

# Annual Clinical Report 2020

Maternity Highlights

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**6212**

**mothers birthed at  
National Women's**



**6310**

**babies birthed at  
National Women's**



**41%**

**nullipara**



**59%**

**multipara**

## Mode of birth



**49.8%**

**Spontaneous vertex**

**37.9%**

**Caesarean section**

**11.7%**

**Operative vaginal**

**0.6%**

**Breech**

**75.4%**

**exclusive breastfeeding  
rate**

# Directorate Priorities

Safe High  
Quality  
Services



Equity

Workforce  
Capacity and  
Capability

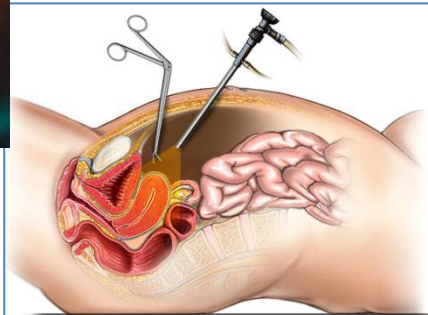


Figure 1  
Laparoscopic surgery

Patient  
Focused  
Models of  
Care

Respond to  
Patient  
Experiences

# MQSP and other Quality Projects

In 2020, despite the constraints of COVID-19, a number of national and local recommendations were implemented:

## **Routine Prophylactic Anti-D**

Offering of Routine Prophylactic Anti-D at 28 & 34 weeks gestation for RhD negative women who had not formed antibodies.

## **Newborn Observation Chart and Newborn Early Warning Score**

Introduction and embedding of the Newborn Observation Chart and Newborn Early Warning Score for all babies  $\geq 35$  weeks gestation born at ACH and not directly admitted to NICU.

## **i-Stat machines**

Change to i-Stat machines for the measuring of blood glucose levels in Newborns. These machines give a more accurate result especially at lower levels.

Upoko 3 Kouna

Chapter 3 Quality

Supporting natural birth, LARC, Equity, strengthening the consumer voice, GAP implementation, Implementing national and local clinical guidelines, workforce, cohorting primary birthing whanau, transitional care, WAU, MOC

# Maternal Demography

Proportion of ADHB domiciled whanau birthing at ADHB reducing, 65% ADHB

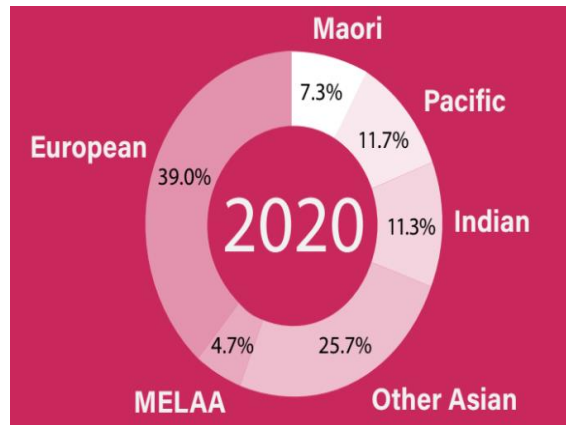
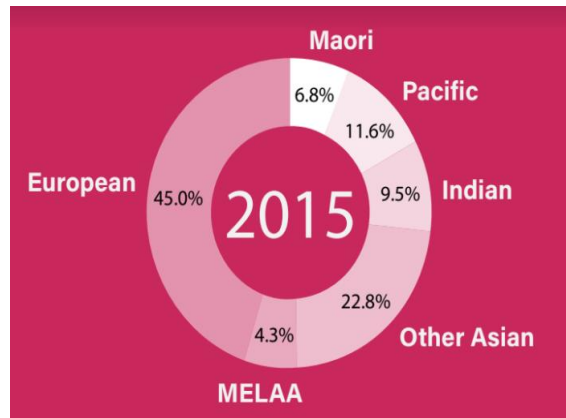
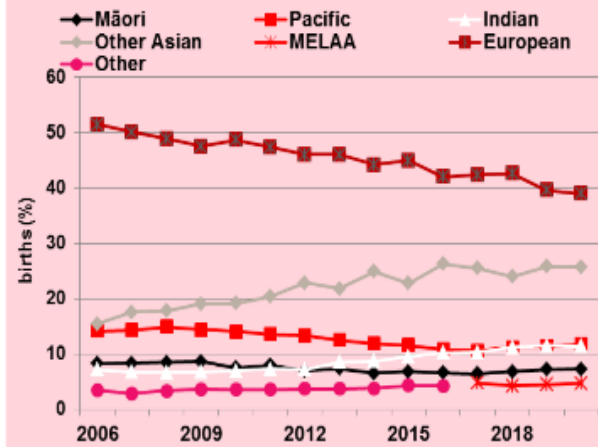
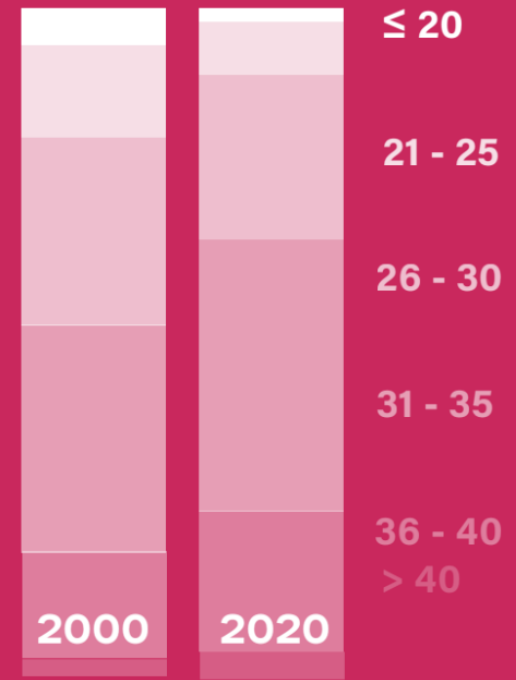
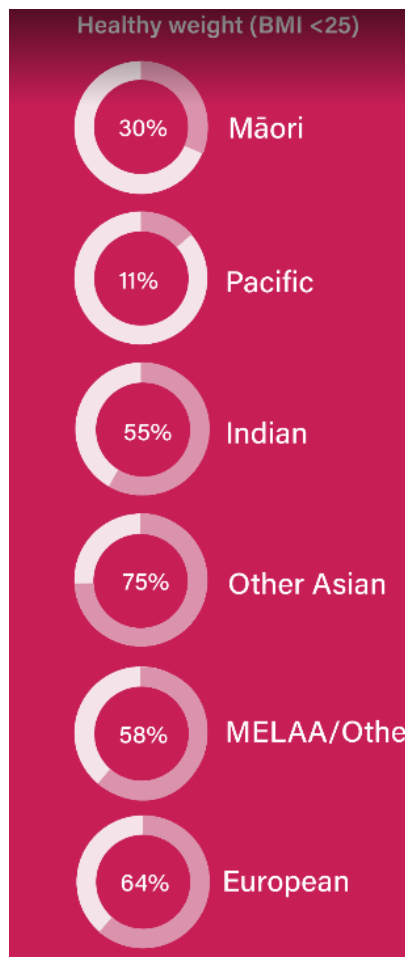


Figure 10: Ethnicity of mothers giving birth at NWH 2006-2020



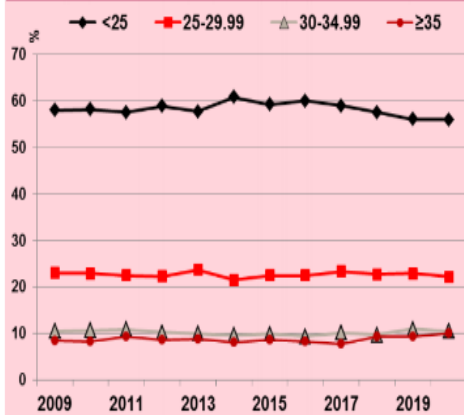
## Age of mothers





Forty-three percent of the maternity population birthing at NWH were overweight or obese (BMI  $\geq 25$ ) in 2020, as in 2019, with 10.0% morbidly obese (BMI  $\geq 35$ ) similar to 2019 (9.3%) (Table 29, Chapter 5).

