

Evaluation of evidence-based episiotomy practice by midwives

By N Teckla, G Omoni, J Mwaura and B Omuga

Abstract

Research-based practice in nursing and midwifery is regarded as a means of ensuring that quality care is provided by integrating individual clinical expertise with the best available clinical evidence from systematic research. Previous studies indicate that few midwives strive to achieve their role of safe motherhood by helping women and their families through the pregnancy and childbirth process using research-based practice. The study documents the practice of episiotomy by midwives in an urban setting.

This is a cross-sectional qualitative and quantitative descriptive study. All midwives working in the labour ward at Pumwani Maternity Hospital in June–July 2009 were eligible for the study. A standard questionnaire was used to collect data regarding socio-demographic characteristics, professional training and evidence-based knowledge. Consenting and qualifying midwives were eligible for study. In-depth interviews were conducted among key informants over the same period. Data were analyzed using Statistical Package for the Social Sciences (SPSS). The most common types of episiotomy preferred by the midwives was medio-lateral and midline. Various factors were reported to have influenced the midwives practices: very tight perineum, breech presentation, premature labour, female genital mutilation, instrumental delivery and status of the fetus. In-depth interviews demonstrated lack of specific guidelines on specific procedures, personal attitudes and inadequate administration support. The study recommends an urgent need to put in place modalities to ensure that guidelines are developed and used appropriately in order to standardize provision of services.

Pregnancy and childbirth are a natural part of life experienced by most women, and midwives have a role in achieving safe motherhood by helping women and their families through pregnancy and childbirth process (Fraser et al, 2006).

Research-based practice in nursing and midwifery is regarded as a means of ensuring that quality care is provided

(Hodnett et al, 1996). Enkin (1989: 49) defines the science involved in care during pregnancy:

'The extent to which care is based on evidence that is effective and that which achieves the desired effect.'

Episiotomy is a surgical cut that is often performed just before birth to enlarge the opening of the vagina. Episiotomy was invented in Europe in 1742 as a procedure that could assist obstetricians in difficult vaginal delivery. It was not until 1920 when deliveries began to move from home to hospital that episiotomy started to become routine (Repke, 2003).

This practice has been used for many decades in the belief that it offers benefits to mothers (Viswanathan et al, 2005a). Historically, the purpose of this procedure was to facilitate completion of the second stage of labour to improve both maternal and neonatal outcomes. Maternal benefits were thought to include a reduced risk of perineal trauma, subsequent pelvic floor dysfunction and prolapsed, urinary incontinence, fecal incontinence, and sexual dysfunction. Potential benefits to the fetus were thought to include a shortened second stage of labour resulting from more rapid spontaneous delivery or from instrumented vaginal delivery (Repke et al, 2006)

The rationale for its use depends largely on the need to minimize the risks of severe spontaneous maternal trauma and to expedite the birth when there is evidence of fetal compromise. However, during a normal birth the indications for its use are few and the midwife should use her skills to avoid this intervention if possible (Fraser et al, 2006). Despite the clear rationale for its use it is noted that the rate of routine episiotomy is still significantly higher than the recommended practice for many countries (Caroli and Belizan, 2001).

A study by Hartmann et al (2005) in the USA on episiotomy recommended that providers with conservative practice style have rates well below 15%. The study highlighted some measures that should be taken to lower the rates of episiotomy to include preparation of guidelines and protocols according to the standard and training for the nurses, midwives, and doctors on the selective use of episiotomy.

'Evidence based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research' (Sackett et al, 1996: 71–2).

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Risks and benefits of episiotomy

Woolley (1995) critically reviewed professional literature published from 1980–1983 on risks and benefits of episiotomy. The benefits include prevention of lacerations, prevention of pelvic floor relaxation, and prevention of fetal injury. The risks that mentioned include blood loss, morbidity of anal sphincter damage, psychological consequences such as dissatisfaction with childbirth process, postpartum pain, dyspareunia, infection, frequency of perineal damage. Furthermore, episiotomy increases risks to birth attendants through increased blood exposure and needlestick injuries during repair

The two most common types of episiotomy are the midline episiotomy and the medio-lateral episiotomy. Midline episiotomy is by far more common in the USA, while medio-lateral episiotomies are more common in other parts of the world (Lingen, 2006).

