Medical abortion and family physicians

Survey of residents and practitioners in two Ontario settings

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ABSTRACT

OBJECTIVE To determine the knowledge, attitudes, and interest in providing medical abortion reported by family physicians and residents in rural and urban settings.

DESIGN A self-administered mailed survey using the modified Dillman method.

SETTING Hamilton and Thunder Bay County in Ontario.

PARTICIPANTS Family medicine residents (n=93) and physicians (n=234) in predominantly urban (Hamilton) and rural (Thunder Bay) settings. All faculty family physicians at McMaster University practising general family medicine and all family physicians in Thunder Bay County were surveyed.

MAIN OUTCOME MEASURES Knowledge of, attitudes toward, and interest in providing medical abortion.

RESULTS Overall response rate to the survey was 62.7% (n=327); 74.2% (69/93) of residents responded; 58.1% (136/234) of physicians responded. Physicians and residents rated their knowledge about medical abortion as poor, but most were interested in receiving more information and training in this area. Many (83.1%, 157/189) reported that medical abortion was an acceptable procedure for family physicians to perform, and 52.0% (64/123) of the physicians would consider providing medical abortions for their patients. Residents training in the more rural Thunder Bay program were less likely to support first-trimester abortions for medical and nonmedical reasons than those training in Hamilton ($P<.05$). Male respondents were significantly less supportive of abortion for nonmedical reasons and were less likely to consider providing medical abortions for their patients ($P<.05$).

CONCLUSION Most family physicians and residents showed interest in receiving more information about and training in medical abortion.

This article has been peer reviewed.

Cet article a fait l’objet d’une évaluation externe.

In Canada, more than 100,000 women undergo therapeutic abortions each year. Access to abortion is increasingly limited for many Canadian women, however, and few residency programs provide training in how to conduct medical abortions.

Medical abortion, using methotrexate and misoprostol, has been shown to be a safe and effective alternative to surgical abortion. In North America, this form of pregnancy termination is being studied increasingly as a feasible alternative to surgical intervention in pregnancies up to 8 weeks' gestation. Studies measuring acceptability have shown that most women (83.5% and 87%) having medical abortions would choose this method again.

Currently, medical abortion using methotrexate and misoprostol is being offered in many centres in the United States, as well as in some centres in Ontario and British Columbia. Primary care physicians are in an excellent position to offer this medical service and provide continuing care. A recent Society of Obstetricians and Gynaecologists of Canada policy statement describes this medical abortion procedure and states that both family physicians and obstetricians and gynecologists are appropriate providers.

Most abortions in Canada, however, are performed in private clinics or hospitals and not in family practices. Such a shift in medical practice requires physicians to be interested and willing to adopt this procedure. There is very little information on the acceptability of this procedure, and no Canadian studies describe readiness to provide medical abortion. This study compared the knowledge, attitudes, interest, and perceived barriers to providing medical abortion among family physicians and residents who work in urban and rural settings.

**METHODS**

**Study population**
The urban component of the study consisted of residents (during the 1998-1999 academic year) and faculty physicians in the Department of Family Medicine at McMaster University in Hamilton, Ont. Residents at Family Medicine North in Thunder Bay, Ont, and community-based family physicians working in Thunder Bay County were surveyed to represent practitioners in a predominantly rural setting.

Lists of full-time and part-time faculty in the McMaster Department of Family Medicine and lists of residents in Hamilton and Thunder Bay were generated from internal databases. The list of family physicians practising in Thunder Bay County was obtained from the Web-based database of the College of Physicians and Surgeons of Ontario (www.cpso.on.ca on 1999 March 10) and was validated against the Ontario Physician Human Resources Data Centre database. Physicians were considered ineligible if they had moved out of the study area or were not practising family medicine (eg, practising only emergency medicine). The sampling frame consisted of 111 and 123 family physicians and 67 and 26 residents in the Hamilton and Thunder Bay areas, respectively.

