

"Change is slow at MidCentral"
Or is it?

MidCentral Labour and Birth Improvement Initiative

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The MidCentral Labour and Birth Improvement Initiative

An example of how a continuous audit of a large number of events and outcomes has been developed and implemented in quality assessment and improvement.

Based on the Ten Group Classification System* to stratify women into like-groups.

*Robson M. Classification of caesarean sections. *Fetal and Maternal Medicine Review*. 2001;12:23-39.

Vogel JP, Betrán AP, Vindevoghel N, Souza JP, Torloni MR, Zhang J, et al. Use of the Robson classification to assess caesarean section trends in 21 countries: a secondary analysis of two WHO multicountry surveys. *The Lancet Global Health*. 2015;3:e260-e70.

Rossen J, Lucovnik M, Eggebo TM, Tul N, Murphy M, Vistad I, et al. A method to assess obstetric outcomes using the 10-Group Classification System: a quantitative descriptive study. *BMJ Open*. 2017;7:e016192.

Kempe, P., & Vikström-Bolin, M. (2019). The continuous audit of events and outcomes of labour and birth using the Ten Group Classification System and its role in quality improvement. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 237, 181-188.

Zeitlin, J., Durox, M., Macfarlane, A., Alexander, S., Heller, G., Loghi, M., . . . Euro-Peristat, N. (2020). Using Robson's Ten-Group Classification System for comparing caesarean section rates in Europe: an analysis of routine data from the Euro-Peristat study. *BJOG*.

