Turning policy into practice: more difficult than it seems. The case of breastfeeding education

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Abstract

Breastfeeding is increasingly recognized as a health policy priority. To achieve real change in breastfeeding rates, those who advise and support childbearing women need to be appropriately educated and trained so that they do not disrupt breastfeeding. The aim of this study was to conduct a needs analysis about breastfeeding training among a range of people who advise and support breastfeeding women, including breastfeeding women themselves, to contribute to future provision of education. A qualitative, interview-based study was conducted in one northern UK city with practitioners who support breastfeeding, and breastfeeding women, selected using purposive sampling. Individual ($n = 73$) and group ($n = 9$) interviews were conducted. Detailed notes were returned to each respondent for checking. Information was organized into themes. Coding was charted to enable comparison by theme and case. Four main themes emerged: perspectives of breastfeeding women; feeling (un)prepared to support breastfeeding; fragmentation of knowledge; and provision of education about breastfeeding. A deficit in education and training for all professional groups was identified. There was little evidence of informal shared learning among professional groups, and no evidence of usual mechanisms to ensure education and practice standards. Doctors received very little formal education; most relied on other health professionals to provide this expertise. Students encountered a chaotic learning environment where it was not possible to observe sound, consistent practice. Voluntary breastfeeding supporters felt well-prepared. The results call into question the potential for health services to respond to policy recommendations that support increased rates of breastfeeding.

Keywords: breastfeeding, health professional education, health policy, qualitative research.

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Background

Exclusive breastfeeding for the first months of life is an important part of public health strategy in all countries (WHO 2003). In recognition of the crucial role infant feeding plays in health inequalities, the UK NHS Priorities and Planning Framework for 2003 to 2006 includes a target for all Trusts and Strategic Health Authorities to increase their breastfeeding initiation rates by 2% annually, focusing especially on women from disadvantaged groups. Breastfeeding is promoted as an important public health issue in both the National Service Framework for Children and Maternity (Department of Health 2004a) and the recent public health White Paper, 'Choosing Health' (Department of Health 2004b). There have been recent signs of improvement in Scotland and Northern Ireland. When corrected for the changed social class composition of the survey samples, however, breastfeeding initiation and continuation rates have remained largely static in England since 1980. Ninety per cent of women who end breastfeeding before the baby is 6 weeks old do so before they intended (Foster *et al.* 1997; Hamlyn *et al.* 2002). Changes are needed if breastfeeding initiation, and continuation, are to increase in line with policy aspirations.

Support offered by health professionals can make a difference to breastfeeding initiation and continuation (Fairbank *et al.* 2000; Sikorski *et al.* 2004; Renfrew *et al.* 2005). It has been shown in a large well-conducted study in Belarus, which changed the way in which health professionals worked using the structured UNICEF/WHO Baby Friendly training programme, that practice changes can have a dramatic impact on the numbers of women breastfeeding (Kramer *et al.* 2001). The persistence of harmful practices in hospital settings, however, can interfere with the successful initiation and establishment of breastfeeding (Renfrew *et al.* 2000). It is known that health professionals can exhibit inadequate knowledge and unhelpful attitudes towards breastfeeding (e.g. Beeken & Waterston 1992; Hyde 1994; Barnett *et al.* 1995; Garcia *et al.* 1998). Studies have identified little initial training for particular groups of health professionals (Pantazi *et al.* 1998; Cantrill

et al. 2003), and wide discrepancies among units and professional groups (Bleakney & McErlain 1996). There was 'appropriately low' self-confidence among paediatricians-in-training in regard to breastfeeding (Williams & Hammer 1995), and one study found that medical training did not prevent women doctors from supplementing their babies inappropriately when faced with their own breastfeeding problems (Arthur *et al.* 2003). Knowledge has been reported as best among health professionals who have breastfed themselves (Bleakney & McErlain 1996; Freed *et al.* 1996), but little is known about the impact of negative personal breastfeeding experiences.

