ABSTRACT

In 1990, the province of Quebec adopted a law authorizing the evaluation of the practice of midwifery through eight pilot projects. The projects, which took the form of birth centres outside hospitals, started operating in 1994. The objectives of the evaluation were 1) to compare midwives' services to current physician services with regard to maternal and neonatal mortality and morbidity, the use of obstetrical intervention, individualization and continuity of care as perceived by clients, and cost; and 2) to identify the professional and organizational factors associated with the integration of midwives into the health care system. A mixed evaluative design was used: a multiple case study with each pilot project representing a case and a cohort study where 1,000 women followed by midwives in the birth centres were matched with 1,000 women followed by physicians in the usual hospital-based services. Various quantitative and qualitative data collection instruments were used. Overall, many results were favourable to midwifery practice, while some were favourable to medical care. Following the evaluation, the Government of Quebec decided to legalize the practice of midwifery.

ABRÉGÉ

En 1990, le Québec adoptait une loi autorisant, à titre expérimental, la pratique des sages-femmes dans huit projets-pilotes. Les projets, qui ont pris la forme de maisons de naissance en dehors des hôpitaux, ont été mis en place à partir de 1994. Les objectifs de l'évaluation de l'expérimentation étaient 1) de comparer les services des sages-femmes à ceux des médecins en ce qui a trait à la mortalité et la morbidité maternelle et néonatale, l'utilisation des interventions obstétricales, l'humanisation et la continuité des soins selon les clientes et les coûts; et 2) d'identifier les facteurs professionnels et organisationnels associés à l'intégration des sages-femmes au système de santé. Un devis d'évaluation mixte a été utilisé : une étude de cas multiple où chaque projet-pilote est un cas et une étude de cohorte où 1 000 clientes suivies par des sages-femmes dans les maisons de naissance ont été jumelées à 1 000 clientes suivies en milieu hospitalier. Différents instruments de collecte de données qualitatifs et quantitatifs ont été utilisés. Dans l'ensemble, de nombreux résultats étaient favorables à la pratique des sages-femmes, alors que certains étaient favorables à celle des médecins. À la suite de l'évaluation, le gouvernement du Québec a décidé de légaliser la pratique sage-femme.

Evaluation of the Midwifery Pilot Projects in Quebec: An Overview

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Canada is the last industrialized country to undertake the legal recognition of midwifery practice. There were midwives in the early days of the country, but the rarity of training programs and the progressive take-over of maternity care by physicians led to their near disappearance, except in the North.¹ In the 1970s and 80s, however, women across Canada began requesting midwives' services, arguing that pregnancy and birth had become too medicalized. They also wanted to have more control over this important event in their lives. Some women chose to receive prenatal care from and give birth assisted by midwives outside the formal health care system.

In response to women's and midwives' demands for legal recognition, several provinces took legislative steps in the 1990s to regulate midwifery. To date, however, only Ontario, as of January 1994,² and British Columbia, as of January 1998, have allowed midwives to fully practice their profession. The province of Quebec chose to evaluate midwifery for a few years before deciding whether or not to legalize it. In 1990, Quebec adopted Bill

4, a law authorizing the evaluation of the practice of midwifery through pilot projects.³ The stated goals of this law were twofold: 1) to determine the relevance of legalizing midwifery in Quebec and 2) if found relevant, to define the professional organization of midwifery and the mode of integration of midwives into the health care system.

Numerous factors influenced Quebec's decision to conduct an evaluation of midwifery instead of legalizing it as other provinces had.⁴ In particular, in the late 1980s, the political will and popular demand were not strong enough to justify immediate legalization. The opposition of Quebec-organized medicine, including specialist organizations and organizations of general practitioners, to the introduction of midwives was probably also a decisive factor. The evaluation was seen as a political compromise between the immediate legalization of midwifery and the status quo.

The Quebec law provided for a maximum of eight pilot projects. These projects were to be proposed by a hospital, a local community services centre (CLSC) or both jointly. For several reasons, including the opposition of medical associations and the legal requirement regarding midwives' autonomy, only projects submitted by CLSCs were implemented, with the exception of the Puvirnituq project in Northern Quebec. The seven other projects were selected, among other criteria, because they served different regions in Quebec: Gatineau (near Ottawa), Montreal (in the multi-ethnic neighbourhood of Côte-des-Neiges), Pointe-Claire (a suburb west of Montreal), Sherbrooke, Saint-Romuald (across the St. Lawrence River from Quebec City), Alma (in the Saguenay area)

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and Mont-Joli (a small town 350 km east of Quebec City). Except for the Puvirnituk project, which was implemented in a small hospital but without operating room facilities, the pilot projects took the form of birth centres located on the premises of a CLSC or, more often, in a house nearby. The birth centres gradually started operating in 1994. (The Puvirnituk centre had opened in 1986, prior to the adoption of Bill 4. Since the context of its implementation differed from that of the other pilot projects, its evaluation differed also and is presented elsewhere.⁵)

Birth centres employ three to six midwives, a few birth assistants and minimal office staff, all salaried. There are no nurses and no physicians. Women without prior or current medical or obstetrical problems and who chose to enroll in the pilot projects received prenatal care and gave birth at the birth centre; they also received postnatal home care visits up to six weeks after delivery. In case of problems during pregnancy, labour or the postpartum period, women could be referred to physicians or transferred to a hospital nearby.