Figure 16: BMI\* over time NWH 2009-2020



\*missing data excluded



Figure 18: BMI 25-34 by ethnic groupings NWH 2009-2019\*

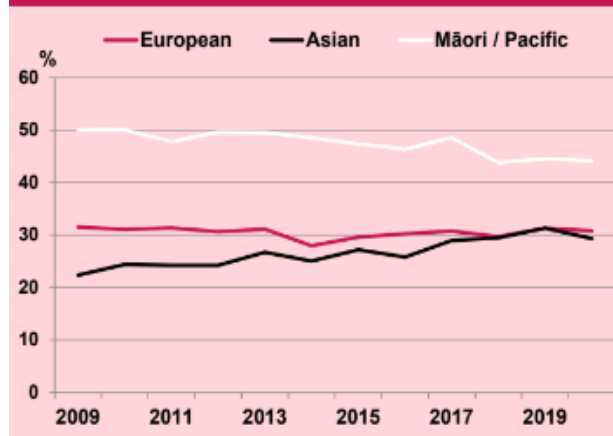
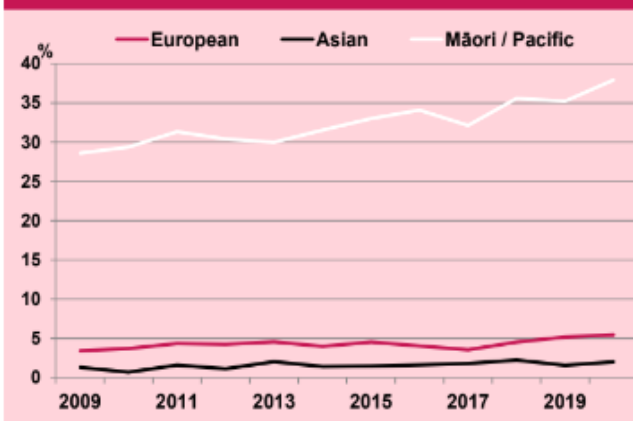
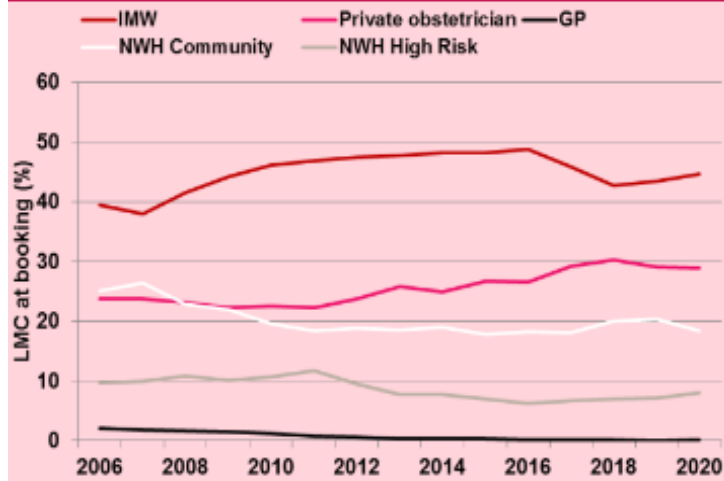


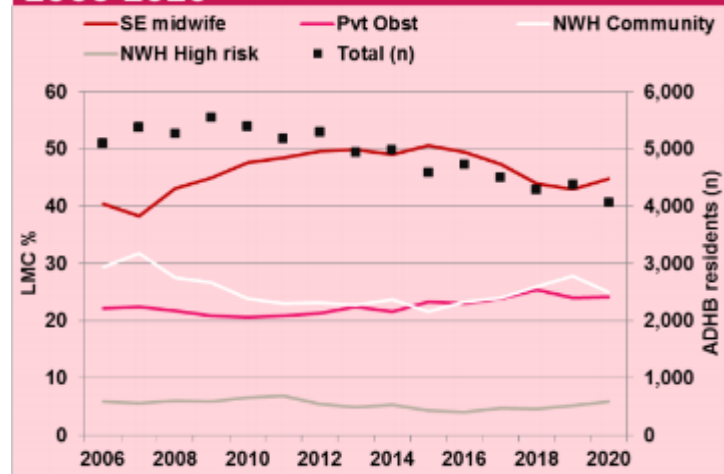
Figure 19: BMI  $\geq 35$  by ethnic groupings NWH 2009-2019\*



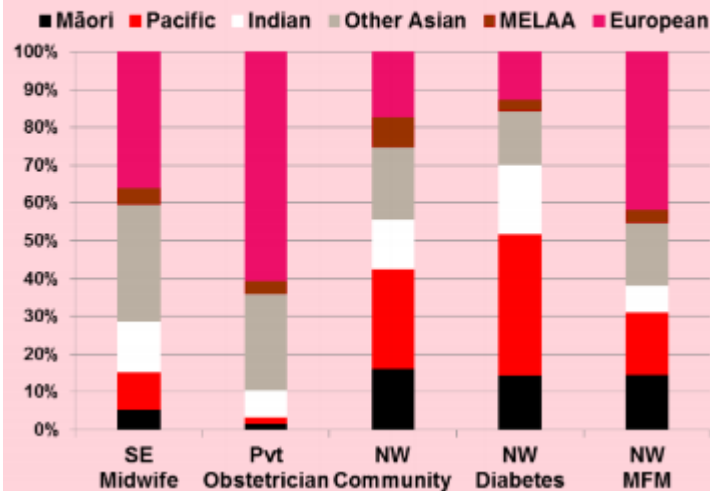
**Figure 22: LMC at birth among mothers birthing at NWH 2006-2020**



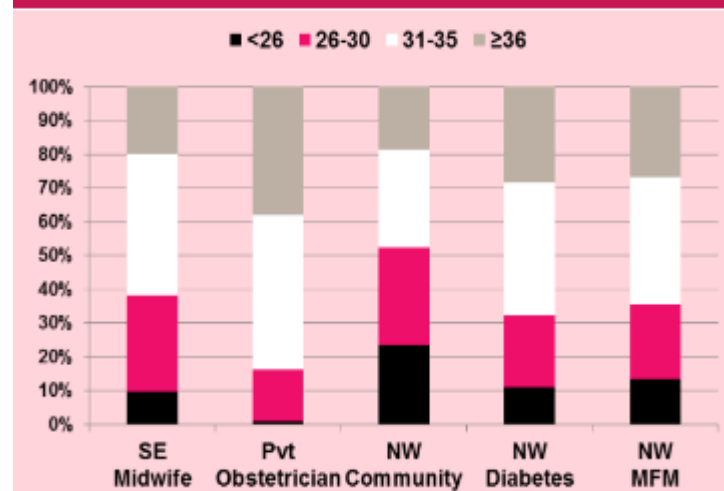
**Figure 23: ADHB resident births and LMC for ADHB resident wāhine birthing at NWH 2006-2020**



**Figure 26: LMC at birth and maternal ethnicity NWH 2020\***



**Figure 25: LMC at birth and maternal age NWH 2020\***



# Preterm Birth

- Spontaneous preterm birth 5.4% ( from 4.0%)
- Iatrogenic preterm birth 4.1 % ( from 4.6%)

Rates of preterm birth differ significantly by ethnicity. Wāhine Māori have rates of preterm birth twice that of European women (17.0% and 8.5% respectively). This is due to higher rates of both spontaneous (9.9%) and iatrogenic (7.0) preterm birth. Pacifica women also have higher rates of preterm birth (12.0%) with increased rates predominantly driven by higher rates of iatrogenic preterm birth (6.5% for Pacifica women compared with 3.9% for European women).