**Survey instrument**
A questionnaire was developed using new and previously tested questions:
- demographic information: sex, age, ethnicity, religion, and attendance at religious events;
- physician education, training, and experience with medical abortion;
- knowledge of and interest in medical abortion;
- attitudes toward abortion;
- perceived barriers to performing abortions; and
- the role of family physicians and personal willingness to perform medical abortions.

The attitude section involved responding to various situations in which women might request abortions, and responses were assessed on a 7-point Likert scale. While the questionnaire had adequate face and content validity, it was pretested on a convenience sample of 18 residents and physicians from other family medicine programs and then further refined. The resident questionnaire differed slightly in order to reflect training-related rather than practice-related characteristics. Copies of the questionnaires are available from the principal author upon request.

**Study design and survey procedures**
All family physicians and residents in the sampling frame in Hamilton and Thunder Bay received two complete mailings using the modified Dillman method between April and July 1999, separated by a reminder postcard. Because of the initially low response rate, a research assistant contacted nonrespondents in
Thunder Bay County by telephone. Family physicians and residents in the Hamilton area were not personally contacted. Completed responses were placed in envelopes and sent separately from coded postcards using preaddressed, stamped envelopes. Confidentiality and anonymity were assured and maintained. The institutional ethics review board at McMaster University approved the study protocol.

Analysis
Data analysis was carried out using SPSS for Macintosh software (version 4.0 for Macintosh, Chicago, Ill: SPSS Inc; 1990). Descriptive statistics (frequencies, means, and standard deviations [SD]) were calculated for all questions. The significance of differences in response between different types of practitioners (eg, residents vs practitioners, urban vs rural) were assessed using the \( \chi^2 \) test. Analysis of variance (ANOVA) was used for ordinal data, followed when necessary by the Scheffé multiple comparisons test. To control for the effect of respondents’ sex on attitudes toward, knowledge of, and perceived barriers to provision of medical abortions, exploratory multivariate linear regression analysis was performed. The following variables were used in multivariate analyses: sex, site (Hamilton vs Thunder Bay), and training (residents vs practitioners). In all analyses, results were considered statistically significant at an \( \alpha \) level of .05 (two-sided).

RESULTS

Response rate and demographic profile
The overall response rate was 62.7% (205/327) after two mailings; with response rates of 71.6% (48/67) for McMaster residents, 80.8% (21/26) for Thunder Bay residents, 69.4% (77/111) for Hamilton faculty, and 48.0% (59/123) for Thunder Bay County practitioners (Table 1).

Education, knowledge, and comfort
Subjects were asked if they had received any form of education on medical abortion. A quarter of residents reported some education during medical school and 39.1% during residency (Table 2). Knowledge and comfort level were assessed using four items measured on a 7-point Likert scale (discussion, performance, pharmacology, and routine complications of medical abortions). All four groups were similar, and overall mean scores were all low (1.7 to 3.6). Respondents were then asked to indicate their interest in receiving further training in various aspects of medical abortion. Mean scores across all
four items and for all four groups of respondents were considerably higher (from 3.3 to 5.1), but there was no significant difference between groups. Analysis by sex, adjusted for site and training, did not show any significant differences.

**Attitudes**
Respondents’ attitudes toward abortion were explored by nine items assessing their support of first-trimester elective abortions (Figure 1) on a 7-point Likert scale. Although only one respondent had performed abortions in the preceding year, most (all mean scores >4) supported first-trimester elective abortions as an option under eight circumstances ranging from threat to maternal health (mean 6.2, SD 1.5), failed contraception (mean 4.8, SD 2.2), to any reason given by the woman (mean 4.0, SD 2.2) (Figure 1). These supportive attitudes toward abortion were further confirmed by a strong disagreement with the last item, “under no option do I support elective first-trimester termination,” which received a mean score of 2.1 (SD 1.8).

