

Induction of Labour



NWH 2019 ANNUAL CLINICAL REPORT

DR JENNY MCDUGALL

(SERVICE CLINICAL DIRECTOR)

Overview



- Definitions
- Rates
- Indications
- Outcomes

Good performance ✓

Opportunities for improvement ✗

Definitions of IOL



Healthware data were used to define IOL:

- “Established labour” entered by user
- ARM before established labour = IOL
- (ARM/Syntocinon after established labour = augmentation)
- Syntocinon before established labour = IOL
(including term PROM)
- Syntocinon before 3cm dilated = IOL
- Syntocinon before ARM = IOL

IOL year on year from 2009



- Total birth numbers have declined (overall)
- Numbers of IOL have stayed the same
- So – rates have gone up

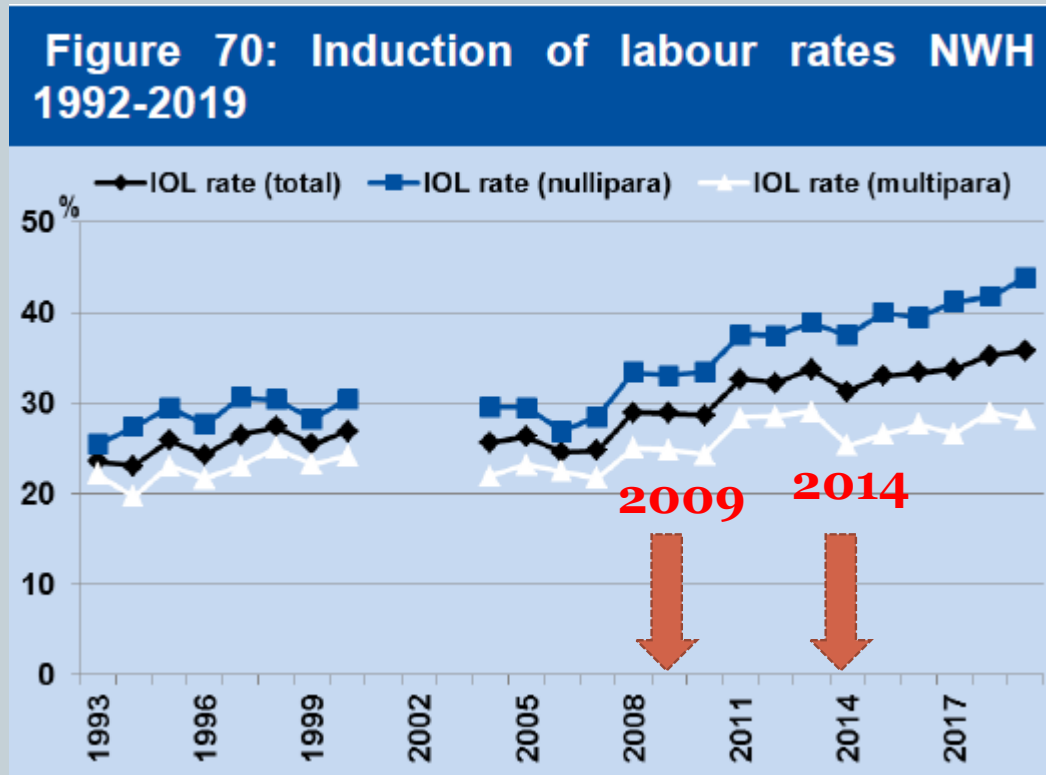
Table 79: Induction of labour rates 2009-2019

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total Births	7735	7709	7523	7695	7223	7400	6933	7241	6846	6481	6660
Wāhine Induced	2238	2214	2463	2483	2438	2315	2289	2423	2312	2290	2381
Incidence (%)	28.9	28.7	32.7	32.3	33.8	31.3	33.0	33.5	33.8	35.3	35.8
Total Nullipara	3811	3650	3539	3778	3441	3604	3321	3517	3343	3183	3202
Nullipara Induced	1260	1226	1330	1382	1337	1354	1328	1391	1378	1332	1407
Incidence (%)	33.1	33.5	37.6	36.5	38.9	37.5	40.0	39.6	41.2	41.8	43.9
Total Multipara	3924	4059	3984	3917	3782	3796	3612	3724	3503	3298	3458
Multipara Induced	978	988	1133	1101	1101	961	961	1032	934	958	974
Incidence (%)	24.9	24.3	28.4	28.1	29.1	25.3	26.6	27.7	26.7	29.0	28.2

IOL rates



- Increasing rates in nullipara and multipara



Process audit



Completeness of Elective Induction of Labour Form

Standard:

- **1** 100% of IOL forms should include a documented and valid indication, and a named SMO
- **2** 100% documentation that wāhine were provided a patient pamphlet, and offered “stretch and sweep”

Findings:

- 94% (87/93) forms completed according to the defined standard. The 6% (6/93) forms failing to reach standard all lacked SMO name but had a reason for IOL. Comparing with the results of the 2017 audit, there has been significant improvement. ✓
- 60% of forms documented that the patient pamphlet was given compared to 59% in 2017. ✗
- 26% of wāhine were offered a ‘Stretch & Sweep’ compared to 36% in 2017. ✗

