

Research article

Achieving sustainable quality in maternity services – using audit of incontinence and dyspareunia to identify shortfalls in meeting standards

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Abstract

Background: Some complications of childbirth (for example, faecal incontinence) are a source of social embarrassment for women, and are often under reported. Therefore, it was felt important to determine levels of complications (against established standards) and to consider obstetric measures aimed at reducing them.

Methods: Clinical information was collected on 1036 primiparous women delivering at North and South Staffordshire Acute and Community Trusts over a 5-month period in 1997. A questionnaire was sent to 970 women which included self-assessment of levels of incontinence and dyspareunia prior to pregnancy, at 6 weeks post delivery and 9 to 14 months post delivery.

Results: The response rate was 48%(470/970). Relatively high levels of obstetric interventions were found. In addition, the rates of instrumental deliveries differed between the two hospitals. The highest rates of postnatal symptoms had occurred at 6 weeks, but for many women problems were still present at the time of the survey. At 9–14 months high rates of dyspareunia (29%(102/347)) and urinary incontinence (35%(133/382)) were reported. Seventeen women (4%) complained of faecal incontinence at this time. Similar rates of urinary incontinence and dyspareunia were seen regardless of mode of delivery.

Conclusion: Further work should be undertaken to reduce the obstetric interventions, especially instrumental deliveries. Improvements in a number of areas of care should be undertaken, including improved patient information, improved professional communication and improved professional recognition and management of third degree tears. It is likely that these measures would lead to a reduction in incontinence and dyspareunia after childbirth.

Background

Health after childbirth has been highlighted as an important issue for consumers and professionals alike [1–3]. Long-term health problems after childbirth, that are likely to have an impact on the well being of women, include incontinence and dyspareunia. Recent surveys [1–3] have identified these symptoms even in women who have had normal vaginal deliveries.

There are important adverse health effects associated with perineal trauma [4,5]. Following perineal injury, sexual intercourse has been reported to be associated with pain or difficulty for months and even years after childbirth [5–7]. Urinary incontinence is another significant postpartum complication of pregnancy [8,9], once again with long term consequences in the community [10,11]. Although perineal pain, dyspareunia and altered urinary function are all correlated with obstetric intervention [5], they can also occur after normal birth.

Obstetric trauma has been regarded as the major aetiological factor in the development of anal incontinence in women [12]. Sultan and co-workers [13] found 13% of primiparous women and 23% of multiparous women had anal incontinence or faecal urgency when studied six weeks after delivery. The authors found a strong link between sphincter defects and the development of bowel symptoms. They also found that a vaginal delivery is associated with an alteration of anorectal sphincter function in approximately one third of primiparous women [13]. Even though more sphincter defects have been identified in women who had an instrumental vaginal delivery, there is also evidence that women suffer long-term bowel problems, including constipation and hemorrhoids whatever the mode of delivery [2,3]. The only group in the study by MacArthur and co-workers [3] who did not appear to be at risk of faecal incontinence were women who had been delivered by an elective caesarean section, however, the numbers were small. The actual incidence of faecal incontinence may be higher than previously supposed. This may be because many women are embarrassed or believe nothing can be done to alleviate their symptoms. A proportion of faecal incontinence relates to undetected anal sphincter trauma or to inadequate repair of 3rd and 4th degree tears [14].

Improvement in the health of women after childbirth, in particular focusing on faecal incontinence, urinary incontinence and dyspareunia was chosen as a priority at the 1996 democratic prioritisation forum (ASQUAM: Achieving Sustainable Quality in Maternity) [15].

Aims & objectives

1. To audit the management of women during labour against interventions aimed at reducing the incidence of incontinence and dyspareunia following childbirth.
2. To audit the incidence and management of urinary and faecal incontinence and dyspareunia against established standards.