Thunder Bay residents rated each item lower and were significantly less supportive than the other three groups. Analysis showed that men were significantly less supportive of abortion in cases of failed contraception, emotional or financial strain, interference with education or career, and any reason given by the mother (mean difference from 0.7 to 0.9, \( P < .05 \)). No difference in attitudes appeared for abortion in case of threat to maternal health or fetal defect.

**Appropriateness**
All respondents were asked whether medical abortion was an appropriate procedure for family physicians to perform (Table 2). Most residents (88%) and physicians (80%) thought medical abortion was within the scope of practice for family medicine. Approximately half (52%) the practitioners responded that they would consider providing medical abortion in their current practice, given appropriate training. There was a significant difference between sexes in that 70% of female versus 45% of male physicians were interested in providing medical abortion (\( P < .05 \)).

**Barriers**
Residents were asked to assess their perceived barriers to providing medical abortion on a 7-point Likert scale (Figure 2). Lack of training and personal or moral beliefs received the highest mean scores. The highest mean score among Thunder Bay residents was for personal or moral beliefs, while the highest

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**Figure 1.** Mean scores and 95% confidence intervals of agreement with providing abortions among Thunder Bay and Hamilton physicians and residents

<table>
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<tr>
<th>REASONS FOR ABORTION</th>
<th>RESPONDENTS’ ATTITUDES</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>Rape or incest</td>
<td>Strongly disagree</td>
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<td>Any reason*</td>
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<tr>
<td>Under no option</td>
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* \( P < .05 \).
Figure 2. Mean scores and 95% confidence intervals of barriers to provision of medical abortions perceived by Thunder Bay and Hamilton family medicine residents

Figure 3. Mean scores and 95% confidence intervals of barriers to provision of medical abortions perceived by Thunder Bay and Hamilton family physicians
mean score among Hamilton residents was for lack of training. The score for threat of harm to oneself or one’s family was much higher among Hamilton residents than among rural residents.

Practitioners ranked their perceived barriers differently from residents. Lack of training, lack of need in their community, off-label use, and having never been given the opportunity were the most common reasons (Figure 3). Moral and religious beliefs were rated sixth, and fear of harm was rated last. There was no pattern of differences based on sex.

**DISCUSSION**

On September 28, 2000, the Federal Drug Administration in the United States approved the use of mifepristone for medical abortion. While this drug is currently unavailable in Canada, medical abortion using methotrexate and misoprostol is available to women seeking early termination of pregnancy. While our survey shows that attitudes toward abortion are supportive, at present most clinicians are inadequately trained to provide medical abortion services.

Consistent with the literature, family physicians are interested in providing medical abortion and believe it is an appropriate procedure for family practice. Studies of family physicians in the United States have shown that, while most currently do not provide surgical abortion, many are interested in providing medical abortion. Twenty-six percent of rural physicians in Idaho stated an interest in using RU-486 when it becomes available. One quarter of family physicians in Washington state said they would consider using medical abortifacients when they became more readily available. Forty-two percent of physicians practising adolescent medicine thought they would prescribe methotrexate and misoprostol if given appropriate training and Federal Drug Administration approval; 54% believed these drugs should be available from primary care physicians.

In our survey, 52% of family physicians stated they would consider providing methotrexate and misoprostol abortions for their patients if given training. Although lack of clinical experience in this area almost certainly is relevant, it is very encouraging to see this high level of initial interest. Women were also more likely to support providing medical abortions in their practices.

There are potential benefits to more widespread use of this new regimen, specifically in the domain of primary care. A non-surgical alternative could increase options and access to abortion services for Canadian women. Training offered during residency has been shown to be a strong predictor of attitude. When training is offered, half of family practice residents have been shown to participate. In our survey, both groups of residents described a lack of education and a wish for more training in medical abortion. In contrast to residents in Hamilton, residents in Thunder Bay were less supportive of abortion, rating moral or personal beliefs as the most important barrier.