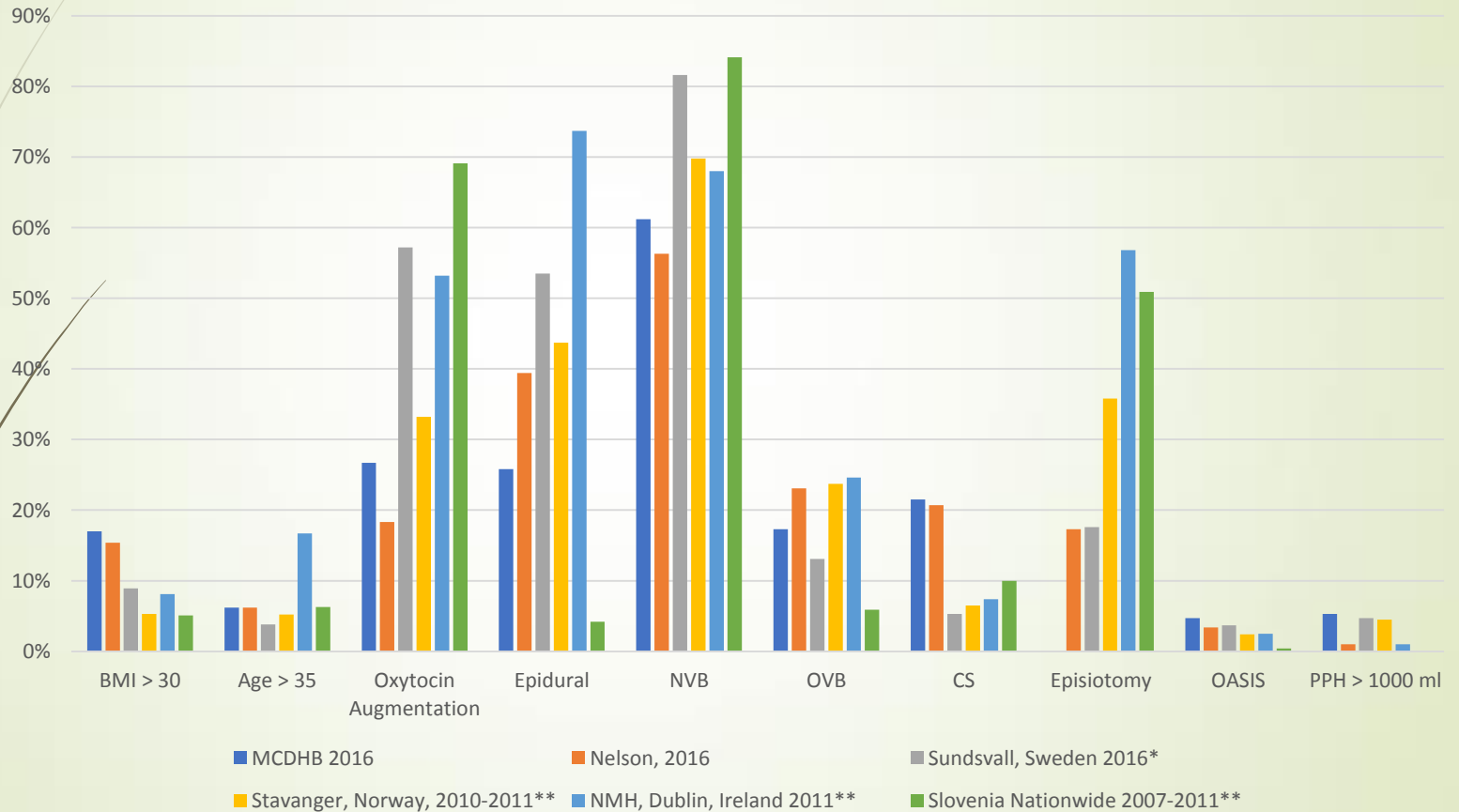


The 2016 results were collected retrospectively and presented to midwives and obstetricians in August 2017 with comparisons to European data.

CS rates in The TGCS groups at MCDHB in 2016

MCDHB	2016 591/1944 30,5%	Size of group	C/S rate	Contr of each gp
1 Nullip single ceph >=37 wks spon lab	91/423	21,8%	21,5%	4,7%
2 Nullip single ceph >=37wks ind. or CS before lab	102/210	10,8%	48,6%	5,2%
2A Nullip single ceph >=37wks ind lab	90/198	10,2%	45,5%	4,6%
2B Nullip single ceph >=37wks CS before lab	12/12	0,6%	100,0%	0,6%
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	14/586	30,1%	2,4%	0,7%
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	62/228	11,7%	26,7%	3,2%
4A Multip (excl prev caesarean sections) single ceph >=37wks ind lab	37/203	10,4%	18,2%	1,9%
4B Multip (excl prev caesarean sections) single ceph >=37wks CS before lab	25/25	1,3%	100,0%	1,3%
5 Previous caesarean section single ceph >= 37 wks	193/263	13,6%	73,4%	9,8%
5A Previous caesarean section single ceph >= 37 wks spont lab	25/79	4,1%	31,6%	1,3%
5B Previous caesarean section single ceph >= 37 wks ind lab	14/30	1,5%	46,7%	0,7%
5C Previous caesarean section single ceph >= 37 wks CS before lab	154/154	7,9%	100,0%	7,8%
6 All nulliparous breeches	27/29	1,5%	93,1%	1,4%
7 All multiparous breeches (incl previous caesarean sections)	29/35	1,8%	82,9%	1,5%
8 All multiple pregnancies (incl previous caesarean sections)	20/31	1,6%	64,5%	1,0%
9 All abnormal lies (incl previous caesarean sections)	6/6	0,3%	100,0%	0,3%
10 All single ceph <= 36 wks (incl previous caesarean sections)	47/133	6,8%	35,3%	2,4%