Attitudes towards episiotomy

Episiotomy at the time of delivery is common in the USA and its practice patterns vary widely, as do professional opinions about maternal risks and benefits associated with routine use (Viswanathan et al, 2005a). This practice has been used for many decades in the belief that it offers benefits to mothers.

An interview with 10 midwives from Zambia, Malawi, Nigeria, Ghana, Kenya and Nepal, who were studying in Liverpool, UK showed that not one of them had ever considered whether routine episiotomy could do more harm than good. Most indicated that health professionals perform episiotomy routinely to a primigravidae to prevent third degree perineal tears. Some are performed to give midwives and medical students the opportunity to practice the procedure, however, no sufficient quantitative data is available to support these anecdotes (Maduma et al, 1998). The information provided by the 10 midwives from different countries is subjective and may not be based on evidence from best practice. This study could have involved a focus group discussion to elicit in-depth information from the 10 midwives from each country and compare the emerging themes using content analysis to bring out common themes.

Knowledge of episiotomy

Many studies have been carried out globally on episiotomy. Among them is a study of 65 labour wards in Sweden which showed that the mean incidence of episiotomy for the whole country was 30% with a wide variation (9–77%) from hospital to hospital (Althabe et al, 2008). The study was compared to another one in Port Harcourt Nigeria by Enyindah et al (2007) which showed that the episiotomy rate in 4720 vaginal deliveries during the period of study was 39.1% in multiparas and 77% in primigravidae. In Ethiopia, a study showed that among 672 Mothers, 270 (40.2%) had an episiotomy; of these 208 (75.2%) were primigravidae and multiparas were 21.3% (Kiros and Lakew, 2006).

A study done by Viswanathan et al (2005a) in 18 hospitals in Philadelphia in 1990 that used a vigorous systems review found that routine episiotomy offers mothers no benefit and it is associated with harm.

Episiotomy practice

A systematic review conducted by Sackett et al (1996) revealed that practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence. Evidence-based practice is widely promoted, but actual obstetric practice is often not informed by the evidence. Research has shown large practice variations across facilities in the same country in China, South Africa and the UK. Unnecessary obstetric procedures during normal birth are common and may actually be increasing in some countries (Althabe et al, 2002).

Increased numbers of reliable summaries of scientific evidence globally has improved knowledge, but there remains a shortfall in uptake and use of this information. Obstetricians continue to implement practices such as routine episiotomy that have been shown to be harmful, and fail to implement those with demonstrable benefit (Smith et al, 2004).

Fraser et al (2006) noted the importance of the Better Birth Initiative (BBI). This initiative supports the implementation of procedures and interventions that are based on scientific evidence.

Smith et al (2004) conducted research on the use of a focused change programme—the BBI, to influence obstetric practice of 10 hospitals in Gauteng, South Africa. The findings showed some important improvements in practice following the implementation of the BBI, such as in women's satisfaction levels and reduced rates of caesarean section births.

Midwives' role in evidence-based practice

Changing long-standing clinical practice is difficult (Leeman et al, 2006). Time constraints and increasing nursing care needs are inherent in clinical practice. Nurses face a real challenge when translating best evidence into clinical practice. For example, the relevant research-based databases are not comprehensive in many areas of nursing practice. Also, there is an ongoing explosion in the amount and type of information available (Pipe et al, 2005).

