GTA/SOON OBS Network QUIPs Project

Avoiding the first Cesarean section for *Failure to Progress* in Labouring Nulliparous Women (Robson Group 1 and 2a)

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Background

- Top 3 indications for the first CS:
  - arrest of labour (34%)
  - non-reassuring fetal heart rate (23%)
  - malpresentation (17%)

Amanda Cipolla

- Coordinated local QIPS project to address this
- Hoping to engage other sites as wider SOON initiative

Project overview

- **Project Aim**: reduce primary CS in laboring nulliparous patients for “failure to progress”
- **Population**: Robson 1 and 2a

Table 2. The modified Robson criteria

Group	Description
1	Nullipara, singleton cephalic, ≥ 37 weeks, spontaneous labour
2	Nullipara, singleton cephalic, ≥ 37 weeks A: Induced

Intervention

1) **Education: updating on Normal Progress of Labour**

- Friedman Curve (outdated)
- Three new initiatives that should inform management of normal nulliparous labour
  - Consortium on Safe Labor
  - ACOG
  - Ontario Quality Based Practice

2) Audit and Feedback

- Home hospital CS rates compared to other similar sites
- Individual CS rates by OB compared to others

Friedman: Traditional nulliparous labour curve

- Active phase at 3cm

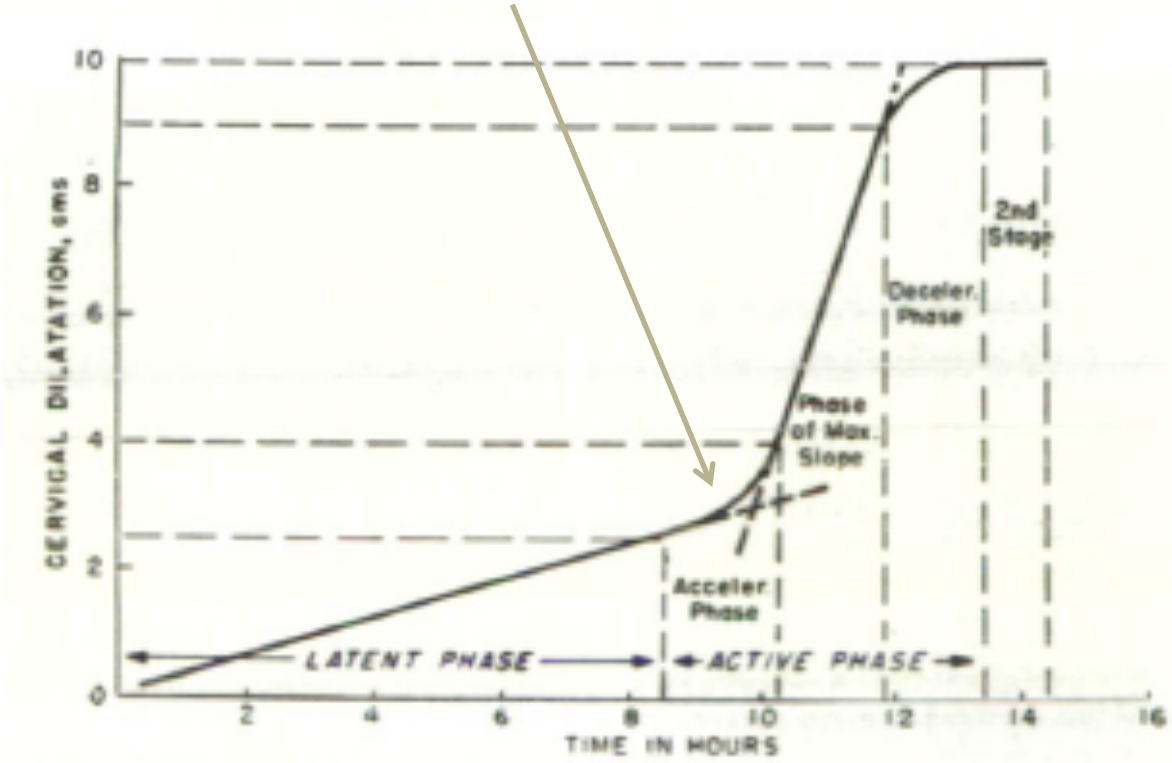


Fig. 1. The mean labor curve, cervical dilatation versus time, based on the study of 500 primigravidas at term. The phases are defined in the text.

