Using research evidence to reduce caesareans

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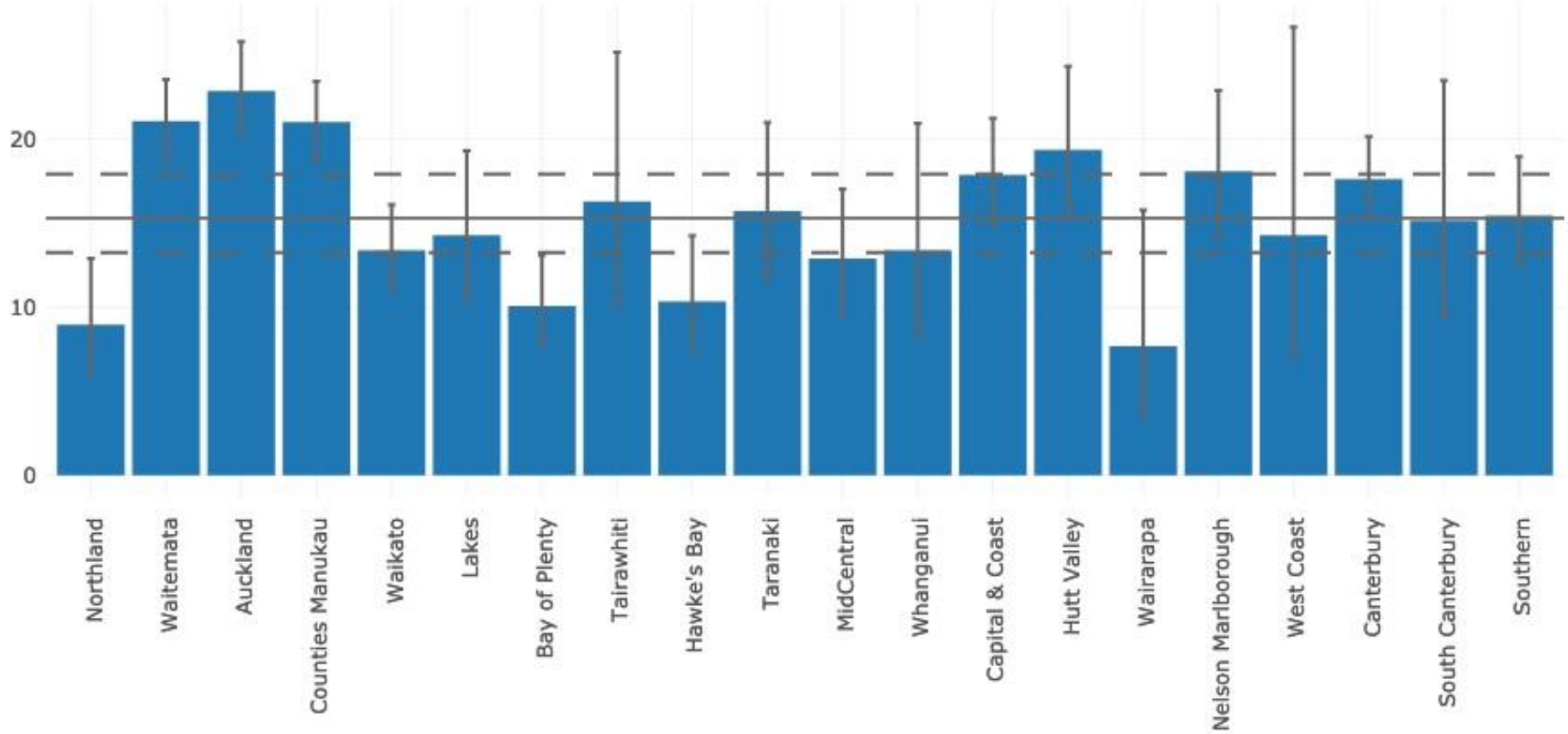
Standard primiparae who undergo caesarean section, by DHB of residence, 2018