Midwives have a role in the achievements of safe motherhood in their countries. They carry a huge responsibility in helping women and their families through the pregnancy and childbirth process (Kwast, 1990). Enkin (1989) defines the science involved in the care during pregnancy as the extent to which care is based on evidence that is effective and that achieves the desired effect. He added that the great challenge that faces every midwife in today's practice is how to use the science appropriately and in ways that do not undermine the complex physiological and sociological aspects of childbirth.

Despite efforts within the nursing profession to promote evidence-based practice, the way that researchers report their findings in journals may not provide information that health-care providers can use in their clinical care. Providers tend to base their decisions to implement a new intervention on three characteristics (Leeman et al, 2006):

- The advantage of the new intervention over current practice
- Its compatibility with the practice setting and population
- Its complexity.

Belizan et al (2007) in their study noted that many hospitals have not changed their clinical practices to reflect research findings.

Theoretical framework

Many health-care facilities have strongly advocated for application of health promotion in all aspects of nursing care practice (Whitehead, 2006). Practising nurses are in the best position to identify and change practices to improve patient outcome. Pender's Health Promotion Model (Pender, 1996) guided the midwives in identifying and implementing evidence-based nursing practices to improve childbirth outcomes. Assumptions and theoretical propositions of the

Table 1. Assessment before giving an episiotomy

Midwives' responses	<i>n</i>
Tightness of perineum	12
Put the patient in lithotomy position	10
Previous episiotomy	7
Poor maternal effort	6
FGM	6
Foetal head presentation	5
Whether the patient is 'roomy'	4
Total	50

NB: Midwives gave more than one response

Table 2. Reasons that guided midwives' decision to give an episiotomy

Criteria	<i>n</i>
Very tight perineum	15
Breech presentation	11
Premature labour	10
FGM	9
Deteriorating baby condition	8
Hastening second stage	7
Big baby	6
Fetal distress	5
Instrumental delivery	4
Delayed second stage	3
Others	3
Mother's serological status (HIV-negative)	2
Shoulder dystocia	2
Poor maternal effort	1
Total	86

NB: Midwives gave more than one response

health promotion model were used to guide the study. The health promotion model is based on the assumptions which reflect both nursing and behavioural science perspectives, that a person seeks to create conditions of living through which they can express their unique human health potential. Persons have the capacity for reflective self-awareness, including assessment of their own competencies. These enable them to value growth in directions viewed as positive and attempt to achieve a personally acceptable balance between change and stability.

Methods and materials

Study design

The study used a cross-sectional qualitative and quantitative descriptive design that sought to evaluate evidence-based practice of episiotomy by the midwives. Content analysis was used for qualitative data. The study was conducted in Pumwani Maternity Hospital labour ward. Pumwani Maternity Hospital (PMH) was founded in 1926 as the Lady Griggs Maternity Home. PMH is one of the largest maternity hospitals in Kenya and a clinical teaching setting for medical training schools, including the University of Nairobi Department of Obstetrics and Gynaecology, Nursing and Midwifery. An average of 60 babies are delivered daily with the numbers growing every year. The hospital has a bed capacity of 350.

The study population included 58 qualified midwives working in PMH labour ward. A purposive sampling of all the midwives was done. Those who met the inclusion criteria were included based on the calculated sample size of 48. Thirty-five completed the questionnaires appropriately, three were incomplete and ten participated in focus group discussions.

Data collection, cleaning, and entry

The focus group discussions consisted of two groups of five members each. Simple random sampling was done by providing folded paper slips with group 1 and group 2. Those who picked group one participated in the first day of discussion and the rest on the second day. The participants were then given chairs to sit in a circle and numbers were allocated from the left side of the researcher for the two groups. Field notes and tape recordings were analyzed. Each transcript was read several times. The researcher used content analysis (Holsti, 1969) first to understand what the participants were saying. Content analysis is defined as:

'any technique for making inferences by objectively and systematically identifying specific characteristics of messages' (Holsti, 1969: 2).

