as pipelle, hysteroscopy, ultrasound scan and magnetic resonance imaging to exclude cancer. During 2020, we gained funding to complete some diagnostic procedures in the primary care setting. This will provide earlier diagnosis of benign disease, and some cancers, and reduce the number of patients on the cancer pathway.

CM Health has substantially higher rates of endometrial cancer than the rest of New Zealand (driven by obesity and related comorbidities) and our mortality rates are not decreasing when compared to the rest of the country. Pacific women are over represented in the endometrial cancer group. Work continues to understand and address these issues.

Obesity increases the likelihood of many gynaecological conditions. It also complicates surgery, when this is required, by increasing theatre time (making it physically more demanding and requiring longer more complex surgeries), increasing post-operative complications and requiring longer post-operative recovery times. This impact of obesity and comorbidities on gynaecological capacity is a huge area of concern for the Women's Health service, and has been identified as a risk in the CM Health Corporate Risk Register.

We continue to advocate for more theatre access, particularly at Middlemore Hospital, in order to avoid delays for surgery and the exclusion of some women from having surgical treatment at all. We also work to ensure appropriate training opportunities are available for our future specialists. Other measures to address capacity include outsourcing some cases and recruiting more gynaecologists. Outsourcing surgery has improved delays, and we have recently secured a contract to accommodate women with higher body mass indexes.

Our perinatal loss service provides support for women and whaanau who have experienced a perinatal loss. We have carried out significant work to design an holistic service for this important activity, including appointing a clinical nurse specialist to complement the work led by our perinatal midwife specialist. Our goal is that every woman will receive appropriate counselling and support throughout and after pregnancy loss.

Health equity

Maaori and Pacific women are over represented in gynaecological first specialist assessment and surgery data. This is partially due to the obesity levels and related comorbidities in these populations. But it is also about the barriers these women face in seeking medical advice and care early.

Gynaecological Services is focused on breaking these barriers down further and providing equity of access, continuing to work together with women to ensure priority populations are prioritised for care.

AUTHOR

DR KATHERINE SOWDEN
Gynaecologist, Gynaecology Clinical Lead

Gynaecology procedural complications data

Counties Manukau Health is committed to excellence in all aspects of gynaecological care. The demands on our service to provide timely care are challenged by the limits on our resources. Despite this, we performed over 2,500 acute and elective gynaecological procedures in 2020.

One way we monitor the quality of care we provide is by closely reviewing complication rates. We do this using post-discharge data and surgeon self-reporting.

As we cannot verify the data we receive, we assume it is accurate. The process for collecting data is continuing to be improved upon. We use the data to identify opportunities to develop services so that they best meet the needs of our diverse population. The data is presented at a two monthly meeting of medical staff, where significant trends are discussed and addressed and any suggested changes to practice are circulated.

A complication can be defined as a deviation from the expected postoperative course or outcome. For our purposes, complications are broken down into five categories:

- haemorrhage/haematoma
- perforation of a viscous or organ
- infection
- wound dehiscence
- an 'other' category, for the less common complications such as pain, ileus, constipation and thromboembolic events.

Reporting on complications is limited to those identified while the patient remains under the care of the gynaecology service or if they are readmitted to the service. Complications identified in the recovery period, while the patient is under the care of community services, may not be reported to the gynaecology service and therefore not included in the collated data. For example, minor wound infections that are managed in the community setting and do not require hospitalisation would not be included in the data. For this reason, the complication rates we monitor are likely to be an underestimate.

The overall complication rate for gynaecology inpatient and day stay surgical procedures for 2020 was 4.09 per cent. Comparing this rate with other units is difficult as the data is not readily available. In addition, caution must be exercised when comparing complication rates in different populations with different risk profiles.

The individual rates for specific procedures and for complication types are identified in Figure 44 to Figure 45.

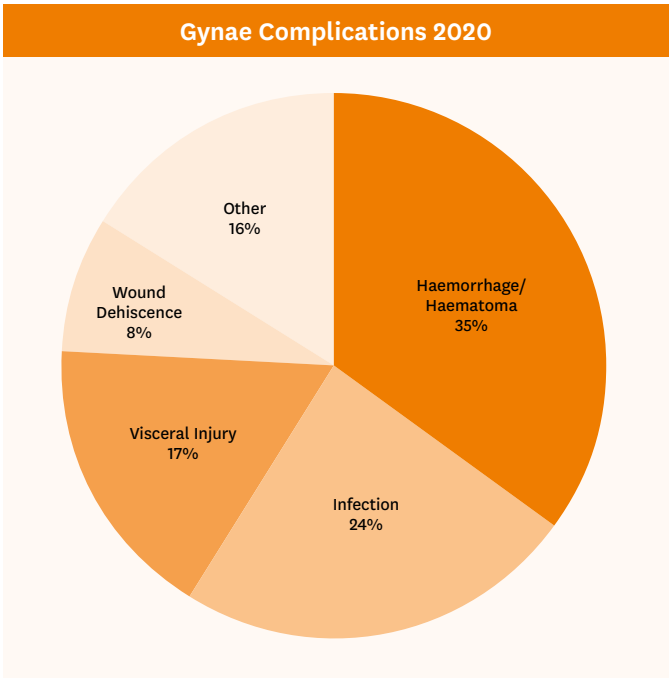
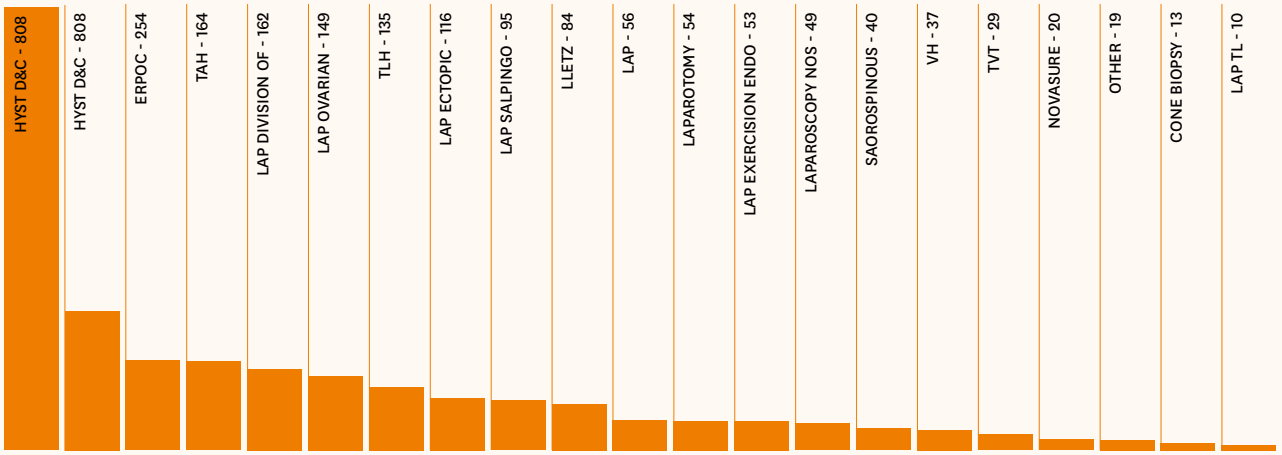


FIGURE 44 ▲

Rates of complications following gynaecology procedures, by complication type, 2020

Gynae Procedures 2020



ACRONYM KEY

Hyst D&C - Hysteroscopy dilatation and curettage | **ERPOC** - Evacuation of retained products of conception | **TAH** - Total Abdominal Hysterectomy | **LAP** - Laparoscopic | **TLH** - Total Laparoscopic hysterectomy | **AP repair** - Anterior posterior repair | **LLETZ** - Large Loop excision transformation zone (Colposcopy) | **Endo** - Endometriosis | **VH** - Vaginal hysterectomy | **TVT** - Tension free vaginal tape (sling) | **TL** - Tubal Ligation | **TLH** - Total laparoscopic hysterectomy

FIGURE 45 ▲

Gynaecology procedures completed at CM Health 2020

Complication Percentage of Total Procedure Type - 2020

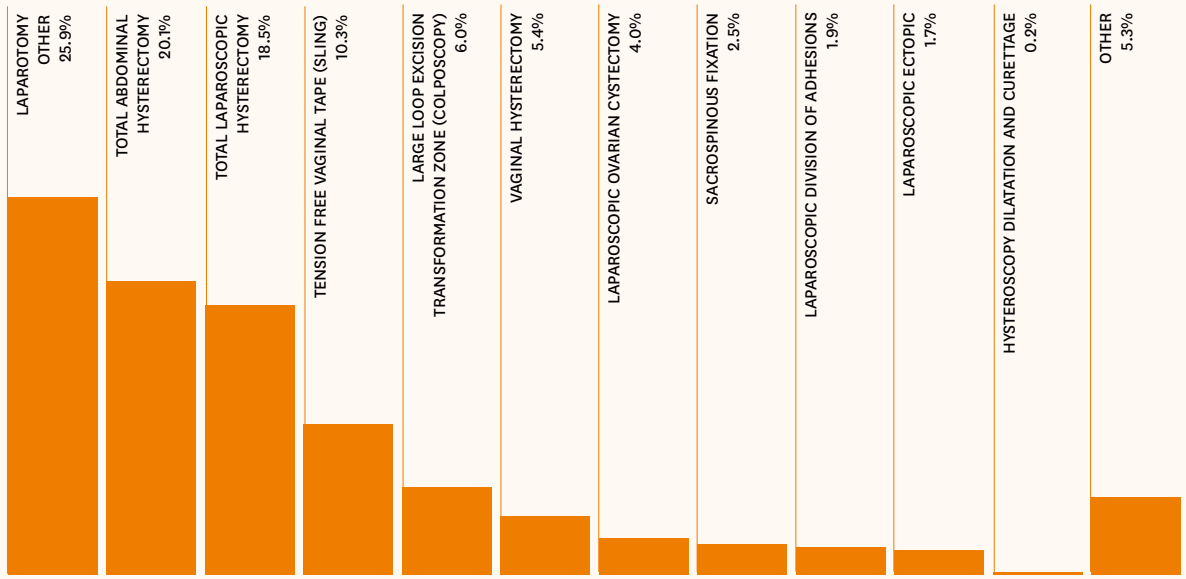


FIGURE 46 ▲

Percentage of complications, by gynaecology procedure type, 2000

AUTHOR

DR RACHEL MURRAY
Fellow

Up skilling in laparoscopic hysterectomy

Numerous studies support laparoscopic hysterectomy over the standard open abdominal approach (when vaginal hysterectomy is not possible), with the benefits of taking a minimal access surgical approach well documented in the literature.

A project at Counties Manukau Health was set up in 2017 to provide a training programme for gynaecologists at senior medical officer level who wished to improve their laparoscopic skills. Following the training, participants would be able to offer laparoscopic assisted vaginal hysterectomy and total laparoscopic hysterectomy.

Four senior medical officers completed the programme. Participants were required to fulfil four requirements:

- attending an advanced training course or cadaveric dissection
- regularly using a personal 'box trainer' to perform exercises
- reviewing videos of a total laparoscopic hysterectomy, via web-based learning
- attending and being actively mentored by a colleague at operating theatre lists until they were proficient in the procedure.

Skills assessment of the participants during the programme comprised:

- certification of course attendance from the course organiser
- an initial skills assessment in theatre by the participant's mentor
- sign off from the mentor that the participant is able to safely perform a total laparoscopic hysterectomy independently
- a structured assessment, using the Australasian Gynaecological Endoscopy and Surgery Society's 'Assessment of procedural skills' form, completed for each laparoscopic hysterectomy procedure carried out
- a 360-degree performance feedback form, covering communication, responsibility, skills and leadership skills.