NZ MoH Maternity Clinical Indicators 2020

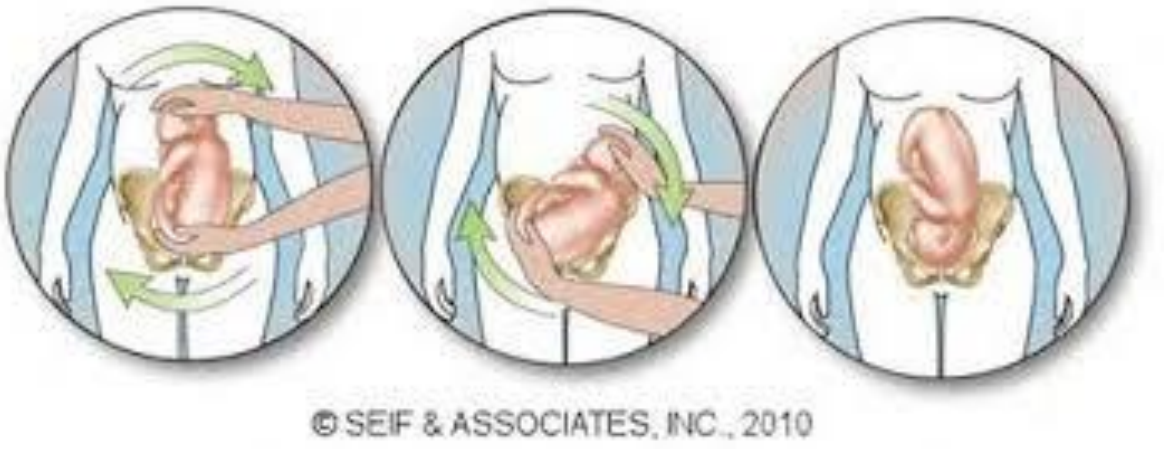

...SO, YOU'RE DUE ON THE 17TH
...HMM, I'M ALL BOOKED THAT WEEK, LET'S GO C-SECTION ON THE 4TH... HOW DOES 1PM SOUND?
CONCEIVE EASY

Clinical pathways

- Breech
- Previous Caesarean Section (CS)
- Twins
- Occiput Posterior (OP)
- Induction of Labour (IOL)

Elective CS for Breech

- Aim: Reduce the number of women with breech presentation at term
- Clinical pathway: routine ECV consult
  - Hospital resource for ECV service



NNT = 3

Elective CS for previous CS

- Aim: Increase the number of women planning Vaginal Birth After Caesarean (VBAC)
- Clinical pathway: routine PBAC consult