IOL in Standard primiparae 2018

Indicator 5: Standard primiparae who undergo induction of labour

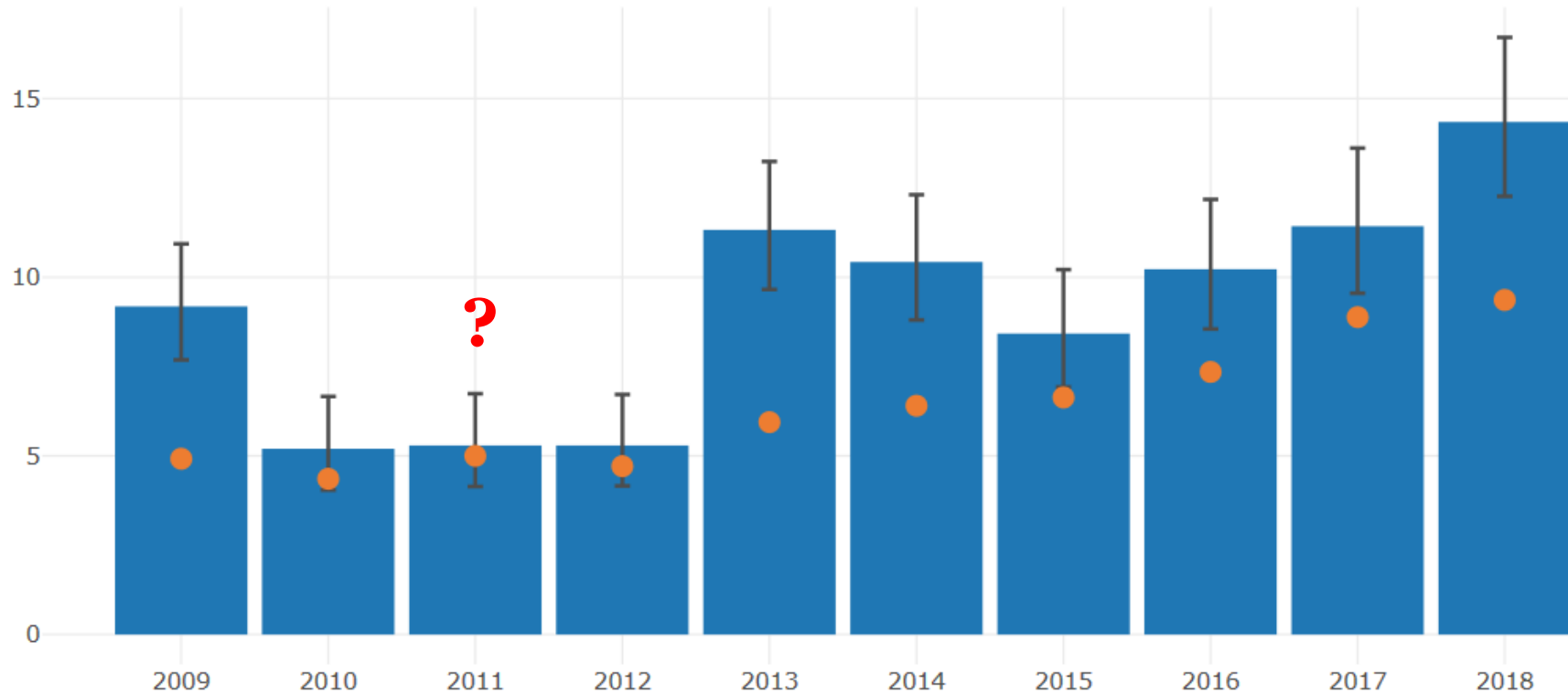
Rate (%) of births at Auckland City (tertiary facility), 2009–2018

X

Graph

Table

About the indicator



Note: Orange dots represent the rate for births at all secondary/tertiary facilities. Error bars represent the 95% confidence interval for the facility of birth.

Standard Primipara



- NWH definition
- MoH

A standard primiparous mother is defined at NWH as a wahine with no prior birth at 20 or more weeks gestation, aged 20-34 years at birth, with a singleton pregnancy, cephalic presentation, gestation 37-41 weeks at birth, with a normally grown pēpe (customised birthweight centile >10th), without medical disease (cardiac disease, renal disease, mental health disorder, SLE, HIV infection, CVA/TIA, diabetes or hypertension), gestational diabetes, pregnancy associated hypertensive disease, or antepartum haemorrhage. This differs from the definition used

We consider approximately 15 percent of women giving birth in New Zealand to be standard primiparae. These women are a subset of the general maternity population and so are not representative of birthing women in New Zealand.

Standard primiparae in this publication are women aged 20–34 years old at the time of giving birth who are giving birth for the first time (parity = 0) at term (37–41 weeks' gestation) where the outcome of the birth is a singleton baby, the presentation is cephalic (head first) and there have been no recorded obstetric complications that are indications for specific obstetric interventions.

Standard primiparae 2019



- Surprising?

