Low-volume obstetrics

Characteristics of family physicians’ practices in Alberta

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ABSTRACT

OBJECTIVE To compare the obstetric practices of family physicians who attended fewer than 25 births per year (low-volume) with the practices of family physicians who attended more than 25 births per year (high-volume) and the practices of obstetricians.

DESIGN Retrospective cohort study using data from administrative databases.

SETTING Alberta.

PARTICIPANTS All physicians who provided intrapartum care between April 1, 1997, and March 31, 2000.

MAIN OUTCOME MEASURES Type of delivery, size of hospitals where deliveries took place, characteristics of patients, and number of medical interventions.

RESULTS Of 1026 family physicians, 543 (53%) were low-volume providers of intrapartum care. In 1997-1998, low-volume family physicians (LVFPs) attended 24% of all vaginal and cesarean births attended by family physicians; by 1998-1999, that percentage had decreased to 9%; and by 1999-2000, to 5%. In contrast, the number of births attended by all family physicians remained relatively constant at 43% during the 3 years. In hospitals that had fewer than 50 deliveries a year, LVFPs attended almost half the births. Although LVFPs did fewer medical inductions, vacuum extractions, and epidural anesthetics and more forceps extractions, episiotomies, and cesarean sections than high-volume family physicians (HVFPs), the differences between their practices were much smaller than the differences between all family physicians’ practices and the practices of obstetricians (who treat higher-risk mothers and newborns).

CONCLUSION The decrease in LVFPs’ obstetric practices could make a pronounced difference at smaller hospitals where most low-volume practice occurs.

Résumé

OBJECTIF Comparer les modes de pratique obstétricale de trois groupes de médecins : médecins de famille qui effectuent moins de 25 accouchements par année (faible volume), médecins de famille qui en font plus de 25 par année (grand volume) et obstétriciens.

TYPE D’ÉTUDE Étude de cohorte rétrospective effectuée à partir de banques de données gouvernementales.

CONTEXTE L’Alberta.

PARTICIPANTS Tous les médecins qui ont prodigué des soins perinataux entre le 1er avril 1997 et le 31 mars 2000.

PRINCIPAUX PARAMÈTRES ÉTUDIÉS Type d’accouchement, taille de l’hôpital où l’accouchement a été effectué, caractéristiques des patientes et nombre d’interventions médicales.

RÉSULTATS Sur les 1026 médecins de famille, 543 pratiquaient moins de 25 accouchements par année (médecins de famille à faible volume, MFFV). En 1997-1998, ces MFFV avaient effectué 24% s accouchements vaginaux et des césariennes effectuées par l’ensemble des médecins de famille; en 1998-1999, ce chiffre avait diminué à 9% et en 1999-2000, il n’était plus que de 5%. Durant cette même période, pourtant, le nombre des accouchements effectués par l’ensemble des médecins de famille est demeuré relativement constant à 43%. Dans les hôpitaux où il se faisait moins de 50 accouchements par année, les MFFV en avaient effectué près de la moitié. Par rapport aux médecins de famille faisant plus de 25 accouchements par année, les MFFV ont eu moins souvent recours au déclenchement médical, à l’extraction par ventouse et à l’épidurale et plus souvent à l’épisiotomie et à la césarienne; les différences entre ces deux groupes sont toutefois plus faibles que celles observée entre les modes de pratique de l’ensemble des médecins de famille et ceux des obstétriciens (qui traitent des mères et des enfants présentant un risque plus élevé).

CONCLUSION La diminution du nombre des accouchements effectués par des MFFV est susceptible d’entraîner des changements considérables dans les petits hôpitaux où ce type de pratique prédomine.

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Cet article a fait l’objet d’une évaluation externe.
Can Fam Physician 2002;48:1208-1215.
The Society of Obstetricians and Gynaecologists of Canada (SOGC) has taken the position that physicians are not required to participate in a certain number of deliveries to maintain competence. The Society recommends, however, that physicians who attend fewer than 25 births per year should be restricted to low-risk obstetric practice and should update their skills every 2 or 3 years. The SOGC, College of Family Physicians of Canada, and Society of Rural Physicians of Canada also recommend that the standard of care for low-risk maternity patients should be the same in the smallest hospitals as it is in tertiary care centres.