NNT = 2

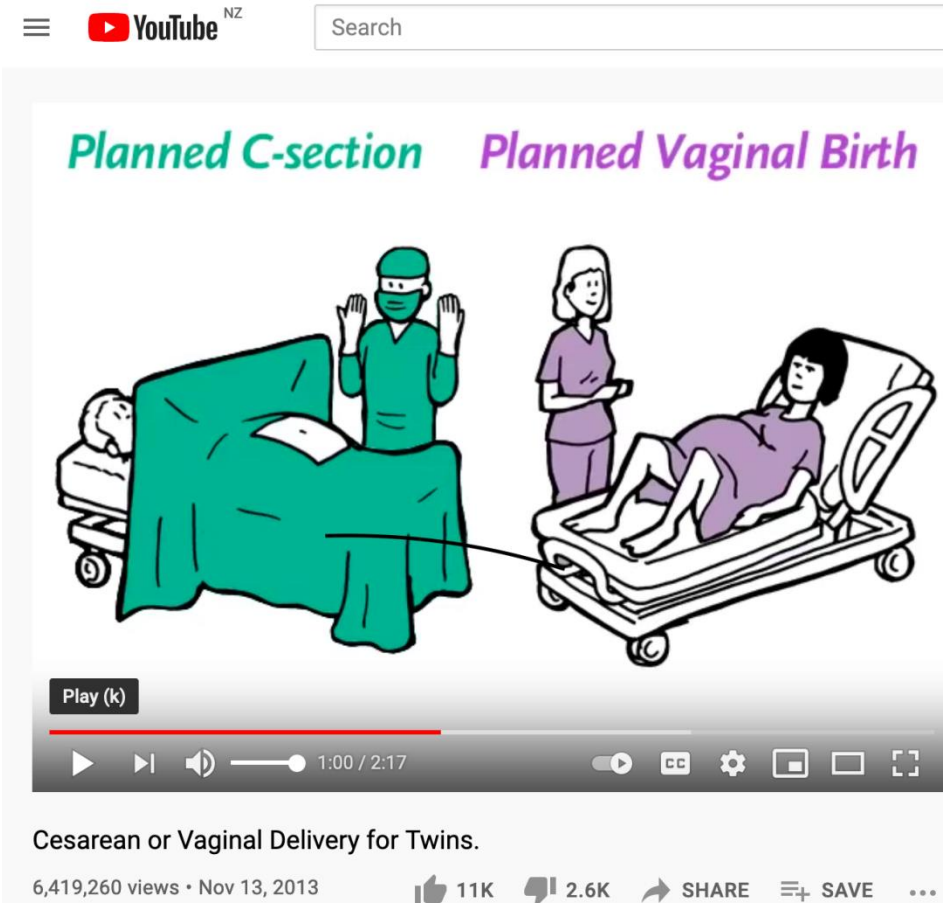
Intrapartum CS for previous CS

- Aim: Increase the number of women who plan VBAC to have a vaginal birth
- Clinical pathway: recommend VBAC to
  - Women with previous vaginal birth
  - Women with spontaneous labour < 41 weeks

NNT = 2

Elective CS for twins

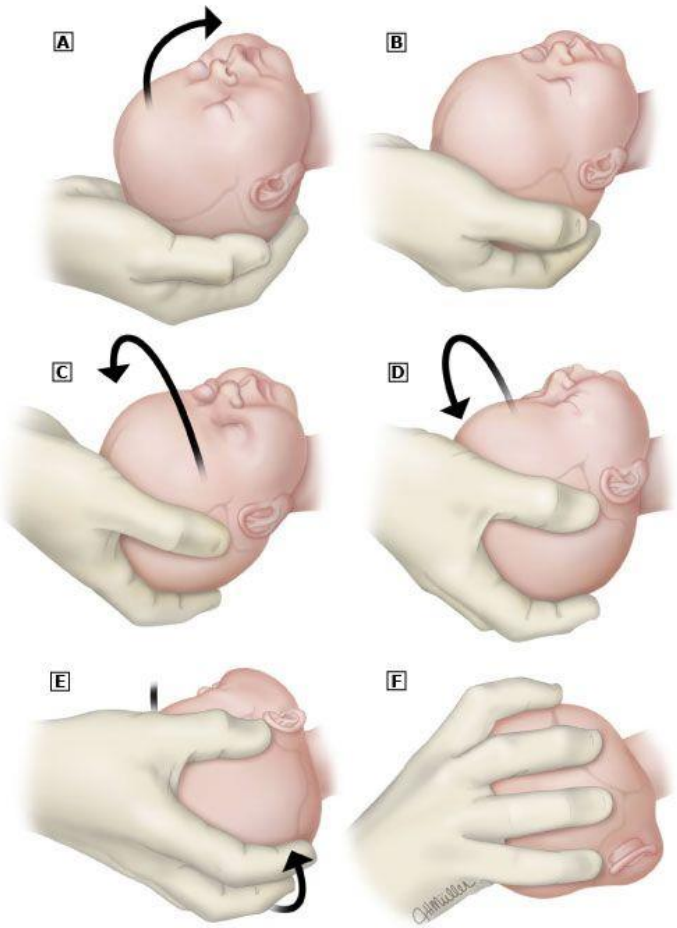
- Aim: Increase the number of women with first twin cephalic planning vaginal birth
- Clinical pathways: recommend vaginal birth if first twin presenting cephalic