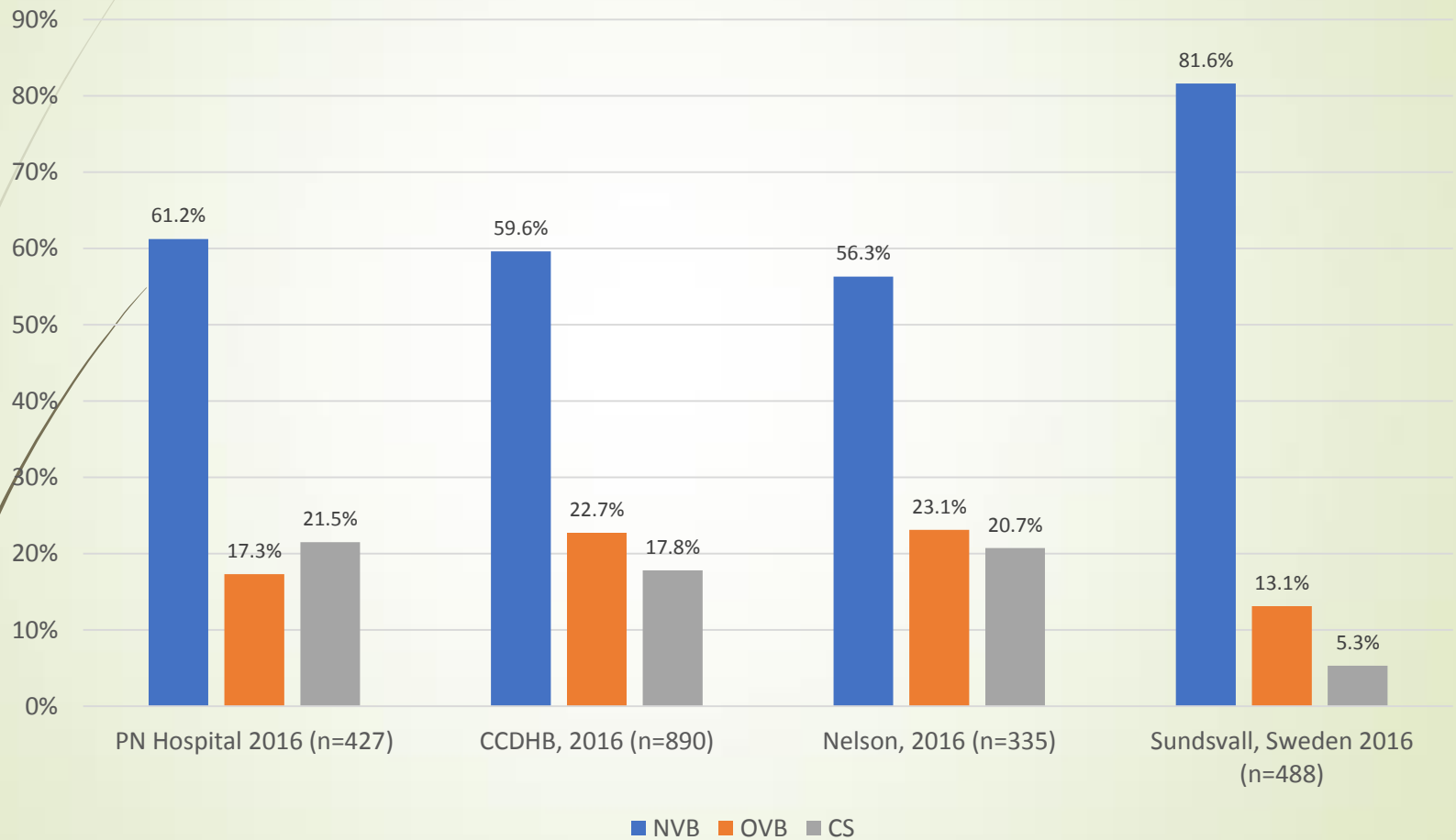
Group 1 (Nulliparous women, at term, cephalic presentation, spontaneous labour) – Events and Outcomes



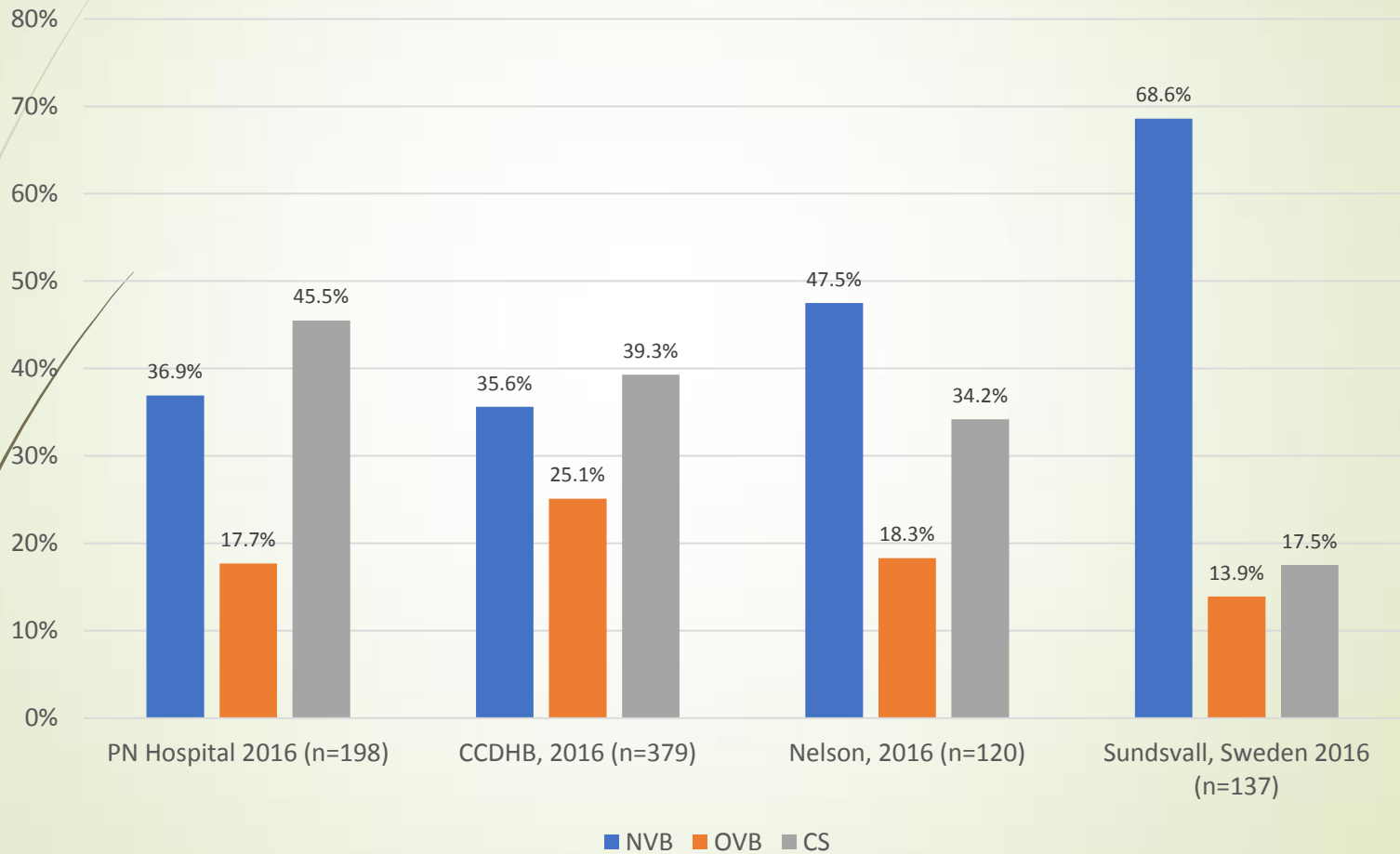
* Kempe P, Vikström-Bolin M. The continuous audit of events and outcomes of labour and birth using the Ten Group Classification System and its role in quality improvement. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2019;237:181-188.