Table 27 compares the total number of laparoscopic hysterectomy cases completed in 2017 and 2020

TABLE 27 ▼

Proportions of hysterectomy types completed, 2017 and 2020

	2017	2020
ABDOMINAL	70%	53%
LAPAROSCOPIC	21%	38%
VAGINAL	9%	9%

This programme aimed to improve the care provided to women at CM Health who proceed to hysterectomy. An additional benefit was the increased exposure to laparoscopic assisted vaginal hysterectomy and total laparoscopic hysterectomy for gynaecologists who wished to increase their skills in this area.

1. Upskilling in Laparoscopic Hysterectomy clinical guideline. Women's Health. Clinical leader, Gynaecology, Gynaecology clinical practise group. 8.5.2017
2. AGES http://ages.com.au/trainee-assessment-doc/laparoscopic-hysterectomy/

AUTHOR

CHRISSIE SYGROVE
Perinatal Pregnancy Loss Nurse Specialist

Creating a significant new nurse specialist position for early perinatal pregnancy loss

Pregnancy loss under any circumstances can have a significant impact on the wellbeing of women and whaanau. Irrespective of the stage of pregnancy, healthcare provided during pregnancy loss must be delivered in a respectful, responsive manner that is appropriate to the unique needs of those involved.

For more than a decade, the pregnancy loss midwife supported all CM Health women who experienced pregnancy loss after more than 20 weeks' gestation. It recently became clear, however, that more support was needed for those women who experience pregnancy loss before the 20th week of their pregnancy. In September 2020, a new position of nurse specialist perinatal pregnancy loss was established to meet this need.

The scope of the nurse specialist's role

The full scope of this innovative new role is still being established. In the first instance, the nurse specialist is responsible for coordinating the management of care for women experiencing either spontaneous or assisted pregnancy loss. The nurse specialist is the interface between the women accessing healthcare and those providing the relevant services; she helps coordinate care and acts as the point of contact, ensuring that women and their support people are given all appropriate information in a sensitive and timely manner.

In this new role, the nurse specialist acts as a barometer, monitoring both how well the service is meeting the needs of women and their whaanau, and whether the service is meeting the requirements of the Interim Standards for Abortion Services in New Zealand. From these observations, the nurse specialist identifies and leads best practice models of care for pregnancy loss, and works to ensure that CM Health policies and procedures reflect these.

Whether a pregnancy loss is spontaneous or planned, women and their whaanau will have their own values, beliefs and needs, which will inform the type of care they might need at any given time. An important part of the nurse specialist role is to hold space for the women, listen to and advocate for them, and help ensure that the service is operating in a way that is responsive to their particular needs and personal preferences. It is vital that service users feel respected, heard and empowered to access care that aligns with their individual needs.

Thanks are due to the Women's Health senior team, the pregnancy loss midwife, Gynaecology Care Unit and Early Pregnancy Assessment Clinic staff, Women's Health social workers and bereavement care staff for their work to date in the area of pregnancy loss. The nurse specialist role for early perinatal pregnancy loss is only just beginning to take shape. There will be many new learnings and we will rise to the challenge and collectively develop this service.

Compliance with the interim standards for abortion services

The Ministry of Health expects all abortion service providers to comply with the Interim Standards for Abortion Services in New Zealand from 24 March 2020.

The standards set the minimum level of service that service providers must comply with, and require all district health boards to have clear and accessible guidelines for referral of women for abortion in the second and third trimester of their pregnancies. All district health boards must also provide women with written information on the abortion process for the first trimester, and access to admission for an abortion should be possible at any time during the second or third

trimester, provided the criteria in the legislation are met.

At CM Health, we continue to improve our process for all women wishing to access abortion through our DHB at whatever gestation. The process aims to continue a service to women in line with the new requirements of the Act and in particularly in relation to local delivery and minimisation of delay for women in accessing the service, including through direct self-referral.

Areas for improvement

Care provision for miscarrying women requires continuous review and improvement. Currently some women who are miscarrying present to the Emergency Department when they could be managed more appropriately as outpatients. We are working to develop improved systems and processes to capture information for all women experiencing pregnancy loss. To progress this, we are also investigating whether Badgernet could be used to manage follow-up appointments and plan care pathways for these women. Better data capture will also help us understand our population and guide opportunities to improve care.

More education for staff is also required around pregnancy loss, including which investigations are appropriate for which women, provision of contraception counselling, and building confidence in caring for women who lose a baby after the first trimester.

New strategies and solutions we plan to develop include:

- streamlining and standardising patient contact and support processes
- making it easier for women to navigate access to all services
- creating and updating patient pamphlets for all pregnancy loss to ensure the information is appropriate, up to date and readily available
- updating and reviewing procedures and guidelines in all areas of gynaecology services
- using Badgernet to store all pregnancy data in one place and ensure data collection is robust and accurate
- providing ongoing education and support all staff involved in pregnancy loss
- assisting with long-acting reversible contraception consultations before women go home
- working with the GP liaison team to develop robust, clear referral pathways
- assisting with electronic lead maternity carer and GP notifications
- ensuring follow-up appointments for the second trimester pregnancy loss clinics are made at the correct times.

REFRENCES

Ministry of Health 2020 *Interim Standards for Abortion Services*, Published April 2020 by the Ministry of Health, Wellington

AUTHOR

DR SUE TUTTY
GP Liaison, Primary care

Vaginal pessaries for prolapse

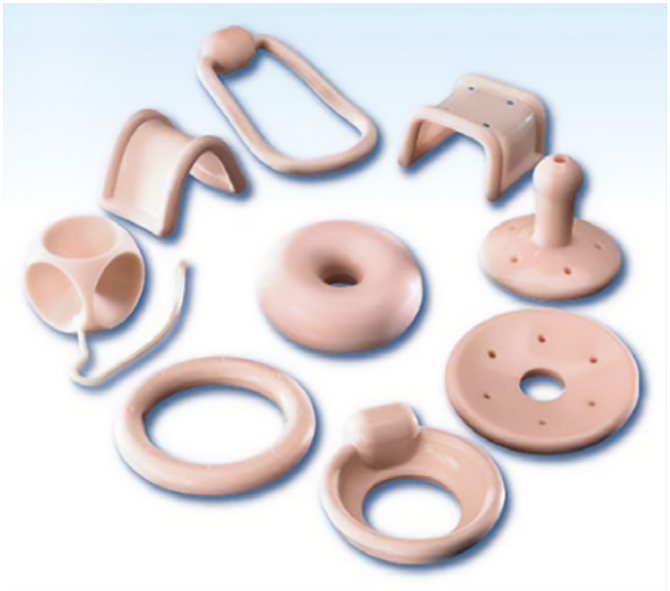
About 40 per cent of women will experience prolapse in their lifetime and this number is likely to increase with the aging population. Women report a wide variety of symptoms that affect their quality of life, sexual functioning and daily activities.

Vaginal pessaries are one treatment option for prolapse and are commonly used to restore the prolapsed organs to their normal position. A pessary can be useful for the whole range of prolapse symptoms including for severe prolapse while awaiting surgery.

Currently CM Health sees women with prolapse at a first specialist clinic and then, if a pessary is inserted, brings the women back to a pessary clinic at least every 6 months. However, most women with prolapse are never seen at the clinic, and could be adequately cared for by their GP with a pessary or/and a referral to physiotherapy.

Some GPs in primary care are already skilled to fit and change pessaries, although this usually only happens where the patient can contribute to the cost of the procedure and the pessary. If this service was more available in primary care, it could be provided to a wider range of women, in a timely manner and closer to home. While not all GPs are confident in fitting pessaries, a larger group of them would be proficient in doing the 6 month checks.

Using planned care funding from the Ministry of Health, we have established a process to fund the fitting and follow-up of vaginal pessaries in primary care. This is expected to take some pressure off the demand for pessary clinic appointments and free up staff to take on alternative duties. The funding will ensure that the woman only needs to pay for her initial visit to the doctor, with all the costs following that, including the price of a fitting kit (for the practice) and of the pessary itself, covered.



▲ *Examples of pessaries (taken from the Milex Pessary training manual)*

AUTHOR

DR SUE TUTTY
GP Liaison, Primary care

Abnormal uterine bleeding

The incidence of endometrial cancer in South Auckland has been increasing dramatically and gynaecology services have been pressured to cope with the increasing demand.

Nationally, the annual incidence of endometrial cancer is 17.3/100,000 female population in New Zealand. In Counties Manukau, the rate has risen by 31 per cent between 2009 and 2018 to be 25.6/100,000 female population*. The mortality rate from endometrial cancer increased by 11 per cent between 2007 and 2016 in New Zealand; in Counties Manukau it increased by 49 per cent†.

The CM Health cancer steering group is concerned about the pressure the gynaecology service has been under to provide care for the increasing number of women with abnormal uterine bleeding. Strategies are needed to help Women's Health get improved outcomes. An ultrasound scan and an endometrial biopsy are the preliminary investigations required for a diagnosis. If these tests could be performed in primary care, prior to referral, this would expedite outpatient management and mean a significant proportion of women would not need to be seen in secondary care.

Although there is already a project in place to support the diagnosis and management of abnormal uterine bleeding in primary care, until recently it was not been adequately funded. An audit of the project from December 2019 to November 2020 revealed that 132 women were seen by 34 different GPs, but that most of the work was being done by a very small number, as shown in Figure 47.

This year, using planned care funding from the Ministry of Health, it was possible to roll out new funding for the project to primary care on 1 December 2020. GPs will now be adequately funded for the work being done, including the cost of the pipelle needed to take the endometrial biopsy.

The results from the audit suggest that, with adequate funding, there is the potential to grow the work being done in primary care very quickly. There is also capacity to train more clinicians. The ethnicity and quintile group of the population already being served by the project suggests that it is reaching the appropriate women (see Figure 48), although this data may reflect the locality of the GPs who have been involved in this work to date.

Analysis of earlier data from the project, from January to November 2019, showed that 97 women were seen in primary care, 15 of them had a Mirena device inserted, and 50 were referred to secondary care. This supports observations made in previous years that, despite adequate investigations in primary care, approximately half of the women will still need to be seen in secondary care. However, women who have their initial investigations in primary care are able to be triaged more appropriately and those with definite pathology to be seen in a timelier manner. Full analysis of the 2020 data is not yet available, but preliminary results suggest that the number of Mirena insertions has increased, which is probably related to the change in funding from Pharmac making Mirena more available.

Overall, we anticipate that the increased funding for the abnormal uterine bleeding project will dramatically increase the number of investigations being performed in primary care, leading to better outcomes for women and less pressure on the gynaecology service.