Table 33: LMC at birth and parity NWH 2019

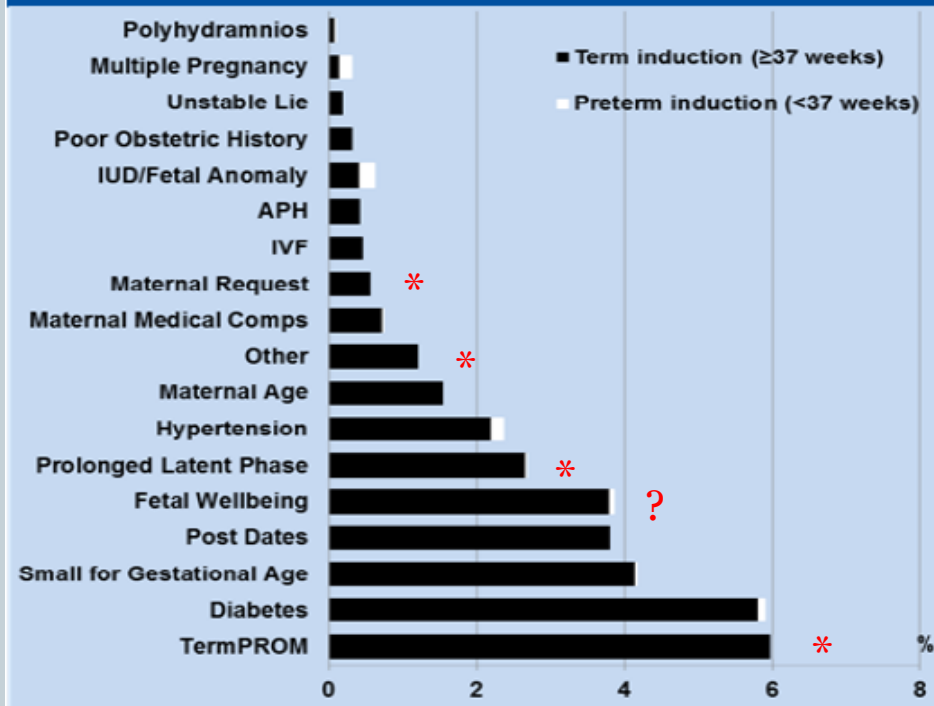
	Total	Nullipara		Standard primipara	
	N	n	%	n	%
Total	6660	3202	48.1	1055	15.8
Self-employed midwife	2891	1420	49.1	501	35.3
Private Obstetrician	1933	974	50.4	319	32.8
General Practitioner	4	0		0	
NWH Community	1357	622	45.8	212	34.1
NWH Diabetes	142	54	38.0	0	
NWH MFM	248	102	41.1	20	20.2
Other DHB	27	15	55.6	0	
Unbooked	58	15	25.9	3	20.0

Indications



- Where do standard primiparae lie in this list?

Figure 71: Primary indication for induction by gestation (as a percentage of all births) NWH 2019



ADHB guideline based indications



- Post dates : 41 - 42/40
- PROM : $\geq 37/40$ within 24 hours
- Hypertension : 37/40
- Maternal age > 40 years : 40 weeks
- SGA – low risk by 40/40, high risk by 38/40
- Diabetes
 - Uncomplicated GDM not before 40 weeks
 - Otherwise individualise

Indications - no guidance **X**



- “Fetal Wellbeing”
- “Prolonged latent phase”

Post Dates



- 29 babies were born after ≥ 42 weeks in 2019
 - This is the lowest since 2008 ✓
 - 10.3% of IOL for “post dates” were $< 41/40$ and all of these were under 40 y X
- Introducing: the new Post Term Virtual Consult Form
 - Risk Assessment at 36/40
 - Streamlines IOL booking at 41/40 to avoid delays due to ultrasound scanning
 - Supports maternal choice



**Referral for Post Term
Virtual Consultation**

MUST ATTACH PATIENT LABEL HERE

SURNAME: _____ NHI: _____

FIRST NAMES: _____ DOB: _____

Please ensure you attach the correct visit patient label

REFERRAL FOR POST TERM VIRTUAL CONSULTATION

LMC to complete

Email with secondary referral form to: centralreferrals@adhb.govt.nz

Woman's details Name: _____ NHI: _____ DOB: _____ Phone: _____	LMC details Name: _____ If ADHB team, colour: _____ Phone: _____
Current Pregnancy: G P	<input type="checkbox"/> Booking Form is in 3M
Most reliable EDD: Gestation requested for IOL: _____	<input type="checkbox"/> All ultrasound scan reports, including dating scan, attached or available in Concerto / Healthware

Suitability for Post Term Virtual Consultation
NB: Risk assess all patients by 36 weeks, if not suitable, please refer early for advice re timing of birth; if not already referred by due date and unsuitable for PTVC, please speak to DU SMO

<input type="checkbox"/> Gestation ≥ 40+3 weeks	<input type="checkbox"/> If previous CS, has consulted with an Obstetrician, is suitable for IOL, and this is documented on Healthware risk sheet
<input type="checkbox"/> Age < 40 years <input type="checkbox"/> Age 40 years or more	<input type="checkbox"/> Customised EFW 10 th centile or greater
<input type="checkbox"/> BMI < 40 kg/m ²	<input type="checkbox"/> Normal fetal movements
Membrane sweeping <input type="checkbox"/> Offered <input type="checkbox"/> Performed	<input type="checkbox"/> No significant antenatal risk factor requiring separate antenatal consult
<input type="checkbox"/> Woman consents to virtual consultation	<input type="checkbox"/> ADHB information leaflet reviewed

- If woman requests IOL at 41^{+0/+1} there is no need for additional fetal surveillance
- If woman requests IOL > 41⁺¹ then please include assessment of baby (e.g. liquor volume measurement +/- Biophysical Profile +/- CTG)