Consortium on Safe Labour:

Contemporary Patterns of Spontaneous Labor With Normal Neonatal Outcomes

Jun Zhang, PhD, MD, Helain J. Landy, MD, D. Ware Branch, MD, Ronald Burkman, MD, Shoshana Haberman, MD, PhD, Kimberly D. Gregory, MD, MPH, Christos G. Hatjis, MD, Mildred M. Ramirez, MD, Jennifer L. Bailit, MD, MPH, Victor H. Gonzalez-Quintero, MD, MPH, Judith U. Hibbard, MD, Matthew K. Hoffman, MD, MPH, Michelle Kominiarek, MD, Lee A. Learman, MD, PhD, Paul Van Veldhuisen, PhD, James Troendle, PhD, and Uma M. Reddy, MD, MPH, for the Consortium on Safe Labor

- 62,415 singleton, term spontaneous labor, vertex
- Delivered vaginally with normal outcome

Obstetrics and Gynecology 116.6 (2010): 1281–1287

The new active phase > 5-6cm

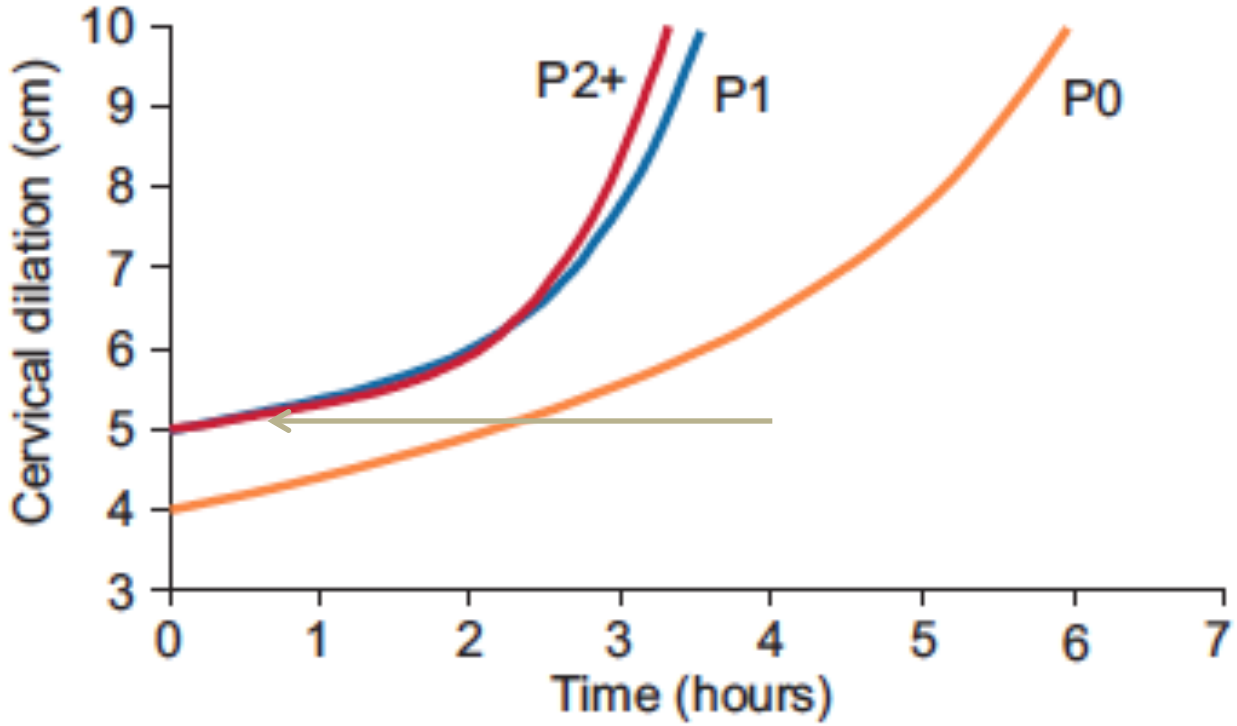


Fig. 2. Average labor curves by parity in singleton term pregnancies with spontaneous onset of labor, vaginal delivery, and normal neonatal outcomes. P0, nulliparous women; P1, women of parity 1; P2+, women of parity 2 or higher.