Although training courses for health professionals have been developed, few undergraduate courses have been described (Dykes 1995). Virtually all courses described have been developed as occasional, non-mandatory courses at post-registration levels (e.g. Valdes *et al.* 1995; McIntyre & Lawlor-Smith 1996; Rea *et al.* 1999). Some courses, using the formal teaching of theoretical knowledge alone, without practice or problem-solving techniques, have had little effect (e.g. Freed *et al.* 1995). Occasionally, educators have worked to include opportunities for health professionals to explore the sensitive cultural and personal issues raised by this topic (e.g. Jamieson 1999), in line with the findings of a review of studies examining effective ways of enabling practice change (Thomson *et al.* 2005). Little evaluation of breastfeeding courses, which can vary from week-long courses to 1.5-hour sessions, has been conducted (e.g. Armstrong 1990; Moran *et al.* 2000; Wissett *et al.* 2000).

The aim of this study was to conduct a learning needs analysis to contribute to planning for future provision of education on breastfeeding. The views and perspectives of a range of people who support breastfeeding women were sought about the training they received relating to breastfeeding and what they considered necessary for improving such education in the future. The views of women themselves were also sought. This study is unique in exploring the views of a wide range of practitioners who advise, inform or support pregnant and breastfeeding women, and who might have influence over

decisions, or the outcome of women's feeding experience.

Methods

A qualitative, interview-based study was conducted.

Setting

The study took place in a large city in northern England with a mixed social and ethnic profile (population 715 402: 9% minority ethnic groups, mainly Pakistani and Indian; 62% owner occupied housing: Census 2001). It has one large teaching hospital NHS trust where maternity care is provided on two clinical sites, one community/mental health trust, five primary care trusts, and two universities providing education for health professionals, including medical, nursing, midwifery, health visiting and pharmacy practice students at undergraduate and postgraduate levels. At the time the study commenced (in early 1999), the initiation rate for breastfeeding in the city averaged somewhat over 50%, with the typical Western social class gradients resulting in higher rates among women from higher social class groups (Hamlyn *et al.* 2002). Approval was granted by local NHS and University Research Ethics Committees and by the National Childbirth Trust (NCT).

Sample

It was recognized that infant feeding behaviour and decisions may be influenced by a range of professional sources, including social workers, pharmacists and childminders, as well as core health professional groups of midwives, health visitors, general practitioners (GPs), paediatricians, obstetricians and nurses. The views of managers and educators were also sought.

An interview schedule was developed and tested with seven practitioners and women known to be interested in breastfeeding, to explore expert opinion on the issues and assist in identifying relevant professionals/others to be approached for further

interviews. The main topics were education and preparation for breastfeeding, and suggestions for future education provision. Purposive sampling was then used to approach a wide range of people with whom a breastfeeding mother might come into contact and those providing education for those groups. Respondents were sought in proportion to the extent to which they worked with breastfeeding women; for example, more midwives were sought than obstetricians. Where professional groups worked in different settings, respondents were sought from as wide a range of those working in different settings as possible (e.g. midwives working in neonatal care, community and postnatal wards), and to reflect a range of time since qualification.

Health professionals and others in contact with mothers were invited to participate by distributing letters in their place of work or study, describing the study and asking if they would agree to be interviewed. In addition, direct approaches by the study team were used to elicit responses from groups that did not respond to this open approach, including GPs, pharmacists, school nurses and childminders. Some approaches were through existing health professional networks known to the study team or the pilot interviewees. Others were through new routes (e.g. local training college for early years practitioners, listing of local pharmacists). Women were contacted by being given an information sheet on the postnatal ward or in the community through the NCT. All interviews and groups discussions were conducted by one interviewer (M.S.) over the course of one year. Once the study was explained and consent given, health professionals were interviewed in their place of work, and women either in the postnatal ward or in their own home.