* *Susan M. Bigby, Sandar Tin, Lois J. Eva, Phillipa Shirley, Kieran Dempster-Rivett and Mark Elwood Increasing incidence of endometrial carcinoma in a high-risk New Zealand community; Aust N Z J Obstet Gynaecol 2020; 1–8 DOI: 10.1111/ajo.13108*

† *Wing Cheuk Chan, Dean Papa, Mildred Lee, Jan 2020, Gynaecological cancer registration and mortality (private paper)*

The Number of patients seen by each individual doctor

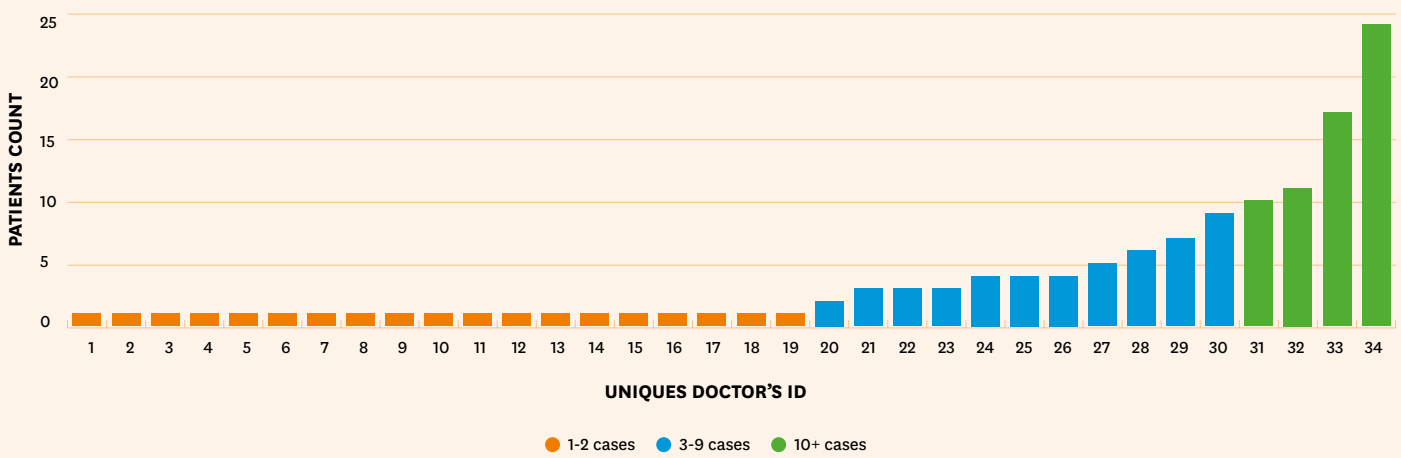


FIGURE 47 ▲

Internal audit of the abnormal uterine bleeding project, 2019–2020

Ethnicity breakdown by quintile group

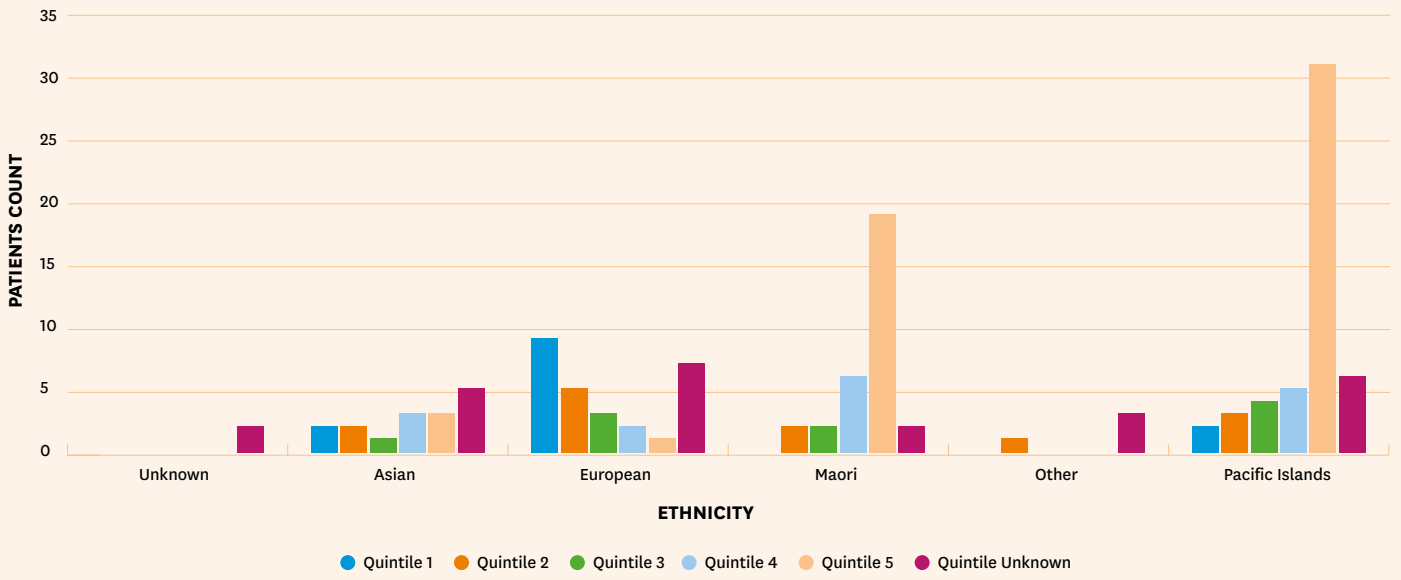


FIGURE 48 ▲

The ethnicity and quintile breakdown of patients seen in primary care with abnormal uterine bleeding, 2019–2020

8

Newborn Care

AUTHORS

DEBRA FENTON
Maternity Service Manager

JENNY LESTER
Lactation Specialist

LOUISE STONE
Lactation Specialist

ALLISON VODANOVICH
Lactation Specialist

Lactation Support Service Specialists Annual Update

Lactation support service

The lactation support service is based in Middlemore Hospital's maternity wards and community midwifery service, and is delivered by a team of nine midwife and nurse specialists with lactation qualifications and three breastfeeding advocates.

The service offers mothers advice on infant feeding and provides intensive assistance to mothers and staff when babies have complications that impede effective breastfeeding. The lactation specialists are available Monday to Friday from 7am to 3:30pm. Further support is given by the breastfeeding advocate team who educate mothers about successful feeding and are available during the day, 7 days a week.

Over the past year, the team has worked on various projects and work streams. Some of the main ones are summarised below.

Newborn hypoglycaemia

LOUISE STONE, LACTATION SPECIALIST

During 2019, the lactation team provided input into the newly developed *Women's Health Guideline for Management of Newborns at Risk of Hypoglycaemia*.

Newborn babies with hypoglycaemia are at risk of not effectively establishing breastfeeding, due to complications associated with poor fetal growth, diabetes and other complications during pregnancy. At CM Health, 12 per cent of our pregnant women have diabetes. We also have high numbers of women having late preterm deliveries, so this guideline applies to a considerable number of our babies.

Giving dextrose gel to newborn babies with low blood sugar can help protect exclusive breastfeeding. However, a considerable number of our babies still required supplementary feeding with an artificial breast milk substitute to avoid newborn hypoglycaemia.

The lactation specialists help staff become familiar with the hypoglycaemia guideline, supporting them with newborns who meet the criteria in the guideline, and emphasising the measures that protect and preserve breastfeeding.

Transitional care beds in maternity

ALISON VODANOVICH, LACTATION SPECIALIST

The introduction of transitional care beds in the maternity wards began in late 2019. This model of care is designed to support babies, mothers and whaanau progressing from the Neonatal Unit.

Transitional care babies tend to have been born prematurely or had a more complex medical course. Their mother or care-giver is re-admitted as a boarder on the maternity ward to gain experience in mother-craft and establish feeding before the baby goes home. Babies are often progressing to breastfeeding after having been on nasogastric feeding support.

Transitional care provides a collaborative approach to baby's care between the whaanau and maternity staff, including the lactation support team and neonatal medical staff. Staff promote autonomy for families by helping mothers and whaanau evaluate their infant's feeding and encouraging other aspects of safe infant care.

This model of care has been used for some time in maternity services, but this initiative created an opportunity to formalise the arrangement and dedicate beds for transitional babies. On average, four babies will be transitioning on the maternity wards at Middlemore at any one time. Others area cared for in the primary birthing units. The goal for Middlemore was to have up to eight dedicated transition beds by the end of 2020. However, progress of this model was complicated by visitor restrictions during COVID, compounded by high levels of postnatal acuity experienced on the ward, which required dedicated staff and bed space resources.

Posters developed for COVID-19

Two very useful posters about the benefits of breastfeeding during COVID-19 were developed with the initiative and

input of the Lactation Support Services team and the two maternity ward midwife managers. They amalgamated information sourced from the Lakes District Health Board, and were consistent with World Health Organisation and Ministry of Health advice on breastfeeding.

The first poster simply advised that breastfeeding, skin-to-skin and rooming-in continue to be recommended during COVID-19, and were placed in all rooms that did not have an isolation function (see next page).

The second poster was provided to any breastfeeding (or unsure) mother who was in isolation with suspected or confirmed Covid-19. They were provided on the mother's arrival to the room, to reassure her that she could continue or elect to breastfeed, and discarded when she left (see next page).

Thematically, the posters aligned with the design used for local general COVID -19 information, and their production fast-tracked, so they could be distributed as soon as possible.

Baby Friendly Hospital Initiative education for 2020

The Baby Friendly Hospital Initiative (BFHI) is an international programme designed to ensure all maternity services become centres of breastfeeding support worldwide.

At CM Health, the lactation support service delivered the following BFHI workshops in 2020. Some courses were cancelled due to Covid-19.

- **Patient safety training** – six 1-hour practical sessions, attended by 149 staff (89 midwives, 58 registered nurses, two enrolled nurses).
- **BFHI essentials** (for new midwifery and nursing staff) – six 2-day courses, attended by 74 staff (24 midwives, 44 registered nurses, one lactation consultant, five dieticians).
- **BFHI update** (for staff who have been with us for 2 years) – seven courses, attended by 52 staff (31 midwives, 18 registered nurses, one enrolled nurse, one lactation consultant, one speech language therapist.
- **BFHI applied** – three courses, attended by 36 staff (25 midwives, nine registered nurses, two lactation consultants).
- **BFHI in practice** – six courses, attended by 98 staff (64 midwives, 27 registered nurses, one enrolled nurse, six lactation consultants).
- **BFHI workshop** – five courses, attended by 20 staff (14 midwives, five registered nurses, one lactation consultant).
- **New staff orientation** – 10 courses, attended by 67 staff (36 midwives, 29 registered nurses, two lactation consultants).

Overall, 496 midwifery and nursing staff received BFHI training throughout the year, including 283 midwives, 190 registered nurses, four enrolled nurses, 13 lactation consultants, one speech language therapist and five dieticians.

In addition, 97 allied health staff completed BFHI education in 2020: 28 health care assistants, nine cleaners, four social workers, 40 clerks, eight hearing screeners, two pharmacists, two dieticians, a community health worker and three breastfeeding advocates.

Exclusive breastfeeding at discharge statistics

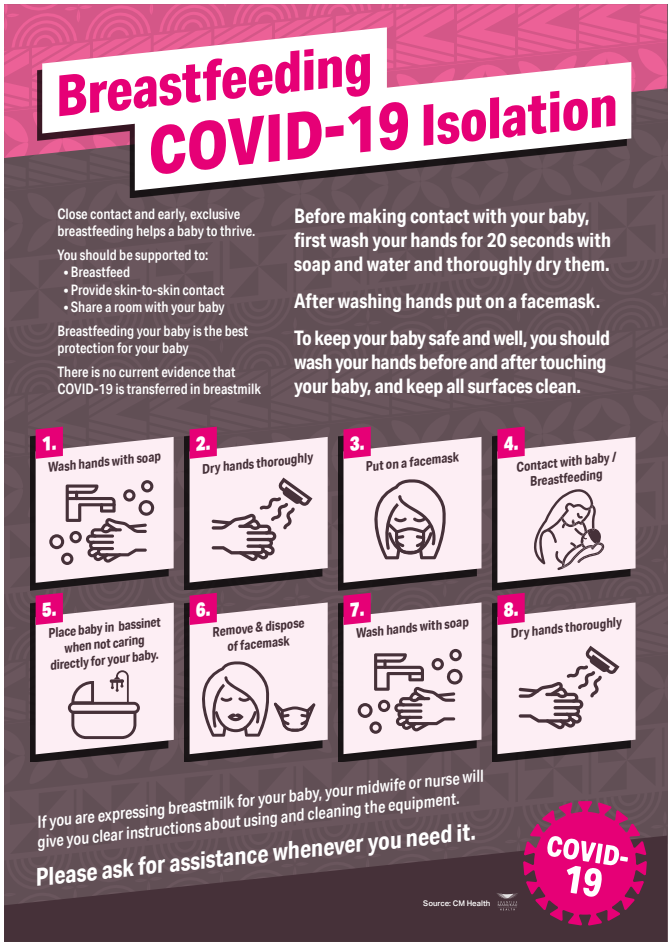
Despite delivering a consistent BFHI education programme, the exclusive breastfeeding rate on discharge continues to decline at Middlemore Hospital, and has fallen below the BFHI target of 75 per cent of babies being exclusively breastfed at their first discharge from a maternity facility, as shown in Figure 49.