A review of the literature was carried out to establish the audit standards for the project. The review included examination of the Royal College of Obstetricians & Gynaecologists recommendations for audit [16] as well as a search of the Cochrane Library and a Medline search using terms relating 'pregnancy and delivery' to the outcomes of 'incontinence' and 'dyspareunia'. We identified relatively few studies with long-term outcomes relevant to the project. Some of the standards, shown in Table 1 of the results section, were therefore chosen on the basis of best available evidence. Others were based on professional consensus achieved by discussion amongst study investigators responsible for the audit, who had two 'time-out' sessions prior to commencement of the project with input from other relevant groups, brought to the protocol via the link investigator; obstetricians (RJ), midwives (CK/JR/DB), health visitors (CK/DB) and women themselves (GG/MN). "Achievable" levels were agreed from the evidence and by consensus.

1. Advice about pelvic floor protection and exercises appears to be related to a reduction in urinary incontinence [17].
2. Awareness of the possibility of altered anorectal function may increase the likelihood of a woman seeking assistance for such problems.
3. A constant caring companion during labour and delivery has been shown to be linked to a lower rate of intervention in childbirth (including instrumental delivery and perineal injury) [18].
4. The instrument of first choice, in terms of avoiding maternal injury, appears to be the vacuum extractor [19,20]. A large multicentre observational study has recently been completed which comes to the same conclusion [3].
5. We believed that it is more likely for symptoms to be revealed if they are specifically asked about. This is considered 'best practice' by health visitors.
6. The incidences of urinary and faecal incontinence chosen as the audit standard were those in the published literature [3,21,9].

Table 1 : Audit standards in relation to improving health after childbirth

Standard	Achievable %	Obtained Overall (%)	Obtained North Staffs (%)	Obtained Burton (%)
Women should receive advice ante-natally / post-natally regarding protecting the pelvic floor	100	412/433 (95%)	244/252 (97%)	168/181 (93%)
Women should receive a pelvic floor exercise sheet	100	316/411 (77%)	182/236 (77%)	134/175 (77%)
Women should be aware that their anorectal function may have altered after childbirth	100	275/453 (61%)	166/262 (63%)	109/191 (57%)
Women should be cared for by a maximum of two midwives	100	a) 568/722 (79%)	a) 319/355 (90%)	a) 249/367 (68%)
a) Clinical Proforma		b) 294/436 (67%)	b) 174/250 (70%)	b) 120/186 (65%)
b) Patient Questionnaire				
The first instrument of choice (for an instrumental delivery) should be Ventouse	100	149/169 (88%)	67/78 (86%)	82/91 (90%)
Health Visitor should ask about continence	100	150/326 (46%)	97/183 (53%)	53 /143 (37%)
The incidence of urinary incontinence should be no more than 15%	≤ 15	133/382 (35%)	81/226 (36%)	52/156 (33%)
The incidence of faecal incontinence should be no more than 5%	≤ 5	17/446 (4%)	10/260 (4%)	7/186 (4%)
The incidence of dyspareunia should be no more than 20%	≤ 20	102/347 (29%)	54/201 (27%)	48/146 (33%)
A stage 2 specialist registrar should be called to suture all 3° tears	100	1/4 (25%)	1/3 (33%)	0/1 (0%)
All women with a 3° tear should be given prophylactic antibiotics	100	4/4 (100%)	3/3 (100%)	1/1 (100%)
All 3° tears should be sutured in theatre	100	3/4 (75%)	2/3 (66%)	1/1 (100%)
All 3° tears should be sutured using PDS or Nylon	100	0/4 (0%)	0/3 (0%)	0/1 (0%)
All 3° tears should be sutured using the overlapping technique	100	0/4 (0%)	0/3 (0%)	0/1 (0%)

7. The standards chosen with respect to third degree tear management are largely based on observational studies [14].

Ethical approval and consumer input

Although ethical approval is not generally required for audit, due to the sensitive nature of this project, this was sought. The protocol for the project was submitted to the Ethics Committee of South Staffordshire Health Authority, who granted approval. The National Childbirth Trust (NCT) was consulted throughout the audit, particularly in the design stage.

Materials and methods

Data collection took place at two centres in the North West Midlands, England: the North Staffordshire Hospital (North Staffordshire Acute and Community Trusts)

and Burton Hospital (Queen's Hospital Burton Acute and Community Trusts).