The increased rate of spontaneous preterm birth is concerning, particularly for those birthing <32 weeks. Ongoing differences in rates of preterm birth by ethnicity are also a major concern. With the current focus for NWH to achieve equity, rates of preterm birth may provide a valuable measure of impact for any initiatives introduced.



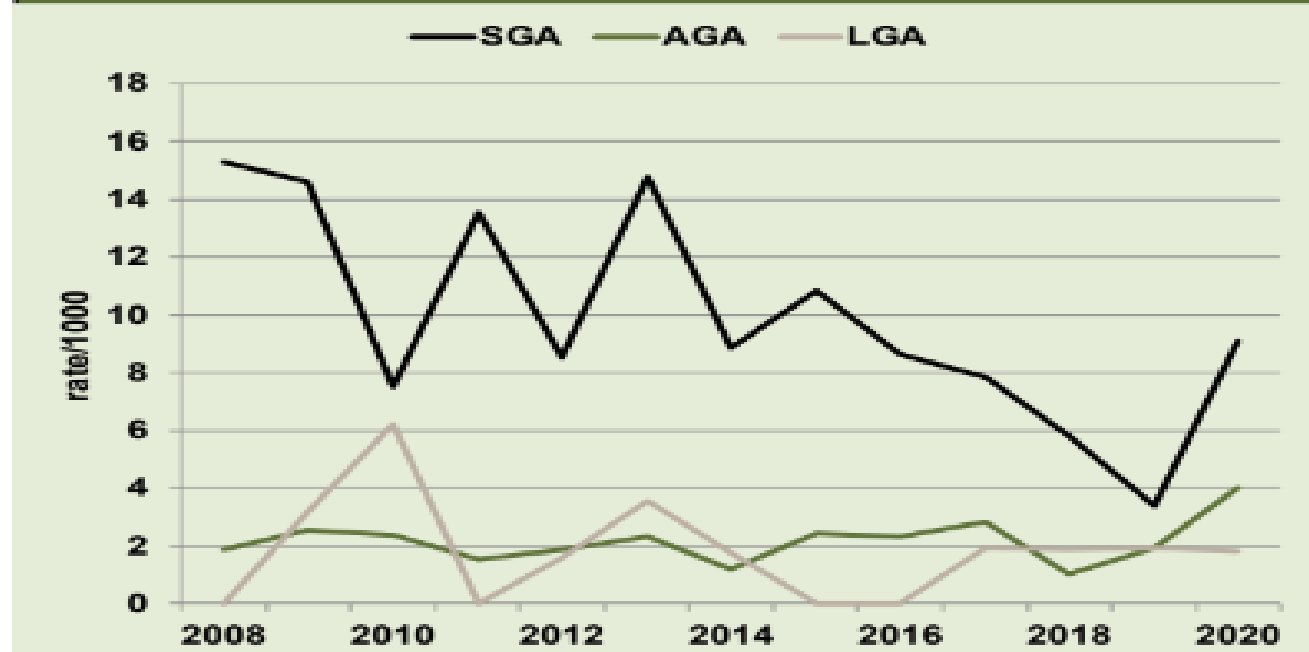
# SGA

Upoko 5 Poauautanga Haputanga

Chapter 5 Antenatal Complications

- Rate of SGA in our complex population= 13.7%

**Figure 36: Perinatal related mortality rate (/1000 births) among SGA, AGA, and LGA singleton non-anomalous pēpi born at ≥26 weeks 2008-2020**

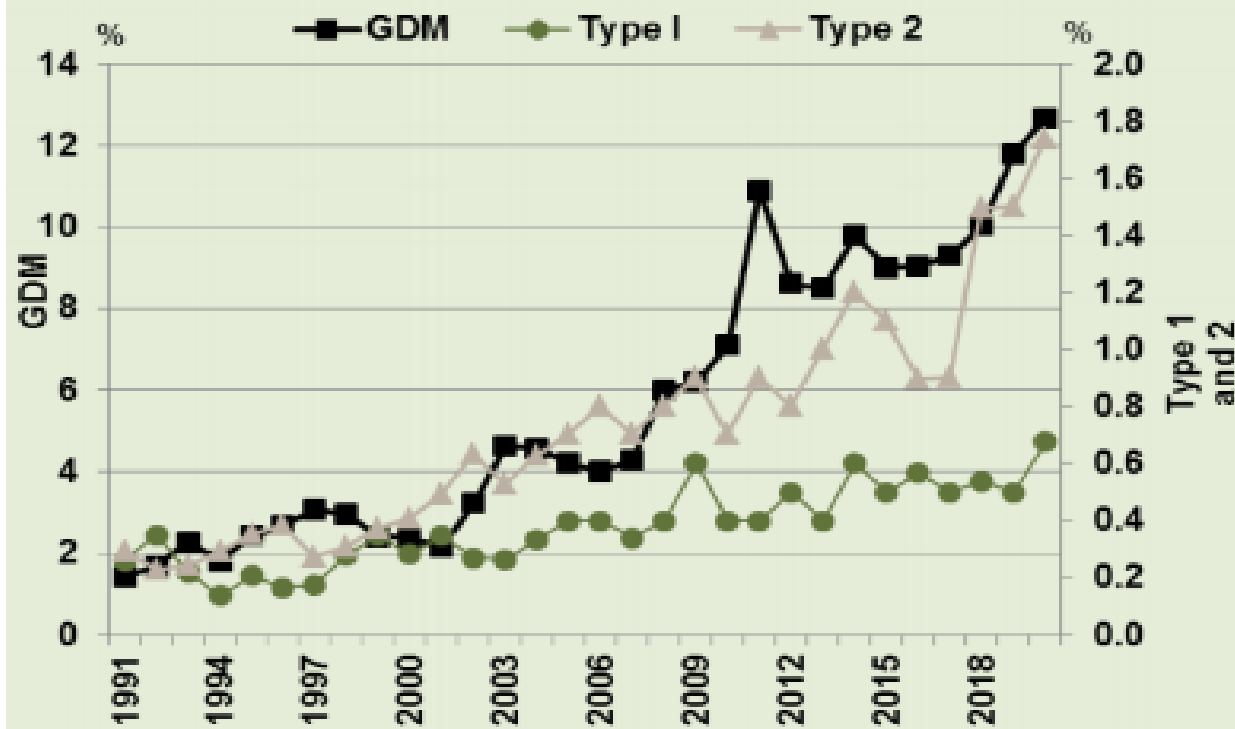


# Diabetes

Upoko 5 Poauautanga Haputanga

Chapter 5 Antenatal Complications

**Figure 39: Prevalence of diabetes (% of all inborn and BBA births) NWH 1991-2020**



# Labour and Birth

**38%**

of births began with an  
**INDUCTION OF LABOUR**

The most common  
reason for induction  
was diabetes

**26%**

of babies born by  
**ELECTIVE CAESAREAN**

The most common  
reason for caesarean  
was previous caesarean

**Epidural for women beginning labour naturally at term**

**67%**

first time mothers



**34%**

mothers with  
previous pregnancy



**50%**

of all mothers  
had a  
**spontaneous  
vaginal birth**

**42%**

first time mothers



**59%**

mothers with  
previous pregnancy



**79%**

of women who started labour  
at Birthcare stayed and had a  
**spontaneous vaginal birth**

**17%**

of mothers had a vaginal birth  
for their second birth after one  
**caesarean section**

