



Optimal Birth BC



Optimal Birth BC is funded by the Canadian Institutes of Health Research and conducted by UBC researchers in partnership with BC Health Authorities. In the NHA we examined diagnosis and management of dystocia.

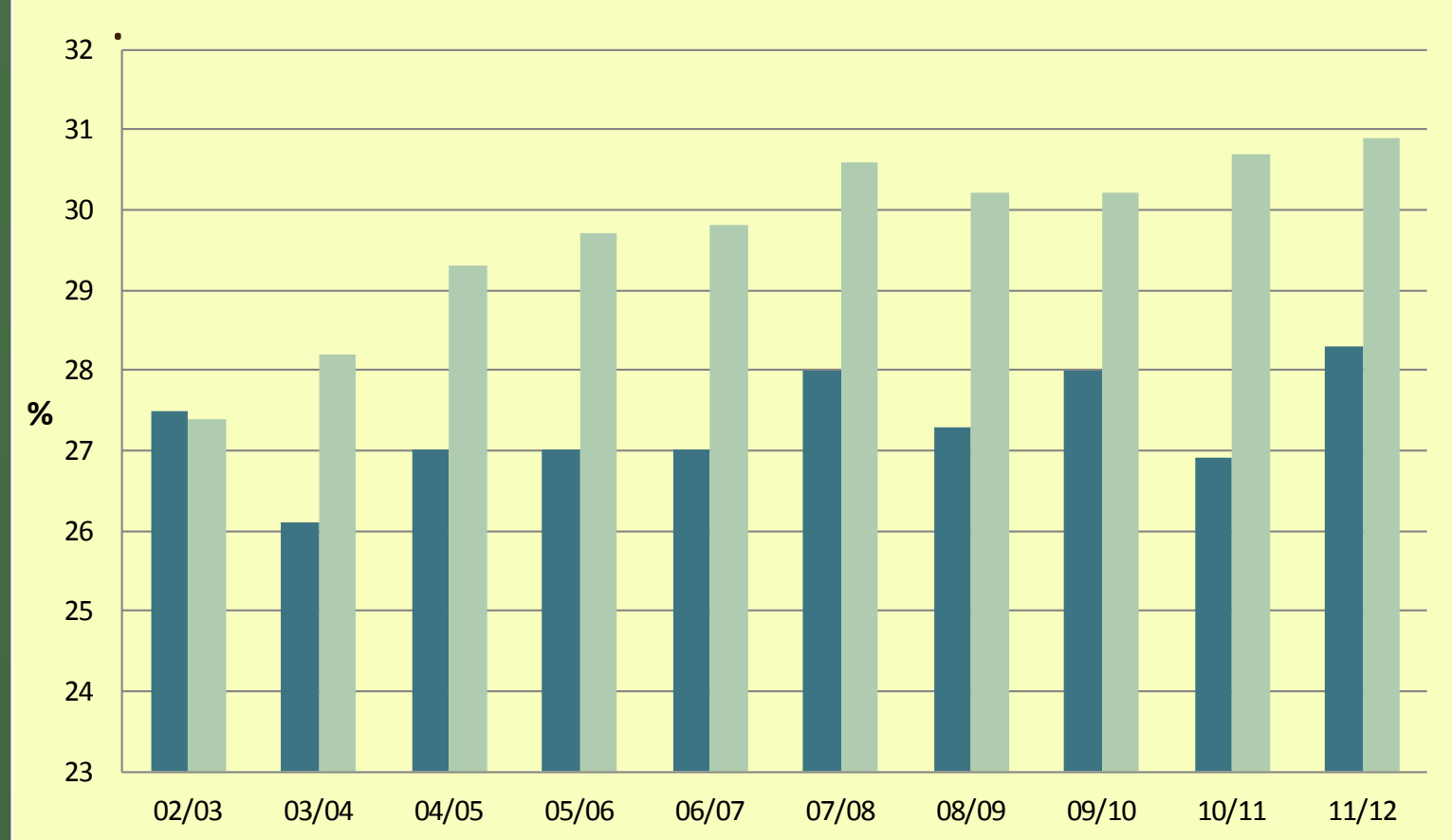
Objectives

- Identify determinants of variation in cesarean birth rates provide recommendations for practice change and evaluate
- Provide evidence reviews to inform practice change
- Develop a consumer-targeted strategy to inform knowledge of risks and benefits associated with cesarean birth