The sample was one of consecutive primiparous women who had given birth to a live child over a 5-month period in 1997; 636 primiparous women were taken from North Staffordshire, and 400 primiparous women from Burton. North Staffordshire has a higher delivery rate than Burton, which accounts for the larger sample. The sample size was determined by the limits of time and resources, but with 1000 women would be large enough to detect an incidence of faecal incontinence of 5% (within the 95% confidence limits of 3.6%–6.4%).

Only primiparous women were included so that reported problems might be easier to attribute to the index pregnancy and labour management.

Data were collected in both hospital and community settings. Data on the mother's management during labour were collected on a clinical proforma from maternity records, partograms, labour and theatre registers and the hospital information systems. A questionnaire was sent out to each mother approximately 9–14 months post delivery. None of the mothers had been recruited into the audit prior to receiving a questionnaire. To ensure that questionnaires were not being sent out inappropriately (for example, to a woman whose child was seriously ill) the following precautions were taken. In North Staffordshire questionnaires were distributed by the mother's health visitor, and in Burton, the audit department contacted each mother's general practitioner (and the Child Health register was also checked) prior to postal distribution of the questionnaire. Of those women who did not receive a questionnaire, a number had moved from the area and were untraceable. Time and resources did not

allow distribution of a second questionnaire to non-responders.

The patient questionnaire was modified from an original questionnaire developed by the National Childbirth Trust (NCT) and comprised of two sections. The mother was firstly asked about her management in labour and secondly she was asked to complete a retrospective self-assessment of her health before and after childbirth. The questionnaire is shown in Additional file 1: [Questionnaire.doc]. In particular, women were asked to answer questions regarding whether they had experienced urinary or faecal incontinence and dyspareunia prior to becoming pregnant, at 6 weeks post partum and at the time they received the questionnaire (9–14 months post delivery). Additional qualitative assessments were made by the women which will be summarised in the current paper but reported in more depth separately.

Table 2 : Management of labour, mode of delivery and perineal injury

	Overall (n = 1036)	North Staffs (n = 662)	Burton (n = 374)
Length of Labour / Pushing	Pushing n = 647 Labour n = 690	Pushing n = 318 Labour n = 333	Pushing n = 329 Labour n = 357
Median length of labour (mins)	450 (IQR 387)	360 (IQR 279)	590 (IQR 432)
Median length of pushing (mins)	46 (IQR 67)	46 (IQR 67)	46 (IQR 55.5)
Type of Pushing	n = 491	n = 317	n = 174
Active	242 (49%)	137 (43%)	105 (60%)
Physiological	146 (30%)	132 (42%)	14 (8%)
Both	103 (21%)	48 (15%)	55 (32%)
Not Recorded	545	345	200
Epidurals	n = 1031 (99%)	n = 662 (100%)	n = 369 (99%)
Yes	402 (39%)	217 (33%)	185(50%)
No	629 (61%)	445 (67%)	184(50%)
Not Recorded	5	-	5
Instrumental Deliveries	n = 198 (19%)	n = 108 (16%)	n = 90 (24%)
Ventouse	151 (76%)	86 (80%)	65 (72%)
Forceps	47 (24%)	22 (20%)	25 (28%)
Caesarean Sections	n = 231 (22%)	n = 142 (21%)	n = 89 (24%)
Emergency Sections	173 (75%)	95 (67%)	78 (88%)
Elective Sections	58 (25%)	47 (33%)	11 (12%)
Episiotomies & Tears	n = 606 (58%)	n = 395 (60%)	n = 211 (56%)
Episiotomy	401 (66%)	254 (64%)	147 (70%)
Tear	193 (32%)	132 (33%)	61 (29%)
Both Episiotomy & Tear	12 (2%)	9 (2%)	3 (1%)
Degrees of Tear	205 (20%)	141 (21%)	64 (17%)
1° Tears	37 (21%)	26 (23%)	11(18%)
2° Tears	133 (76%)	84 (74%)	49 (80%)
3° Tears	4 (2%)	3 (3%)	1 (2%)
Degree Not Recorded	31	28	3

*In addition 2 women had assisted vaginal breech deliveries.