Zhang. Contemporary Labor Patterns. Obstet Gynecol 2010.

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Society for Maternal-Fetal Medicine

OBSTETRIC CARE CONSENSUS

Number 1 • March 2014
(Reaffirmed 2016)

Safe Prevention of the Primary Cesarean Delivery

Table 3. Recommendations for the Safe Prevention of the Primary Cesarean Delivery

Recommendations	Grade of Recommendations
First stage of labor	
A prolonged latent phase (eg, greater than 20 hours in nulliparous women and greater than 14 hours in multiparous women) should not be an indication for cesarean delivery.	1B
	Strong recommendation, moderate quality evidence
Slow but progressive labor in the first stage of labor should not be an indication for cesarean delivery.	1B
	Strong recommendation, moderate quality evidence
Cervical dilation of 6 cm should be considered the threshold for the active phase of most women in labor. Thus, before 6 cm of dilation is achieved, standards of active phase progress should not be applied.	1B
	Strong recommendation, moderate quality evidence
Cesarean delivery for active phase arrest in the first stage of labor should be reserved for women at or beyond 6 cm of dilation with ruptured membranes who fail to progress despite 4 hours of adequate uterine activity, or at least 6 hours of oxytocin administration with inadequate uterine activity and no cervical change.	1B
	Strong recommendation, moderate quality evidence

3 Ontario QBP Indicators

8.1 Evaluation Metrics for the Low Risk Birth QBP

The Low Risk Birth QBP Expert Panel recommends three outcome indicators that should be measured within the QBP low risk target population, order to evaluate this QBP. These indicators include:

Low Risk QBP Evaluation Metrics

	Evaluation Metric	Domain	Relevance	Rationale	Feasibility/ Data Source
1	Rate of vaginal delivery and Caesarean section delivery	Effectiveness Appropriateness Efficiency	Administrators Clinicians MOHLTC LHINs	To measure if the QBP clinical care pathway is promoting increased vaginal birth within the QBP target population	Data readily available in BORN Ontario
2	Rate of admission to a special care nursery or transfer to other hospital	Effectiveness Appropriateness	Administrators Clinicians MOHLTC LHINs	To measure if appropriate care is provided	Data readily available in BORN Ontario
3	Rate of Caesarean section delivery for women with non-progressive first stage of labour with a dilatation of <6cm	Effectiveness Appropriateness	Administrators Clinicians MOHLTC LHINs	To measure if appropriate care is provided	Data not readily available