Practising physicians were more likely to give clinical or technical reasons for not providing abortion, while residents were more likely to cite personal or moral beliefs. These findings suggest that either experience or some key attribute gives practising physicians a broader understanding of the circumstances that make abortion necessary. There are also clear differences between men’s and women’s attitudes and willingness to provide abortions. Hamilton residents rated fear of harm as an important barrier, and this could be due to episodes of abortion-related violence and harassment in the area. Rural residents were significantly less supportive in their attitudes toward abortion over a range of circumstances. Regional variation in attitudes toward reproductive services could affect interest in and acceptance of education and training.

This study has several limitations. Although our response rate was acceptable, some nonresponse bias could still have been introduced. Even if every nonrespondent were opposed to providing medical abortion, however, one quarter to one third of practitioners would still consider providing medical abortion. This study is based on self-reported data, including educational background. It is very difficult to quantify or evaluate the education offered in undergraduate medical and residency programs based on these questions.

Education could range from core curriculum through a well-planned clinical elective to a brief remark during a lecture series. Yet it is clear that, for such a common and safe procedure, medical education is inadequate at various levels. Lack of training remains a modifiable barrier shared by both residents and physicians. Most physicians and residents are also interested in receiving more information and training in medical abortion.

The choice of our study population might also be viewed as inadequate (specifically, to what extent Thunder Bay County can be regarded as rural). Further, because of Family Medicine North, some of the Thunder Bay practitioners have academic
appointments. Of the 58 physicians from Thunder Bay County who completed our survey, however, only four (6.9%) had full-time and 14 (24.1%) had part-time academic appointments. Furthermore, more than a quarter of Thunder Bay practitioners reported that the communities where they currently practise have populations of less than 10,000. Finally, our sampling frame included physicians practising in the following communities: Geraldton, Nipigon, Terrace Bay, Longlac, Schreiber, Marathon, Red Rock, and Manistouwade.

CONCLUSION

This study provides evidence that family physicians and residents in several Canadian settings are interested in learning more about medical abortion. Nearly all participants in this study supported the principle that family physicians should provide medical abortions, and about half of practise physicians would consider it for their current patients. Medical methods of abortion allow greater privacy and personal control and have the potential to increase access to safe abortions.

Acknowledgment

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Contributors

Dr Raymond conceived and designed the study, helped with data acquisition, analysis, and interpretation; wrote the manuscript; and determined presentation of results. Dr Kaczorowski conceived and designed the study, helped with data acquisition, analysis, and interpretation; and reviewed the manuscript. Dr Smith conceived and designed the study, and reviewed the manuscript. Dr Sellors conceived and designed the study, helped with data interpretation, and reviewed the manuscript. Dr Walsh conceived and designed the study, and reviewed the manuscript.

Competing interests

None declared

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References


Editor’s key points

- This survey examined knowledge of and attitudes to medical abortion among Hamilton, Ont, and Thunder Bay, Ont, family physicians and residents.
- Knowledge and comfort level regarding medical abortions was low overall, but interest in learning more was apparent. There were differences in attitudes and interest between groups.
- Many (83%) reported that medical abortion is an acceptable procedure for family physicians, and 52% of physicians would consider providing it.
- Male physicians and Thunder Bay residents were less supportive of medical abortion in some circumstances.

Points de repère du rédacteur

- Cette enquête portait sur les connaissances et les attitudes entourant l’avortement médical chez les médecins de famille et les résidents à Hamilton et à Thunder Bay, en Ontario.
- Les connaissances et le degré de confort concernant les avortements médicaux étaient faibles dans l’ensemble, mais l’intérêt à en apprendre davantage était évident. Il n’y avait pas de différences dans les attitudes et les intérêts entre les deux groupes.
- Beaucoup (83%) ont indiqué que l’avortement médical était une intervention qu’il est acceptable pour les médecins de famille d’effectuer et 52% des médecins envisageraient de la pratiquer.
- Les médecins masculins et les résidents à Thunder Bay étaient moins favorables à l’avortement médical dans certaines circonstances.