Rates at the three primary birthing units remain high.

We will begin a programme of work shortly to identify the factors contributing to the decline in exclusive breastfeeding rates at Middlemore Hospital. At first glance, these factors are likely to include rising intervention rates, an increase in detection of small-for-gestational-age babies and implementation of the newborn hypoglycaemia guideline, alongside with social and other population health determinants.

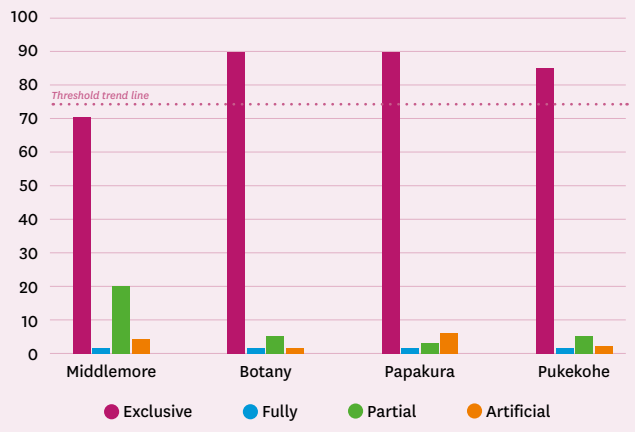
The lactation support team continues to provide an essential service in our secondary maternity care environment. We continue to implement quality improvement initiatives that uphold the standards required of our BFHI-accredited facilities. Next year, we hope to be able to report a turn around in our exclusive breastfeeding at discharge rates at Middlemore, ahead of our BFHI re-assessment in 2022.

▲ *Poster about breastfeeding during COVID-19*



▲ *Poster about breastfeeding while in COVID-19 isolation*

Exclusive breastfeeding at discharge rates for CM Health maternity facilities



Source: New Zealand Breastfeeding Data Report

FIGURE 49 ▲

▲ *The lactation support team, left to right: Lactation consultants Cami Nettekoven, Allison Vodanovich, Johanna Hermans, Jenny Lester, Louise Stone, Tusiata Ioramo (breastfeeding advocate), Allison Farnell, Linda Appleyard, Bev Pownall (team leader). Absent – Barbra Hussain and Theresa Roebeck (breastfeeding advocates), Hagar Barvich (lactation consultant).*

AUTHOR

BEV POWNALL
Team Leader, Lactation Support Services

New blood glucose analysers make a significant difference

The introduction, at the end of 2019, of two new blood glucose analyser machines for use in the maternity ward and birthing and assessment unit has made a significant difference to the comfort of babies, mothers and their whaanau.

The two machines, designed for use on neonates, were purchased and installed following a trial in September 2019.

The trial itself arose from staff concerns over the appropriateness of products designed for testing blood glucose in adults, which at the time were also being used on newborn babies, despite there being no evidence to support their use. Staff noted that the product was returning frequent false negative and positive results, and often required repeated heel-stick blood tests, leading to delays in transfers form the birthing and assessment unit to the wards and in the discharge process.

The trial investigated how blood glucose testing might be improved. Specific aims included:

- improving accuracy in test results
- reducing multiple avoidable blood tests for newborn at-risk babies
- improving staff satisfaction and workflow
- reducing unnecessary use of infant formula.

The Lactation Support Services team based at Middlemore Hospital assisted with the trial, with 10 staff trained to take samples and act as champions. The results suggested that by using trained staff who are skilled in capillary sampling, providing training in the correct use of the blood glucose analyser, and enabling samples to be processed on the ward in a timely manner the first three specific aims could be met (no impact was noted on the use of infant formula).

The decision (taken near the end of the trial in 2019) to purchase two blood glucose analysers suitable for use with neonates has been welcomed by staff. Acknowledgement is due to those staff who identified issues with the previous approach and advocated for fit-for-purpose equipment to be made available for mothers and newborns.

The analysers became fully operational during 2020. Anecdotal benefits noted to date include a significant reduction in hold-ups for mothers and babies waiting to be transferred or discharged, and the avoidance of repeated heel sticks for most babies. Other anticipated benefits include reduced family stress and dissatisfaction, reduced staff frustration and stress, savings in time and money, and avoidance of potential for loss of confidence in breastfeeding by mothers.

The Lactation Support Services team will continue to investigate ways to support, promote and protect breastfeeding.

AUTHOR

DEBBIE DAVIES
Perinatal Loss Midwife Specialist

Supporting families through the loss of a baby

In 2016, with the support of the Middlemore Foundation, we renovated our whaanau room in the Birthing and Assessment Unit. The room provides for extended families who stay to support parents whose baby has been stillborn or died in the neonatal unit.

In 2019, we undertook a small project to rename the room and identify a symbol that could be used to alert staff when a loss has occurred in a particular room.

In consultation with our kaumatua, Te Teira Rawiri, and with feedback from bereaved parents through Baby Loss NZ, we adopted the symbol of New Zealand's giant dragonfly or kapokapowai. The name means 'water snatcher' in te reo Maaori, with the symbol's significance described as:

The spiritual meaning of a dragonfly is transformation. It is said the dragonfly appears before you when a life has gone, taking the wairua or spirit to a place of rest. The dragonfly represents light to the departing one.

The symbol, and the kaumatua's words appear on a door card, which highlights for staff that a tragedy has occurred in that room and they should tread carefully. The card is given to the family as a keepsake of their baby that they have lost.

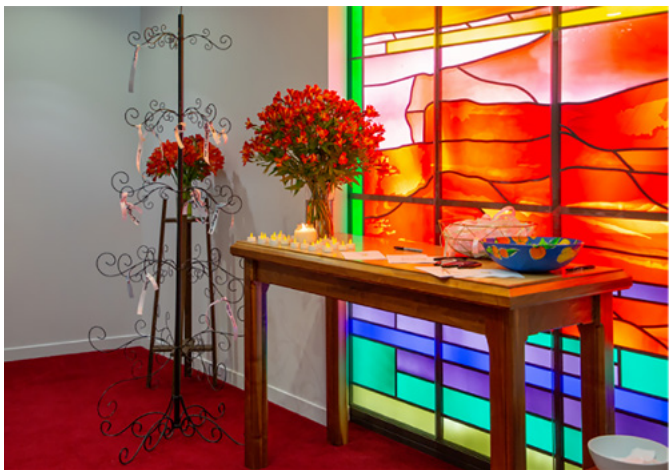
We also send a card to families at the 1-year anniversary of the loss of their baby (see next page). This gesture is appreciated by families, some of whom make contact after they have received the card.

We have also been given a new name for the whaanau room – Te Korowai Atawhai (the cloak of nurturing) – and are having a name plate made. The name indicates the room's purpose, namely to nurture and support families in a time of sadness or grief, indicating that whoever enters the room will feel the warmth and support of the korowai.

For parents whose baby dies after 20 weeks gestation or after birth, counselling is now automatically offered. Fifty-seven families have used the counselling service to date, some for just two or three sessions, others for up to six sessions. Counselling helps families process some of their feelings and, for longer sessions, fully understand what has happened and develop tools for coping with everyday life again. Every couple is offered this opportunity at the time of their loss, and later at a follow-up appointment (or if they do not attend their follow-up appointment, in a letter sent).

During the two COVID-19 lock downs in 2020, it became distressing for families who had experienced a loss and were unable to access whaanau support, as access to the hospital was limited. In the second lockdown, a slightly more flexible approach was adopted, with both partners and some whaanau being able to come into the hospital. Staff also ensured that casting moulds and photographs were taken, where appropriate, to provide keepsakes for the whaanau.

Since 2018, we have held an annual memorial service during International Baby Loss Awareness Week (see photo below). We held our first service on 15 October 2018, and have continued to do so every year, for the past three years, with bereaved parents able to light a candle in memory of their baby or babies.



▲ *Middlemore remembrance service 2020. Image taken by Heartfelt Photography.*

For now I am in the land of songs.

Like the kapokapowai, that flies quickly in the air,
My spirit flies free, I am almost there.

The beautiful wings which move back and forth,
That nurtures the flights course.

So please don't cry for me now I'm gone,
For now I am in the land of songs.

By Kaumatua Te Teira Rawiri

New Zealand's Giant Dragonfly
or Kapokapowai.

The name means
"water snatcher" in Maaori.

The spiritual meaning of a dragonfly is transformation. It is said the dragonfly appears before you when a life has gone, taking the wairua or spirit to a place of rest. The dragonfly represents light to the departing one.

Perinatal Loss Midwife Specialist
Phone: 021 719 632

COUNTIES MANUKAU HEALTH

▲ *Card sent to bereaved families 1 year after the loss of a baby*

AUTHORS

DR CHRISTINE MCINTOSH
General Practitioner Liaison CM Health and Senior Lecturer,
Department of Paediatrics, Child and Youth Health, The University of Auckland

TINA HIGGINS
SUDI Prevention Project Manager

Sudden unexpected death in infancy

Sudden unexpected death in infancy (SUDI) numbers in the Counties Manukau Health region have spiked over 2019 and this has particularly affected Maaori.

Higher numbers have been observed in other parts of the country too, and a national review of SUDI is underway, led by the Ministry of Health. The local Child and Youth Mortality Review Group is reviewing cases in Counties Manukau and will make recommendations to the maternal and child health sector on opportunities to improve SUDI prevention care.

Wahakura weaving waananga

During 2019/2020, CM Health funded two wahakura weaving programmes. The programmes were attended by a number of hapuu maamaa, as well as others interested in learning to weave a wahakura for their hapuu whaanau, and participants interested in supporting the weaving workforce by providing wahakura.

▲ *Whaanau learning to weave a wahakura*

For many Maaori whaanau, reconnecting to maatauranga Maaori has been at the heart of their participation in these waananga.

Wahakura waananga aim to deliver a cultural enrichment programme, with the outcome of delivering an appropriate safe sleep bed for babies. The waananga are embedded in traditional skills and tikanga, while promoting whaanau engagement in accessing health and social services to improve health outcomes for babies, women and whaanau.

The photo (below left) shows whaanau who attended the September 2019 waananga learning to weave their own wahakura for their expected peepee. The waananga was held at Puukaki Marae in Maangere and led by local master weaver Shelley Bell.

Survive and Thrive 2025

CM Health has worked with midwives, consumers and community providers in the Counties Manukau area to co-design and develop a SUDI protection wrap-around care programme – Survive and Thrive 2025.

Entry to the programme is through the Survive and Thrive 2025 web-based tool, which includes a safe sleep calculator for SUDI risk assessment and enables SUDI protection care for whaanau to be coordinated through South Auckland community providers.

Training and testing of the programme with a small group of community lead maternity carer midwives and the Smokefree team occurred from October to December 2019. Roll out was planned for 2020. However, due to the Covid-19 pandemic it was postponed.

Despite this setback, 510 SUDI assessments were completed using the Survive and Thrive tool, mainly by the Smokefree service for hapuu maamaa engaged with them. This resulted in 25 referrals for AWHI Healthy Housing, 210 requests for a wahakura or Pepi Pod baby bed, 207 requests for WellChild Tamariki Ora SUDI key-worker care and three referrals for a Family Start social worker.