Data were coded according to themes from the variables with exhaustive code categories. Data were summarized using inferential and descriptive statistics. Data input and analysis was done using SPSS version 16. Relationships among some variables were measured using correlation coefficient and chi-square. Data were presented in form of charts, tables and frequency graphs and in narrative form.

Ethical considerations

The proposal was submitted to Kenyatta National Hospital, University of Nairobi Ethics and Research Committee and Pumwani Maternity Hospital Institutional Ethics Committee for approval. An information sheet was given to the participants after an explanation about the purpose of the study and a consent form was given to the participants who read and signed as an indication that they had agreed to participate voluntarily.

Limitations

The study was conducted in an urban hospital setting and the findings may not be generalized to the hospitals and clinics in a different setting. The hospital serves a majority of Somali population which practices female genital mutilation. This practice influenced the decision made by the midwives before performing an episiotomy. The practice may not be common in other parts of the city and the results of the study may not be applicable in another set up. Although the participants consented to participate a few of them did not complete the questionnaires appropriately. The researcher held two forums to accomplish the focus group discussion (FGD) interviews. Data collection was done in a time span of 3 weeks to achieve the required sample because of staffing rotation. This may have biased the responses if the midwives shared the information with the others during the process.

Findings

Demographic information

A total of 35 respondents answered the questions. Four of them were male, while 31 were female. Eight respondents were in the 18–26 years age bracket; 20 were aged 27–35 years; 11 respondents were 36–45 years and only 3 were above 45 years old. Most respondents were female midwives aged between 27–35 years.

Training qualifications and duration of basic training formed part of the questionnaire with a total of 35 respondents. In this group 20 respondents trained as Kenya Registered Community Health Nurses (KRCHN), 12 were Kenya Registered Midwives (KRM), 2 respondents had trained in Intensive Care Nursing (ICN) and only 1 of the respondents had a BSc in Nursing. There were no PhD or MSc-qualified midwives in the group. In relation to duration of basic training, 27 of the respondents had 2–3 years, 5 had 5 years, 2 of the respondents gave no response to this and only 1 respondent had training lasting for 1 year only.

Years of service at Pumwani Maternity Hospital for the majority of midwives ($n=19$) was 5–9 years; 14 had practised there for over 10 years, while 2 midwives had practised for 1–4 years. Seventeen midwives received training on evidence-based episiotomy practice, while 18 did not.

The decision to perform an episiotomy depends on prior or immediate midwives' assessment. The respondents ($n=35$) listed the assessments they carry out before giving an episiotomy and can be seen in *Table 1*. The criteria that the midwives use to guide their decision to perform an episiotomy is shown in *Table 2*.

On a scale of 1–5, 17 respondents rated their knowledge as high level (4–5 points); 13 at midpoint (3 points), 4 of

Table 3. Questions about evidence-based practice

	<i>n</i>	%
Attitude to EBP		
Strongly agree	10	29
Agree	4	11
Disagree	19	54
Strongly disagree	2	6
EBP used in daily practice		
Strongly agree	18	52
Agree	16	43
Disagree	1	2
Strongly disagree	1	2
Evidence lacking in most clinical practice interventions		
Strongly agree	5	14
Agree	15	43
Disagree	11	31
Strongly disagree	4	11
Ability to review critical literature		
Confident	14	40
Fairly confident	15	43
Not confident	6	17
EBP guidelines available in the unit?		
Yes	15	43
No	10	29
Not sure	10	29
How often are guidelines reviewed?		
Yearly	6	17
Quarterly	5	14
As needed	5	14
Not sure	17	49
Other	2	6

the respondents rated their knowledge as low level (1–2 points); and 1 of the respondents was not sure which knowledge level was appropriate for them.

Figure 1 shows when the midwives last updated their knowledge of evidence-based practice of episiotomy. Most ($n=21$) of the respondents had never updated their knowledge. When asked whether they agreed with research findings on evidence-based practice of episiotomy, 5 respondents strongly agreed; 20 agreed, 5 of them each disagreed and strongly disagreed.