Preferences (e.g. LMC or woman's preference for Induction of Labour date / time / method):

OBLIGE Study Eligible Informed (pamphlet / website) Considering

Triaged by: MW Name: _____ Date: _____

Post Term Virtual Consultation outcome	
<input type="checkbox"/> Suitable for post-term virtual consult: Elective IOL request form started, and referral forwarded to SMO for virtual consult next business day	<input type="checkbox"/> Not suitable for virtual consult Action: _____
<input type="checkbox"/> Not enough info – returned to LMC	<input type="checkbox"/> Healthware completed
LMC informed by: Date: _____ Time: _____	IOL form emailed to Inductions@adhb.govt.nz Date: _____ Time: _____ <input type="checkbox"/> Sent to 3M

SINGLE SIDED FORM – Reverse not scanned
DO NOT DOCUMENT CLINICAL NOTES ON BACK

REFERRAL FOR POST TERM VIRTUAL CONSULTATION

Hypertension



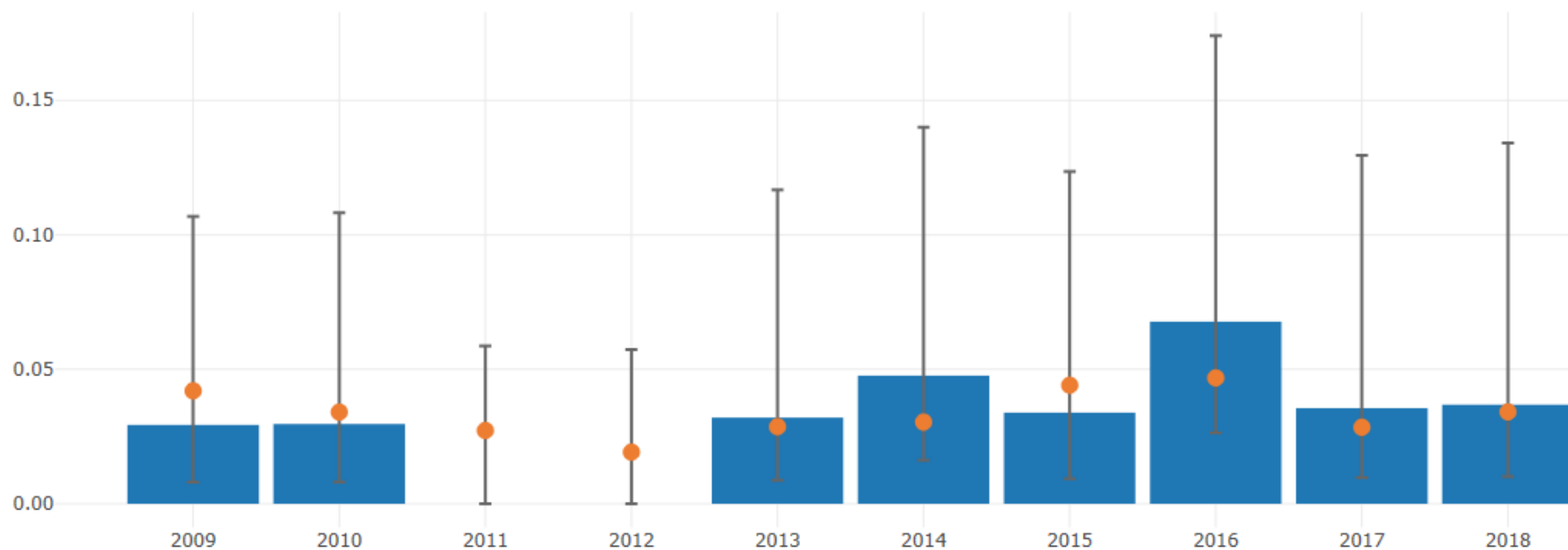
Indicator 13: Diagnosis of eclampsia at birth admission ✓

Rate (%) of women giving birth (all ethnic groups), residing in the Auckland DHB area, 2009–2018