NNT = 2

Intrapartum CS for OP

- Aim: Reduce the number of women with persistent OP in 2nd stage of labour
- Clinical pathway: routine manual rotation in 2nd stage for OP



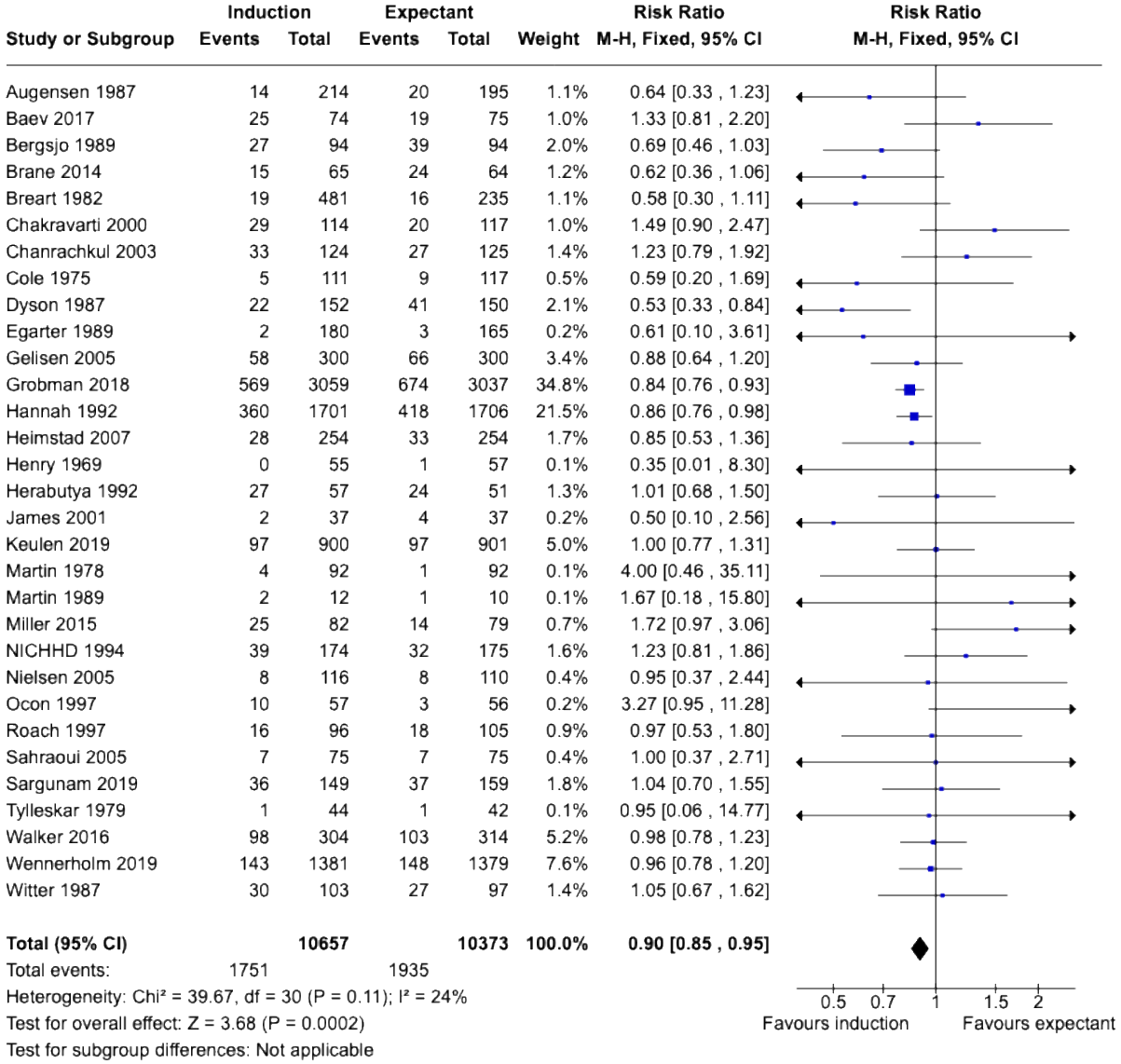
NNT = 4

IOL

- Aim: Offer IOL for indications that reduce CS
- Clinical pathway: update guidelines to enable IOL for:
  - post-dates at 41+0/+1
  - no medical indication at 39+0/+4

Labour induction versus expectant management: Caesarean

Cochrane review 2020
31 trials
RR 0.90
ARR 2%



Study or Subgroup	Induction Events	Induction Total	Expectant Events	Expectant Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Augensen 1987	14	214	20	195	1.1%	0.64 [0.33 , 1.23]
Baev 2017	25	74	19	75	1.0%	1.33 [0.81 , 2.20]
Bergsjo 1989	27	94	39	94	2.0%	0.69 [0.46 , 1.03]
Brane 2014	15	65	24	64	1.2%	0.62 [0.36 , 1.06]
Breart 1982	19	481	16	235	1.1%	0.58 [0.30 , 1.11]
Chakravarti 2000	29	114	20	117	1.0%	1.49 [0.90 , 2.47]
Chanrachkul 2003	33	124	27	125	1.4%	1.23 [0.79 , 1.92]
Cole 1975	5	111	9	117	0.5%	0.59 [0.20 , 1.69]
Dyson 1987	22	152	41	150	2.1%	0.53 [0.33 , 0.84]
Egarter 1989	2	180	3	165	0.2%	0.61 [0.10 , 3.61]