Given that this high standard of care is expected despite constrained resources, the number of rural and remote hospitals that offer obstetric services has decreased over the last decade. Centralization has occurred by default rather than through regionalization, and many rural communities have no local access to maternity care services.

What we know about the practice profiles of low-volume family physicians (LVFPs) comes from their practices in a few rural hospitals. The literature on practice profiles in rural areas in Canada is out-of-date. In this study, we use administrative data to describe the obstetric practices of LVFPs in Alberta from 1997 to 2000. This study does not determine whether LVFPs are providing “safe” care, but rather, by describing LVFPs, it investigates the sustainability of low-volume practice irrespective of the quality of care.

**METHODS**

Data


All data were accessed through Alberta Health and Wellness. The Alberta Centre for Health Utilization Research is regulated by the Health Information Protection Act, which specifies that utilization analysis done by Government of Alberta employees or contracted researchers using Alberta Health and Wellness administrative data and reported in aggregate form does not require specific patient consent or approval from an ethics committee. Security is maintained by using anonymous patient identifiers, publishing only aggregate data, auditing researchers’ activities, and keeping the data physically secure in Alberta Health and Wellness offices. All authors sign an oath of adherence to the ethical principles of the Government of Alberta, which include confidentiality of data.

Information on deliveries found in the DAD indicated that 99.7% of births in Alberta take place in hospitals each year. All separations for 1997-1998, 1998-1999, and 1999-2000 with the main patient service field “51” (obstetrics delivered) were extracted. Three years of data were combined because the volume of deliveries in some facilities was small. No stillbirths were included.

Use of forceps or vacuum extraction for deliveries (International Classification of Diseases-9CM [ICD-9CM] codes 72.0, 72.1, 72.2x, 72.3x, 72.4, 72.5x, 72.6, 72.71, 72.79, 73.3) and medical-surgical induction (ICD-9CM codes 73.4, 73.01, 73.09) were recorded in one of the 10 DAD procedural code fields. Maternal reproductive comorbidities associated with pregnancy, defined as multiple pregnancy, malposition or malpresentation, abnormalities of cervix or uterus, and cephalopelvic disproportion (ICD-9CM codes 651.x to 654.x), were recorded in one of the 15 DAD diagnosis fields. Maternal hypertension comorbidity, defined as ICD-9CM codes 651.x to 654.x), were recorded in one of the 15 DAD diagnosis fields or as a case mix grouper (groupers 602, 603, 608, or 610 for previous cesarean sections). Fetuses diagnoses coexisting with pregnancy, defined as developmental problems and fetal placenta or uterine problems (ICD-9CM codes 655.x to 658.x), were recorded in one of the 15 DAD diagnosis fields and not as maternal comorbidities as defined above. Maternal hypertension comorbidity, defined as ICD-9CM codes 401.x to 405.x and 642.x, was recorded in one of the 15 DAD diagnosis fields. To obtain neonatal data (sex, birth weight, date and time of birth), main patient service field “54” (newborn) was extracted and matched to each delivering mother. The database identifies aboriginal women who are registered with the Department of Indian Affairs and Northern Development.

Questions on birth records must be completed by attending physicians or pediatricians and mothers. Vital statistics recorded on birth records were unavailable from January 1 to March 31, 2000. Vital statistics relevant to this study are total number of live births, number of breech or cephalic presentations, neonatal Apgar scores at 5 and 10 minutes, and number of gestational weeks.

An anonymous maternal identifier for hospital deliveries was used to find specific physician billing codes...
RESEARCH

Low-volume obstetrics

(Canadian Classification of Procedures\textsuperscript{12} [CPX]) for the mothers we identified from the CLASS database. These billing records included a range of anesthesia services, including epidural anesthesia (CPX 16.91C) for obstetric procedures, the provider's role (anesthesia), and the provider's specialty (general practice, anesthetist).

Hospital volume and service region

Hospitals providing delivery services were categorized into six groups on the basis of average number of deliveries per year over the 3-year study period, location, and level of newborn facilities. Twenty-nine hospitals had one to 49 deliveries per year; 13 hospitals had 50 to 99; 32 hospitals had 100 to 405; and five hospitals in the five nonmetropolitan regional health care areas had 631 to 1691. Five hospitals were located in the metropolitan health regions of Calgary and Edmonton. Two hospitals had level 3 neonatal intensive care units, one in Calgary and one in Edmonton.