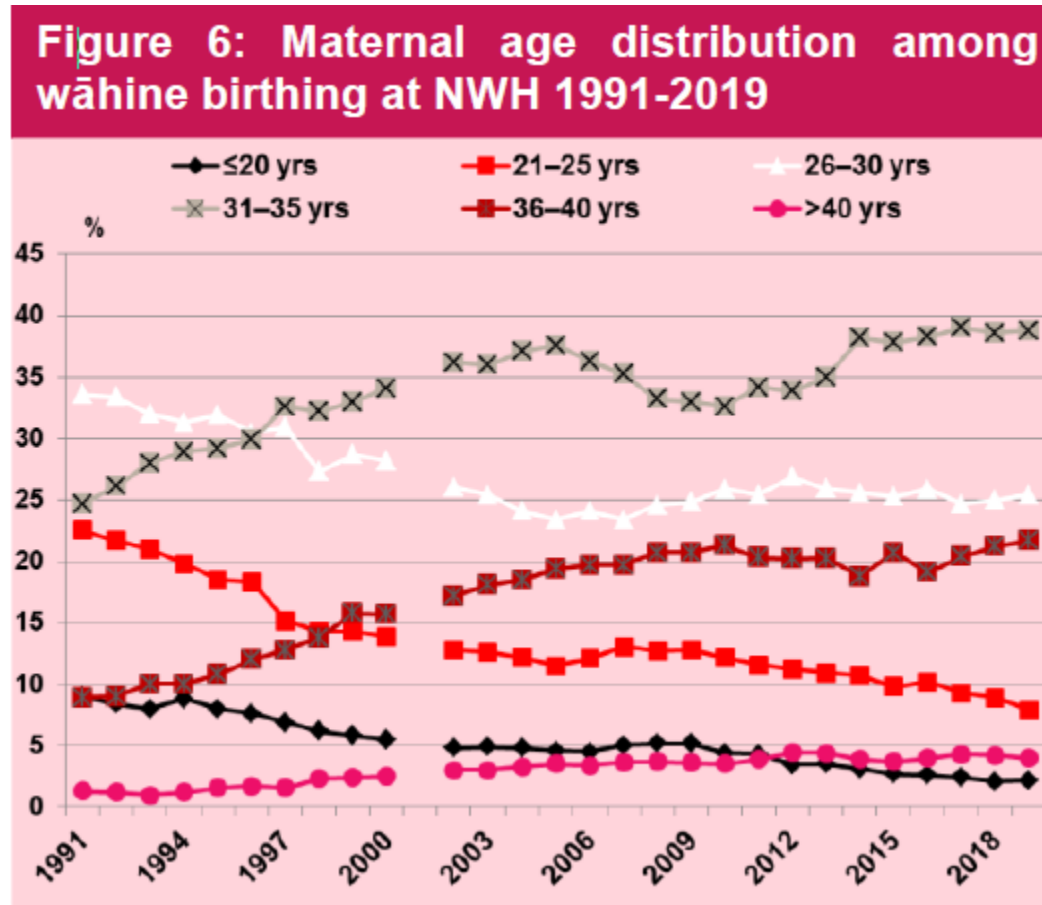
Graph

Table

About the indicator



Maternal Age



SGA



Indicator 19: Small babies at term born at 40-42 weeks' gestation

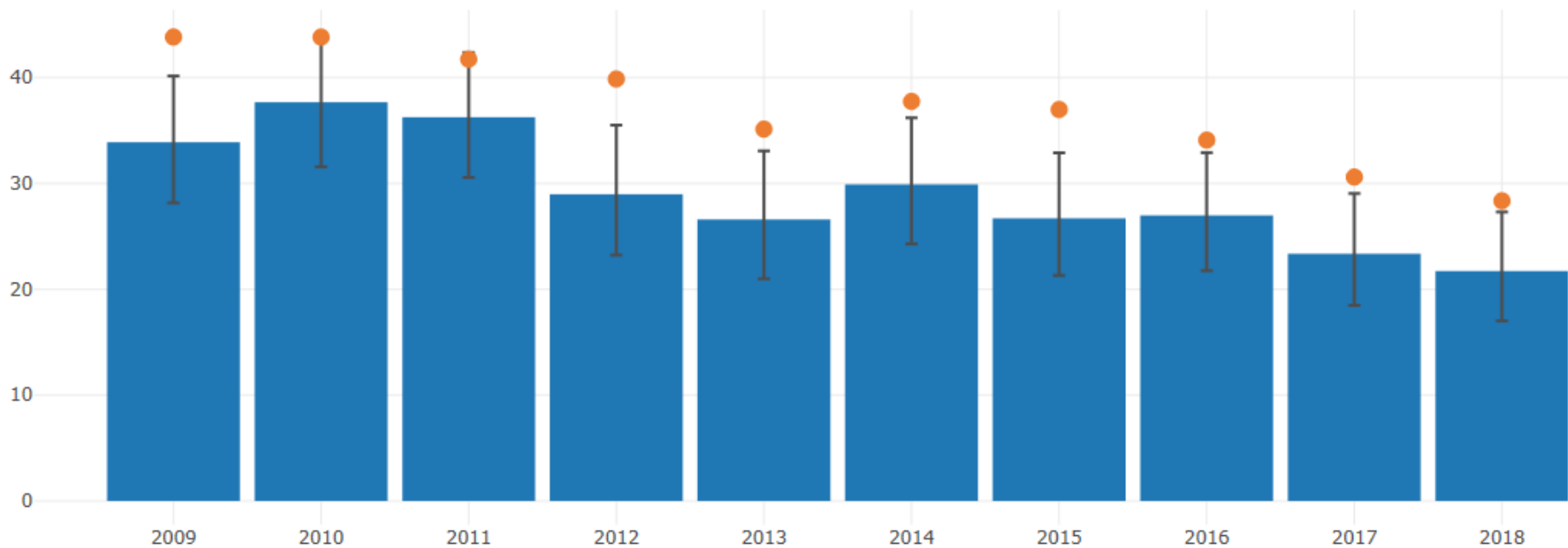


Rate (%) of births at Auckland City (tertiary facility), 2009–2018

Graph

Table

About the indicator



Note: Orange dots represent the rate for births at all secondary/tertiary facilities. Error bars represent the 95% confidence interval for the facility of birth.