Gelisen 2005	58	300	66	300	3.4%	0.88 [0.64 , 1.20]
Grobman 2018	569	3059	674	3037	34.8%	0.84 [0.76 , 0.93]
Hannah 1992	360	1701	418	1706	21.5%	0.86 [0.76 , 0.98]
Helmstad 2007	28	254	33	254	1.7%	0.85 [0.53 , 1.36]
Henry 1969	0	55	1	57	0.1%	0.35 [0.01 , 8.30]
Herabutya 1992	27	57	24	51	1.3%	1.01 [0.68 , 1.50]
James 2001	2	37	4	37	0.2%	0.50 [0.10 , 2.56]
Keulen 2019	97	900	97	901	5.0%	1.00 [0.77 , 1.31]
Martin 1978	4	92	1	92	0.1%	4.00 [0.46 , 35.11]
Martin 1989	2	12	1	10	0.1%	1.67 [0.18 , 15.80]
Miller 2015	25	82	14	79	0.7%	1.72 [0.97 , 3.06]
NICHHD 1994	39	174	32	175	1.6%	1.23 [0.81 , 1.86]
Nielsen 2005	8	116	8	110	0.4%	0.95 [0.37 , 2.44]
Ocon 1997	10	57	3	56	0.2%	3.27 [0.95 , 11.28]
Roach 1997	16	96	18	105	0.9%	0.97 [0.53 , 1.80]
Sahraoui 2005	7	75	7	75	0.4%	1.00 [0.37 , 2.71]
Sargunam 2019	36	149	37	159	1.8%	1.04 [0.70 , 1.55]
Tylleskar 1979	1	44	1	42	0.1%	0.95 [0.06 , 14.77]
Walker 2016	98	304	103	314	5.2%	0.98 [0.78 , 1.23]
Wennerholm 2019	143	1381	148	1379	7.6%	0.96 [0.78 , 1.20]
Witter 1987	30	103	27	97	1.4%	1.05 [0.67 , 1.62]
Total (95% CI)		**10657**		**10373**	**100.0%**	**0.90 [0.85 , 0.95]**
Total events:	1751		1935			