** Rossen J, Lucovnik M, Eggebø TM, et al. A method to assess obstetric outcomes using the 10-Group Classification System: a quantitative descriptive study. *BMJ Open* 2017;0:e016192. doi:10.1136/bmjopen-2017-016192

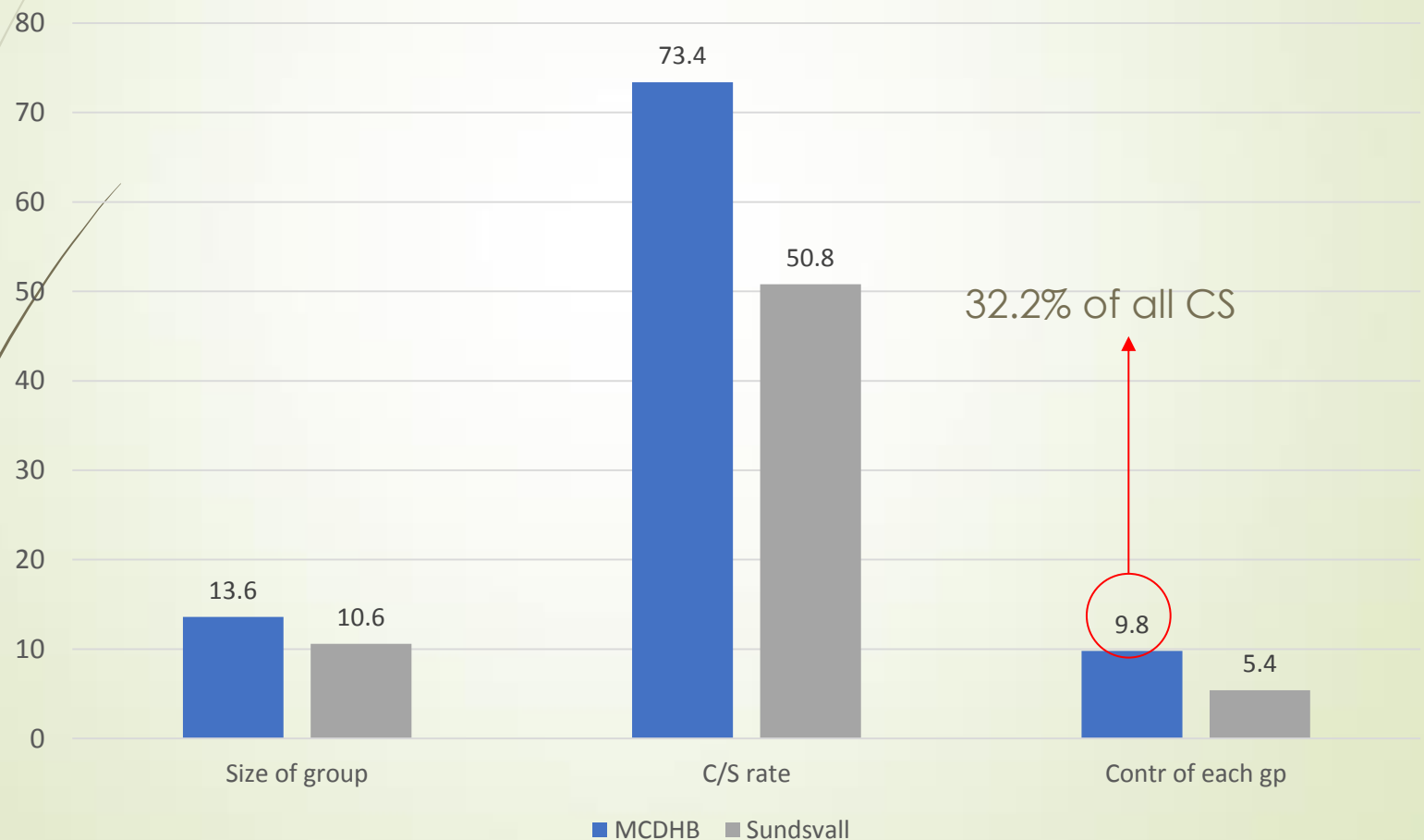
High CS rates in Group 1 (Nulliparous women, at term, cephalic presentation, spontaneous labour)