AUTHORS

DR MAISIE WONG
Neonatologist

KAREN BOYLE
Nurse Manager

DR LINDSAY MILDENHALL
Clinical Lead Neonates

Neonatal Unit

Kidz First Neonatal Care is part of CM Health's Kidz First Child Health Service and works closely with CM Health Maternity Services.

Kidz First Neonatal Care is situated adjacent to the Kidz First wards, and the theatre and critical care complex at Middlemore Hospital. The unit has 38 cots – 18 level-3 cots and 20 level-2 cots – which together provide intensive and special care for premature or unwell neonates.

In 2021, Neonatal Care will be extended in the level 2 area, increasing the unit's capacity to 46 cots. This will help meet the growing demand for neonatal cots, locally within CM Health, as well as regionally and nationally.

The unit will focus further on providing transitional care, with the goal of ensuring neonates and their families receive optimal support. Transitional care supports mothers and babies to be together, as a last step before going home.

There is a large and growing multidisciplinary workforce of dedicated staff within the unit, who provide services for around 1,200 neonatal admissions each year.

The nursing team comprises new graduates through to senior registered nurses. The latter include associate charge nurse managers, clinical nurse specialists, nurse practitioners, a nurse educator, clinical coaches, lactation consultants and a nurse manager.

The medical team consists of senior medical officers, a medical officer and rotating registrars, with various levels of experience.

The immediate clinical team is supported by a social worker, dietician, speech language therapist, physiotherapist, child protection services, play specialists, a pharmacist and the Kidz First Home Care Nursing team. The Allied Health Team is integral to the care provided and plays a dynamic role within the multidisciplinary team.

Relationships with Women's Health are strong in both the primary and secondary maternity settings. The primary birthing units play a pivotal role in transitioning neonates to the community birthing unit closest to their homes, under the care of their community lead maternity carer midwife or CM Health midwifery services.

Tertiary sub-specialty support and paediatric surgery is provided by Starship Children's Hospital (Auckland District Health Board) with whom we have established bonds and communication. A strong research culture enriches our practice, with one senior medical officer holding a joint appointment with the University of Auckland and the Liggins Institute.

The articles of the Treaty of Waitangi underpin the model of care in Kidz First Neonatal Care. By promoting whaanau participation, we can nurture a solid foundation from which parents can independently care for their children. Our neonatal team expects to optimise the life potential of every neonate in our care.

AUTHOR

SHARON ARROL
Data Analyst, Health Intelligence and Informatics

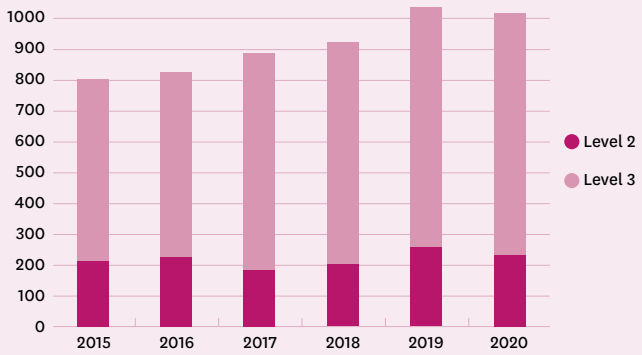
Admissions to Neonatal Care

There has been a marked increase in level 3 and level 2 admissions to the Neonatal Care Unit in 2019 and 2020, as well as an increase in weighted inlier equivalent separations (WIES)*.

See Figure 50, Table 28 and Table 29 for a summary of these changes. The increase is consistent with the increased workload felt by the staff in the unit.

FIGURE 50 ▼

Total admissions to Middlemore Neonatal care, Level 2 and 3, 2015–2020



Source: Data provided by Health Intelligence and Informatics 2020. Each baby is only counted once ie if they are transferred from level 3 to level 2 they are not counted twice. This is a different data source to the data provided for the 23-31 week infants.

TABLE 28 ▼

Total admissions to Middlemore Neonatal Care Unit, Level 2 and 3, 2018–2020

CALENDAR YEAR	2018	2019	2020
Level 2 neonates	208	249	239
Level 3 neonates	721	962	880
Total	929	1211	1119

Source: CMH data warehouse

TABLE 29 ▼

Summary of WIES by calendar year 2015–2020

CALENDAR YEAR	SUM OF WIES
2015	2500
2016	2760
2017	2861
2018	3545
2019	3453
2020	3625

Source: Costpro

* Weighted inlier equivalent separations (WIES) is a method of weighting individual discharges based on complexity.

One family's journey: seven weeks from news of pregnancy to birth at 26 weeks gestation

Dad Richard tells the story.

"The last thing my partner Tasmin expected was to find out she was 19-weeks pregnant. We didn't have anything for a baby. Our kids are 8 and 9 years old, so we had to start all over again. We thought we'd have time."

Unfortunately they didn't. Richard often works night shift at the ports and he was at work when Tasmin went into labour. "She phoned me to say she had severe cramps and had started bleeding. I literally ran out of work. Maria, our midwife, came over examined her and sent us to hospital. When we got there they ran blood tests and did an ultrasound and we stayed in overnight and waited for the results."

Those results showed a uterine infection. Tasmin was given steroids to assist in the baby's development and antibodies for RH negative, and things moved pretty fast after that. Richard was at home when he was told that Tasmin was in actual labour and by the time he got there she was already in the delivery room. It took only 30 minutes for their son, Loki, to be born.

Richard is not new to being a dad, but he says this was very different. "I won't lie; it was rough and sometimes overwhelming. We don't have family here, so I was moving between work, home and hospital, organising care for the kids and on top of that we were in lockdown. Some days were better than others. There were a lot of complications: from bacterial infections to jaundice, blood transfusions and severe bi-lateral pneumonia. At one point we were sitting in the lounge having breakfast when the alarm went off. It was Loki. We ran down to see about 20 medical staff around our boy. His little heart had stopped. I thought mine would too. But after two doses of adrenaline, he was okay."

"My greatest moment was getting to hold Loki for the first time; even though my heart hurt for my boy and my wife, and it was hard trying to hold him with all the drips and oxygen pipes. Our boy was so little, I was terrified that we would lose him, but he's a fighter."

Loki is home now, growing and doing well. The family has settled into a routine and Richard and Tasmin are grateful for the exceptional work of the Middlemore team.

Richard says his purpose has strengthened since the birth of Loki: being a dad is what it's all about. "Being a dad means putting your family first, being there to guide, protect and support them. My greatest joy is coming home after a 12-hour shift and seeing them excited to see me. Tasmin and I are fortunate that this little life fought so hard to be here, and we owe it to him to make it a good one."

AUTHOR

DR MAISIE WONG
Neonatologist

Neonatal Outcomes Australian and New Zealand Neonatal Network Data

The Australian and New Zealand Neonatal Network (ANZNN) is a collaborative network that monitors the care of high-risk newborn infants by pooling data to provide quality assurance for neonatal care. All level 3 neonatal units in Australia and New Zealand and all level 2 neonatal units in New Zealand contribute data to the neonatal network.

CM Health is able to compare its survival and morbidity data with ANZNN data, which is provided annually. This survival data is for babies who were admitted to the neonatal unit and survive until their discharge home.

Our incidence of survival at 23 weeks gestation remains low, compared to ANZNN survival rates. However, there are very few babies at 23 weeks gestation admitted to Middlemore Hospital's Neonatal Care Unit. The survival rate at 24 weeks and above improves, and is similar to rates reported by ANZNN, as shown in Figure 51.

The incidence of survival in babies with a birth weight of less than 800gm is low, compared to ANZNN survival rates, but improves to be comparable at birth weights of above 800gm, as shown in Figure 52.

FIGURE 51 ▼

Survival by gestational age for babies admitted to Middlemore Hospital 2017-2020, compared to ANZNN 2014-2018

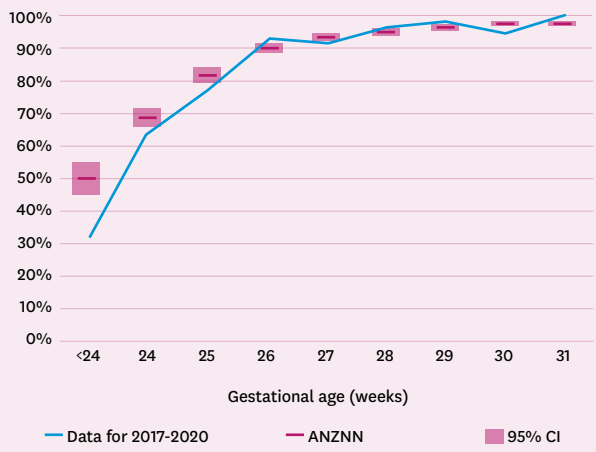
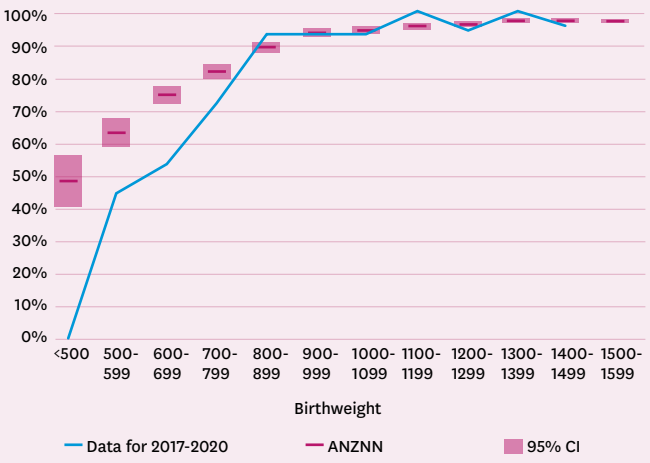


FIGURE 52 ▼

Survival by birthweight group for babies admitted to Middlemore Hospital 2017–2020, compared to ANZNN 2014-2018

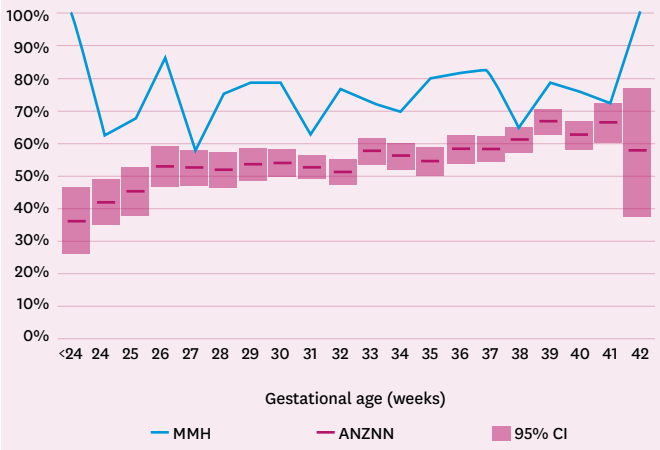


Admission temperature in preterm babies has been shown to be associated with mortality. Middlemore consistently has a higher percentage of babies within the normothermic range on admission, compared to ANZNN data, as shown in Figure 53.

We are continuing with quality improvement projects to maintain and increase the incidence of normothermia and avoid hypothermia on admission.