Low-volume and high-volume family physicians

Each assisted birth was ascribed to only one most responsible physician in order to obtain valid comparisons and avoid duplicate entries. If more than one billing claim was submitted, the hierarchy of most responsible physician was obstetrician, general surgeon, and family physician. Each claim submitted was credited as an assisted birth experience to the submitting physician for the purpose of determining volume even if more than one physician submitted a claim for the delivery. Thus all participating physicians were credited with an assisted birth experience even if they were not the most responsible physician.

Low volume was defined as fewer than 25 assisted birth experiences per year or fewer than 73 deliveries in the 3-year period. For physicians who did not provide obstetric services during the entire 3-year period, the number of deliveries was prorated to the percentage of the 3-year period during which each physician submitted claims (ie, between the first and last service dates within the 3 years).

Statistics

Practices of LVFPs and HVFPs and practices of all family physicians and obstetricians were compared using $\chi^2$ tests. Significance was defined at the level of .05.

RESULTS

We identified 107,426 deliveries from the CLASS database, which was 96% of the total 111,789 deliveries extracted from the DAD system. During the 3 years, 543...
of 1026 family physicians (53%) and six of 135 obstetricians (4%) were determined to be low-volume providers.

**Figure 1** shows the percentage of vaginal deliveries attended by LVFPs and HVFPs during the study period. The percentage of all (vaginal and cesarean section) births attended by LVFPs decreased from 24% in 1997-1998 to 9% in 1998-1999, and to 5% in 1999-2000. In contrast, the number of all births attended by all family physicians remained relatively constant at 43% during the 3 years.

The median number of births HVFPs attended during the 3-year study period was 80 (25% to 75% quartiles, 3:134). The 25% quartile reflects both the short time that some physicians were considered to be practising obstetrics during the study period and the fact that HVFPs might have received credit for attending a birth but not have been called most responsible physician. The median number of births attended by LVFPs during the study period was 23 (25% to 75% quartiles 9:42). The median number of births attended by high-volume obstetricians was 626 (25% to 75% quartiles 118:1158).

**Table 1** lists hospitals by volume of deliveries, location, and level 3 neonatal intensive care capability in relation to type of delivery (vaginal or cesarean) and type of physician involved. As hospital volume increased, the percentage of births attended by obstetricians increased. General surgeons performed a few cesarean sections in smaller facilities, but family physicians still performed most of them. The percentage of births attended by LVFPs decreased as hospital volume increased (**Table 2**).

In low-volume hospitals (fewer than 50 deliveries per year), LVFPs attended nearly half the births.

**Table 3** shows the characteristics of LVFPs’ and HVFPs’ patients. Data show that LVFPs attended more deliveries of aboriginal women and more births of small-for-gestational-age babies and fewer first deliveries and births of newborns with fetal comorbidities. Obstetricians’ patients are very different from family physicians’ patients; obstetricians care for more high-risk mothers (age >40, comorbidities, hypertension) and newborns (breech presentations, low birth weight, small for gestational age, fetal comorbidity, Apgar scores <7). Obstetricians attend more first live births. Low-volume family physicians practise predominantly in rural areas; obstetricians practise predominantly in urban centres.

**Table 4** compares the practice styles of LVFPs, HVFPs, and obstetricians. Low-volume family physicians do fewer medical inductions, vacuum extractions, and epidurals for vaginal deliveries and more forceps extractions, episiotomies, and cesarean sections than HVFPs. Low-volume family physicians deliver more patients who have had no prenatal visits than HVFPs do. Obstetricians’ practices are significantly more interventional (medical induction, forceps and vacuum extraction, cesarean sections) than family physicians’ practices are.

**DISCUSSION**

In 1997-1998, LVFPs attended about 24% of all births attended by family physicians in Alberta.
Table 2. Hospital deliveries by type of birth and attending physician: Note predominance of low-volume family physicians in smaller hospitals.