High CS rates in Group 2A (Nulliparous women, at term, cephalic presentation, induced labour)



Resulting in a large Group 5 (women with previous CS's, with a high rate of repeat CS's)





Early multidisciplinary discussions

Do we want to change?

Define normal labour and birth

Define diagnosis of labour

Management of dystocia

Indications for induction of labour

Methods for induction of labour

How do we get there?

Agreed philosophy, definitions and guidelines


Truly multidisciplinary approach

Good communication

Respect each others competencies

Key decision making

Continuous audit



The Process to Implementing Change

- Form a policy group
 - Consultation
 - Information Sessions
 - Pharmacy
 - Staff Training
 - Communications
 - Audit
- 



Identifying potential solutions

- Consistent management of labour dystocia
- Evidence based indications for IOL, closely monitored
- Change Prostaglandin from vaginal Dinoprostone to oral Misoprostol as recommended by WHO
- 2/24 oral dose (8 doses in 16 hours)
- ARM as soon as cervix favourable (don't delay due to time of day)
- Syntocinon regime: one regime for both primip and multip
- More assertive syntocinon regime (increasing every 20 min)
- Midwifery Led Care under the multidisciplinary umbrella (standing order for Misoprostol, standard agreed protocol)
- Focus on avoiding the first CS

Low dose (25 mcg) oral Misoprostol for IOL

- ▶ 200 mcg Misoprostol is dissolved in 20 ml of water and 2.5 ml (25 mcg) is given orally every 2 hours.
- ▶ Recommended by WHO since 2011
- ▶ More effective than placebo, as effective as vaginal misoprostol and results in fewer caesarean sections than vaginal dinoprostone or oxytocin. (Cochrane 2014)
- ▶ Low dose (< 50 µg) titrated oral misoprostol solution had the lowest probability of caesarean section. (Alfirevic 2015, syst review)
- ▶ As effective and safe as Foley Catheter for IOL of women with HTN or preeclampsia. (Mundle 2017)
- ▶ Recommended in the NZ Guideline of IOL (MoH 2020)

Low dose (25 mcg) oral Misoprostol for IOL

- Misoprostol is an approved medicine in New Zealand
- Misoprostol is one of a large number of approved medicines we use for indications they are not approved for. Another examples are Nifedipine for tocolysis
- Oral low-dose Misoprostol is regarded as a supported indication* as per the MidCentral DHB Policy on the use of unapproved medicines.
- A 25 mcg tablet is available in Europe and is approved for IOL in an increasing number of countries.

* Indications that are endorsed by professional consensus (locally, nationally or internationally), and/or by professional guidelines (be they DHB-based, or generated by the likes of Vocational Colleges or Professional Societies)



The continuous audit

To continuously analyse events and outcomes.