Diabetes



Figure 38: Prevalence of diabetes (% of all inborn and BBA births) NWH 1991-2019

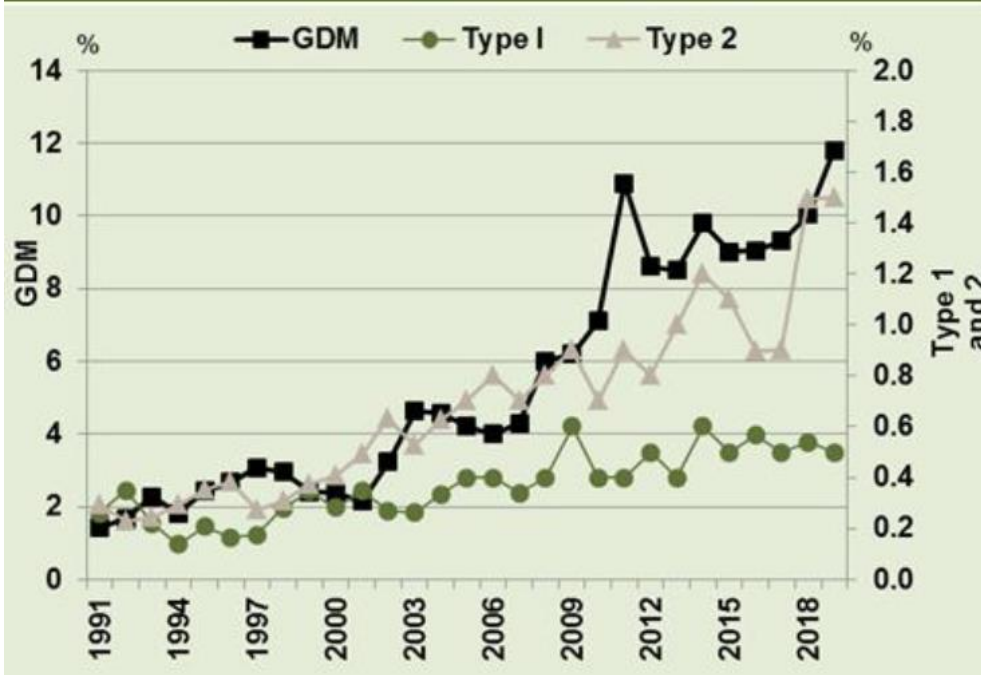
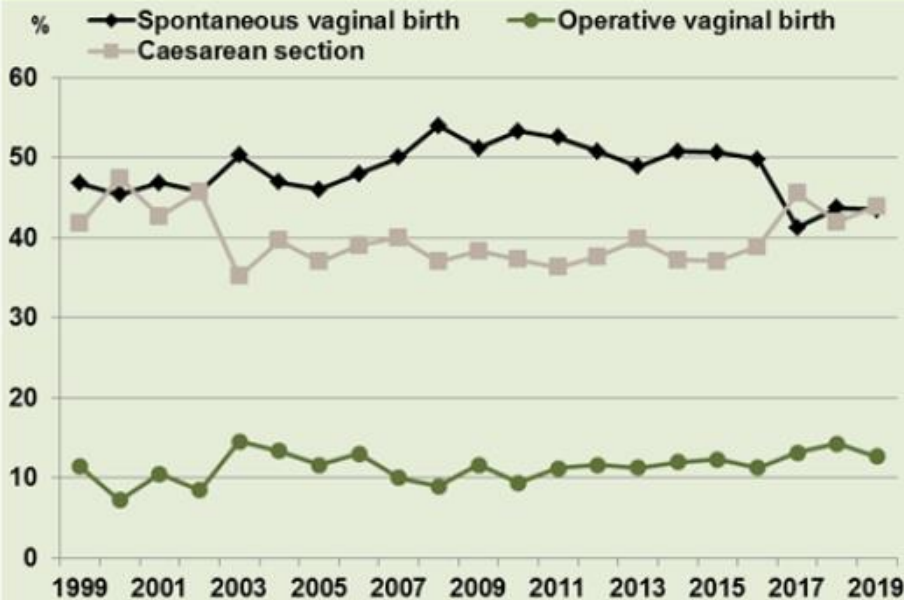


Figure 43: Mode of birth among wāhine with GDM NWH 1999-2019



IOL impact



- Induction prevents spontaneous labour start
- Induction prevents some obstetric complications – but not all
- Gestation at birth, related neonatal outcomes
- Mode of birth

