

Financial Implications of Childbirth

Caesarean Births in BC
Trends, Perspectives, and Future Strategies

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Economic input

- Health care resources are scarce
 - Rationing is a reality and is here to stay
 - Choices must be made about what to fund (allocative efficiency)
 - Also need to examine in what ways to fund services (operational efficiency)
- In each of these, need to evaluate service options on basis of costs and benefits

In ideal world

- Information on outcomes/ benefits based on well designed, multi-centre studies
- Assess costs of service delivery options using full patient level costing system
- Based on this one could:
 - Evaluate costs and benefits of birth options
 - Make recommendations on best use of resources

Challenges

- No patient level costs available in BC
- Could not identify readily available patient level costs elsewhere in Canada
- C & W cannot provide distinction between c-section and vaginal birth costs with current data available
- Limited Canadian studies identified providing evidence on costs and benefits of different birth options

What we did find

- National data on average costs of:
 - Different birth options
 - Different provider types
- But, not presenting any data on benefits
 - Workshop participants need to ‘weigh out’ benefits and costs associated with different options

Costs Associated With Childbirth

- Primary caregiver
- Nursing staff
- Labour and delivery room
- OR (C-sections)
- Drugs
- Incidentals (gloves, swabs, linens, capital costs)

Canadian Costs 2002 - 2003

- \$821M for inpatient pregnancy and childbirth services
 - about 6% of overall health care spending in Canada
- \$154M for physician fee for service
 - \$98M of this for vaginal deliveries (64%)

Canada – Vaginal Births 2002 - 2003

Uncomplicated

- \$2700 (not including professional fees)

Complicated

- \$3200 (not including professional fees)
- 21% of deliveries are by induced labour