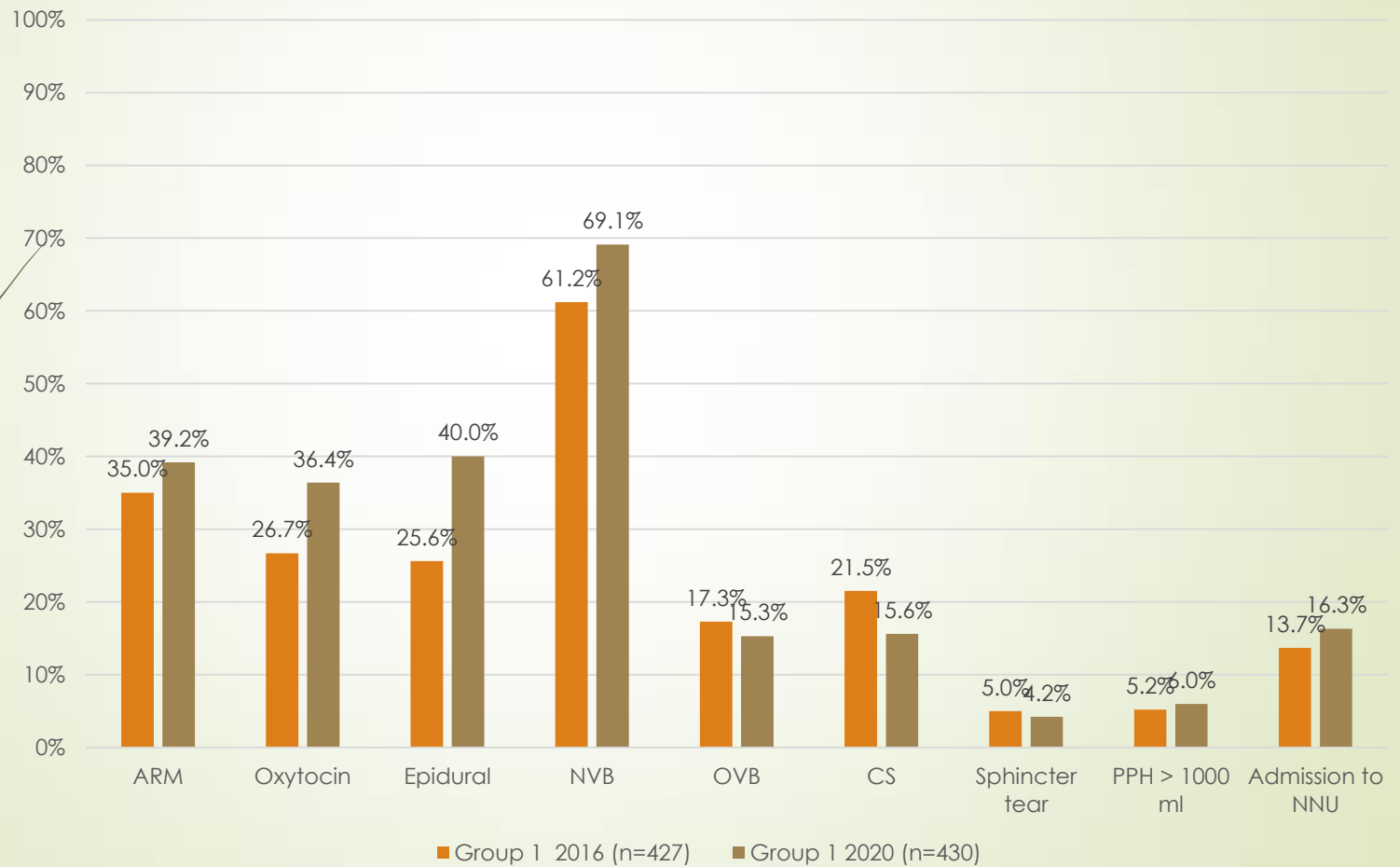
Presented to staff and managers at recurrent meetings