Some group discussions were conducted with health professionals and voluntary workers in our target groups. In an effort to reach those who would not normally attend meetings on breastfeeding, time was allocated for discussion of this topic as part of scheduled meetings for relevant groups, such as supervisors of midwives, paediatricians in training and health visitors. One group of postnatal women agreed to attend a meeting convened especially for this work.

Analysis

Summaries of responses were made by hand during the interview and typed up by the interviewer. Reports were returned to each interviewee for checking. All but nine were returned; of these, three were known to have left the area or their job and one had died. Fewer than half of those returned ($n = 42$) included clarifications and additional thoughts. Group interviews were not seen by all participants but checked for accuracy by at least one person present. All returned transcripts were agreed by participants, and only transcripts agreed or amended by the interviewees were included in the analysis. Summaries therefore recorded the words from the perspective of the interviewer (i.e. 'You thought that ...'). Once the notes were checked and accepted for accuracy by the interviewee, quotes used for publication were then amended as if recorded in the first person (i.e. 'I thought that ...'), to avoid confusion for the reader. Wherever this has occurred, brackets are used to indicate the change [i.e. '(I) thought that ...'].

Following accepted conventions of qualitative analysis, information was taken from the typed interviews and organized into themes (Burnard, 1998). Coding was conducted primarily by one researcher (M.S.), with a random 20% independent check conducted by other members of the research team (M.J.R., J.M.). This was then transferred onto a chart, allowing comparison by theme and case. Data included under each heading reflected both the range and frequency of respondents' views on particular issues. This enabled comparative analysis of different perspectives or experience taking into account individuals' background and training.

Results

Seventy-three individual and nine group interviews were conducted, including the pilot interviews. Table 1 shows the backgrounds of those interviewed, and Table 2 shows the groups with which interviews were conducted. A small number of those approached directly did not agree to be interviewed, citing pressure of time as the reason. Other potential

participants including teacher trainers and school nurses responded to initial contact indicating that they felt they had been offered or had received no relevant training and did not feel there was any point in being interviewed. It was not possible to calculate the numbers of those who did not respond, as a result of the open approach to recruitment (e.g. leaving letters for midwives and GPs at their place of work).

Four main themes emerged: the problem – perspectives of breastfeeding women; feeling (un)prepared to support breastfeeding mothers; fragmentation of knowledge; and education about breastfeeding. Respondents also made recommendations for future provision of education.

The problem – perspectives of breastfeeding women

Perhaps unsurprisingly, women with older babies and women who had previously breastfed had most to say about their breastfeeding experience. Most women felt they had received good support from health professionals. However, several women reported conflicting information or not receiving the support they wanted. Conflicting advice was usually more confusing for women early in their breastfeeding experience and often related to detail such as how to hold the baby. For example, one mother breastfeeding her first baby who was 2–3 days old said:

Some things do fit ... and some don't ... how to hold her, they say 'do it like this' and there are lots of different ways ...

Another mother, whose baby had been in the Special Care Baby Unit (SCBU), found that although care could be good, it was also not consistent:

SCBU staff were really positive. ... However it depended who was on duty ...

Women feeding an older baby sometimes ignored information that did not make sense to them, but there were also some examples where different professionals had offered different, and sometimes value laden, comments. This is illustrated in the following report from a woman with a baby under 3 months old, who was offering a formula feed in the evening:

Table 1. Backgrounds of individuals with whom interviews were conducted

Background of participant interviewed	Interviews undertaken	Transcripts returned after checking
Staff with formal education remit (either full-time educators or with education role alongside their clinical responsibilities) in nursing, midwifery, general practice, obstetrics, paediatrics, health visiting, nutrition, pharmacy, radiography, health promotion, nursery nursing	23	20
Midwives in practice (range of settings)	14	11
Supervisors of midwives	3	3
Health visitors	3	3
General practitioners	4	3
Paediatrician	1	1
Paediatric nursing staff	2	2
Public health physician	1	1
Health promotion specialist	1	1
Family planning doctor	1	1
Trust managers	3	3
Support worker for ethnic minority women	1	1
Ancillary workers	5	3
Social worker	1	1
Women's health charity worker	1	1
Childminder	1	1
Pharmacist	1	1
NHS Direct spokesperson	1	1
Complementary practitioners	2	2
Voluntary trained breastfeeding supporters	3	3
Tutor of voluntary breastfeeding supporters	1	1
Childbearing women	18	18
Total individual interviews	73	64 (88%)

Table 2. Groups with whom interviews were conducted*

Health Visitor interest group	~16
Doctors undertaking paediatric training	~12
Supervisors of midwives	~10
Ancillary workers in hospital ward	~3
Voluntary breastfeeding counsellors	~6
Trainee breastfeeding counsellors	~5
Postnatal mothers in clinic	~14
Mental health care staff	~20
Graduates of breastfeeding and lactation specialist course	~6
Total group discussions conducted	9
Estimated total number of participants	92

*Numbers in each group fluctuated throughout the meeting: as the groups were not convened specifically for the study, some participants took an active part while others took the opportunity to leave the room or to occupy themselves with other activities. These numbers reflect the best estimate of those who actually participated.

The health visitor and midwives were discouraging about this [formula feeding] and explained about the effect it would have, but the doctor thought it was a great idea and that it would make (my) baby sleep longer.

Women who had experienced serious problems with breastfeeding generally felt less well-supported. One woman who changed to formula feeding when the baby was 5 weeks old due to poor weight gain said:

The midwife came every day, and talked with (me) at length. (I) realised she wanted to help but felt she had limited knowledge and gave snippets of information only and did not have enough specialist knowledge.

In contrast to some of their experience with health professionals, women encountered consistent support and help from voluntary supporters, as described by this mother:

(I) found the information from the NCT better, as it was fuller.

Even the input of voluntary supporters had its limitations, however:

(I) missed the breastfeeding part of the NCT classes and just had leaflets. None of these implied there could be a problem. Leaflets should be realistic and talk about soreness.

Feeling (un)prepared to support breastfeeding mothers

Many health professionals did not feel prepared to confidently support breastfeeding mothers. This was the case not only for practitioners who rarely encountered breastfeeding mothers but also for those whom breastfeeding was a large part of their role. In contrast to this, voluntary breastfeeding supporters felt well-prepared.

Doctors reported receiving very little formal education. Generally, the small amount of training they had received focused on anatomy, physiology and benefits of breastfeeding but did not prepare them to support breastfeeding women who encountered problems such as mastitis and poor weight gain. Most recognized breastfeeding as a gap in their education and they relied on other health professionals to provide this expertise. This is illustrated in the following report from a paediatrician:

The simple things need to be understood, the more you do the more you realise you do not know. (I) feel it is outrageous and scary that paediatricians do not get specific training in breastfeeding. You assume Health Visitors know more so you have to look to them.

Health visitors reported that breastfeeding support was 'a very small part' of their initial training. Some described receiving short lectures on breastfeeding, but these were either perceived to provide just 'the basics' or were biased by input from formula representatives. There was also a suggestion that each health visitor's ability to support breastfeeding women was dependent on the interest of the community practice teacher (CPT) responsible for their practice training and was thus very variable. One health visitor described an incident where the

CPT had suggested a mother change to bottle-feeding and said her impression was 'that the CPT knew only a little about breastfeeding'. Generally, health visitors who felt well-prepared to support breastfeeding women had gained this knowledge as a result of pursuing a special interest in breastfeeding (e.g. choosing the topic for a dissertation or attending a specific course) not as the result of standard training.