# IOL

Slight rise in vaginal birth rates after spontaneous labour and IOL

Slight reduction in emergency LSCS after spont onset of labour

Figure 67: Mode of birth following spontaneous labour at term 2006-2020

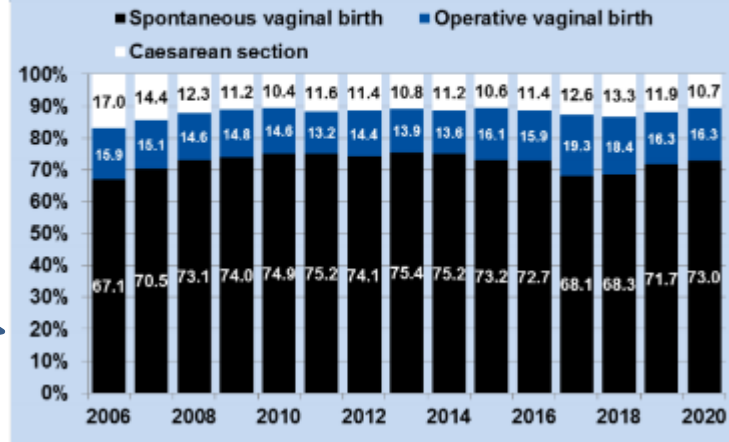


Figure 66: Mode of birth following induced onset of labour at term 2006-2020

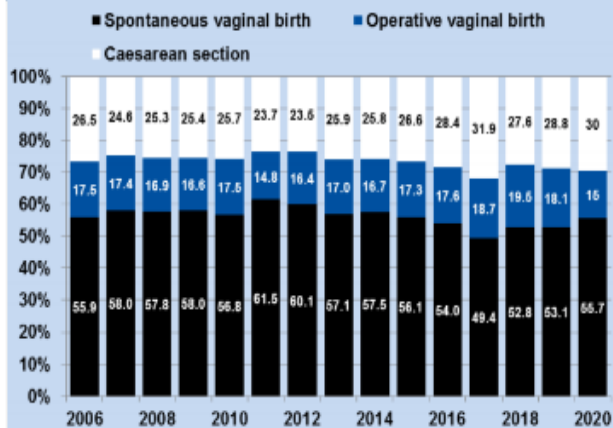
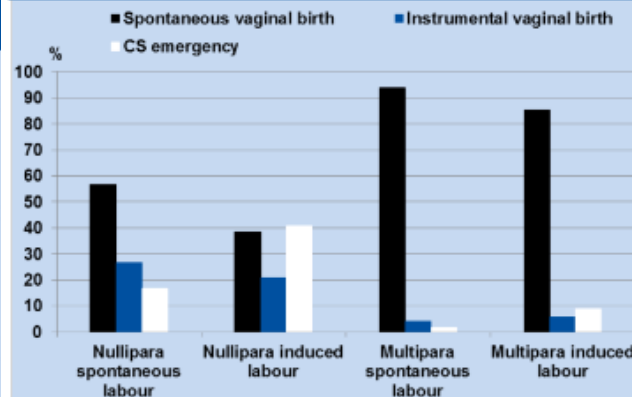


Figure 68: Mode of birth among intended vaginal births at term by parity and onset of labour (excludes previous CS) NWH 2020



IOL significant pathway to emergency LSCS

# Elective LSCS

Malpresentation  
fetal distress,  
and failed  
induction.

Maternal request  
15% of nullip  
elective and pre-  
labour LSCS (20%  
in 2019)



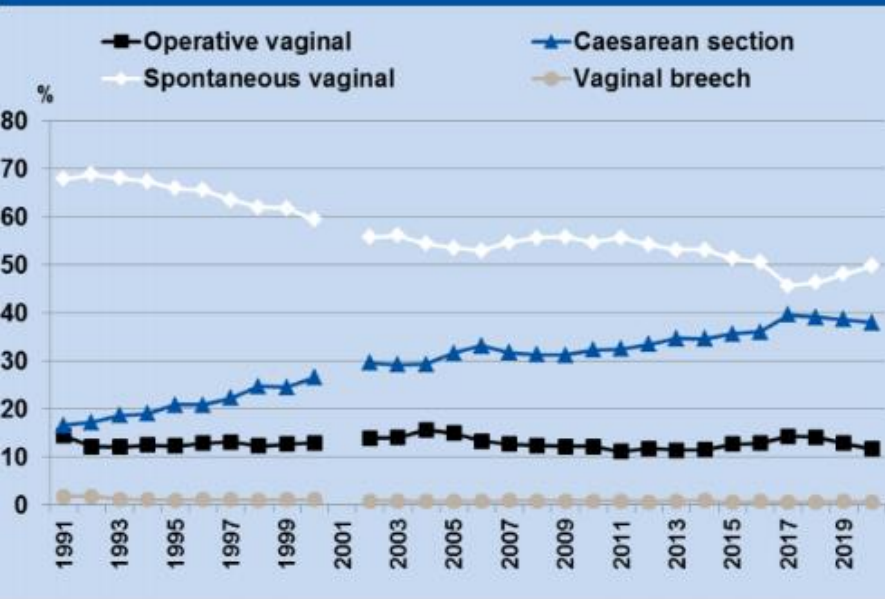
Maternal age and ethnicity  
are strongly assoc with  
elective LSCS.

A greater proportion  
of older wāhine and of non-  
Māori and non-Pacific  
ethnicity, undergo elective  
CS.

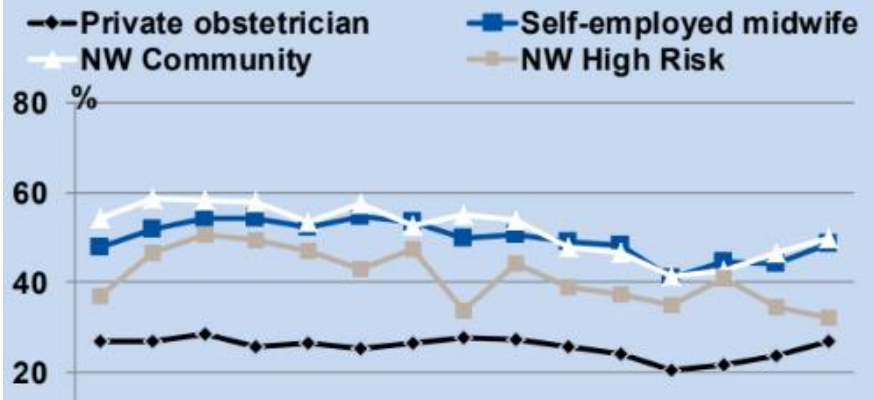
26% of all births

# Mode of Birth

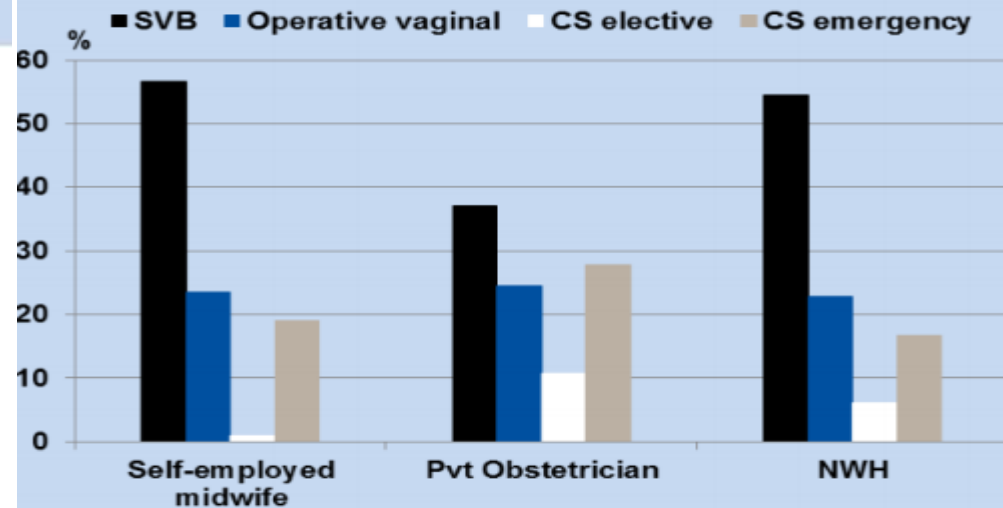
**Figure 73: Mode of birth NWH 1991-2020**