Table 3 : Comparison of responders and non responders

	Both Hospitals Responder (n = 470)	Both Hospitals Non Responder (n = 566)	North Staffs Responder (n = 276)	North Staffs Non Responder (n = 386)	Burton Responder (n = 194)	Burton Non Responder (n = 180)
Age (median)	27 (IQR 7)	25 (IQR 9)	26 (IQR 7)	24 (IQR 9)	28 (IQR 7)	26 (IQR 9)
Gestation (median)	40 (IQR 2)	40 (IQR 3)	40 (IQR 2)	40 (IQR 3)	40 (IQR 1)	40 (IQR 40)
Weight (Kg)	3.39 (SD = 0.49)	3.24 (SD = 0.54)	3.39 (SD = 0.52)	3.23 (SD = 0.54)	3.40 (SD = 0.46)	3.24 (SD = 0.53)
Normal Delivery	271 (58%)	334 (59%)	170 (61%)	241 (62%)	101 (52%)	93 (52%)
Emergency Section	76 (16%)	97 (17%)	36 (13%)	59 (15%)	40 (21%)	38 (21%)
Elective Section	22 (5%)	36 (6%)	20 (8%)	27 (7%)	2 (1%)	9 (5%)
Ventouse	71 (15%)	80 (14%)	37 (14%)	49 (13%)	34 (17%)	31 (17%)
Forceps	29 (6%)	18 (3%)	12 (4%)	10 (3%)	17 (9%)	8 (5%)
Mode of Delivery not given	1	1	1	-	-	1
Intact Perineum	140 (33%)	208 (40%)	79 (32%)	126 (35%)	61 (33%)	82 (48%)
Episiotomy	209 (49%)	192 (36%)	120 (49%)	134 (38%)	89 (49%)	31 (22%)
Tear	74 (17%)	119 (23%)	43 (18%)	89 (25%)	31 (17%)	30 (21%)
Episiotomy & Tear	5 (1%)	7 (1%)	3 (1%)	6 (2%)	2 (1%)	1 (1%)
Perineal damage n/r	42	40	31	31	11	9

Statistical analysis

Data were analysed using the statistical package SPSS. The majority of analyses were Chi-squared tests of differences (χ^2) in 2×2 tables of categorical data (in all instances the appropriate test was Yate's Continuity Correction). In the situations where correlation analysis was undertaken, the data were non-normally distributed, requiring use of the Pearson correlation. The Mann-Whitney test was used to examine relationships between numeric and categorical data (again determined by whether the data was normally or non-normally distributed).

Results

The details of labour management and outcome are shown in Table 2. There were 605 (58.4%) normal deliveries, 198 (19.1%) instrumental deliveries, 231 (22.3%) caesarean sections and 2 (0.2%) delivered as an assisted breech. There were no statistical differences between the two centres with regard to caesarean section rates (either emergency or elective). Women were, however, more

likely to undergo an instrumental delivery (ventouse / forceps) at Burton than at North Staffordshire (χ^2 (1 d.f.) = 8.8, $p = 0.003$). Thirty-nine percent of women had an epidural (402/1031). However, the number of epidurals administered was significantly higher at Burton Hospital than at North Staffordshire (χ^2 (1 d.f.) = 29.2, $p = 0.0001$). Fifty eight per cent of women had some degree of perineal injury (606/1036). Only 4 women were diagnosed as having a third degree tear (0.38%). As there were so few third degree tears identified it was impossible to conduct any statistical analyses on these cases.

Women who delivered at Burton Hospital had a significantly higher median length of labour, almost an additional 4 hours in labour, when compared to those than at North Staffordshire (Mann-Whitney = 31491, $p = 0.0001$). The median length of the second stage was the same at both centres; 46 minutes. Women who delivered at North Staffordshire were much more likely to push physiologically (on instinct), whilst those who delivered