In the absence of a College of Midwives, Bill 4 created a provisional body to regulate this profession: the Comité d'admission à la pratique des sages-femmes (CAPSF; the "Midwifery Admissions Committee"). While the scope of midwifery practice was defined in the law, it was the responsibility of this committee to develop a list of competencies required of midwives, assess each candidate and deliver a certificate of competency to those found acceptable to practice in the pilot projects. The CAPSF also defined 134 specific criteria that would render a woman non-eligible for midwifery care. Those criteria were quite extensive and covered the prenatal, intranatal and postnatal periods. Midwives had to apply those criteria accurately or risk losing their right to practice in the pilot projects. In addition to the CAPSF, a multidisciplinary council was responsible within each pilot project for developing practice guidelines and monitoring the quality of midwife practice.

Since there was no midwife training program in Quebec, the candidates who came forward to practice in the pilot projects had differing professional background.

They included midwives who had been certified in other countries (about one third), with or without nursing training and with or without midwifery or nursing experience in Quebec; nurses who had acquired expertise in perinatal care through experience on maternity wards or through training provided by associations of midwives or elsewhere; and persons who had learned the practice of midwifery by assisting other midwives (through apprenticeship), by taking various continuing education courses and through independent study. To be authorized to practice in the birth centres, selected candidates received a few months of refresher training in a university setting and were required by the CAPSF to pass a clinical and theoretical exam.

THE OBJECTIVES AND THE EVALUATION STRATEGY

The responsibility for evaluating the practice of midwifery was assigned to the Conseil d'évaluation des projets-pilotes sages-femmes (CEPP; the "Midwife Pilot Project Assessment Council"), a body created by Bill 4 to select the projects, monitor their implementation and make recommendations to the government at the end of the experiment. The CEPP was composed of representatives from different interest groups and institutions: midwives, midwife clients, physicians, nurses, hospitals, CLSCs, universities, etc. To assist the CEPP with its mandate, the government sponsored independent evaluative research, conducted by a multidisciplinary team. In accordance with the goals of the experiment, the overall objectives of the evaluation were: 1) to compare midwives' services with current physician services in terms of maternal and neonatal mortality and morbidity, use of obstetrical intervention, individualization ("humanization" or woman-centred care) and continuity of care as perceived by clients, and cost; and 2) to identify the professional and organizational factors and the mode of integration of midwives into the perinatal health care system that would promote the best outcomes and midwife autonomy. Given these two different overall objectives, a mixed evaluative design was used: a multi-

ple case study in which each pilot project was a case and a cohort study with matched controls.⁶

To fulfil the first objective, a cohort of 1,000 women under the care of midwives at the birth centres were matched with 1,000 women under the care of physicians through the usual hospital-based maternity care services. Matching was done *a posteriori* (after birth) on the basis of several socio-demographic characteristics and obstetrical risk as assessed retrospectively through a telephone interview conducted 6 to 10 weeks after birth.⁷ This was a booking-based study, meaning that the analysis was based on the original plan or booking for a birth centre delivery (i.e., midwives' clients after 20 weeks of pregnancy were left in their original group, regardless of the place of delivery).

To compare the two groups of clients, data were collected using several instruments. Mortality, morbidity and the use of obstetrical intervention were assessed mainly via a perinatal patient record specially designed for midwives participating in the study and the usual patient record employed by physicians. Individualization and continuity of care as perceived by clients were measured through a self-administered postnatal questionnaire sent by mail to all clients two to three months after delivery and through a series of unstructured interviews with a few clients. Costs were estimated based on several sources: the patients' records, the self-administered postnatal questionnaires, the Régie de l'assurance maladie du Québec (Quebec health insurance board) for physician services provided to participating women and paid on a fee-for-service basis, and various official documents on the cost of health services provided by hospitals and birth centres. Because of the varying degree of data completeness across data sources, the number of valid cases used in the analysis of each component of the evaluation varies slightly.