Recommendations for management of labour for “low risk” birth

Evidence-Based Strategies for Reducing Cesarean Section Rates: A Meta-Analysis

Nils Chaillet, PhD, and Alexandre Dumont, MD, PhD

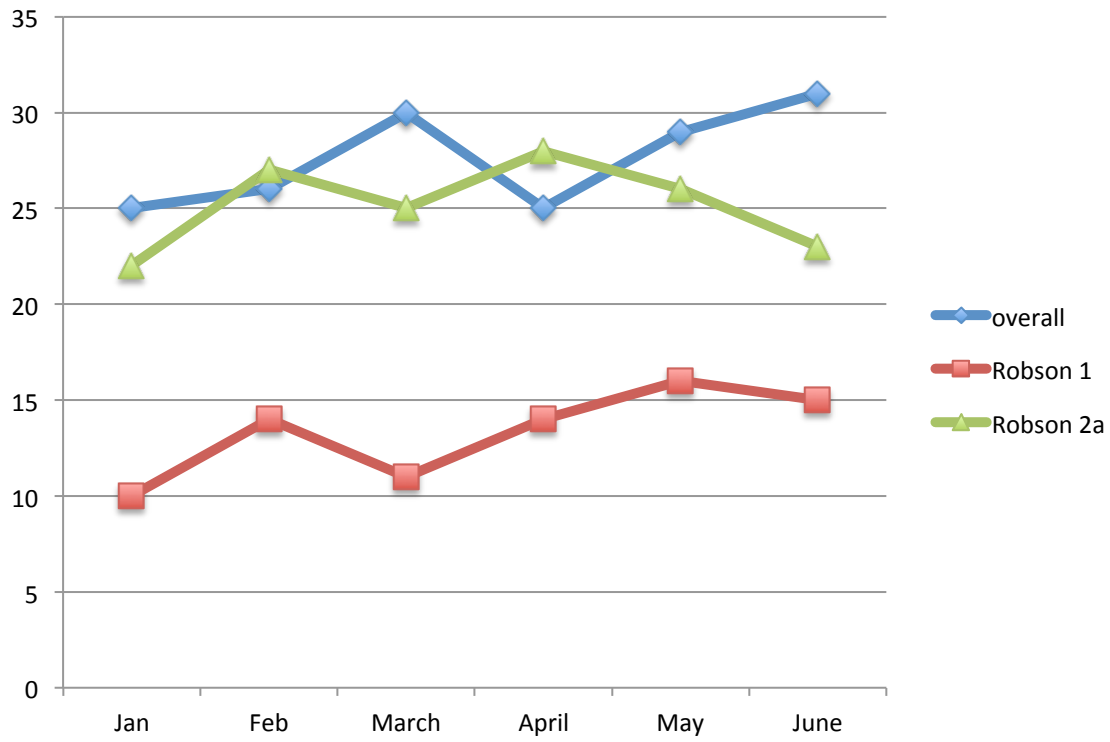
- **Audit and feedback alone** reduced CS rates by **13%**
- **Addition of at least one other strategy** reduced rates by **27%, eg:**
  - Education on guidelines
  - Payment reform
- No difference in perinatal/neonatal mortality or morbidity, maternal morbidity, NICU admission

Birth 2007

AUDIT OF HOSPITAL PRACTICE

Home Hospital CS rates accessible in BORN

- Eg. Overall c/s rate and by Robson Groups (eg. 1-5)



AUDIT OF PERSONAL PRACTICE

Data:

1) Robson 1, 2a CS rates for each OB

2) % CS done for “arrest of labour” or “failure to progress”

NOT obtainable through BORN

-Electronic OB documentation (eg OBTV)