FIGURE 53 ▼

Admission temperature for babies admitted to Middlemore Hospital, by gestational age for babies born in 2018



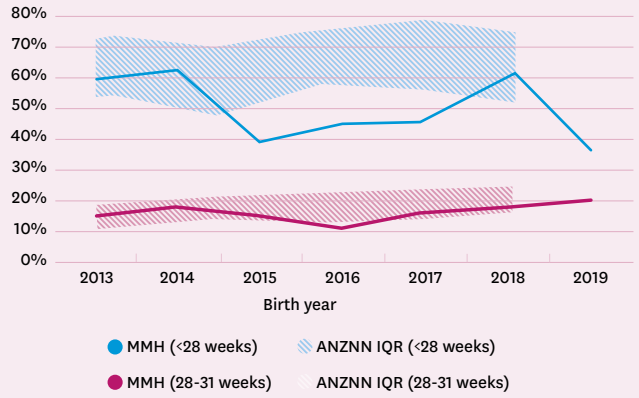
**36.5°C ≤ admission temperature < 37.5°C*

ANZNN Indivudual unit feedback for babies born in 2018 - STRICTLY CONFIDENTIAL - interpret with care

The incidence of chronic lung disease in babies with a gestational age of less than 28 weeks has fallen in 2019. Our rates compare favourably to ANZNN data, as shown in Figure 54. This relates to our use of non-invasive ventilation and minimally invasive surfactant therapy.

FIGURE 54 ▼

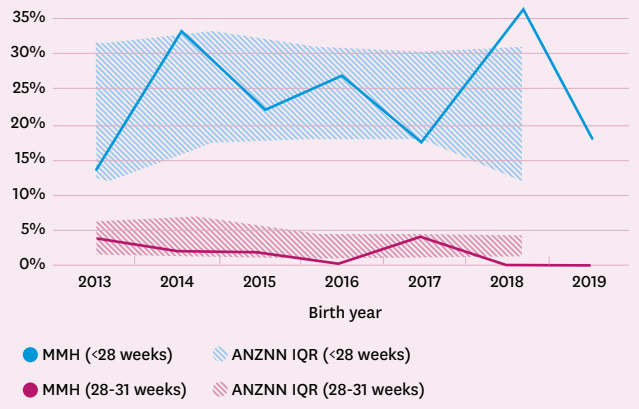
Incidence of chronic lung disease, 2013–2019



The incidence of late-onset sepsis for 2019 is comparable to ANZNN data for babies of less than 28 weeks gestation, and there was no incidence of late-onset sepsis in babies of 28 to 31 weeks gestation, as shown in Figure 55.

FIGURE 55 ▼

Incidence of late-onset sepsis, 2013–2019

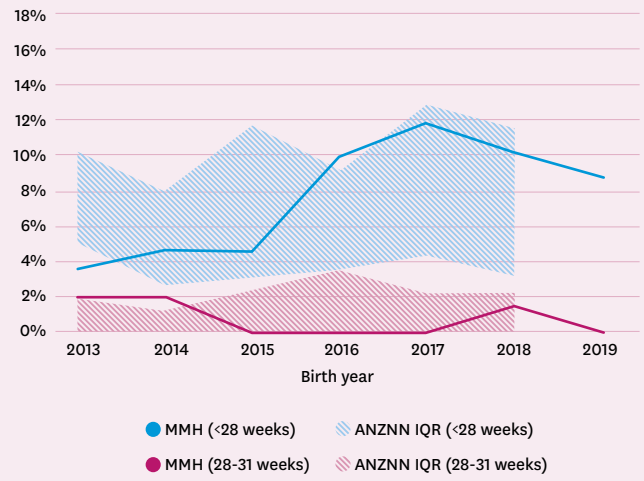


The incidence of necrotising enterocolitis has remained stable in recent years, as shown in Figure 56. When compared to ANZNN data, our incidence is similar to other units.

To date, we have reduced our rates by introducing a standardised feeding protocol and probiotics in 2011. The Lactation service has now introduced the use of screened unpasteurised donor breast milk for our babies most at risk of NEC when mother's own milk is insufficient. The next step will be to establish a regional donor breast milk bank.

FIGURE 56 ▼

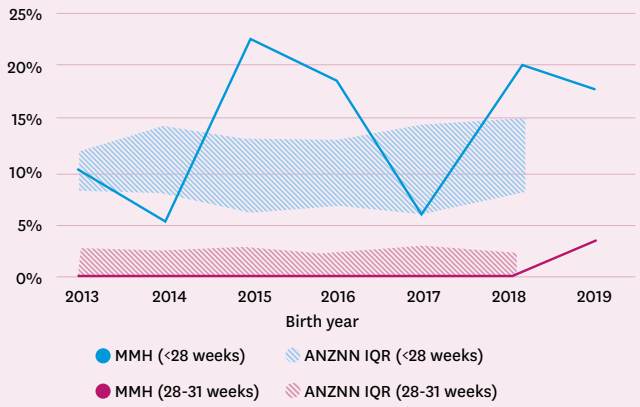
Incidence of necrotising enterocolitis, 2013–2019



The incidence of severe intraventricular haemorrhage continued to be high in 2018 and 2019, as shown in Figure 57. We will be starting quality improvement projects to see whether there are any modifiable factors, which we can change to improve the intraventricular haemorrhage rates.

FIGURE 57 ▼

Incidence of severe intraventricular haemorrhage, 2013–2019



The incidence of severe retinopathy of prematurity (≥stage 3) has increased in 2019, especially in babies in the 28 to 31 weeks gestational age group, and is high compared to ANZNN rates, as shown in Figure 58.

However, we think that this is related to better technology, with use of retinal cameras, and hence higher ascertainment of retinopathy of prematurity. The rates for babies needing treatment for retinopathy of prematurity have been stable in recent years.

FIGURE 58 ▼

Incidence of severe retinopathy of prematurity, 2013–2019

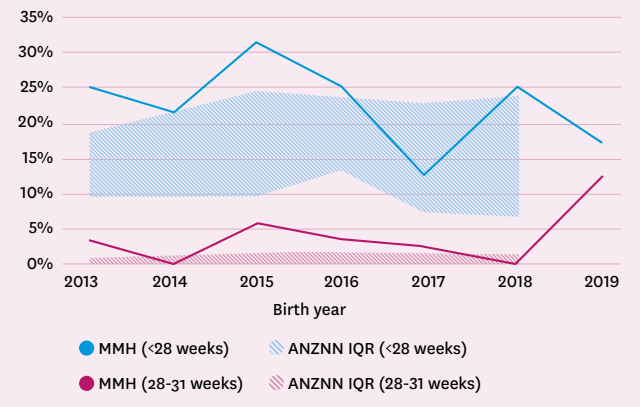
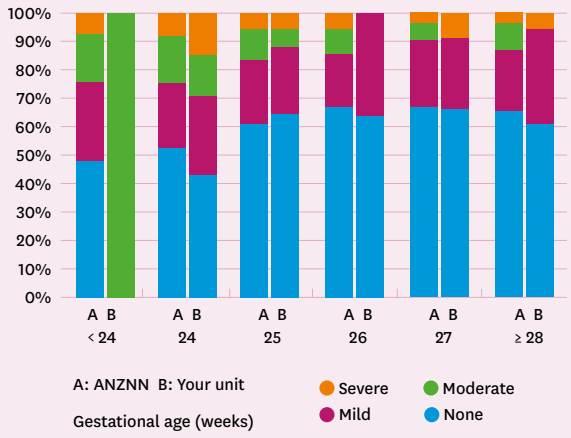


Figure 59 shows the follow-up data for preterm babies for functional impairment, compared to ANZNN data. We have achieved a follow-up rate of 80 per cent in Middlemore Hospital's very low birth-weight clinic.

Compared to the ANZNN data, the babies born at 23 and 24 weeks have a higher incidence of functional impairment, but these are small numbers. Results for other gestational groups are similar.

FIGURE 59 ▼

Severity of functional impairment, 2012–2015



Notes to figure:

Mild – Gross motor function classification score (GMFCS) level 1: cerebral palsy, or mild cognitive, language or motor delay.

Moderate: GMFCS level 2 to 3: cerebral palsy, deafness requiring amplification or moderate cognitive, language or motor delay.

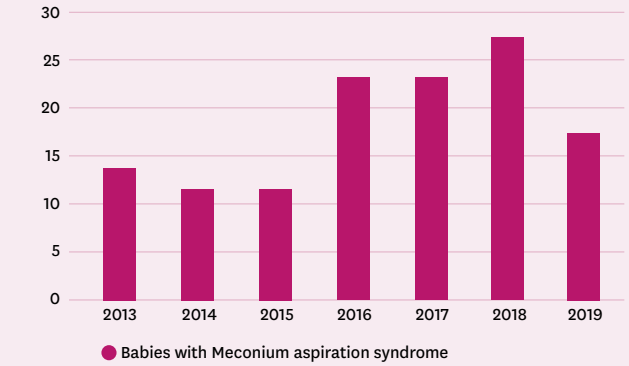
Severe: GMFCS level 4 to 5: cerebral palsy, blindness, severe cognitive, language or motor delay, or unable to be assessed due to severe developmental delay.

The denominator is babies who survived to have a Bayley III assessment at 24 months corrected age.

The number of babies with meconium aspiration syndrome has continued to be high since 2016. However, the diagnosis of meconium syndrome is based on the radiological features of meconium aspiration syndrome, which can sometimes be difficult to distinguish from infection and other causes of respiratory distress. The numbers have remained similar in the past 4 years, as shown in Figure 60.

FIGURE 60 ▼

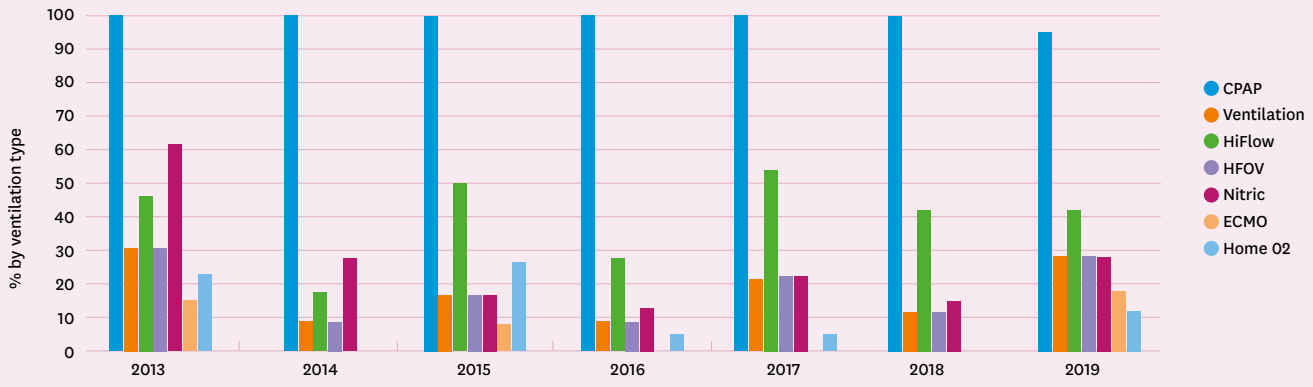
Number of babies with meconium syndrome admitted to Middlemore Hospital Neonatal Care, 2013–2019



Source: Middlemore Hospital Neonatal Care, 2019

FIGURE 61 ▼

Mode of ventilation for meconium aspiration syndrome, 2013–2019



Notes to figure: CPAP = continuous positive airway pressure
HFOV = high-frequency oscillatory ventilation
ECMO = extracorporeal membrane oxygenation
Home O2 = home oxygen.

Source: Middlemore Hospital Neonatal Care, 2018

Most of these babies were treated with continuous positive airway pressure (CPAP), with only 10 to 30 per cent requiring ventilation and mostly oscillation.

No babies had required extracorporeal membrane oxygenation (ECMO) from 2016 to 2018, but three babies with meconium aspiration syndrome in 2019 did require ECMO, as shown in Figure 61.