The respondents rated the support provided by the administrators in enforcing the use of evidenced-based practice: 14 indicated 'sometimes'; 11 'always'; and 10 'never'.

The indications for episiotomy based on evidence given by the respondents were a tight perineum ($n=33$), instrumental delivery ($n=25$), breech presentation ($n=22$) and 9 indicated both primigravida and patients' choice.

With the current advances in technology it is imperative that health-care workers are knowledgeable about the use of computer applications in their practice. Regarding formal training on computer application, 25 midwives had not had formal training and 10 of the respondents said they had.

Midwives were asked about the best source of evidence-based information. The results are shown in *Figure 2*.

A number of questions were asked about attitudes and use of evidence-based practice in the clinical unit. The responses can be seen in *Table 3*.

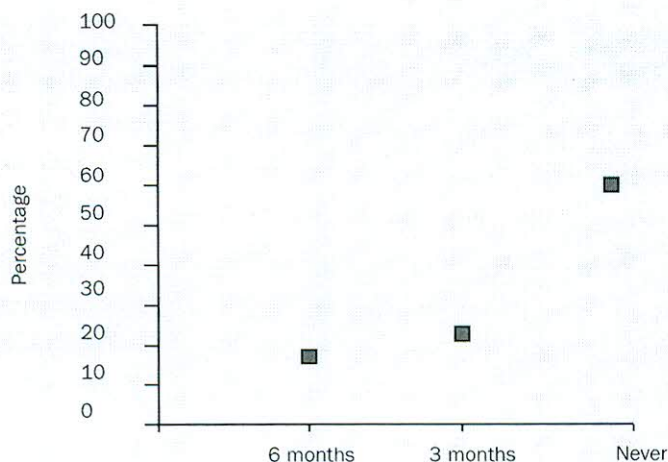


Figure 1. Last time midwives updated their knowledge on episiotomy

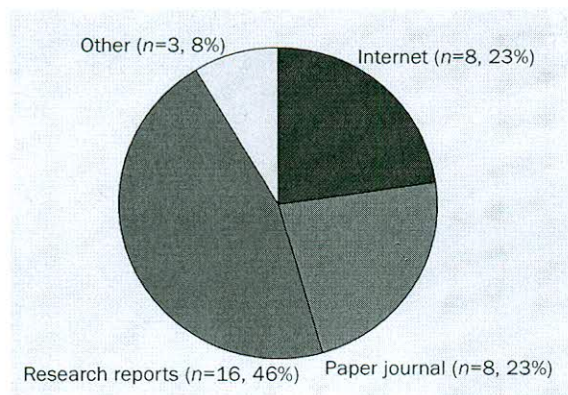


Figure 2. Best source of current evidence-based practice information

Focus group discussion (FGD)

The research targeted 10 focus group members who were interviewed using an interview guide. In order to gain more information prompting questions were used to elicit in depth information relating to the topic. There were two groups with each group consisting of 5 respondents.

Views of the midwives on evidence-based practice (EBP) on episiotomy

The respondents stated that evidence-based practice tends to:

'...improve fetal outcome and helps to save time for the midwife.' (R4)

'Episiotomy practice should only be done selectively.' (R3)

'[EBP helps one to] make good assessment before giving an episiotomy.' (R4)

'selective episiotomy is important to maintaining perineal integrity.' (R10)

'Me I think it should only be given to mothers whenever it is necessary.' (R7)

Evidence-based practice of episiotomy practiced at PMH

Some group members discussed that:

'We apply the evidence-based knowledge that we know in deciding whether to give an episiotomy or not.' (R2)

'We may not know what the current practices are and it is hard for us to know if what we are doing is EBP.' (R7)

'Evidence based is those indicators which tell me to give episiotomy if it is a premature baby or if the perineum is tight.' (R8)

Criteria applied by the midwives in performing an episiotomy

Midwives were asked about the various criteria that they use to decide whether the mother needs an episiotomy or not and whether the criteria chosen is evidence based. The responses were as follows:

'If the mother is HIV-positive we avoid episiotomy unless it is a must.' (R6)

'Those patients with known HIV status are given the option of elective caesarean section for PMTCT.' (R2)

'Me I think it should only be given to mothers whenever it is necessary.' (R7)

'... if the doctors tell you to do it'

Other reasons included perineal assessment, instrumental delivery, fetal presentation, the second stage of labour and the size of presenting part.