Table 4: Mode of delivery in relation to incontinence and dyspareunia

	Ventouse (n = 71)	Forceps (n = 29)	Emergency Section (n = 76)	Elective Section (n = 22)	Normal Delivery* (n = 189)	Normal Delivery (Intact Perineum)* (n = 75)	All Deliveries (n = 470)
Urinary Incontinence							
Ante-natally	10/70 (14%)	4/25 (14%)	19/73 (26%)	3/20 (15%)	23/182 (13%)	15/73 (20%)	74/456 (16%)
At six weeks	44/60 (73%)	16/25 (64%)	19/54 (35%)	5/16 (31%)	89/156 (57%)	33/57 (58%)	210/377 (56%)
9–14 months	25/60 (42%)	11/25 (44%)	11/55 (20%)	4/17 (24%)	59/158 (37%)	20/58 (35%)	133/382 (35%)
Faecal Incontinence							
Ante-natally	0/70 (0%)	0/28 (0%)	3/74 (4%)	0/20 (0%)	4/182 (2%)	1/72 (1%)	8/447 (2%)
At six weeks	8/70 (11%)	5/28 (18%)	4/71 (6%)	2/20 (10%)	11/175 (6%)	3/70 (4%)	33/443 (7%)
9–14 months	5/70 (7%)	2/28 (7%)	3/71 (4%)	1/20 (5%)	5/177 (3%)	1/71 (1%)	17/446 (4%)
Dyspareunia							
Ante-natally	13/66 (20%)	6/27 (22%)	19/68 (28%)	3/19 (16%)	32/180 (18%)	10/71 (14%)	86/354 (24%)
At six weeks	32/43 (74%)	16/21 (77%)	19/46 (41%)	5/12 (42%)	82/131 (63%)	35/56 (62%)	192/314 (61%)
9–14 months	17/52 (33%)	9/20 (45%)	9/48 (19%)	3/15 (20%)	40/146 (27%)	22/60 (37%)	102/347 (29%)

at Burton were more likely to push actively (as directed by the midwife). (χ^2 (2 d.f.) = 10.0, $p = 0.0001$).

Four hundred and seventy women returned the questionnaire from a total of nine hundred and seventy women deemed to have received a copy (48%). The comparability of responders and non-responders is shown in Table 3. There was no relationship between mode of delivery and response. However, significantly more responders did not have an intact perineum, (χ^2 (1 d.f.) = 4.5, $p = 0.035$).

A comparison of mode of delivery in relation to the principal outcome measures of incontinence and dyspareunia is shown in Table 4. High rates of dyspareunia (29%(102/347)) and urinary incontinence (35%(133/382)) were seen. All the symptoms were worse at 6 weeks than they had been before or during pregnancy, or at 9–14 months after delivery. Similar rates of urinary incontinence and dyspareunia were seen regardless of mode of delivery. Numbers of women with faecal incontinence were small (4%(17/446)) and it was not possible to assess the effect of mode of delivery on this outcome.

For some women the incidence of incontinence was severe enough for them to wear a protective "pad". Sixty-five (15%) women reported that they still needed to wear

a protective pad at 9–14 months as a consequence of urinary incontinence. Twenty-four (5%) women stated that they were wearing a pad at 9–14 months as consequence of faecal incontinence. This question elicited more positive responses than the earlier direct question about the presence of faecal incontinence.

The results in relation to the audit standards are shown in Table 1. Four hundred and twelve (95%) women stated that they had been given information regarding protection of the pelvic floor, whilst 21 (5%) stated that they had not, with no statistical difference between the two centres. Three hundred and sixteen (77%) women stated that they had been given a pelvic floor exercise sheet, with no differences between the two centres in the reporting of this. Two hundred and seventy five (61%) women stated that they had been told that their anorectal function may be altered after giving birth (χ^2 (1 d.f.) = 1.6, $p = 0.209$), with no differences between the two centres. One hundred and fifty women (46%) stated that their Health Visitor discussed continence with them at a post-natal visit, with more of these delivered at North Staffordshire reporting that they had received this information, (χ^2 (1 d.f.) = 7.6, $p = 0.006$). Although the incidence of faecal incontinence was lower than the audit standard, both urinary incontinence and dyspareunia occurred more frequently than expected. The vacuum

was used as the instrument of first choice in 76% of cases. The numbers of third degree tears were very small. Although all four women with 3rd degree tears were given antibiotics, none of the other audit standards, in relation to this injury, were met.