<table>
<thead>
<tr>
<th>VOLUME OF DELIVERIES</th>
<th>NO. OF BIRTHS ATTENDED</th>
<th>NO. OF CESAREAN BIRTHS ATTENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LOW-VOLUME FAMILY PHYSICIANS N (%)</td>
<td>HIGH-VOLUME FAMILY PHYSICIANS N (%)</td>
</tr>
<tr>
<td>&lt; 50 deliveries</td>
<td>691 (46)</td>
<td>814 (54)</td>
</tr>
<tr>
<td>50-99 deliveries</td>
<td>445 (21)</td>
<td>1666 (79)</td>
</tr>
<tr>
<td>100-405 deliveries</td>
<td>1503 (13)</td>
<td>10090 (87)</td>
</tr>
<tr>
<td>631-1691 deliveries</td>
<td>408 (6)</td>
<td>6356 (94)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>NO. OF BIRTHS ATTENDED</th>
<th>NO. OF CESAREAN BIRTHS ATTENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calgary or Edmonton without level 3*</td>
<td>517 (4)</td>
<td>11134 (96)</td>
</tr>
<tr>
<td>Calgary or Edmonton with level 3*</td>
<td>203 (5)</td>
<td>4138 (95)</td>
</tr>
<tr>
<td>ALL DELIVERIES IN ALBERTA</td>
<td>3767 (10)</td>
<td>34200 (90)</td>
</tr>
</tbody>
</table>

* Level 3 neonatal intensive care.

Table 3. Characteristics of patients delivered by low-volume family physicians, high-volume family physicians, and obstetricians: Note similarities between low-volume family physicians’ and high-volume family physicians’ patients (with exceptions) and general differences from obstetricians’ patients.

<table>
<thead>
<tr>
<th>PATIENT CHARACTERISTICS</th>
<th>LOW-VOLUME FAMILY PHYSICIANS %*</th>
<th>HIGH-VOLUME FAMILY PHYSICIANS %*</th>
<th>OBSTETRICIANS %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age &gt; 40</td>
<td>0.8 (34/4206)</td>
<td>0.9 (315/36 756)</td>
<td>2.5† (1664/66 133)</td>
</tr>
<tr>
<td>Gestation &lt; 32 weeks</td>
<td>2.2 (82/3692)</td>
<td>2.7 (779/29 248)</td>
<td>8.8† (4453/50 696)</td>
</tr>
<tr>
<td>Aboriginal treaty status</td>
<td>10.7† (394/3696)</td>
<td>8.1 (2369/29 263)</td>
<td>5.6† (2833/50 728)</td>
</tr>
<tr>
<td>Hospital not in Calgary or Edmonton</td>
<td>82.5† (3470/4206)</td>
<td>58.0 (21 315/36 755)</td>
<td>18.9† (12 488/66 125)</td>
</tr>
<tr>
<td>Maternal reproductive comorbidity</td>
<td>7.8 (328/4206)</td>
<td>7.9 (2910/36 755)</td>
<td>24.7† (16 301/66 125)</td>
</tr>
<tr>
<td>Maternal hypertensive comorbidity</td>
<td>2.2 (92/4206)</td>
<td>2.6 (947/36 756)</td>
<td>5.5† (3608/66 133)</td>
</tr>
<tr>
<td>Mother’s first live birth</td>
<td>32.6† (1205/3696)</td>
<td>38.1 (11 141/29 263)</td>
<td>43.7† (22 163/50 728)</td>
</tr>
<tr>
<td>Breech presentation</td>
<td>0.7 (26/3696)</td>
<td>0.6 (188/29 263)</td>
<td>4.7† (2402/50 728)</td>
</tr>
<tr>
<td>Birth weight &lt; 2500 g</td>
<td>2.1 (78/3695)</td>
<td>1.9 (562/29 260)</td>
<td>6.7† (3381/50 721)</td>
</tr>
<tr>
<td>Small-for-gestational-age newborn</td>
<td>8.8† (324/3696)</td>
<td>6.9 (2033/29 263)</td>
<td>8.7† (4423/50 728)</td>
</tr>
<tr>
<td>Fetal comorbidity</td>
<td>11.6† (488/4206)</td>
<td>17.4 (6402/36 755)</td>
<td>24.2† (16 020/66 125)</td>
</tr>
<tr>
<td>Apgar score &lt; 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• at 1 minute</td>
<td>17.0 (628/3696)</td>
<td>16.3 (4768/29 263)</td>
<td>17.1† (8677/50 728)</td>
</tr>
<tr>
<td>• at 5 minutes</td>
<td>2.1 (77/3696)</td>
<td>1.7 (512/29 263)</td>
<td>2.2† (1101/50 728)</td>
</tr>
<tr>
<td>• at 10 minutes</td>
<td>0.2 (9/3696)</td>
<td>0.4 (119/29 263)</td>
<td>0.5 (237/50 728)</td>
</tr>
</tbody>
</table>