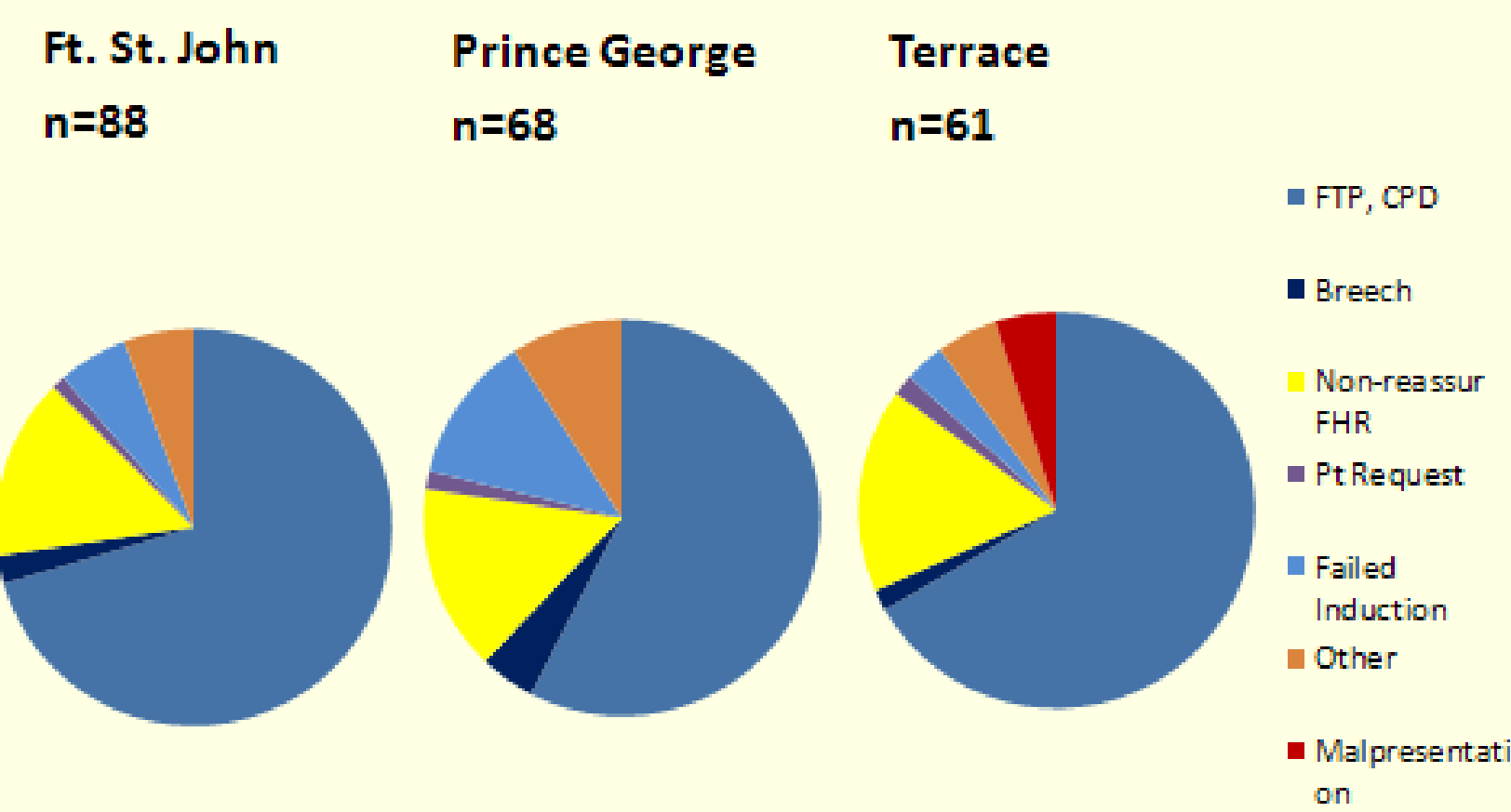
Cesarean Section and Dystocia

In partnership with NHA, we conducted a chart review (n=265) on cesarean section births between 2005-2011 to look at indications for cesarean sections.