The questionnaire also addressed a number of social and emotional issues in relation to incontinence and dyspareunia. Table 5 gives summarises the proportions of women affected in various ways by their symptoms.

In addition, eighty women (25% of those who answered the question) stated that dyspareunia had affected their relationship with their partner, of whom, 37 (49%) stated that it had put a strain on their relationship. A typical example of free text response was: "We argue because we don't have sex as often as we used to, because I'm nervous about it hurting". Twenty three women (30%) stated that they had intercourse less frequently or that they were put off intercourse, and three women stated that their relationship had ended as result of dyspareunia.

Although many women in the audit were suffering physical and/or social and emotional problems as a result of incontinence or dyspareunia, relatively few sought professional advice. For example, whilst 149 (47%) women stated that they had spoken to family, partner or friends about their problem, only 78 (24%) had spoken to a health professional. Of these only 31 women (40%) stated that the professional had understood the problem and suggested some treatment or advice, the remaining women stated that they had been told that this was "normal after having a baby", or that "it would go away by itself in time".

Discussion

This study has attempted to examine quality of care in relation to childbirth and link this to long-term outcomes. Vause and Maresh measured the extent to which evidence-based interventions are used in routine clinical practice, [22] but did not link their observations to measurements of outcome. The other studies that have looked at long-term outcome have made obstetric correlations but have not looked at issues of information, communication and awareness [1–3]. In addition, some of the studies looking at outcomes such as incontinence have been small and hospital based, [23] or have been on a selected group of women, for example, those women who suffered a third degree tear, or who had undergone an assisted delivery [24].

One of the strengths of this audit is the fact that it was carried out in two centres. There were strikingly similar results from both units. These are both busy district general hospitals serving mixed urban and rural popula-

Table 5 : Summary of comments made by responders

Impact	Cases
Felt Embarrassed	214 (48%)
Had to wear a pad always/often	61 (14%)
Felt differently about themselves	52 (12%)
Felt anxious or worried	44 (10%)
Felt miserable or depressed	32 (7%)
Couldn't go out unless there was toilet nearby	21 (5%)
Had to wear different clothes	19 (4%)

tions, with intervention rates similar to the national average. A response rate of nearly 50% to a single questionnaire may be considered reasonable. It is of interest that the response rates were similar in the two units despite different methods of questionnaire administration. We are aware that the questionnaire relied upon recall of antenatal and 6-week symptoms. Data obtained from a retrospective view will not be as accurate as that established in a prospective survey.

The prevalence of faecal incontinence in this study was lower than that found in a UK interview-based series of 906 women at 6–7 months postpartum (6.2% (which included 2% with existing bowel problems)) [3] but higher than a Swedish series of 278 primiparous women at 5 and 9 months postpartum (2% and 1%) [25]. Within the study using a different way of asking the same question about incontinence (with respect to use of pads) resulted in more positive responses. Clearly there is a need for a validated and reliable survey questionnaire in this area. Such a questionnaire has recently been finalised in Manchester (Bugg G, personal communication). There have been suggestions that elective caesarean section may minimise the occurrence of such problems [26]. It is of interest to note that in our study elective caesarean section did not appear to eliminate the risk, although the sample size was inadequate to properly address this question. This raises questions about the timing of pelvic floor injury. For example, does pregnancy itself, with hormonal changes and a growing fetus, have long-term adverse effects on the anatomy and function of the pelvic floor muscles and nerves?

The levels of urinary incontinence and dyspareunia are considerably higher than the standards chosen for this audit. However, these data are supported by observations from other studies [5,6,17]. This high incidence is continued 9–14 months post-delivery, demonstrating that these problems do not occur only in the immediate

postnatal period but may be present for a considerable length of time. Although the responders and non-responders were well matched in all respects, apart from differences in perineal trauma, it is possible that they were more likely to have symptoms, regardless of mode of delivery.

Although restricted rates of episiotomy are associated with improved shorter term outcomes, the associated increase in tears could be linked to other complications. There is limited data to inform this question and longer-term follow up of women in perineal care research studies is required [27].