Presented to women and whanau as posters in DS

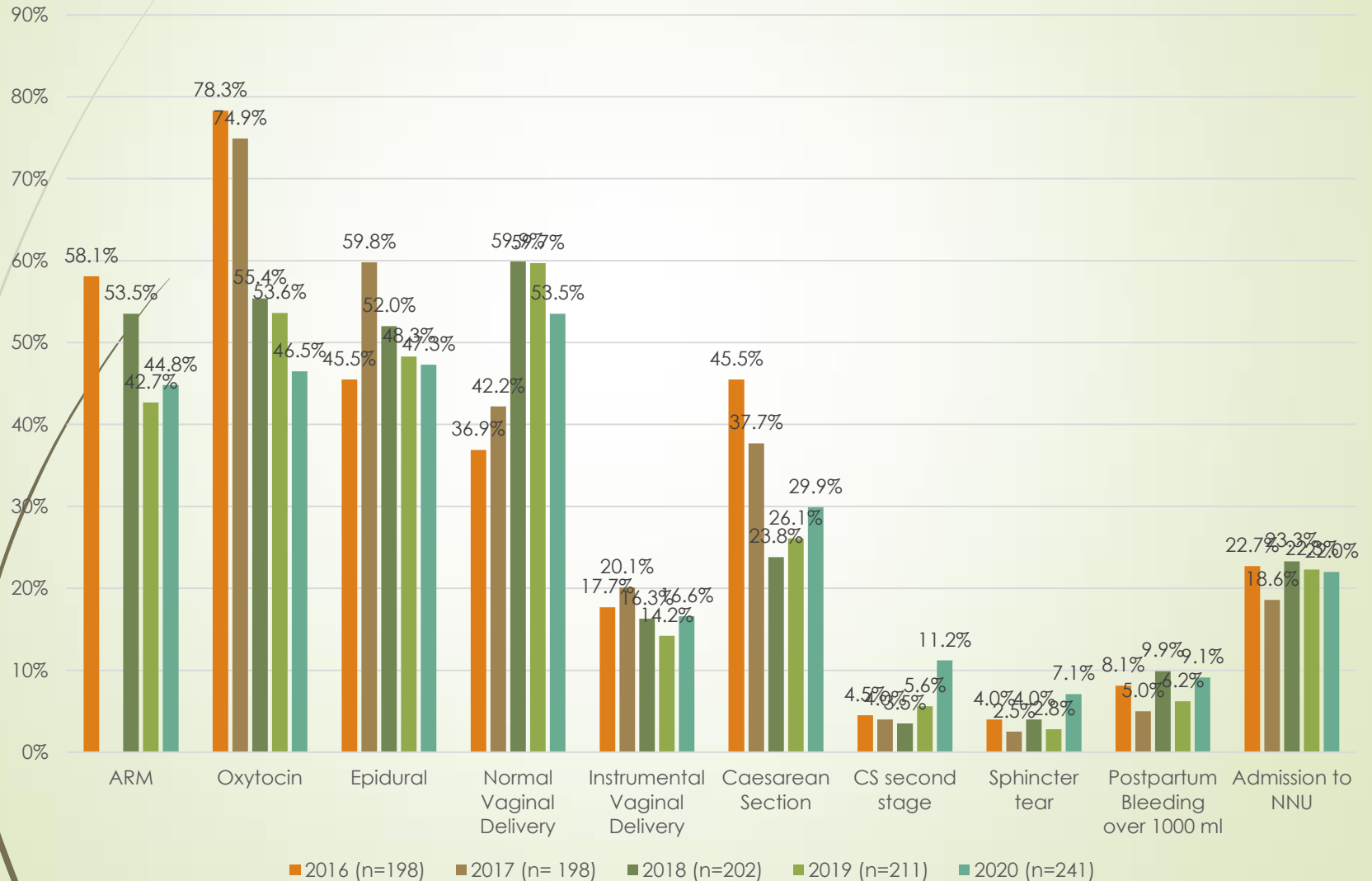
Presented to the public in the Annual Report