**Figure 77: Spontaneous vaginal birth rate among all nullipara by LMC 2006 - 2020**



**Figure 74: Mode of birth at term by LMC at birth among standard primipara NWH 2020**

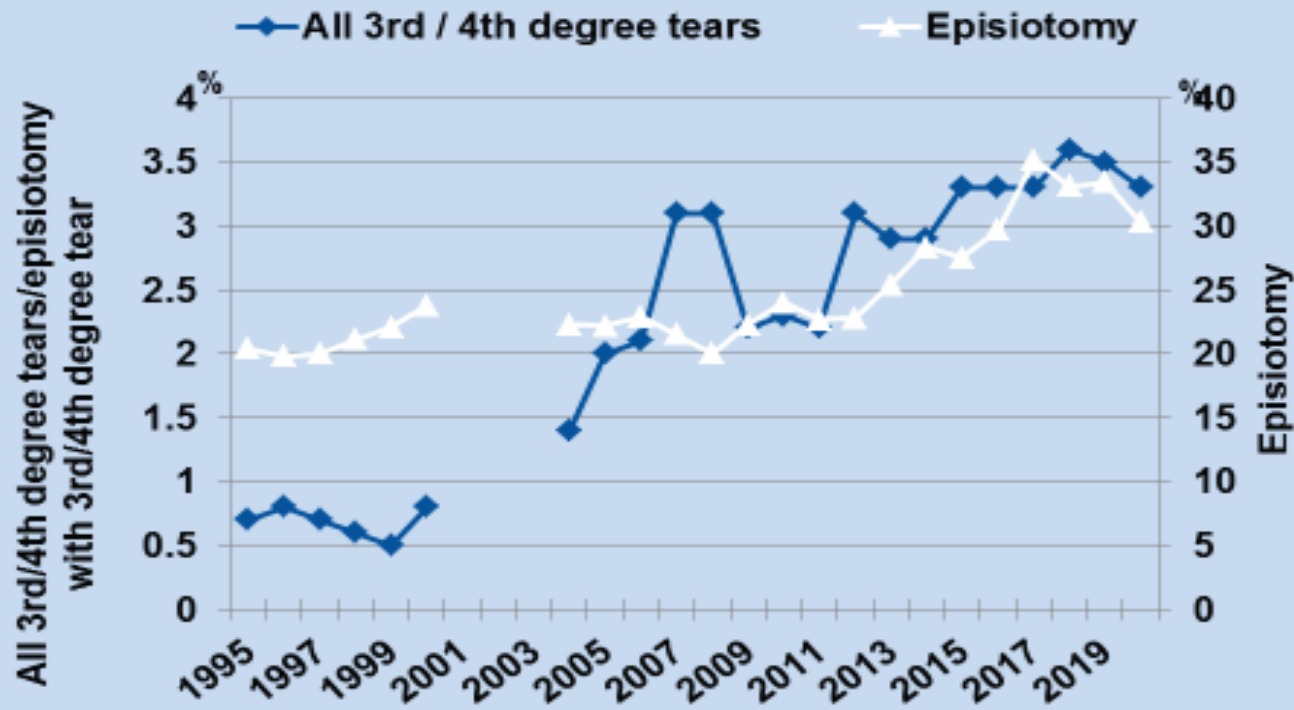


# Perineal Trauma

Ūpoko 7

Chapter 7 Labour and birth outcomes

**Figure 94: Perineal trauma among all vaginal births NWH 1995-2020**



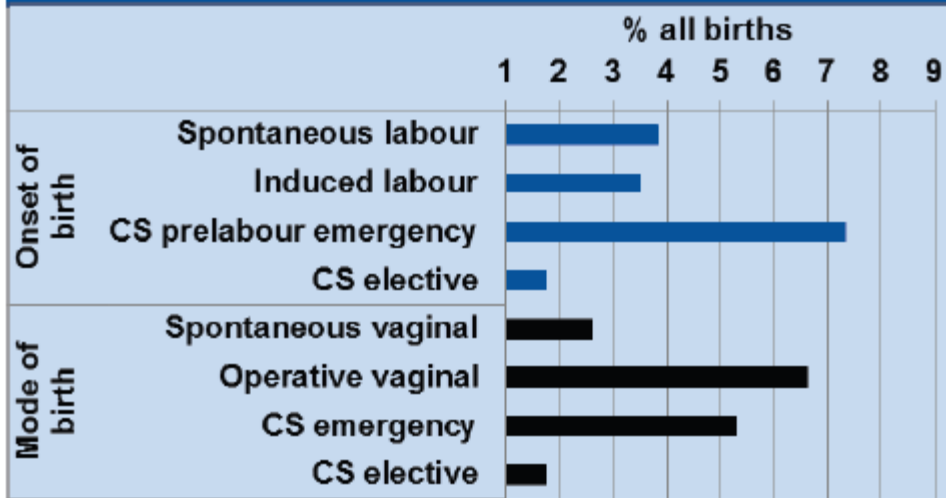
# Blood transfusion

Ūpoko 7

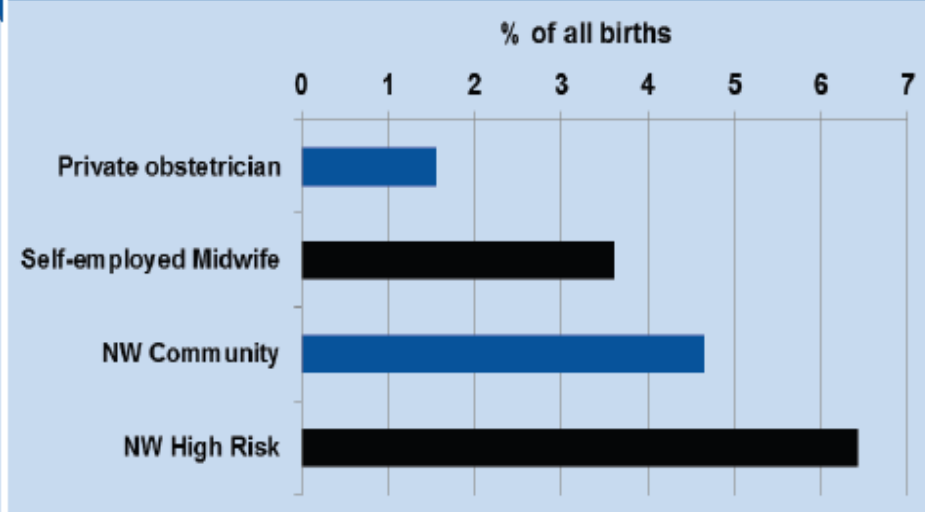
Chapter 7 Labour and birth outcomes

- Increased transfusion rate ( 3.6% from 2.3%)
- Associated with em CS/ OVD, not with IOL
- Third stage management appears appropriate