*Numbers in parentheses are index cases out of total population.
†P < .05 comparing obstetricians with all family physicians.
‡P < .05 comparing low-volume family physicians with high-volume family physicians.
This percentage decreased during the 3 years of our study; by 1999-2000, LVFPs attended only about 5% of such births. In contrast, the number of deliveries done by all family practitioners remained fairly constant at about 43% during the 3 years. Despite the SOGC’s statement that low-volume obstetrics is a viable practice choice, it does not seem to be so for family physicians. We speculate that LVFPs have been replaced by HVFPs in smaller hospitals. Both LVFPs and HVFPs deliver only lower-risk patients; high-volume family practice does not result in higher-risk obstetrics. Even when HVFPs offer local obstetric services, not all women deliver locally. High-risk women are still cared for by obstetricians, usually in urban centres.

**Forced out of low-volume practice**

Low-volume family practitioners are sometimes forced out of obstetrics because their hospitals no longer provide the required resources. Hospitals stop providing obstetric services because they lack adequately trained practitioners, equipment, or funding. Because they must be able to provide obstetric resources all the time, but these resources are only intermittently used, some low-volume hospitals in other provinces have chosen to stop providing obstetric services. The centralization (by default) of obstetric services would likely affect LVFPs to a greater extent than HVFPs because LVFPs are more likely to practise in low-volume facilities.

The closing of smaller hospitals would likely have the greatest effect on rural and aboriginal women. In Alberta, the decrease in low-volume practice was not due to a general decrease in deliveries in smaller hospitals, which were relatively constant over the 3 years at 9% of all deliveries.

**Competence and capabilities**

Family physicians leave obstetrics because they lose confidence in their competence. Low-volume practitioners are challenged to provide a full range of maternal services, including analgesia, newborn resuscitation, and sometimes cesarean sections. When offered it, about 30% to 50% of mothers request epidural analgesia during labour. Approximately 10% of low-risk deliveries require newborn resuscitation. An inability to provide the entire spectrum of obstetric services has not, however, been associated with poor outcomes. A Canadian survey in 1991 found that 125 of 576 hospitals provided maternity services without full-time on-site cesarean section capability. Lack of cesarean section capability in northern British Columbia and rural New South Wales, New Zealand, did not lead to adverse perinatal outcomes attributable to lack of such capability. Ontario family practitioners who do cesarean sections do an average of only 15 annually.

The relationship between volume and outcome for obstetrics does not hold for other medical conditions. Hospitals that perform a high volume of cancer surgeries have lower mortality rates than lower-volume centres. Our differentiation between LVFPs and HVFPs is based on a recommendation from the

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**Table 4. Practice style of low-volume family physicians, high-volume family physicians, and obstetricians**

<table>
<thead>
<tr>
<th>MEDICAL INTERVENTION</th>
<th>LOW-VOLUME FAMILY PHYSICIANS % OF ALL DELIVERIES</th>
<th>HIGH-VOLUME FAMILY PHYSICIANS % OF ALL DELIVERIES</th>
<th>OBSTETRICIANS % OF ALL DELIVERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>No prenatal visits</td>
<td>7.4 (272/3696)</td>
<td>3.9* (1140/29 263)</td>
<td>2.6′ (1333/50 728)</td>
</tr>
<tr>
<td>Epidural</td>
<td>10.3 (4 3918)</td>
<td>19.6* (6812/34 685)</td>
<td>42.3′ (21 264/50 286)</td>
</tr>
<tr>
<td>Medical induction</td>
<td>10.9 (457/4206)</td>
<td>13.5 (6006/36 642)</td>
<td>25.7 (12 869/50 042)</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>19.2 (752/3912)</td>
<td>17.3 (554/34 462)</td>
<td>9.7′ (4871/50 042)</td>
</tr>
<tr>
<td>Forceps extraction</td>
<td>2.4 (94/3912)</td>
<td>1.6 (3488/34 462)</td>
<td>15.1′ (751/50 042)</td>
</tr>
<tr>
<td>Vacuum extraction</td>
<td>7.0 (273/3912)</td>
<td>10.1 (879/36 318)</td>
<td>4.9′ (3209/65 733)</td>
</tr>
<tr>
<td>Vaginal births after cesarean section</td>
<td>2.1 (86/4059)</td>
<td>2.4 (3209/65 733)</td>
<td>5.6′ (2209/46 733)</td>
</tr>
<tr>
<td>Cesarean section</td>
<td>7.2 (294/4059)</td>
<td>5.8* (879/36 318)</td>
<td>24.5′ (16 089/65 773)</td>
</tr>
</tbody>
</table>