Cesarean Birth in NHA vs. BC



Indications for CS - Primips



SOGC Policy Statement No. 40 "Dystocia", 1995

Primary Dystocia:

Nulliparous: Dystocia without the presence of absolute cephalopelvic disproportion should not be diagnosed until:

- Cervix 3-4 cms dilated
- Cervix 80 to 90 % effaced
- Lack of cervical dilatation (< 0.5 cms/hour) over 4 hours

Proportion meeting all criteria for diagnosis of primary dystocia

Ft. St. John	77.1%
Prince George	81.2%
Terrace	85.3%
All	81.2%

The Ottawa's Hospital Clinical Practice Guideline for the Second Stage of Labour, Nulliparas (2006)

Without epidural

- 2 hours active pushing (active pushing starts when fully dilated and urge to push)
- total length of 2nd stage > 3 hours

With epidural

- 2 hours active pushing (active pushing starts when fully dilated and head visible OR urge to push AND station > +2 AND OA)
- total length of 2nd stage > 4 hours and birth not imminent

Second Stage Dystocia:

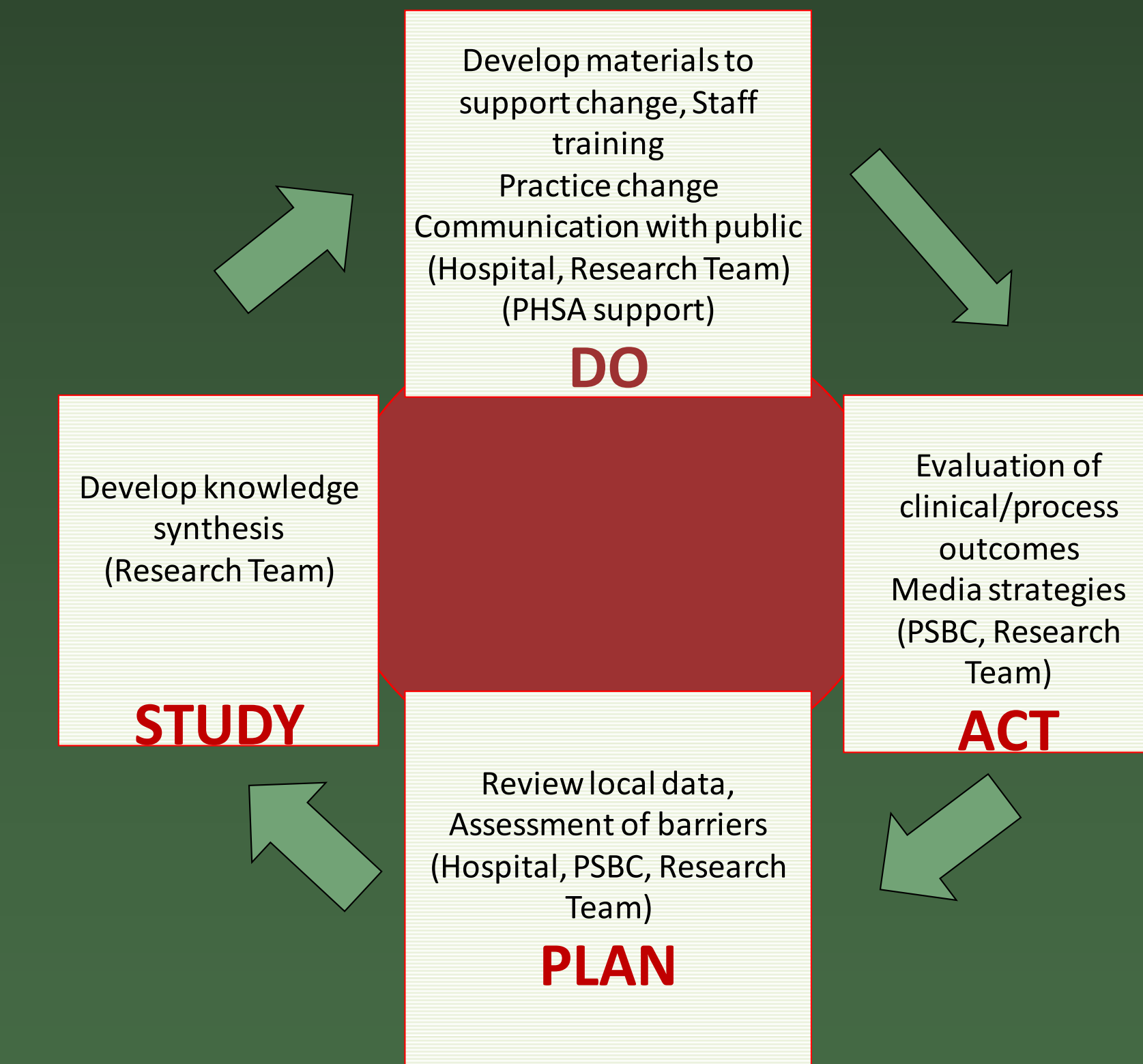
Nulliparas without epidural

- 37.3% (n=19) of nulliparas with dystocia did not have an epidural
- 22% (n=4) spent less than two hours pushing.

Nulliparas with epidural

- 62.7% (n = 32) of nulliparas with dystocia did have an epidural
- 24.1% (n=6) pushed for less than 2 hours.

EPIC Evidence-based Practice Identification and Change



Predictors of CS among Women with Dystocia and who had an epidural (BC Women's)

Model	Odds ratio	95% Confidence Intervals
Model 1		
Stage 2 non-compliant	19.38	(2.54-147.35)
Model 2		
Stage 2 non-compliant	5.36	(0.55-51.98)