Heterogeneity: Chi² = 39.67, df = 30 (P = 0.11); I² = 24%
Test for overall effect: Z = 3.68 (P = 0.0002)
Test for subgroup differences: Not applicable

Non-clinical interventions to reduce unnecessary CS

- Pregnant women and their whanau
- Healthcare professionals
- Healthcare organisations

Cochrane review 2018

Non-clinical interventions – pregnant women

- Moderate evidence that these probably do not ↓ CS
  - Antenatal classes for physiologic childbirth
  - Antenatal classes for breathing/relaxation techniques
  - Group CBT and psychotherapy
  - Interactive decision aids
- Low certainty evidence that these interventions may reduce CS (n=535)
  - Childbirth training programmes
  - Relaxation training programmes
  - Psychoeducation

Cochrane review 2018

Non-clinical interventions – healthcare professionals

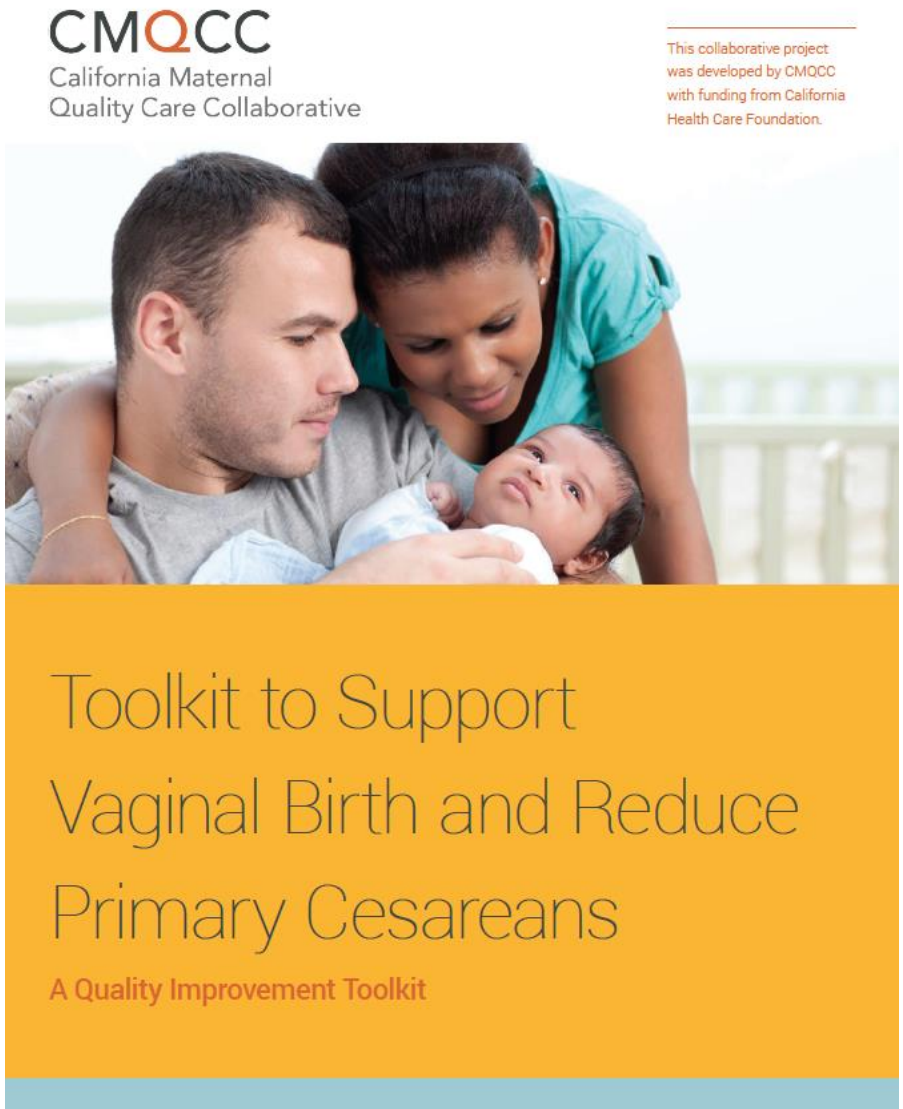
- High certainty evidence that these interventions reduce CS (n=258,000)
  - Implement GL + mandatory 2nd opinion ↓ overall CS by 2%
  - Implement GL + audit and feedback ↓ overall CS by 2%
  - Education by obstetric opinion leader ↓ ELCS from 67% to 54%