Indicator 17: Preterm birth

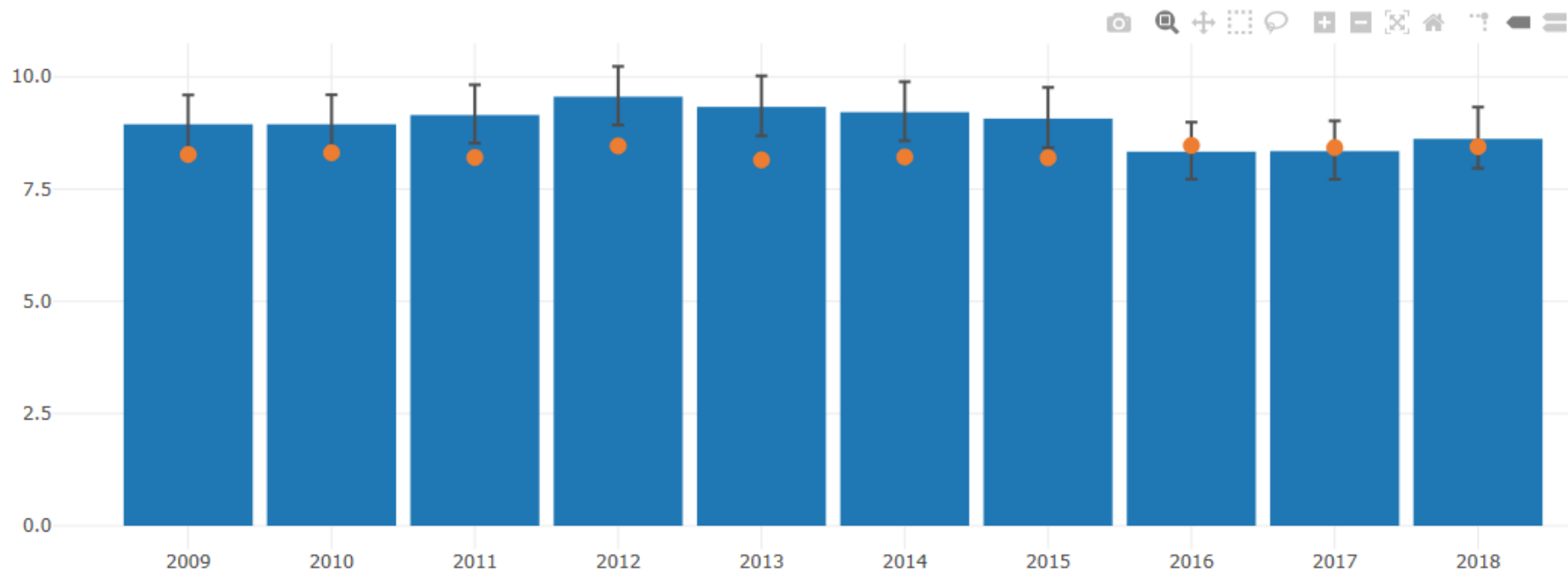


Rate (%) of births at Auckland City (tertiary facility), 2009–2018

Graph

Table

About the indicator

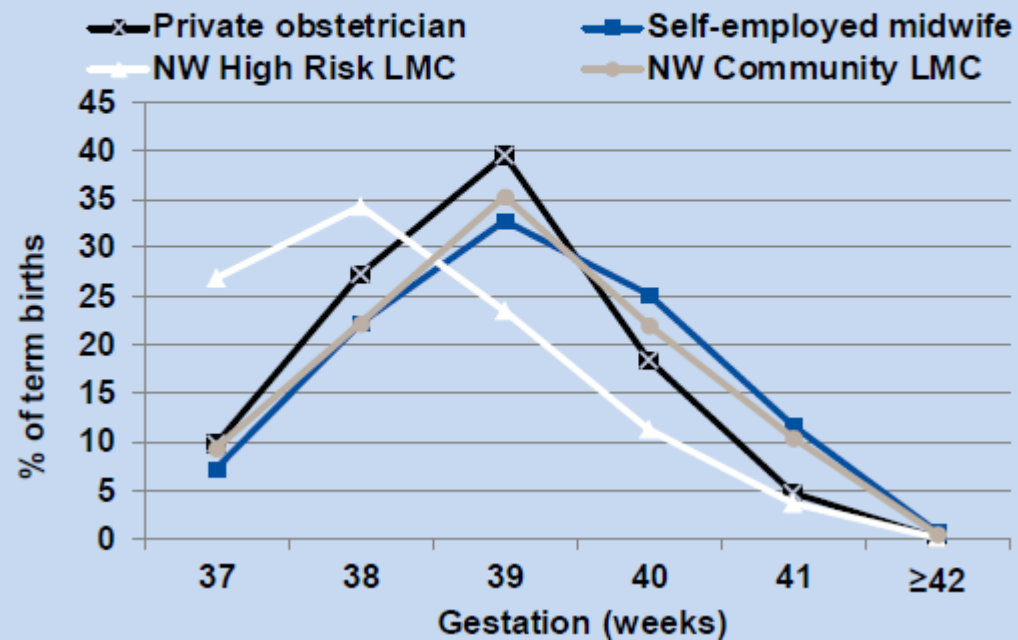


Note: Orange dots represent the rate for births at all secondary/tertiary facilities. Error bars represent the 95% confidence interval for the facility of birth.

Gestation at birth (term)