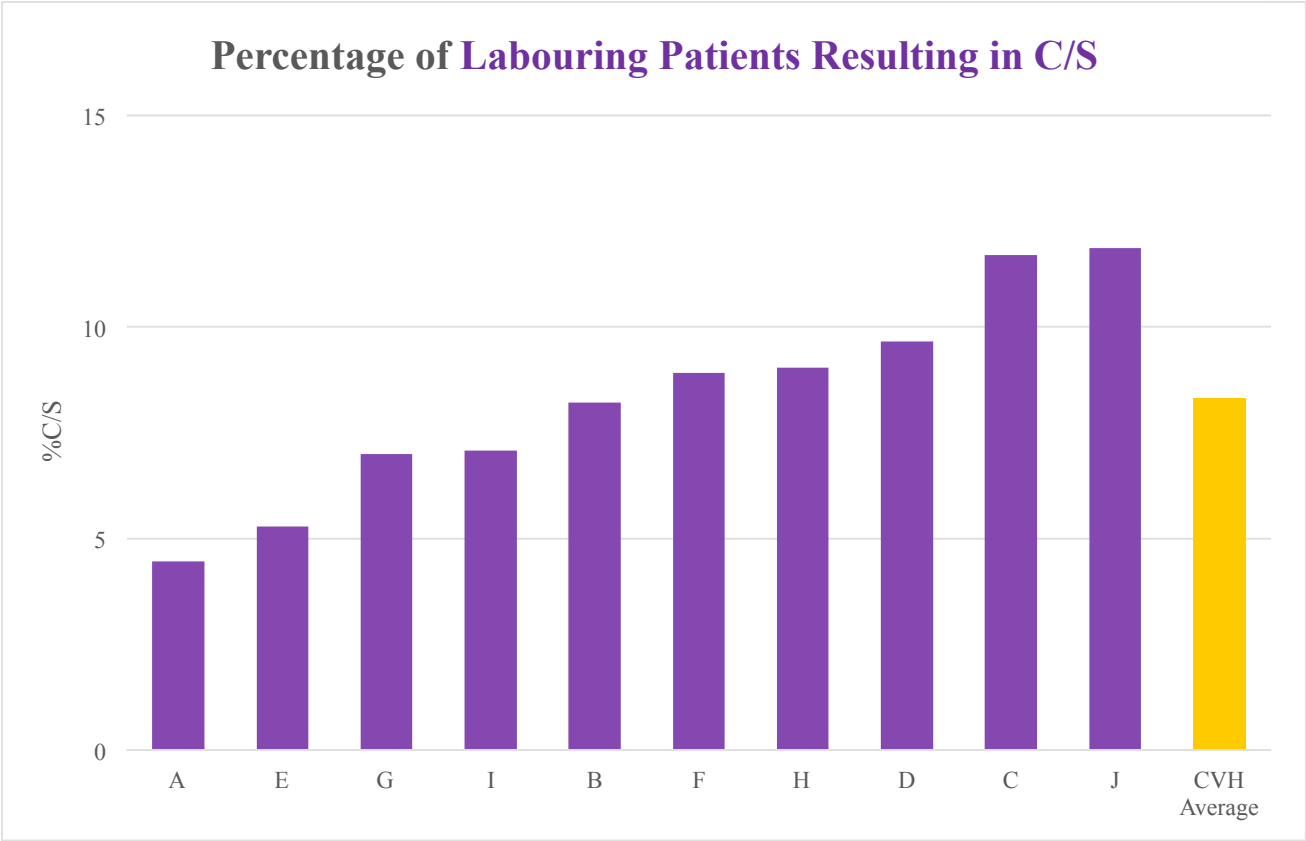


Figure 2. Anonymized individual rates of caesarean deliveries, expressed as a percentage of the total number of labouring deliveries, by physician at CVH.