Accessibility of research reports on evidence-based practice of episiotomy

'We have no reliable way of accessing research reports in the unit.' (R7)

'We mostly we depend on the "memos" that are circulated by the hospital whenever there is new information that needed attention but these may not be specifically on EBP or episiotomy practice.' (R6)

Some midwives reported that they can access information from the school of midwifery library but the information may not be current.

Barriers to the implementation of evidence based practice of episiotomy

All the respondents said that poor accessibility to information, lack of guidelines and policies, prevalence of HIV, staffing constraints, lack of interest to update oneself on current information, lack of computer application knowledge, and

lack of appropriate equipment e.g. (enough theatre services) were some of the most prevalent barriers.

Availability of guidelines addressing evidence-based practice of episiotomy

The respondents agreed that:

'Somehow we have the information but they are not in written form'

Since the information is not written down reviews and updates are not conducted and no one is assigned to review the guidelines and policies.

Efforts by the administrators to uphold the implementation of evidence-based practice of episiotomy

The efforts put in place by the administrators that were discussed included continuing education in the unit whereby a member of staff picks a topic of interest and explores it among the staff. The topics are not necessarily on EBP but on any clinical topic relevant to them. Another support is in the form of provision of equipment in the unit to facilitate efficiency of work e.g. buying new episiotomy scissors:

'They have now provided very nice scissors, when I was giving episiotomy, I was really enjoying it. So at least the administration has assisted us.' (R8)

How evidence-based practice on episiotomy improves clinical practice

All respondents said that EBP of episiotomy will help in infection control:

'We have said it helps to avoid infection transmission from the mother to the baby especially HIV.'

'...it saves us time of repairing an episiotomy and the cost to the patient at least.'

'...it will lead to a better delivery and post delivery outcome to the mother and baby.'

Challenges faced by the midwives in the implementation of evidence-based practice of episiotomy

A number of challenges were highlighted by respondents.

'...work load will not allow us time to implement duties and activities effectively.'

'...it is hard to access current information because of lack of time and computers in the unit.'

'We get many mothers here and we get very tired by the end of the shift even if I read anything I will not understand it.' (R5)

Other issues were under-staffing in relation to increased patient population and instrument malfunction. Furthermore, a majority of the midwives lack computer literacy and some

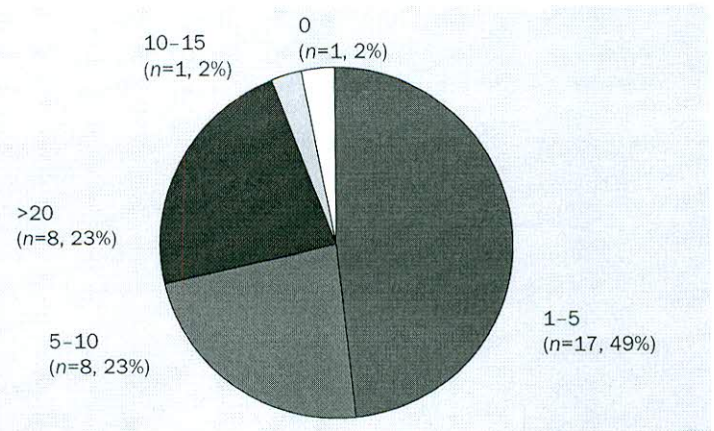


Figure 3. Midwives (n) stated how many HIV-positive mothers in their care had required an episiotomy in the past one year

mothers come to labour ward when they are already at the second stage of labour and the midwife has minimal time to conduct the appropriate assessment to be able to give the mother alternative choices.

