Regional differences in C-section rate not a result of maternal request

31 May 2010

Fewer than two per cent of cesarean births in British Columbia were a result of maternal request, but the number of cesarean and assisted vaginal deliveries varied widely across health regions in B.C., according to a new study by University of British Columbia researchers.

"There is a misconception that the overall increase of cesarean births is the result of maternal request," says lead author Gillian Hanley, a PhD student in the UBC School of Population and Public Health. "Our analysis of B.C. data shows that this is not the case."

Published in the June issue of the journal *Obstetrics & Gynecology,* the UBC study examined all deliveries in B.C. between 2004 and 2007 and found an average of 21.2 per 100 deliveries were first-time C-sections and 14.2 per 100 deliveries were assisted vaginal deliveries involving the use of forceps and/or vacuum devices. Dystocia - or abnormal or difficult childbirth - was the most common reason for cesarean deliveries (30 per cent), followed by non-reassuring fetal heart rate (19.1 per cent).

Canada's cesarean delivery rate has increased dramatically over the past two decades, reaching an all time high of 26.3 per cent of in-hospital deliveries in 2005-2006. Until recently, B.C. had the highest cesarean rate in the country, according to the Canadian Institute for Health Information.

The study also found significant regional variations in cesarean and assisted vaginal delivery rates across B.C.'s 16 Health Services Delivery Areas that could not be explained by accounting for medical indications for these procedures. Cesarean delivery rates ranged from 27.5 per cent in the South Vancouver Island area to 16.1 per cent in Kootenay Boundary. Assisted vaginal delivery rates ranged from 18.6 per cent in Vancouver to 8.6 per cent in East Kootenay.

"In other words, some regions are either performing too many or too few cesareans after taking into consideration the characteristics and conditions of the mothers," says Hanley, also a researcher at the UBC Centre for Health Services and Policy Research.

"Our study doesn't attempt to determine the ideal rate of cesarean or assisted vaginal delivery," says Hanley. "But since regional variation is a fundamental principal in assessing the quality of health care, we need to further investigate the reason behind these large differences within the province's system."

The researchers suggest potential reasons may include the differences in practitioners' responses to similar medical situations, such as dystocia, including how they interpret and respond to the condition, and how they factor the resources available to them into their decisions.

"For example, smaller institutions may lack the resources required to respond to medical emergencies in the same manner as a tertiary care facility," says Hanley. "It is therefore more likely for practitioners there to recommend a cesarean delivery with a lower medical threshold.

"These hypotheses should be further investigated and may include non-medical factors such as socio-economic status," says Hanley. "But the findings point to a need for revising current national guidelines regarding the management of dystocia."

Provided by University of British Columbia