Cochrane review 2018

Opinion Leaders/Clinical Champions

- Well respected by colleagues and enthusiastically supportive of quality improvement projects
- Does not use command and control method of leadership. Inquires about what is needed to accomplish the desired outcome and encourages teamwork to achieve the goal
- Possesses outstanding listening skills, is able to gain useful feedback from colleagues, and is actively aware of actions and performance of all team members
- Establishes effective dialogue with team members early in the process and ensures shared understanding of the desired outcome and the necessary processes to get there
- Improves care and teamwork in emergencies by thorough pre-planning of possible contingencies early in the care process
- Models effective communication and encourages the entire team to practice effective communication styles during drills, huddles, committee meetings, and case presentations

California Toolkit



Standardisation

- Safely reduce primary CS in labour by adopting standard definitions

Summary of Recommendations ACOG/SMFM Obstetric Care Consensus Statement Safe Prevention of the Primary Cesarean (2014)
In the First Stage of Labor
A prolonged latent phase of greater than 20 hours in nulliparas and 14 hours in multiparas is not an indication for cesarean delivery
Slow but progressive labor is not an indication for cesarean delivery
Before 6 cm dilation, standards of active labor progress should not be applied to nulliparous or multiparous patients
Patients who undergo cesarean delivery for active phase arrest in the first stage of labor should be at or beyond 6 cm dilation WITH ruptured membranes AND: • 4 hours of adequate contractions without cervical change, OR • At least 6 hours of oxytocin with inadequate contractions and no cervical change

Summary of Recommendations ACOG/SMFM Obstetric Care Consensus Statement Safe Prevention of the Primary Cesarean (2014)
In the Second Stage of Labor
An absolute maximum length of time for the 2nd stage has not been identified
As long as maternal and fetal condition permits, the diagnosis of arrest of labor in the 2nd stage should not be made prior to: • At least 2 hours of pushing for multiparous patients • At least 3 hours of pushing in nulliparous patients (Longer durations may be appropriate on an individualized basis, for example with epidural anesthesia or fetal malposition as long as progress is documented)
Operative vaginal delivery by an experienced, well-trained physician is a safe and reasonable alternative to cesarean delivery
Manual rotation of the fetal occiput of the malpositioned fetus in the 2nd stage of labor is a reasonable intervention to consider before operative vaginal delivery or cesarean delivery. Furthermore, assessment of fetal position in the 2nd stage of labor is essential, especially when abnormal descent is noted

Implementation and findings

- 56 California hospitals with CS rate > 23.9% target (nullip/term/singleton/cephalic) participated in 2-year Toolkit Collaborative