Time to Augmentation after epi (hrs)	1.25	(0.99-1.57)
Model 3		
Stage 2 non-compliant	8.35	(1.04-67.14)
Model 4		
Stage 2 non-compliant	2.93	(0.29-29.29)
Time to Augmentation after epi (hrs)	1.21	(0.98-1.49)

Epidural Use among Nullips with Dystocia

- Among women who had a CS (n=85)
 - 70% had an epidural (n=60)
 - 14.1% had an epidural ≤ 3 cm dilation
- Among women who had a CS and had an epidural (n=60):
 - 71.4% had labour augmented
 - The average time to augmentation after epidural was 163 minutes, range (10-1260)

Epidural Use among Nullips with Dystocia (BC Women's)

	Vaginal n=106	CS n=122	P-value
Augmentation with oxytocin	61 (58.5%)	78 (63.9%)	ns
Time to oxytocin after epidural (min)	181.7 (146.5)	304.9 (268.5)	0.036

Lessons Learned

- Adherence to SOGC Dystocia guidelines for first stage is about 77-85% for first stage of labour
- Adherence to Ottawa Civic Hospital Guidelines for second stage is about 75-80%
- Data from other BC Hospitals suggest that among women with dystocia, CS may be related to how soon labour augmentation is started after epidural placement

Next Steps ?

- Promote adherence to SOGC Dystocia guidelines for first stage
- Promote adherence to Ottawa Civic Hospital Guidelines for second stage
- Policy regarding use of augmentation immediately after epidural as needed.
 - Standing order?
 - Issues re nursing resources?

Our Evidence Reviews

Continuous Labour Support

In North America, labour support has not been associated with fewer interventions in most studies to date. It may be of value when use of epidural is delayed/avoided.