Figure 63: Distribution of gestation at birth among term pēpi born by LMC 2019



Gestation at birth (term) over time



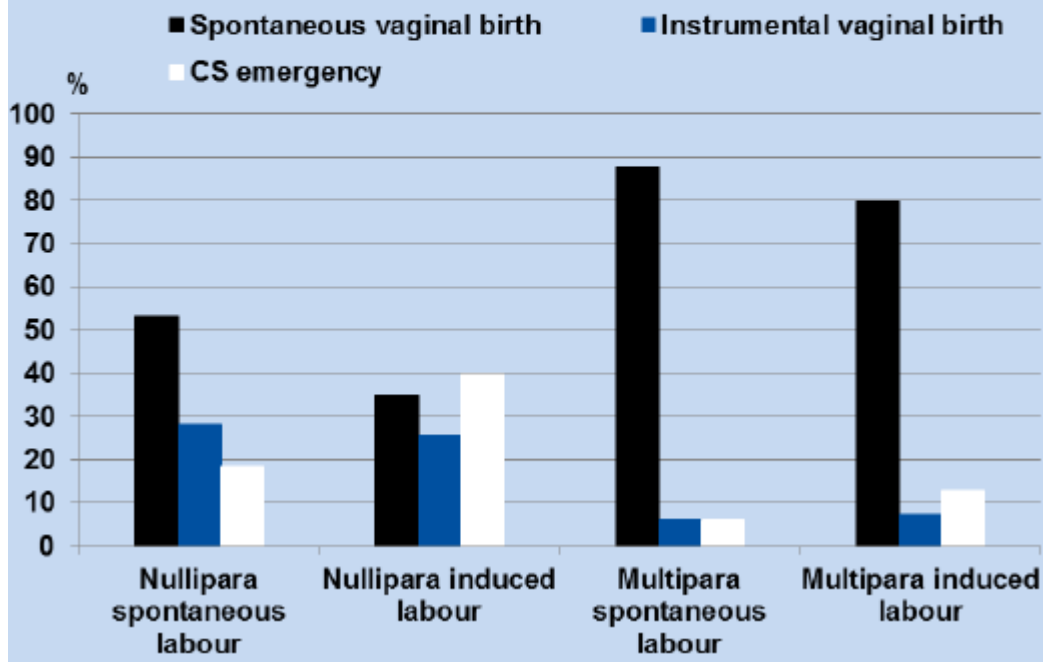
Table 10: Term births (pēpi) by gestation NWH 2008-2019

Gestation	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
37 weeks	648	638	630	626	616	608	643	591	675	605	599	583
38 weeks	1488	1565	1546	1539	1536	1550	1595	1501	1677	1527	1488	1501
39 weeks *	1802	1965	1983	2078	2172	2055	2078	1989	2109	2103	1935	2131 *
40 weeks	1827	1813	1810	1664	1744	1575	1585	1540	1489	1459	1348	1331
41 weeks	943	992	977	864	877	754	818	702	690	601	566	541
≥42 weeks	182	150	133	132	98	61	73	60	48	47	40	29
Total	6890	7123	7079	6903	7043	6603	6792	6383	6688	6342	5976	6116

Mode of birth X



Figure 68: Mode of birth among intended vaginal births at term by parity and onset of labour (excludes previous CS) NWH 2019



Perinatal mortality ✓

Figure 35: Perinatal related mortality rate (/1000 births) among SGA, AGA, and LGA singleton non-anomalous pēpi born at ≥26 weeks 2008-2019

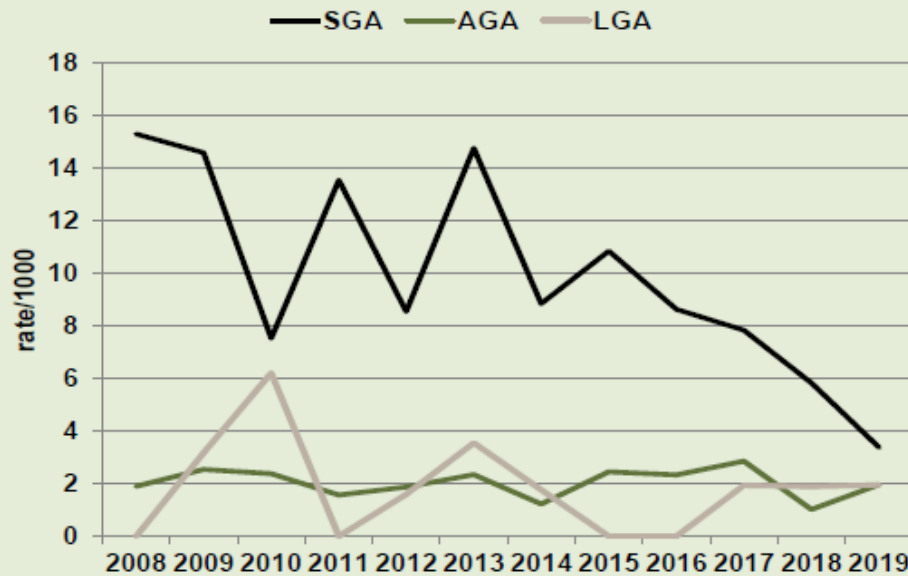


Table 50: Perinatal related deaths (2008 – 2019) among births complicated by diabetes

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total number of perinatal related losses	1	4	10	5	10	6	9	6	8	9	13	9
Perinatal related loss rate /1000	2	7	16	5	13	16	11	8	10	12	16	10

Opportunities for Improvement



- Publish and launch new IOL guidance and process
- Data collection to align with new guidelines
 - Definitions of IOL and failed IOL
 - Indications linked to timing - KPIs
 - Scan data re SGA to stratify as low/high risk
- Standard primiparae – further research 39/40/41?
- Post dates – new PTVc form
- Diabetes – further research into GDM – 39/40/41?
- Membrane sweeps

Opportunities for improvement: CS after IOL



- Patience in labour: KPI = failed IOL
- OBLIGE study – primary outcome= CS rate
- Bring in misoprostol to replace PG gel for those not in OBLIGE

Change of mindset?



From this:

To this?

“If in doubt, get it out”

“The right care at the
right time ”