**Figure 99: Postpartum transfusion by mode of onset of birth and by mode of birth NWH 2020**



**Figure 100: Postpartum transfusion by LMC (% of all births) NWH 2020**



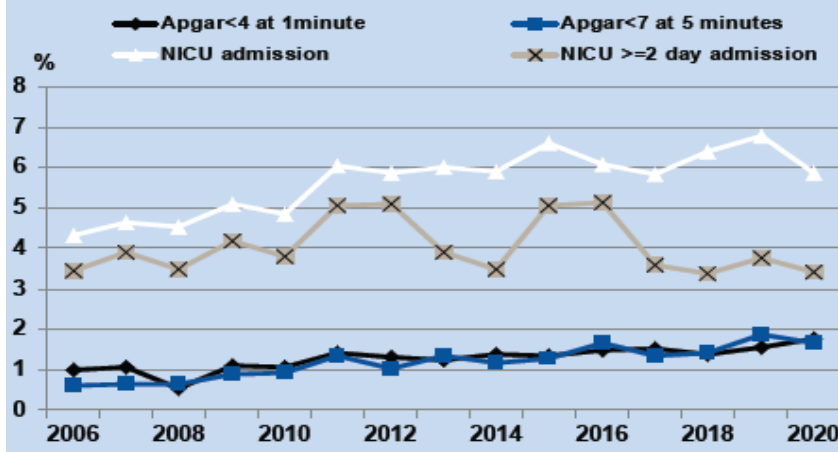


# Neonatal Outcomes

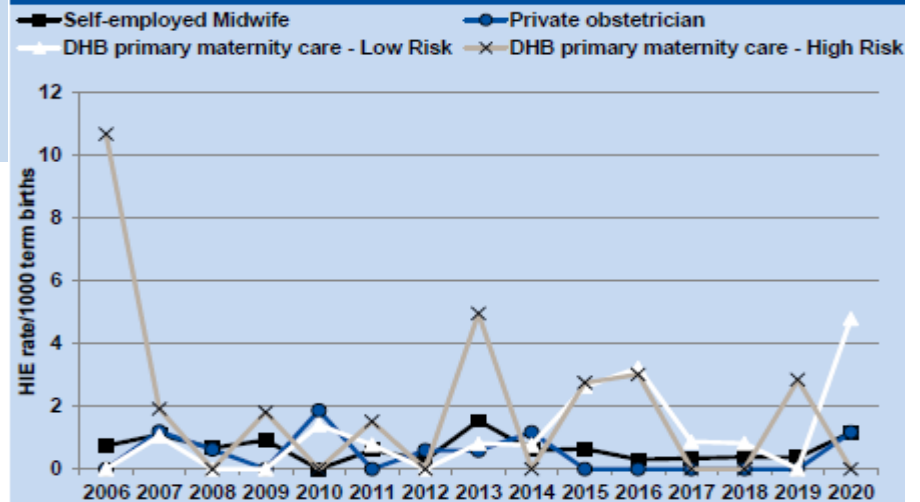
Ūpoko 7

Chapter 7 Labour and birth outcomes

**Figure 101: NICU admission and low Apgar scores among live births at term NWH 2006-2020**

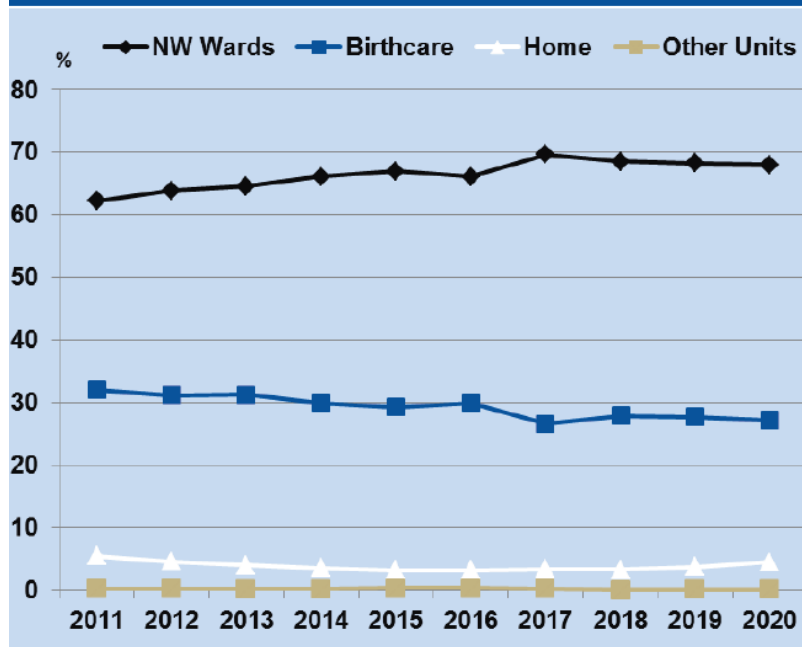


**Figure 107: HIE (stage 2 and 3) rate (per 1000 term births) by LMC NWH 2006-2020**



# Postnatal Care

**Figure 109: Maternal destination immediately after birth NWH 2012-2020**



**Table 142: Reason for admission to NWH postnatal wards among wāhine having a spontaneous vaginal birth 2020**

	N=1337	
	n	%
Neonatal reason*	549	41.1
Postpartum haemorrhage	248	18.5
Perineal trauma	121	9.1
Diabetes	97	7.3
Retained placenta/products	39	2.9
Hypertensive disorder	43	3.2
Fainting/dizziness	7	0.5
Other listed reasons†	233	17.4