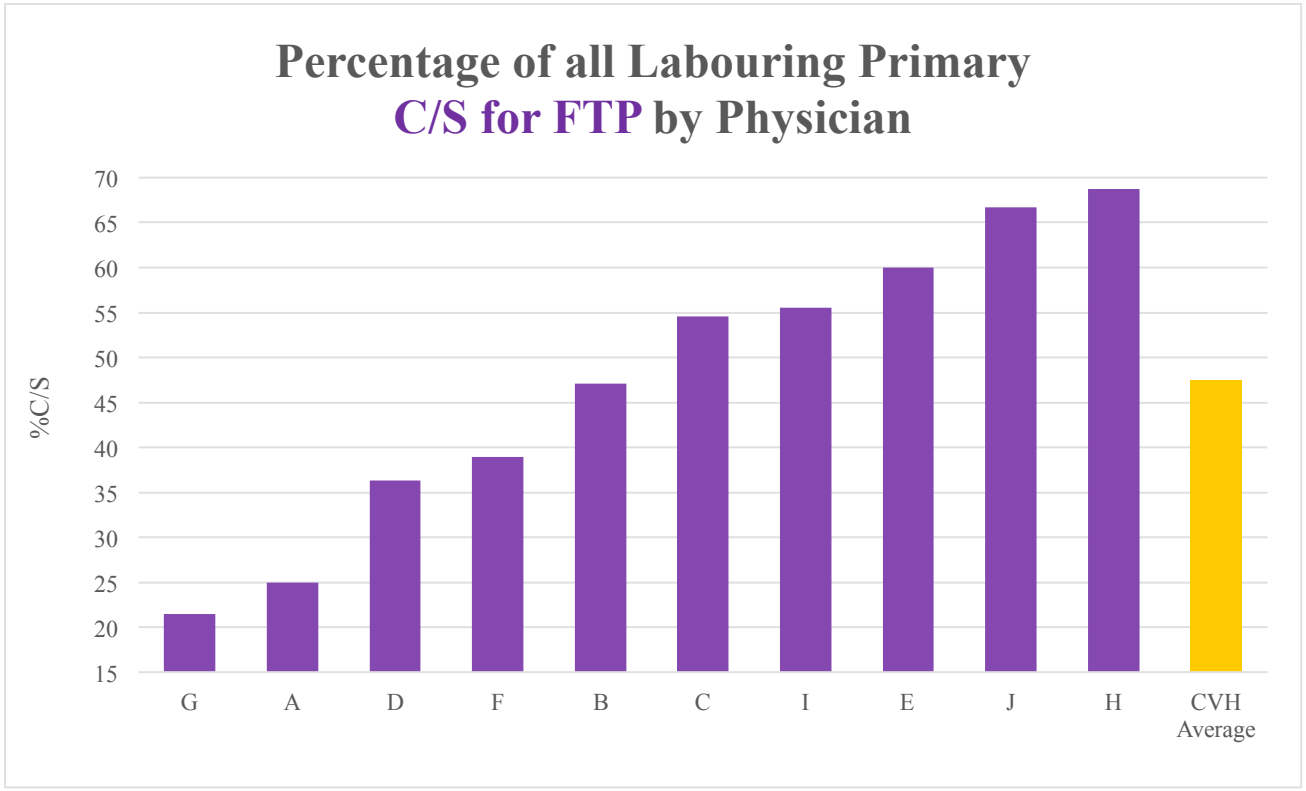
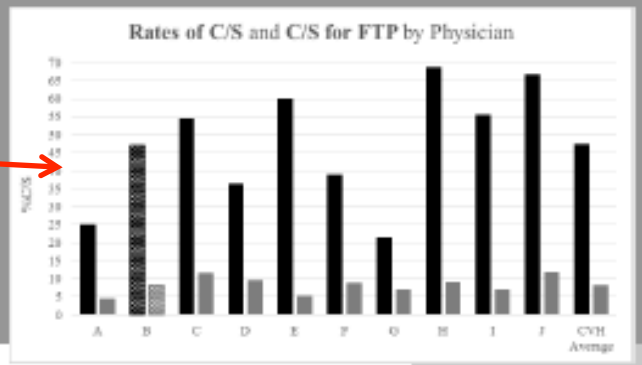


Figure 1. Anonymized individual rates of caesarean deliveries for failure to progress, expressed as a percentage of the total number of caesarean deliveries, by physician at CVH.

- Anonymous individual data
  - C/S rate total
  - FTP rate
- Personal stats for OB “B”
- Reminder of QBP recommendations

QUIPS Rounds: Using BORN data to improve Obstetrical care at CVH



Anonymized individual rates of total caesarean deliveries and caesarean deliveries for failure to thrive (FTP) by physician at CVH (June—November 2016).

Labouring patients resulting in C/S Percentage C/S that are for FTP

Your data:
Physician 'B'
Percentage of labour patients resulting in C/S: 8.21% (CVH average = 8.32%)
Percentage of C/S that are for FTP: 47.06% (CVH average = 47.43%)

QBP Evidence-Based Recommendations for Management of Abnormal First and Second Stage Labour

Latent phase of labour (up to 6cm) may be more than 20h in duration. Most women will enter active phase with expectant management, amniotomy or oxytocin	ACOG Guideline	1-B
Standards of active phase progress should be applied after 6cm dilation	ACOG Guideline	1-B
Oxytocin augmentation should be used for up to 8h in the first stage of labour. After 4h of oxytocin and no progress, an additional 4h may safely reduce the rate of CS	Expert Consensus	III
Women with or without an epidural can wait up to 2h before pushing	Ottawa Hospital Guideline	1-A
Before diagnosing arrest of labour in second stage, allow for at least 3h of pushing as long as progress is being made	ACOG Guideline	1-B
Manual rotation of the fetal occiput should be considered before moving to operative delivery	ACOG Guideline	1-B