Recommendations for improving evidence-based practice of episiotomy

The group mentioned some solutions and recommendations such as an increase in the number of midwives on labour ward, organizing continuing medical education of the evidence base for episiotomy, the need for other neighbouring hospitals and health-care facilities to reduce costs to allow patients to get services there, thus, reducing the patient population at PMH.

It was felt the midwives should be more vigilant in labour monitoring to allow them to make appropriate assessments that will enable them to give an episiotomy only when indicated. Another important solution would be for the midwives to change their attitude from old practices to adopting new and evidence-based practices to improve their practice. Furthermore, it was suggested women should attend antenatal clinic so they can receive more patient education and relevant services at an appropriate time.

To improve the status quo, the respondents felt that the administration should be proactive in upholding and reinforcing evidence-based practices and ensure that there are enough resources to handle the patient population, provision of quality service to the patients and a conducive working environment to the staff.

Discussion

The study participants were midwives working in Pumwani Maternity Hospital. Most of the participants were female with a mean age being 31 years.

The majority of the respondents aged 27–35 years had KRCHN level of education, followed by those who had KRM. Most had 2.5 years basic training which is the initial diploma or certificate course to practice as a nurse or midwife. These are enrolled nurses/midwives with a working experience of between 5–10 years. Most midwives accessed information and



knowledge on evidence-based practice of episiotomy from the nursing school where they received their basic qualifications, and a few of them through continuing education.

Despite a subjective high rating of their knowledge of evidence-based practice there is evidence that specific knowledge of episiotomy is limited. Information from the nursing school is based on the syllabus that gives basic and introductory information. These findings show that midwives need to put in a great deal of effort to update themselves on the current issues of episiotomy as an ongoing practice.

Continuing education is an important source of current information. This is supported by Benard (2009) who noted that nurses have an ongoing need to expand their professional knowledge and skills because of rapidly changing advances in health care and technology.

An excellent source of information related to evolving evidence reports is the Agency for Healthcare Research and Quality (AHRQ) (Reeves, 2006). AHRQ (2006) reports about topics of significant interest. The midwives at PMH can plan to access this site and receive information on evidence based episiotomy practice.

It was evident from the responses that midwives make assessments before giving an episiotomy, although the responses given did not indicate that the criteria influencing the decision is strongly evidence based. Various responses showed that most of the midwives check the tightness of the perineum.

Some criteria employed by the midwives at PMH are consistent with those applied by different health-care practitioners in different parts of the world. This is evidenced in a study by De Olivera and Miquilini (2005) which showed results on

the frequency and criteria for indication of episiotomy to be perineal rigidity (28.7%), primiparity (23.7%), macrosomic infant (11.9%) and prematurity (10.2%). The most common type was the right medium-lateral (92.0%), and the justifications were:

- It was learned during academic formation
- It is adopted routinely
- There is a lesser chance for causing lesions to the anal sphincter
- There is a lesser risk of complications.

The practices for attending women giving birth must be revised taking into account scientific evidence and individualized conduct.

There is still a problem in incorporating evidence-based information into practice. The problem is seen when the results show that midwives lack the skills to critically review research findings and are thus unable to frequently update their knowledge on the research findings relevant to their practice. Lack of accessibility of current information on EBP of episiotomy is a big barrier to the midwives in the facility.

The findings at PMH are echoed by Belizan et al (2007) in their study which noted that many hospitals have not translated their clinical practices to reflect research findings. Barriers noted included limited access to new knowledge, limited time and physical resources and attitudes, resistance to change as factors limiting the adoption of new practices in such hospitals. Lack of skills in performing new practices, lack of medical resources and explicit guidelines and a perceived need to practice defensive medicine were part of the hindrances.