# Breastfeeding rates



Exclusive  
Breastfeeding on  
discharge 75.4%

Pacific  
70.4%

Māori  
72.8%

Asian  
68.6%

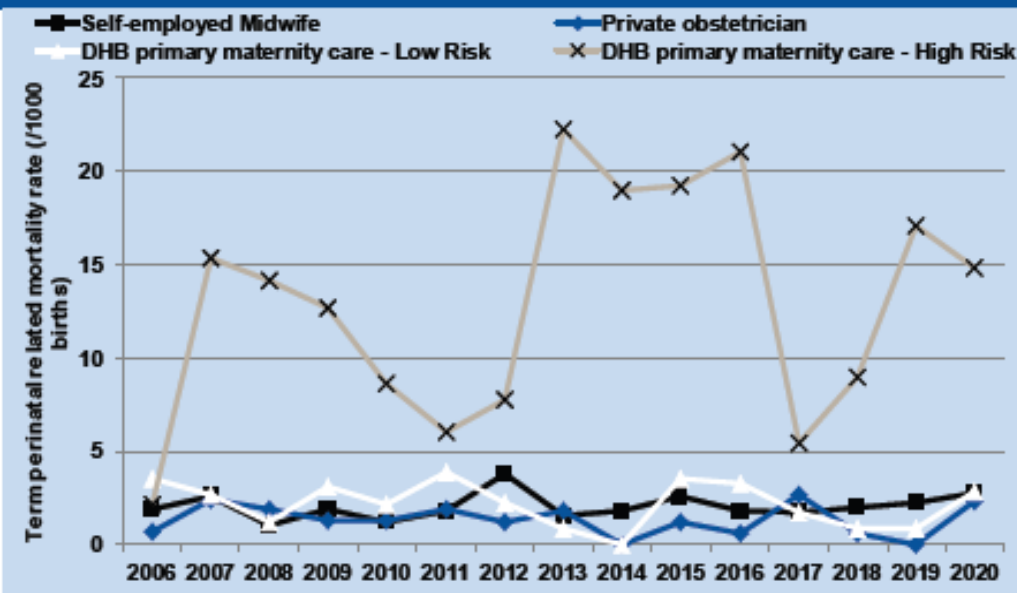
European  
83.4%

# Perinatal Mortality

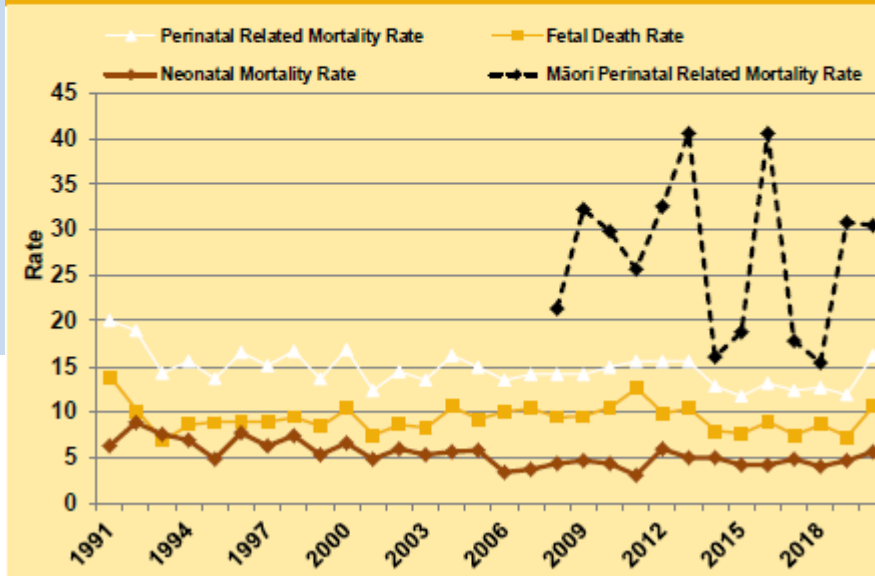
Ūpoko 10 Te Materoto me te Mate a te Whaea

Chapter 10 Perinatal and Maternal Mortality

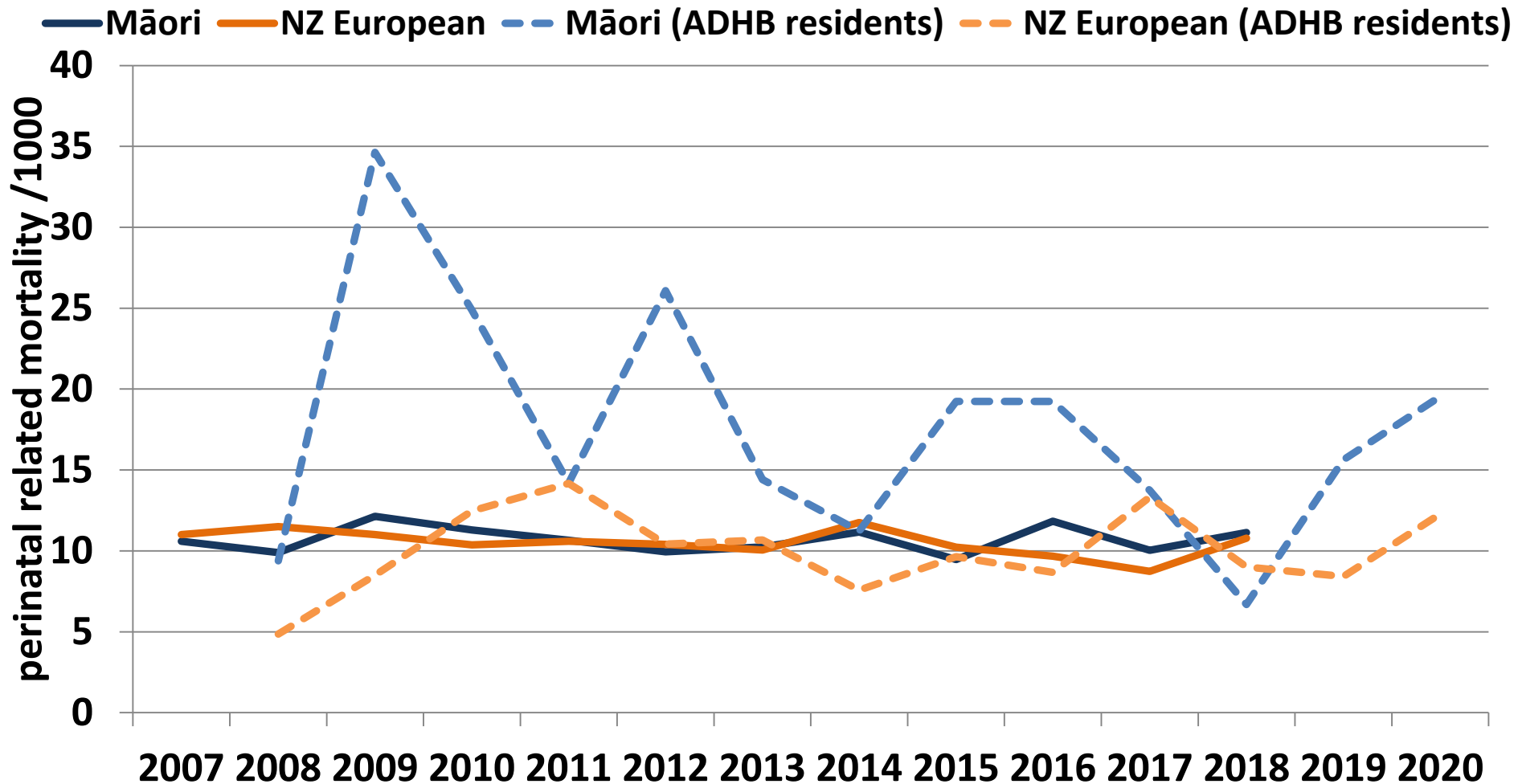
**Figure 106: Perinatal related mortality rate at term (per 1000 term births) by LMC NWH 2006-2020**



**Figure 165: Perinatal related mortality rate (Māori and total), fetal death rate and neonatal mortality rate NWH 1991-2020 (all rates expressed as deaths/1000 births)**



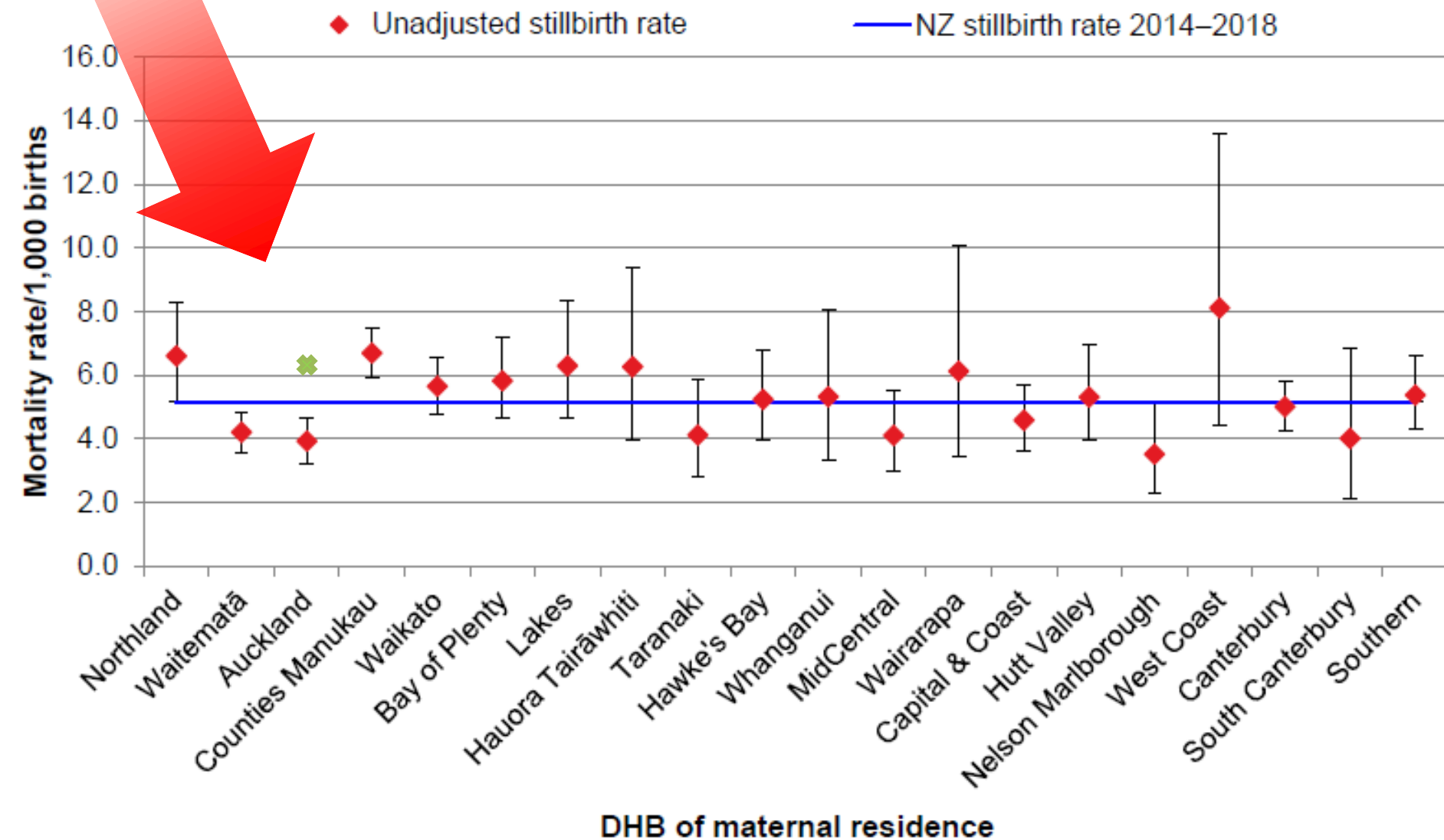
# Perinatal related mortality NZ and ADHB residents