*P < .05 comparing low-volume family physicians with high-volume family physicians.
†P < .05 comparing obstetricians with all family physicians.
‡Vaginal births.
Low-volume obstetrics

SOGC; the cutoff of 25 deliveries a year is arbitrary, and no evidence suggests that quality of care and volume are directly linked.

The median numbers of births attended by LVFPs and HVFPs during a 3-year period were relatively close (23 and 80); obstetricians attended a median of 626. When birth weight and maternal risk are controlled for, high-volume practice does not decrease perinatal mortality. In one study, physicians with five to 22 deliveries annually performed to expected norms. Women who live in communities where fewer than one third of deliveries occur in local hospitals have higher rates of complicated deliveries, prematurity, and need for neonatal care than women who live in communities where most babies are delivered locally. Absence of local physicians in rural communities leads to increased infant mortality. Risk stratification and export of selected cases could help maintain local community services and, at the same time, lessen perinatal mortality.

Limitations
Population-based administrative database research is highly generalizable although limited in clinical detail. We were able to verify number of deliveries by comparing two independent databases. We were reliant on those completing other data fields for non-verifiable data. Family physician or specialist designation was determined from the Alberta College of Physicians and Surgeons’ classifications. Family physicians sometimes have training in special areas not recognized by the Alberta College of Physicians and Surgeons. Volume of obstetric practice was based on number of births attended between first and last claims. Physicians with only one claim during the study period had a time interval of 0 and were not defined as LVFPs. This assumption might have led us to underestimate the number of LVFPs. We have no information on physicians who moved out of province temporarily and provided obstetric services elsewhere between the first and last Alberta claim dates.

Conclusion
The percentage of births attended by LVFPs decreased in Alberta in the late 1990s. This practice change is likely to be more noticeable in smaller hospitals where most low-volume practice occurs. Both LVFPs and HVFPs attend lower-risk births. Results of this study suggest that LVFPs were replaced with HVFPs in smaller hospitals. The study cannot determine whether LVFPs were providing “safe” care, but their patients’ outcomes were similar to those of HVFPs.

Contributors
Both authors were involved in designing the study, data analysis, preparation of the manuscript, and approval of the final version to be published.

Competing interests
This work was partially supported by the Alberta Centre for Health Service Utilization Research. Opinions and conclusions expressed in this paper are those of the authors, and no endorsement by the Alberta Ministry of Health and Wellness is implied.

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Editor’s key points
• In Alberta from 1997 to 2000, 53% of family physicians attended fewer than 25 births per year.
• The percentage of births attended by these low-volume family physicians (LVFPs) decreased from 24% of all family physician–attended births in 1997-1998 to 5% in 1999-2000. The overall percentage of births attended by all family physicians remained constant at about 43%.
• The percentage of births attended by LVFPs increased as hospital size decreased. In low-volume hospitals, LVFPs attended almost 50% of births.

Points de repère du rédacteur
• Entre 1997 et 2000 en Alberta, 53% des médecins de famille ont pratiqué moins de 25 accouchements par année.
• Par rapport à l’ensemble des accouchements pratiqués par les médecins de famille, la proportion de ceux effectués par le groupe à faible volume (MFFV) est passée de 24% en 1997-1998 à 5% en 1999-2000. Durant la même période, le pourcentage des accouchements effectués par l’ensemble des médecins de famille est demeuré constant à 43%.
• La proportion d’accouchements effectués par les MFFV est en relation inverse avec la taille de l’hôpital. Dans les hôpitaux qui ont un faible volume, près de la moitié des accouchements ont été effectués par des MFFV.
References