There has been a sustained decrease in the incidence of hypoxic ischaemic encephalopathy since 2013, however the recent incidence in 2019 and 2020 seems to show an upward trend. We will need to monitor this closely in conjunction with the maternity services. In 2017, there were several cases of out-born babies admitted with hypoxic ischaemic encephalopathy, but there have been no out-born cases in recent years; see Table 30.

TABLE 30 ▼

Incidence of hypoxic ischaemic encephalopathy, 2012–2020

	NUMBER	DIED	COOLED	GRADE 3	OUT-BORN	INCIDENCE PER 1000 LIVE BIRTHS
2012	16	2	15	3		1.99
2013	9	2	7	3		1.21
2014	4	0	4	0		0.55
2015	7	3	6	3		0.96
2016	7	2	7	2		0.96
2017	8	2	8	4	4	1.08
2018	6	2	6	2	0	0.81
2019	7	3	7	0	0	0.93
2020	10	1	10	1	0	1.35

Source: Middlemore Hospital Neonatal Care, 2018

Maternity Quality Improvement Workplan 2021-2023

The Women's Health division at Counties Manukau Health recognises the role of the Maaori people as tangata whenua and Te Tiriti o Waitangi as the founding document of Aotearoa New Zealand.

1	**PRINCIPLE**	**Maternity care is provided in both a culturally and clinically appropriate way which supports care that protects, promotes, and supports normal childbirth for women and babies, with evidence based medical intervention when required.**	
		ACTIVITY	**MEASURE**
1.1	**Culturally Appropriate**	A. Consumers and service users are included in service and research design with co-design as the methodology used to engage stakeholders	a. Membership of Maternity Consumer Focus Groups reflects Tangata Whenua and other representatives of the DHB population (including age, ethnicity and domicile).
		B. Increase the rate of inpatient feedback from women and whaanau across Women's Health to inform the presentation and discussion of all feedback to direct quality improvement initiatives from the findings.	a. Women and whaanau feedback, via various available sources, increases by 5% across Women's Health.
1.2	**Supporting Normal Childbirth**	A. Provide a Project Manager to lead the Primary Birthing Strategy and Consultation Project with the goal to increase birthing in primary settings, with equity as a driver	a. The total number of women birthing in primary birthing settings (home births and primary birthing units) has increased similarly across all ethnicities.
		B. Commission a project person to develop a system ensuring evidence based, clinically indicated & timely medical intervention when required, supporting a woman lead approach that underpins physiological births where appropriate. This will be inclusive of auditing and reviewing IOL and LSCS guidelines and clinical practice.	a. Results of the IOL and LSCS audit demonstrate equitable outcomes.
		C. Pregnant women who have had one previous caesarean section, and are suitable for VBAC, are given culturally appropriate, easily accessible evidence based information to support their decision making for their mode of birth.	a. There is a 2% increase rate in women attempting VBAC.

2	PRINCIPLE	Women will easily access a local lead maternity carer who will provide individualised care, navigate and support the woman and her family through the Maternity care system, as close to home as possible.	
		ACTIVITY	**MEASURE**
2.1	Increase early Registration with LMC	A. Develop and implement an early registration action plan which is women and whaanau lead.	a. Improve the percentage of women across all ethnicities, prioritising waahine Maaori, registered with a Community LMC or DHB midwife by 12 weeks + 6 days
			b. Reduction in gaps in care reported in Incidents and SAEs.
			c. Reduction in time from 1st GP pregnancy visit to LMC allocation
2.2	Provide Integrated Care	A. Improve communication and collaboration between primary care and midwifery providers	a. Reduction in gaps where communication breakdown has been reported in incidents and SAEs.
		B. Support use of the Ministry of Health (MoH) *Guidelines for Consultation with Obstetric and Related Medical Services 2012* (Referral guidelines) by providing a local implementation guide linking the MoH referral categories and content with current CM Health Women's Health Guidelines and Procedures. The document will be called CM Health Referrals Plus+ and will also include key CM Health and local services referral processes relating to pregnancy and the postnatal period up to 42 days.	a. CM Health Referrals Plus+ document completed, available on CM Health online Documentation Directory system with hard copies available on request for community based primary maternity carers.
		C. Promote an integrated approach to care with the LMC, GP and Well Child Providers (WCP): • Include LMC/DHB midwives as recipients of communication between women in their care and GPs and WCP. • Support collaborative working across all projects • Women receive a copy of their GP referral to share with their LMC	a. Three monthly review of unbooked/ unregistered pregnant women presenting in labour to a birthing facility b. Three monthly review of the babies not enrolled with a GP c. Three monthly review of the babies not enrolled with a WCP by 6/52 d. Annual review of Terms of Reference to identify primary care membership on maternity related projects e. Measure hospital admissions for the management of hyperemesis gravidarum

3	PRINCIPLE	Having a baby and the transition to parenthood is recognised as a socially and culturally significant event for families/whaanau.	
		ACTIVITY	**MEASURE**
3.1	Identifying "At Risk" Pregnancies & Neonates	A. Provide stakeholder education to develop confidence in screening for: • Maternal alcohol consumption • Maternal drug use • Maternal mental health concerns • Family violence • Smokefree.	a. Audit the number of pregnant women/whaanau screened and appropriately referred. b. Measure the number of stakeholder's attending educational opportunities.
		B. Socialise referral and shared care pathways for pregnant/new mothers requiring support for maternal mental health concerns	a. 80% of maternal mental health referrals of all pregnant women will be linked back to the LMC for shared care planning discussion within 4 weeks of referral. b. Produce a three monthly audit of maternal mental health referrals and check evidence within service user clinical file of care plan discussion. c. Produce and distribute a maternal mental health referral pathway infographic to further clarify the process.
		C. Socialise referral and shared care pathways for pregnant/new mothers requiring support for: • Maternal alcohol consumption • Maternal drug use • Family violence • Safe warm homes under AWHI Programme.	a. Maintain biennially and distribute the CM Health Information Directory b. First Contact Pregnancy Information Packs maintained and made available to all.
		D. Support screening during pregnancy and the postnatal period for factors which contribute to SUDI using the Survive and Thrive 25 tool	a. New to service staff and community LMC midwives are orientated to the Survive and Thrive tool b. Record stakeholder participation in use of the Survive and Thrive tool c. Measure equitable access to safe sleep care provision d. 95% of pregnant and postnatal women and whaanau who smoke are referred to a cessation service. e. Assess equitable access to safe sleep care provision f. Reduction in SUDI rates.
3.2	Patient Journey Information	A. With equity lens identify types of information women and whaanau want and mediums to be used, including the CM Health internet site • Develop information resources with consumer adviser input. • Develop virtual tour of BU & maternity areas	a. Resources developed and socialised.
		B. Develop an inpatient orientation resource for women and their whaanau/support people to explain the services available to them while using CM Health facilities.	a. Resources developed and socialised.

3.3	Breastfeeding	A. Support women/babies to be exclusively breastfeeding on discharge from a maternity facility and to 6 weeks postpartum.	a. Exclusive breastfeeding discharge rates from Middlemore Hospital will be > 75% on average. b. 84% fully/exclusive BF rate at 6 weeks postpartum for babies under Te Rito Ora and B4Baby breastfeeding services. c. Achieve BFHI re-accreditation for all 4 maternity facilities 2022.
4	**PRINCIPLE**	**Childbearing women and their families are supported to make choices which are underpinned by the maternity care providers sharing evidenced based information.**	
		ACTIVITY	**MEASURE**
4.1	Obesity	A. Improve the outcomes of women and their babies affected by obesity by: • Making available personalized information about optimal weight change in pregnancy and access to healthy Weight Change in Pregnancy Cards.	a. The Healthy Weight Change in Pregnancy Card is utilised by all carers and women.
		B. Hold education sessions on 'Healthy Conversations'	a. Attendance to 'Healthy Conversations' sessions
4.2	Diabetes in Pregnancy	A. Ko Awatea lead codesign review of Diabetes in Pregnancy Service	a. Implementation of the recommendations from the review of the Diabetes in Pregnancy project
4.3	Preterm Birth	A. Improve the outcomes for women with a previous preterm birth at <37 weeks by: • Ensuring counseling at time of preterm birth to outline strategies recommended for next pregnancy • Ensuring early registration in subsequent pregnancies to identify modifiable risks factors e.g. smoking, STIs, UTIs • Ensuring referral for specialist consultation in first trimester • Promoting and supporting counseling around signs and symptoms of preterm birth and response to these to optimize outcomes • Coordinate a Maaori led approach for waahine Maaori.	a. All women with a preterm birth receive counseling and pamphlet within 6 weeks. a. Aim for increasing the number of women with a history of preterm birth register their next pregnancy by 12+6 wks. b. All registered women are being referred appropriately with a focus on the first trimester. a. A practical resource for carers, women and whaanau is developed.
4.4	Immunisation	A. Support health professionals in primary care and consumers to increase awareness about the importance of influenza and pertussis vaccination during pregnancy.	a. Increased rates of Fluvax and Boostrix coverage in pregnant women by 20% in CM Health.
		B. Circulate information/resources/ educational opportunities about the importance of Fluvax and Boostrix vaccination during pregnancy to Primary Care health professionals and consumers.	a. Increased rates of Fluvax and Boostrix coverage in pregnant women by 20% in CM Health.

5	**PRINCIPLE**	**Maternity care is coordinated across setting and disciplines to maximise cultural and clinical safety and use resources wisely.**	
		ACTIVITY	**MEASURE**
5.1	**MQSP Annual Work plan**	A. An annual work plan and budget prioritisation process is maintained by the MQSGG.	a. Funding is allocated by consensus according to the MQSWAG Terms of Reference.
		B. Annual Workplan includes Human Resource values/ cultural safety programme to be developed	
		C. All resources developed have an equity focus	
5.2	**Clinical Indicators**	A. Continue to communicate Clinical Indicators and progress for maternity quality and safety to DHB provider services, primary carers and consumers.	a. Infographic format of maternity clinical indicators is produced and circulated.
		B. Continue to respond to clinical indicators to inform our work plan including by ethnicity.	a. Workplan reflects quality improvement initiatives addressing ethnicity based clinical indicators that are outliers.
5.3	**Screening and Surveillance of "At Risk" pregnancies**	A. Ensure equitable access for women to services to support obstetric management of their pregnancy by appropriate early referral by 12/40.	a. Audit of CMH guidelines against cases which require early referral for Obstetric management i.e. previous second trimester loss, preterm birth
		B. Implement the Social Work model to all women and include women and whaanau who have experienced a perinatal death in the postnatal period and subsequent pregnancies.	a. Equitable access to Social Worker model for all women across CM Health.
6	**PRINCIPLE**	**People who work in the maternity care system are provided with a respectful and culturally safe environment in which they can learn and grow together.**	
		ACTIVITY	**MEASURE**
6.1	**Valuing Workforce**	A. Finalise a workforce plan with key strategies for retention and recruitment by: • -Exploring and developing support processes for our workforce including access to professional supervision, structured debriefing following critical events and other identified wellness initiatives e.g. Schwartz rounds. • Assisting and supporting midwives who have completed their first year of practice, to enable them to consider and progress their career development pathways	a. Recruitment and retention data b. Trends identified from exit interviews
		B. Improve work place culture and communication, responding to staff survey and themes from complaints.	a. Staff will report feeling valued and respected as measured by the Staff Survey results and complaints received.
		C. Maaori Midwifery Workforce Forum	

7	PRINCIPLE	The quality of maternity care and services is measured and valued.	
7.1	National Reporting	A Reporting to PMMRC, NMMG and MoH is undertaken.	a. Submission of Women's Health and Newborn Annual Report inclusive of MQSP requirements.
			b. Achievement of DHB and national quality improvement recommendations demonstrated by activities undertaken and regular audits and evaluations of completed projects. PDSA
		A. Reporting to stakeholders and consumers.	a. Annual launch and socialisation of Women's Health & Newborn Annual Report, inclusive of MQSP work.
7.2	CM Health Reporting	A. An annual Workplan is devised reflecting the priorities of; • Equity • CM Health • MoH • NMMG • PMMRC • Other organisations as appropriate i.e. Child Youth Mortality Review Committee (CMRYC).	a. Progress updates provided at regular Intervals
		B. Implementation of the Health Quality & Safety Commission (HQSC) maternal morbidity review toolkit and SAC rating (maternal and NE case review) for SAC 3 & 4	a. Health Quality & Safety Commission (HQSC) maternal morbidity review toolkit and SAC rating (maternal and NE case review) developed and BAU .