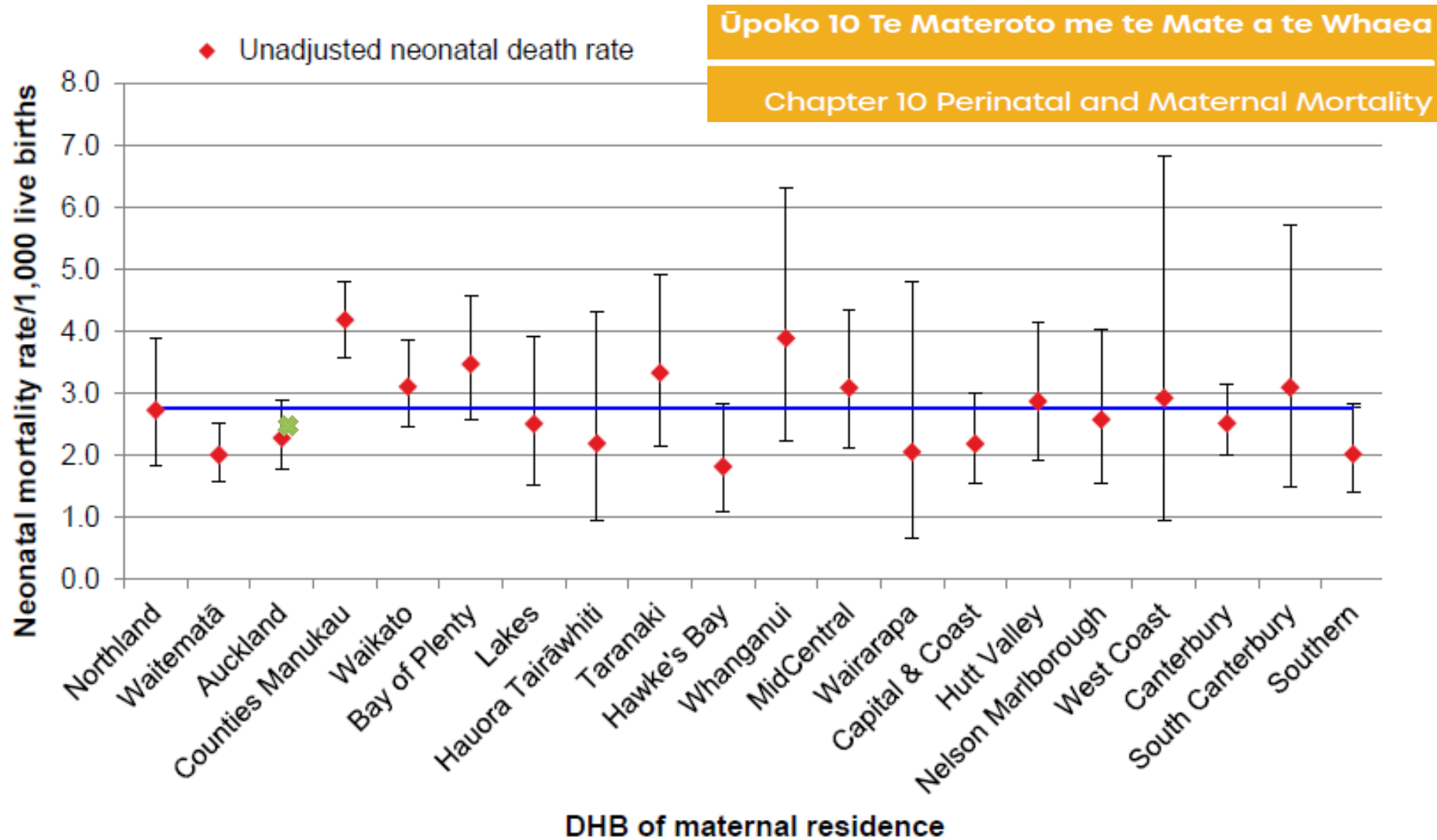
# PSANZ PDC codes 2020

	2014	2015	2016	2017	2018	2019	2020
Congenital abnormality	37	28	33	20	33	36	<b>31</b>
Perinatal infection	2	4	3	7	1	3	<b>3</b>
Hypertension	5	1	0	3	7	3	<b>7</b>
APH	10	9	14	9	7	6	<b>13</b>
Maternal conditions	7	3	7	5	8	5	<b>12</b>
Complications of multiple pregnancy	5	0	6	5	8	5	<b>7</b>
Specific perinatal conditions	8	11	9	9	4	5	<b>1</b>
Hypoxic peripartum death	2	1	0	3	0	0	<b>3</b>
FGR/placental dysfunction	5	7	6	6	1	0	<b>1</b>
Spontaneous preterm	9	9	10	10	9	7	<b>11</b>
Unexplained antepartum death	6	9	9	9	5	10	<b>11</b>
No obstetric antecedent	1	1	0	0	0	0	<b>2</b>
<b>Perinatal related deaths</b>	<b>97</b>	<b>83</b>	<b>97</b>	<b>86</b>	<b>83</b>	<b>80</b>	<b>102</b>

# Stillbirth rate by DHB of residence



# Neonatal mortality rate by DHB of residence





# Neonatal Mortality

Ūpoko 10 Te Materoto me te Mate a te Whaea

Chapter 10 Perinatal and Maternal Mortality

**Table 188: Neonatal deaths by neonatal classification (PSANZ-NDC) and gestational age at birth NWH 2020**

	Total neonatal deaths N=35		< 37 weeks n=28		≥ 37	
	n	%	n	%	n	%
Extreme prematurity	6	17	6	21		
Congenital abnormality	10	29	8	29	2	29
Infection	3	9	3	11		
Neurological	5	14	3	11	2	29
Cardio-respiratory disorders	6	17	6	21		
Other	5	14	2	7	3	43

# Maternal Mortality

Ūpoko 10 Te Materoto me te Mate a te Whaea

Chapter 10 Perinatal and Maternal Mortality

- 5 maternal deaths in 2020
- Diverse aetiology
  - Sepsis x 2
  - Pre-eclampsia x 1
  - Metastatic cancer x 1
  - Ectopic pregnancy x 1
- Associated perinatal/fetal loss x 4
- RCA reports completed
- External review findings awaited

# A moment of silence