To fulfil the second objective of identifying the organizational and professional factors associated with midwifery, a multiple case study using a qualitative research approach was employed. Beyond analyzing the seven birth centres in their essential dimensions (e.g., process of implementa-

tion, agreements reached with hospitals), the operation of three birth centres deemed to have typical characteristics was studied in greater depth. The principal sources of data for this part of the study were individual interviews and focus groups with key informants (e.g., midwives, physicians, nurses), site observations of various situations (e.g., midwife consultations with clients, committee meetings) and content analysis of an important quantity of documentation (internal reports, correspondence, press releases, etc.).

Data collection was mainly conducted between February 1995 and December 1996. Results showed that across the whole range of dimensions, midwife clients were more satisfied than physician clients, some clinical indicators were favourable to midwifery care while others were favourable to medical care, and costs of the two types of care were quite similar. A number of professional and organizational factors were identified as key for the integration of midwives in the health care system and to promote the best outcomes in the future. Detailed findings of the evaluation are provided in accompanying articles in this journal⁷⁻⁹ and elsewhere.⁵

LIMITATIONS, CHALLENGES AND STRENGTHS

The main characteristic that defines the context and determines some of the limitations of this evaluation is the fact that its object is a social experiment. In Quebec, birth centres were a new type of organization; everything had to be created from scratch. The "intervention" itself was not standardized, and it continued to evolve both throughout and after the evaluation.

Only one model of organization of midwife services was tested, i.e., out-of-hospital birth centres. This model does not represent the full spectrum of work settings in which midwives practice in other countries and will probably practice in Canada. It is thus impossible to generalize the evaluation results to work settings such as hospitals or home birth.

Clients were not randomly attributed to either type of service and matching, although useful, was not perfect. A selection bias is therefore likely, and it could, at

least in part, explain the results. Clients who chose midwife services seem to have had different expectations.⁵ Since they had been requesting midwife services for a long time and wanted the experiment to succeed, it is also possible that midwife clients were more positive in their assessment of the care they received than were physician clients, who may have had less explicit expectations.

As part of the evaluation, midwives used a perinatal patient record that allowed them to note much more information than the one employed by physicians, thus possibly creating an information bias regarding certain events (e.g., health habits). Moreover, midwives knew their services were being evaluated, while physicians did not. On one hand, this might have created an incentive for midwives to perform well in general and to do good record keeping in particular. On the other hand, the evaluation represented additional tasks for midwives, as well as additional stress.

Assessing a social experiment poses particular challenges in terms of evaluation strategy. Given the novelty of the birth centres and their "moving target" characteristic, original measuring tools had to be developed (e.g., perinatal patient record, postnatal questionnaire). One instrument that was initially developed, the midwife's logbook, had to be replaced because it was time-consuming to use and because midwives feared breach of confidentiality. Although it would have been preferable, *a priori* matching of clients from the two groups was not possible because of lack of access to physician clients; matching was therefore done after delivery. Given the high stakes involved for the future of midwives and the opposition of medical organizations to the pilot projects (for example, medical associations called for a boycott of the pilot projects by their members), a climate of tension prevailed throughout the evaluation period, raising the level of stress for everyone involved.

Despite these limitations and difficulties, the research strategy had particular strengths. Multiple approaches and data sources allowed a wider coverage of issues and a better understanding of the practice of midwifery. The use of different perspectives and research methods made it possi-

ble to contextualize the findings. For example, clinical results and client satisfaction could be interpreted in light of professional and organizational factors that were also assessed. The multidisciplinary expertise of the research team was also a key asset to the evaluation.

FOLLOWING THE EVALUATION

Based on the results of this evaluation and on complementary works that it had commissioned (e.g., a literature review on the safety of home birth), the CEPP presented its report to the Quebec Minister of Health and Social Services and the Minister responsible for the application of professional laws.¹⁰ Considering that the evaluation results were generally positive, the CEPP concluded that it was relevant to legalize midwifery and proposed a number of parameters to do so. Shortly after and based on the CEPP report, the two ministers presented to the government their own recommendations to legalize midwifery.¹¹ Finally, a bill creating the profession of midwife with its own college was adopted by the Quebec government in June 1999 and took effect on September 25, 1999: the existing out-of-hospital birth centres would continue to operate, midwives would be hired by contract with local community service centres (CLSC) which would develop agreements with hospitals to allow midwives to perform deliveries at hospitals, but home births would not be permitted until the College of Midwives set up the appropriate practice norms and had these approved by the government.¹² The government invited universities to propose midwife training programs. The University of Québec at Trois-Rivières was selected to offer this program; it received its first cohort of 16 midwife students in September 1999.

CONCLUSION

The practice of evaluating a new health care program or intervention before making it available on a large scale is quite common. It is generally seen as good public health planning. However, this was the first time in Quebec, and maybe in Canada, that a law defining the parameters

of a "new" profession requested that it be evaluated before receiving official recognition by the government. Now that Canadian provinces are gradually implementing midwife services, it would be valuable to have comparative evaluation studies to let them learn from each other's experience.

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