Canada – Caesarean Births 2002 - 2003

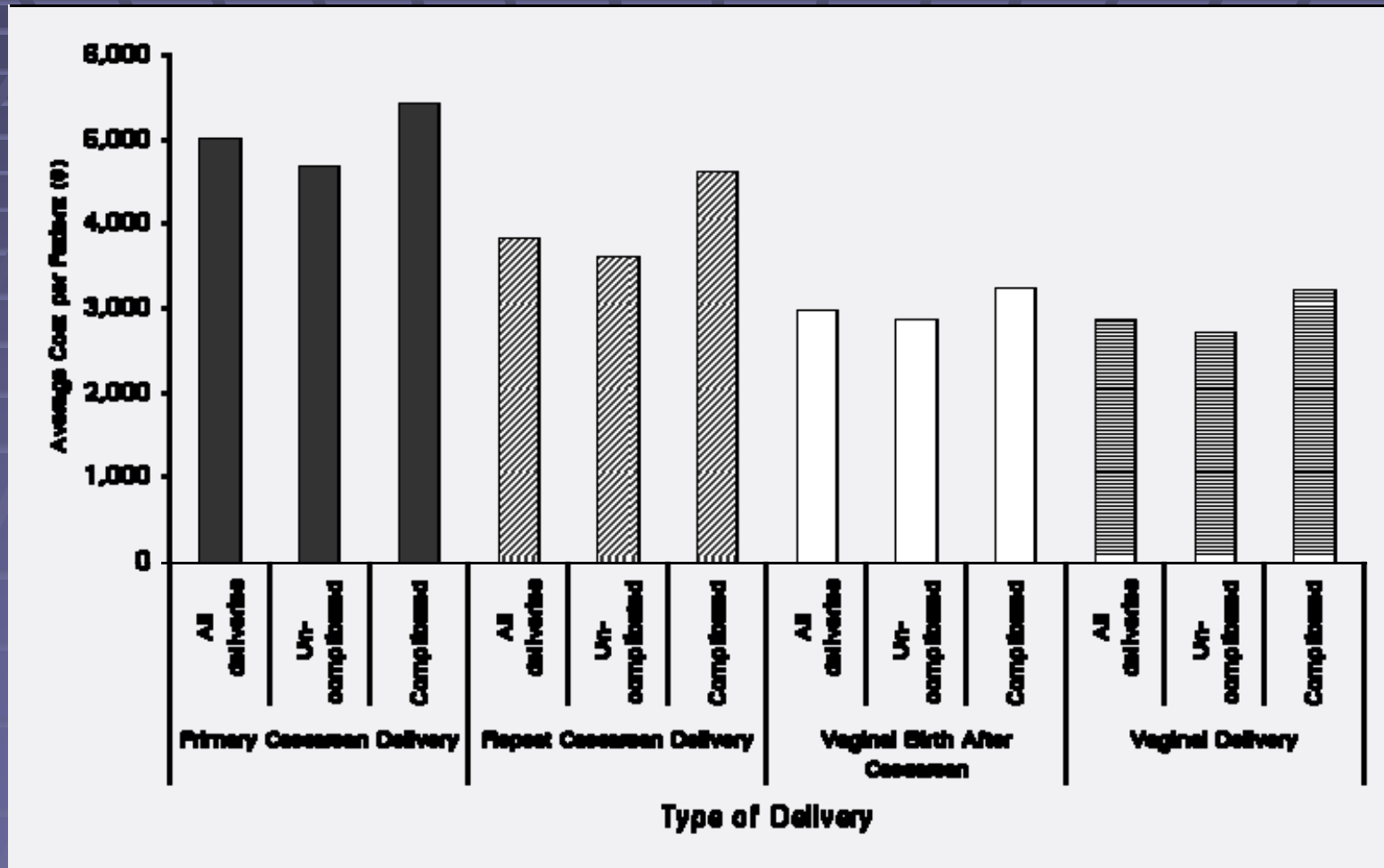
Uncomplicated

- \$4200 (not including professional fees)
- 63% of caesarean deliveries

Complicated

- \$5200 (not including professional fees)
- Higher costs largely due to increased hospital resources such as increased anesthesia, longer stays, medical supplies, nursing

Average Cost in Canada 2003 for Different Types of Delivery



BC physician fee-schedule

Vaginal Uncomplicated

- \$516.65
- 50% surcharge for family physicians, but not ob/gyns

Caesarean Emergent

- \$442.10 day
- \$685.00 night
- \$605.00 eve/week-end

Caesarean Elective

- \$395.53 day

Complication

- \$546.00 surcharge

Midwifery in Canada

- 1% of births are at home or birthing centre
- MSP funded in BC, Manitoba, Ontario, Quebec, NWT, and Nunavut
- Labour and delivery (home or hospital) in BC is \$946.62
- Midwife stays for 3 – 4 hours post birth to ensure client is safe and healthy

Midwifery – Hospital Costs

- Can be primary care provider in hospital unless medically necessary to see ob/gyn or pediatrician
- Resources can be freed up when midwife is in attendance in hospital (after care, ordering of tests, etc.)
- Supplies: come out of hospital budget

Midwifery – Home Delivery

- Supplies: Some paid by midwife and other expenses by the client (gloves, O2, towels)
- Second qualified professional must be in attendance during labour and delivery – paid by midwife (\$200 – \$250)

Nova Scotia perinatal database

- 18-year population-based cohort study (1985-2002) compared outcomes in nulliparous women at term undergoing spontaneous or induced labor for planned vaginal delivery, or undergoing cesarean delivery without labor
- Costs that were assessed included physician fees, nursing hours in the labor and delivery, postpartum and neonatal intensive care units, epidural use, induction of labor agents, and consumables
- 27,614 pregnancies satisfied inclusion and exclusion criteria, 5233 of which had labor induced
- comparison of mean costs per mother/infant pair:
 - cesarean delivery in labor (\$2137)
 - spontaneous vaginal delivery (\$1340, P = .01)
 - assisted vaginal delivery (\$1594, P = .01)
 - cesarean delivery without labor (\$1532, P = .01)
- Cesarean delivery in labor occurs more frequently with labor induction and is associated with increased costs compared with other methods of delivery

RCT - Planned Births due to Breech Presentation

- Four Canadian teaching and three community hospitals
- Estimated mean costs (including physician services)
 $C = \$7165$ $V = \$8042$
- Planned cesareans cost less than planned vaginal births for women with a singleton fetus in breech presentation in this study
- Cost savings are restricted to the procedures and care during and immediately following the birth

Healthcare Costs and Utilization Project 2003 - U.S.

Type of delivery	Mean charge
All deliveries	\$8,300
Vaginal with comp.	\$8,200
Vaginal without comp.	\$6,200
Caesarean with comp.	\$15,500
Caesarean without comp.	\$11,500

Merrill, C., Steiner, C. *Hospitalizations Related to Childbirth, 2003*. HCUP Statistical Brief #11. August 2006. Agency for Healthcare Research and Quality, Rockville, Md.

UK based Systematic review

- 975 papers identified from 1990-1999
 - 49 met criteria for the review
 - 32 were from the USA where the organisation, structure and costs of health care differ significantly from that of other industrialised countries
 - aggregate costs of different modes of delivery reported in these American studies were between four and five times higher than costs reported in other studies
 - majority of studies were of poor quality
- Data from the better quality studies demonstrated that caesarean section costs a health service substantially more than other modes of delivery
- Papers typically only considered short term health service costs

Take Home Messages

- Much work needs to be done on the costing end for a better picture
- What we do know is c-sections are more expensive than vaginal births
- Current study in BC looking at cost of home birth and hospital birth, for midwives and physicians
- Need to calculate budget impact for given regions to inform policy making
- Note that differences in costs do not necessarily equate to real 'savings'