9 Appendices & Glossary

▼ APPENDIX 1

Consumer advisor feedback – Women's Health planning workshop, 21 October 2020

What did you know about where to have your baby?

- Other women told me – 'safer to go to Middlemore'
- Don't know about home birth
- Hospitals – go to
- Homebirth – no
- Primary birth option is subsequent births only
- Perception birthing units are for postnatal care
- Followed midwife – TRUST
- Not all women have a trusting relationship with their midwife so creates an inequity

What's needed?

- Street appeal needed for primary birthing units
- Nice facilities
- Restful environment
- Bigger beds
- Birthing pools
- Swiss balls
- Partners to stay
  - protection of partner
  - partners feel excluded
- Home-cooked meals
- Car seat access
- Antenatal classes at units
- Approachable staff at reception
  - helpful
  - show you around
- Ownership by the woman: my place to birth – familiar
- Opportunity to view the hospital, and familiar with and understand emergency transferring.
- Family pressure to birth in a hospital setting
- Important to meet midwife at birth unit, invite whaanau to view the unit – tell whaanau why its important
- Need own toilet and shower facilities wherever we give birth
- More childbirth educators, more classes, more facilities at birth units
- Stop the first caesarean section – empower women to own physiological birth

What is choice?

- Women can choose where to birth, but Middlemore caters for complex pregnancies
- Series of education throughout pregnancy; choices are made from information
- Teach women their rights – increase their knowledge
- Vulnerable staff
- relies on one person
- persuaded
- Midwifery shortage
- unable to find midwife to support birth place

Why not choose midwifery as a career?

- doesn't pay
- three to four years' study
- Do not share pregnancy news with people until 12 weeks or more, so unable to get recommendations
- Social media forms to ask for recommendations
- December to January estimated delivery dates, very difficult to get midwife

Solutions?

- QR codes; 0800 numbers
- Facebook pages – mums' groups
- Contact points – reception given to women seeking midwifery care
- Women's family health hub – Whaanau Ora/Ola home model
- Welcome days
- Ownership of local unit
- Transport to a hub, needs shuttle from main areas
- Midwife appointments
  - early morning
  - weekend
  - late night

New Women's Health building

- Areas for uplift
  - Need dedicated space
  - Process – staff know what to do
  - To feel safe and supported
  - Away from other women and whaanau
- Expectation to have a support person
  - Caters for support person
  - Felt safe with analgesia post-caesarean section
  - Single rooms
  - Couches
  - En-suite facilities
  - Option for natural remedies
- Enjoyed communal eating areas
- Multifunctional birthing and stay rooms
- Workforce – work around the woman and baby
- Lighting – ambience
  - dim and bright
  - music equipment
- Baby's cot
  - your choice
  - peepi pod
  - wahakura
- Not judgmental
- Enough postnatal beds
  - birth and stay birthing rooms
  - need skin-to-skin time
- Car parking – plenty of
  - new parents parking spots
  - free
- No not send husband, partner away: not alone on first night
  - en-suites
  - maps for partners to ensure they don't get lost
  - buzzer
  - meals prepared on site
  - on-site access to food of good quality and nutritious
- Birthing floor
  - ground floor
  - access to outside areas
  - courtyard
  - away from hustle and bustle of rest of hospital
- Settling babies
  - education
  - extended care
  - support with breastfeeding
  - drop-in support

Being handed over too soon

- 4-6 weeks can be very early to have midwife care stop
- Not always first-time mothers; subsequent babies' births important too and can be different
- Breastfeeding support needs to be strengthened
- More information on breastfeeding home support
- Comfort needed
- Woman wanted information about formula
- Overworked breastfeeding support team
- La Leche not accessible
- East Auckland access to breastfeeding support services not the same as Mangere, Manukau
- Cluster feeding not known about why and this is normal
- Shared record
  - not having to repeat my story every time
  - being able to self refer

Glossary

Assisted vaginal birth A vaginal birth that needs assistance (e.g. forceps, vacuum extraction).

Body Mass Index is a measure of body fat based on height and weight that applies to adult men and women (mass (kg)/ (height (m))2.

Caesarean section An operative birth through an abdominal incision. This includes emergency and elective, lower segment and classical and it is identified by the presence of any caesarean section clinical code.

Cephalic Head down presentation.

CM Health community midwife Antenatal, labour, and postnatal care is provided by a CM Health employed midwife. Care during labour is provided by CM Health employed midwives at Middlemore Hospital or one of the three primary birthing units.

CM Health employed LMC Midwife A midwife who carries a full clinical primary workload including antenatal, intra-partum and postnatal care. Used to describe salaried position in DHB as opposed to LMC midwife who claims off the Section 88 Notice.

Epidural An injection of analgesic agent outside the dura mater that covers the spinal canal. It includes lumbar, spinal (inside the dura mater) and epidural anaesthetics.

Episiotomy An incision of the perineal tissue surrounding the vagina at the time of birth to facilitate birthing, identified by the presence of an episiotomy clinical code.

Exclusive breastfeeding The infant has never, to the mother's knowledge, had any water, formula or other liquid or solid food. Only breast milk, from the breast or expressed, and prescribed medicines (as per the Medicines Act 1981) have been given from birth.

Fellow A doctor who is has usually completed their specialised exams and is completing final year of training requirements.

Fully breastfeeding The infant has taken breast milk only, no other liquids or solids except a minimal amount of water or prescribed medicine, in the past 48 hours.

Gravida Number of pregnancies.

House officer A junior doctor, in their first 1-3 years of working, who is not yet on a specialist training scheme.

Hypoxic Ischemic Encephalopathy Brain trauma that occurs when there is an insufficient supply of blood and oxygen carried to the brain.

Induction of labour An intervention to stimulate the onset of labour by pharmacological or other means, identified by induction of labour clinical codes.

Intact lower genital tract Identified by an absence of clinical codes indicating an episiotomy or a tear of any degree (first to fourth, and including unspecified degree).

Large for gestational age Greater than the 90th percentile for their gestational age.

Lead maternity carer A person who a) is a general practitioner with a Diploma in Obstetrics (or equivalent), a midwife or an obstetrician and b) is either a maternity provider in his or her own right; or an employee or contractor of a maternity provider; and c) had been selected by the women to provide her lead maternity care.

Level II neonatal care Level 2 units within New Zealand generally care for babies 32/40 weeks and above and babies who have been transferred from Level 3 units after being clinically stabilised. They do not ventilate babies (except in emergencies) and generally use a less invasive form of ventilation continuous positive airways pressure (CPAP) for babies that are clinically stable. Some Level 2 units provide intermediate (Level 2+) care for babies over 28 weeks.

Level III neonatal care Level 3 unit provides neonatal intensive care and high dependency care. This means that they have the facilities to care for extremely premature infants (from 24 weeks gestation) and sick babies requiring ventilation, intravenous feeding and other types of intensive care monitoring and treatment.

Live birth The complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as breathing, beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered liveborn (WHO 1975).

Maternity facility A facility that provides labour and birth services and inpatient postnatal care.

Midwife A person who has successfully completed a midwifery education programme that is duly recognised in the country where it is located and that is based on the International Confederation of Midwives (ICM) Essential Competencies for Basic Midwifery Practice and the framework of the ICM Global Standards for Midwifery Education who has aquired the requisite qualifications to be registered and/or legally licensed to practice midwifery and use the title 'midwife'; and who demonstrates competency in the practice of midwifery.

Non-governmental organisation An organisation that is neither part of government nor a conventional for profit business.

NZDep2018 is an updated version of the NZDep2013 index of socioeconomic deprivation. NZDep2018 combines census data relating to income, home ownership, employment, qualifications, family structure, housing, access to transport and communications. NZDep2018 provides a deprivation score for each meshblock in New Zealand. Meshblocks are the smallest geographical area defined by Statistics New Zealand, with a population of around 60–110 people.

NZDep2018 groups deprivation scores into deciles, where 1 represents the areas with the least deprived scores and 10 the areas with the most deprived scores. A value of 10 therefore indicates that a meshblock is in the most deprived 10% of areas in New Zealand.

It is important to note that NZDep2018 estimates the relative socioeconomic deprivation of an area, and does not directly relate to individuals. NZDep2018 can not be used to look at changes in absolute deprivation over time as 10% of areas will always be the most deprived, relative to other areas in New Zealand. The indicators used to generate the index may also change over time, depending on their relation to deprivation.

The NZDep2018 Index of Deprivation is available on the Ministry of Health website.

Partial breastfeeding The infant has taken some breastmilk and some infant formula or other solid food in the past 48 hours.

Parity The number of times a woman has given birth, including stillbirths.

Postnatal All pregnancy-related events following birth.

Post-term birth A birth at 42 or more completed week's gestation.

Preterm birth, preterm labour Birth or labour before 37 completed week's gestation.

Premature birth The birth of a baby born between 32 weeks 0 days and 36 weeks 6 days gestation.

Primary maternity facility A facility that does not have inpatient secondary maternity services or 24-hour onsite availability of specialist obstetricians, paediatricians and anaesthetists. This includes birthing units.

Referral guidelines Guidelines for Consultation with Obstetric and Related Medical Services.

Secondary maternity care facility A facility that provides additional care during the antenatal, labour and birth and postnatal periods for women and babies who experience complications and who have a clinical need for either consultation or transfer (Health Funding Authority 2000).

Community LMC Midwife Midwives claiming from the MoH to provide antenatal, labour and post-natal care using, primarily, a continuity of care model by the same midwife.

Senior Medical Officer Fully trained specialist doctor/consultant.

Spontaneous vaginal birth The birth of a baby without obstetric intervention (i.e. without caesarean section, forceps or vacuum), identified by the presence of a spontaneous vaginal birth clinical code with no concurrent instrumental/ caesarean section code. These may include births where labour has been induced or augmented.

Standard primipara Defined by the MoH as a woman aged between 20 and 34 years at the time of birth, having her first baby (parity = 0) at term (37 to 41 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.

Tertiary maternity care facility A facility that provides a multidisciplinary specialist team for women and babies with complex or rare maternity needs; for example, babies with major fetal disorders requiring prenatal diagnostic and fetal therapy services, or women with obstetric histories that significantly increase the risks during pregnancy, labour and birthing (e.g. those who have already had two placental abruptions). Includes neonatal intensive care units.

Third and fourth degree tear A third or fourth degree perineal laceration during birth, identified by the presence of a third or fourth degree of tear clinical code.

Third and fourth degree tears are defined as;

3a Less than 50% of the external anal sphincter thickness torn

3b More than 50% of external anal sphincter torn

3c both external and internal sphincter torn

Fourth degree tears involve both the anal sphincter complex and the rectal mucosa.

Weighted Inlier Equivalent Separations (WIES) is a method of weighting individual discharges based on complexity.

COUNTIES MANUKAU HEALTH

countiesmanukau.health.nz