Dystocia

Dystocia is the most common indication for primary cesarean birth yet national guidelines are inconsistent regarding definitions and diagnosis.

Epidural

While randomized controlled trials agree that the use and/or timing of epidural analgesia does not appear to affect cesarean section rates, these studies have high crossover and drop-out rates. Cohort studies that control for confounding factors demonstrate a 2-3 fold increase in cesarean section.

Triage

Trials of triage to date have shown that triage delays admission to hospital and prevents repeat visits, but these studies have not demonstrated reduction in cesarean birth rates.

Vaginal Birth after Cesarean (VBAC)

The risk of uterine rupture among women with a previous cesarean birth increases by 2-9/1,000 for those planning vaginal versus cesarean birth. Healthy women at term with a singleton fetus should be encouraged to plan a vaginal birth after a discussion of risk vs. benefit.

Fetal Scalp Lactate

Fetal scalp lactate is equivalent to fetal scalp pH for clinical decision-making to avoid adverse neonatal outcomes. It requires less time and has fewer failed sampling attempts.

High vs. Low Dose Oxytocin

Administration of "high dose" oxytocin regimens starting at 4 mU/min and increasing incrementally at 4 mU/min is associated with fewer cesarean sections and higher rates of spontaneous delivery without fetal compromise compared to lower dose regimens

What's New?

SmartMom: Prenatal Text Messaging

Developing out of a request from the NHA on ways to innovative ways to deliver prenatal education, SmartMom will:

- Deliver three messages per week appropriate for gestational age
- Empower women to take charge of their pregnancy, discuss issues and birth plans, and make informed decisions about their care
- Direct women to local programs, resources and online information

Visit our website : www.optimalbirthbc.ca

- Evidence reviews to help inform your practice
- Info pamphlets to help educate expectant mothers
- Your client's chances for a successful VBAC
- How overall hospital lengths of stay change by rates of VBAC

Contact Information

Dr. Patricia Janssen, patti.janssen@ubc.ca
Peter Subrt, Research Manager, psubrt@cw.bc.ca

Optimal Birth Team

Andrew Kotaska, MD – Clinical Director of Obstet/Gynecol, Stantion Territorial Hospital, Yukon
Ruth Johnson, RN – Network Director Perinatal Services, Interior Health Authority
Ashley Hennessey – Project Director for Dr. Michael Klein, UBC Dept. Family Practice
Saraswathi Vedam, RN – Associate Professor, UBC Division of Midwifery

Diane Sawchuck, BSN, MSN, PhD – Adjunct Professor, School of Nursing, UBC
Brenda Wagner, MD – Senior Medical Director, Richmond Hospital, Vancouver Coastal Health Auth.
Michael Klein, MD – Emeritus Professor of UBC Family Practice and Pediatrics
Melanie Basso RN – Senior Practice Leader-Perinatal, BC Women's Hospital

Patricia Janssen, PhD – PI, Professor, UBC School of Population and Public Health
Jan Christlaw, MD – President, BC Women's Hospital and Health Centre
Robert Liston, MD – Professor and former Head, UBC Dept Obstetrics and Gynecology
Rose Perrin, RN – Executive Perinatal Lead, UNBC Clinical Educator, Northern Health Authority
Peter Subrt – Research Manager, Optimal Birth BC.

Leanne Dahlgren, MD – Assistant Professor, UBC Dept. Obstetrics and Gynecology
Tamara Van Tent RN, BSN – Perinatal Clinical Program Director, Fraser Health Authority
Kathryn Dewar, PhD – Research Program Manager, Women's Health Research Institute
Patty Keith, RN – Director of Planning, Maternal/Child Services, Vancouver Coastal Health Auth.

Ying MacNab – Associate Professor, UBC School of Population and Public Health
Katie McNiven, RM – Community Midwife, Vancouver Area
Irene Rathbone, RN – Perinatal Program Planning and Evaluation, Vancouver Island Health Auth.
Sarah Munro, PhD Candidate – UBC School of Population and Public Health, Dept. Family Practice