Ethical approval to present/publish data

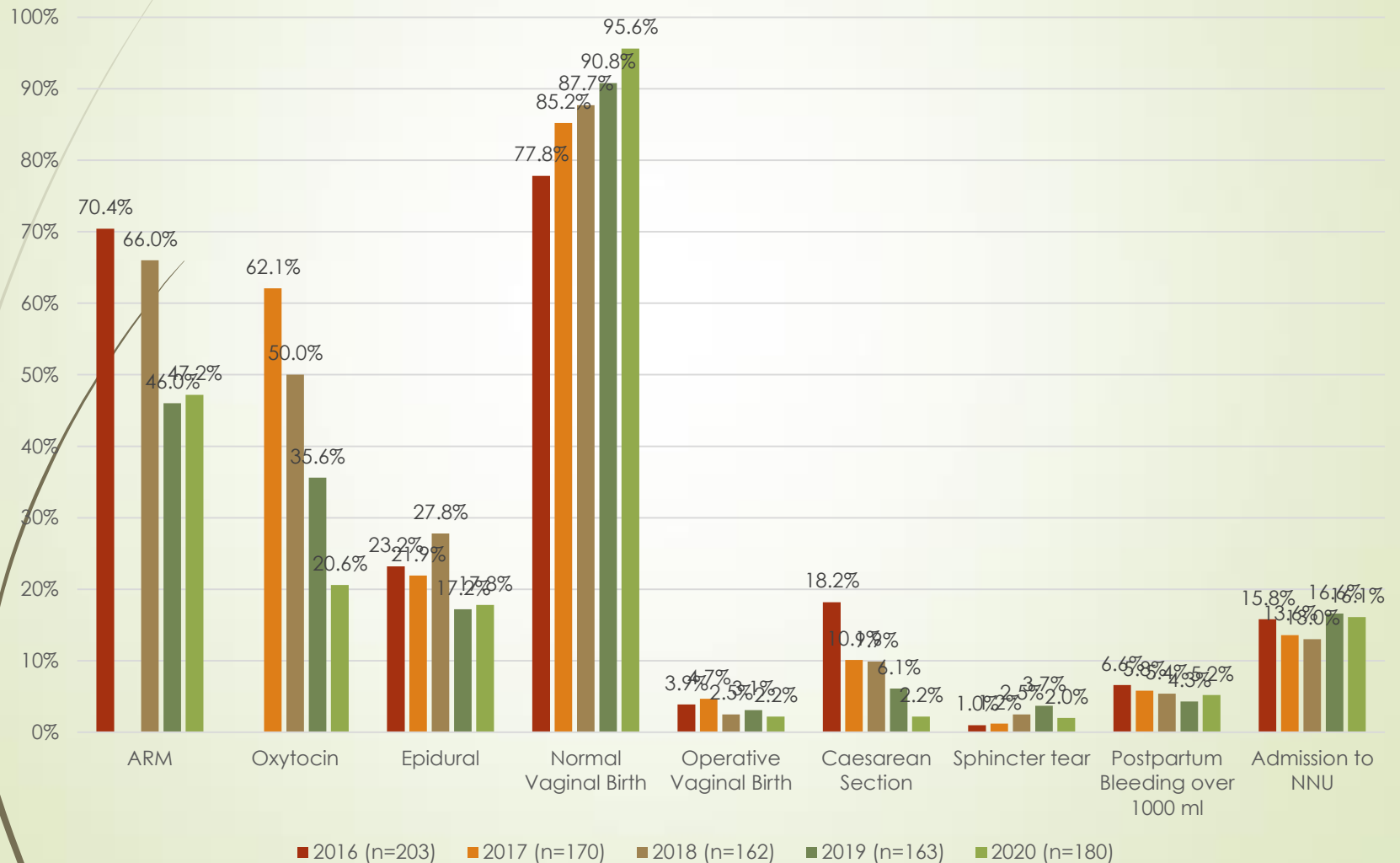
Robson Group 1



Robson Group 2A




Robson Group 4A




TGCS table MidCentral DHB 2016 vs 2020

MCDHB	2016 591/1944 30,5%	Size of group	C/S rate	Contr of each gp
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8 All multiple pregnancies (incl previous caesarean sections)	20/31	1,6%	64,5%	1,0%
9 All abnormal lies (incl previous caesarean sections)	6/6	0,3%	100,0%	0,3%
10 All single ceph <= 36 wks (incl previous caesarean sections)	47/133	6,8%	35,3%	2,4%

MCDHB	2020 472/1986 23,8%	Size of group	C/S rate	Contr of each gp
1 Nullip single ceph >=37 wks spon lab	67/430	21,7%	15,6%	3,4%
2 Nullip single ceph >=37wks ind. or CS before lab	90/258	13,0%	34,9%	4,6%
2A Nullip single ceph >=37wks ind lab	72/241	12,1%	29,9%	3,6%
2B Nullip single ceph >=37wks CS before lab	18/18	1,0%	100%	1,0%
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	12/627	31,6%	1,9%	0,6%
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	24/200	10,1%	12,0%	1,2%
4A Multip (excl prev caesarean sections) single ceph >=37wks ind lab	4/180	9,1%	2,2%	0,2%
4B Multip (excl prev caesarean sections) single ceph >=37wks CS before lab	20/20	1,0%	100%	1,0%
5 Previous caesarean section single ceph >= 37 wks	188/293	14,0%	64,2%	9,5%
5A Previous caesarean section single ceph >= 37 wks spon lab	41/120	6,0%	34,2%	2,1%
5B Previous caesarean section single ceph >= 37 wks ind lab	11/37	1,9%	29,7%	0,6%
5C Previous caesarean section single ceph >= 37 wks CS before lab	136/136	6,8%	100%	6,8%
6 All nulliparous breeches	25/27	1,4%	92,6%	1,3%
7 All multiparous breeches (incl previous caesarean sections)	22/25	1,3%	88,0%	1,2%
8 All multiple pregnancies (incl previous caesarean sections)	11/21	1,1%	52,4%	0,6%
9 All abnormal lies (incl previous caesarean sections)	4/4	0,2%	100%	0,2%
10 All single ceph <= 36 wks (incl previous caesarean sections)	31/100	5,0%	31,0%	1,6%



Let's look at the positives

- Improvement in outcomes
 - Positive attitude toward IOL method
 - Consistency with adherence to guidelines and policy
 - Increased Midwifery autonomy
 - Multidisciplinary Collegiality and respect
 - Communication – embracing of board rounds
 - Discussion – Multi Disciplinary Case reviews
 - All contributing to the evolution of our Delivery Suite
- 



What have been the Challenges?

- Fears of Misoprostol
- Adherence to Induction Guidelines
- Unpredictability of labour
- Confronting components for midwives
 - knowledge gaps, VE accuracy
- Labour management – understanding of labour dystocia
- LMC attendance
- High levels of acuity
- Staffing