The reduced length of labour seen in Stoke compared to Burton may be related to the use of a shortened partogram, modified from the Dublin Active Management Partogram, introduced 5 years ago [28]. The overall rates of instrumental delivery reflect the national average [29] but the increased rates at Burton may be related to the increased use of epidurals there. Epidural anaesthesia is recognised to be linked to an increase in length of labour as well as instrumental delivery [30]. Both epidural usage and length of labour are reduced by continuous companionship in labour, a component of 'Active Management'. It was not possible to measure attendance in detail but in North Staffordshire a larger proportion of women had continuity of carer. This may have contributed to the observed differences.

Although compliance with the audit standards was generally high, there were a number of areas where practice fell considerably short of the desired standard. The fact that only 61% of women stated that they knew that their anorectal function might alter after giving birth meant that a large percent of women were unaware that they may suffer problems. Given the levels of distress and uncertainty about what to do, when such a problem did develop post delivery, this is an area of particular concern. Similarly, the finding that 54% of women reported that their Health Visitor had not discussed continence with them suggests an alarming shortfall in practice. Since the data collection period, new guidance has been issued to Health Visitors, in consultation with obstetric physiotherapists, to ensure that continence issues are discussed with all women, and that appropriate advice is given. Thirty three per cent of women did not receive a pelvic floor exercise booklet. This is disappointing as they may have benefited from receiving this information.

Social and emotional issues were also covered in this audit and will be covered in more detail in a further analysis. The physical aspects of continence problems and dyspareunia correspond to feelings of poor self-image and may impact on a woman's lifestyle. A number of

women felt unable to leave their homes unless there was a toilet nearby, a problem seriously restricting daily activity. Dyspareunia not only impacts upon women themselves, but also on their relationships [6], some of which in our study had ended.

The fact that only a small number of women consulted a professional for advice or assistance demonstrates the sensitive nature of these problems and confirms findings of earlier studies [2,31]. Painful intercourse and continence problems are still considered to be taboo areas and women are reticent about asking for help, even if doing so might alleviate their problems. It is important that health professionals are able to give appropriate advice to those women who do consult them. It is clearly not only postnatal women who need to know about health problems that may occur after childbirth. Health professionals also need information and guidance on the management of these problems.

In our audit there was a high level of dyspareunia at 6 weeks post delivery. With regard to the current debate about mode of delivery, it is interesting to note that this problem was seen even in the group of women who had an elective caesarean section. Clearly, having an elective section does not guarantee that a woman will not suffer from painful intercourse. This has been confirmed by another recent study on sexual function after childbirth [32]. Furthermore, the present audit did not look at other possible morbidities associated with caesarean section, such as wound and other infections [6].

The small incidence of third degree tears (about 0.38%) is an important area for improvement. The expected rate would be at least 1–2% (and possibly more). If third degree tears are being missed at the time of repair, the likelihood of anal incontinence increases significantly. There is clearly a need for increased training and education in this area [33].

Clinical Governance dictates that NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care [34]. Although the concept of achieving quality is widely accepted, the reality of ensuring that services are clinically effective is complex. A wide range of measures have achieved limited success in terms of getting research into practice [35]. The next stage of this project is to introduce further improvements to the care we provide. The results were presented at an Inter District Audit meeting in October 1998 and have been fed-back to the two units involved. Further interventions planned include professional specific feedback with dissemination of this paper and adaption of established (IMPACT) guidelines for post natal care [36].

Conclusion

Further work should be undertaken to reduce interventions – primarily instrumental deliveries, the rates of which differed between the two hospitals. Improvements in a number of areas should be undertaken, including improved patient information, improved professional communication and improved professional recognition and management of third degree tears. It is likely that these measures would all lead to better health after childbirth. Although this study only included primiparae the same problems would be expected to occur in multiparous women, in some cases as a result of prior deliveries, so that the recommendations can be generalised to all women having a baby.

Competing interests

None declared.

Additional material

Additional File

Urinary and faecal incontinence – clinical form
Questionnaire.doc

[<http://www.biomedcentral.com/content/supplementary/1471-2393-1-4-S1.doc>]

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