Obstet Gynecol 2019

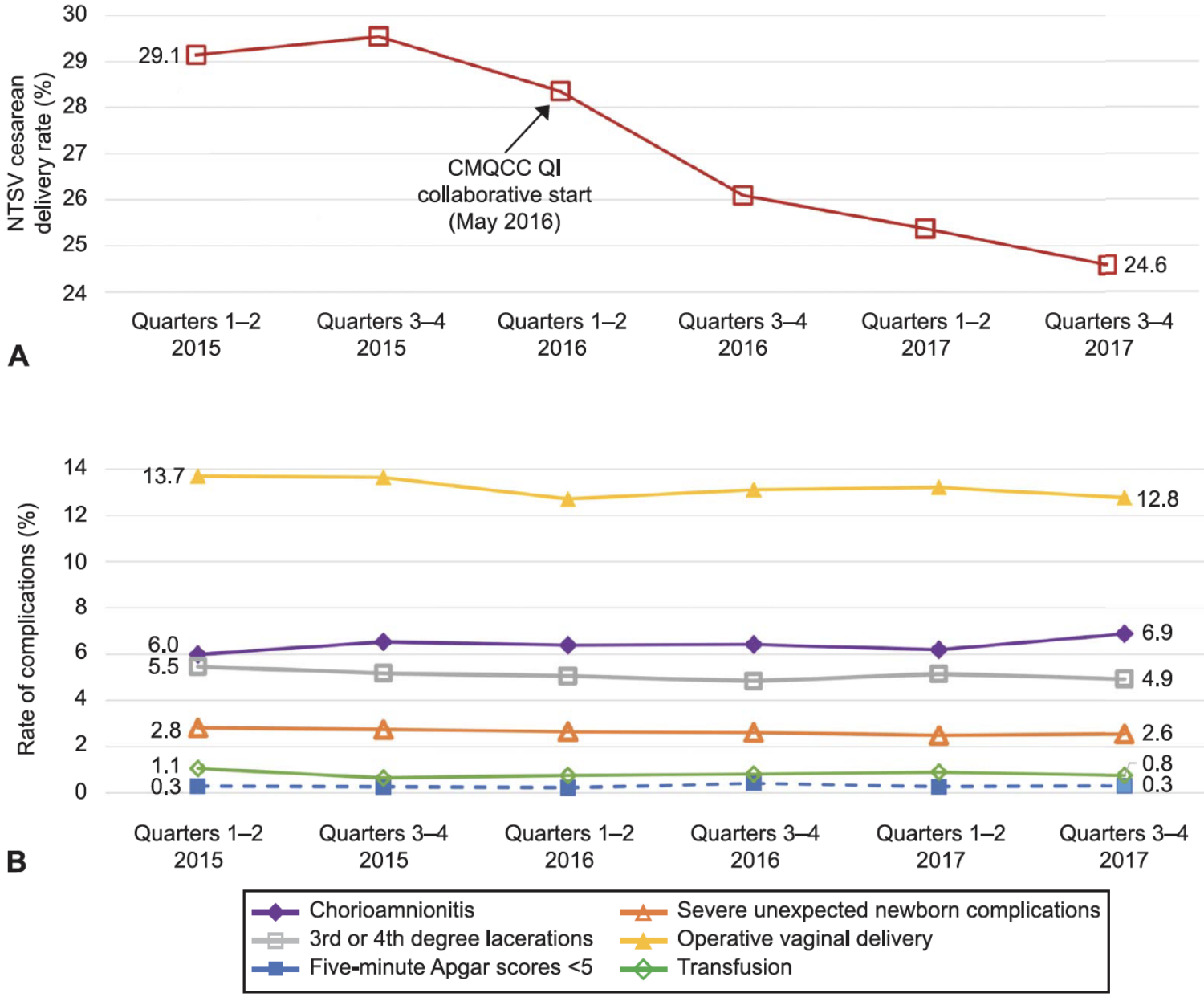


Fig. 1. Trend of nulliparous, term, singleton, vertex (NSTV) cesarean delivery (**A**) and other complications (**B**) in the California Maternal Quality Care Collaborative (CMQCC) supporting vaginal birth quality improvement (QI) collaborative (N=56 hospitals), 2015–2017. Unexpected newborn complications analysis included only 51 hospitals (see Methods for

Final Thoughts

- It’s time to change PROVIDER behaviour

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