Even though midwives are often expected to be breastfeeding experts, they reported being ill-prepared to support breastfeeding women. Many had learned the anatomy and physiology of the breast and advantages of breastfeeding, but had not received any formal teaching to support breastfeeding women. There was a general feeling that this kind of knowledge would be learned on the job. This is illustrated in the following excerpt from a hospital-based midwife:

Did physiology, a diagram of the breast and an essay, 'nothing useful'. On placement in both courses (I) was told to 'watch the auxiliaries' as they were the ones who had experience and time, although they were not meant to be helping breastfeeding women.

Those who did feel well-prepared had usually attended extra training, either seminars or a post-graduate course specifically on breastfeeding.

There was a consistent view that voluntary supporters were well-prepared. One mother commented that:

NCT . . . was a combination of really good information and asking where you were coming from.

Several contrasted the problems caused by advice from health professionals with the support from voluntary counsellors, for example,

Help from a particular breastfeeding counsellor was particularly beneficial. One offered to go with (me) to the health visitor. In the end (I) went to another clinic to have the baby weighed. Health visitors need more training – they are more interested in the babies going up the centile charts than in breastfeeding.

In contrast to the normal language of health care, some health respondents used quasi-religious lan-

guage to describe practitioners interested in breastfeeding, including voluntary supporters. It appeared that being knowledgeable about and supporting breastfeeding was not the norm, but rather what practitioners did if they 'believed' in it:

- 'an evangelical approach to breastfeeding' (Women's health charity worker)
- 'the trainer was quite evangelistic' (NHS Direct)
- 'only the converted will network' (Midwifery lecturer)
- 'they are too fanatical' (GP)

Fragmented knowledge about breastfeeding: 'bits and pieces'

Staff reported that much of their knowledge about breastfeeding was gained from colleagues, experience or study days. Those with spousal or personal breastfeeding experience felt this was an important source of knowledge, but personal breastfeeding experiences were seldom discussed during education. Many useful teaching methods found in published studies (e.g. Thomson *et al.* 2005) had only recently been adopted in some courses, and the opportunity for 'deep' learning reported in relation to breastfeeding was unusual.

An apprenticeship approach, which aimed to address deficits in pre-registration training, was described. This was dependent on access to sound role models and was often imitative, in which snippets of information had been picked up, often lacking rationale. For example, in describing her experience of learning about attachment, a midwife working in neonatal care said:

All help was 'hands on'. Now all 'hands off'. Hands on can be used sometimes. More training about this might be useful.

Information transmitted in this piecemeal way limited health professionals' ability to defend good information in light of differing views, or clearly explain suggestions to mothers. Available information was sometimes seen to be out of date, as illustrated by the following excerpt from an educator of nursery nurses:

Some handouts used are 10 years old and it is not certain they contain up to date information – new guidance would be welcome.

The sense of fragmented understanding – of receiving and passing on of pieces of information lacking rationale – was reflected across a wide range of respondents. The low priority for reconciling theory–practice and experience–theory tensions to give a coherent picture was apparent for some practitioners:

(I) feel (I) have got a lot of 'snippets'... If there is no communication between the people who are giving you the snippets how do you know whether you know what you need to do? (GP)

The sense of fragmentation was also reflected in the feelings of mothers:

Midwives were more knowledgeable about birth but their information about breastfeeding was 'bits and pieces'. (Mother)

Those who recognized that their initial training had not equipped them adequately, and who wished to learn about breastfeeding, described complex, self-managed, and sometimes self-funded, ways of gaining this knowledge. They recognized that such knowledge would not be gained from the systems in which they worked, or had been trained.

There was an increasing, but still quite limited, use of research-based information in education and practice, resulting in the perpetuation of potentially harmful practices. For example, the feasibility of breastfeeding was seen as conditional on diet, sleep and lack of stress rather than effective milk transfer and pain-free feeding, demonstrating a lack of understanding of the evidence base and a reliance on outdated views. An informal cascade model of learning in post-registration education was an aspiration of some respondents who were educators, but this was restricted by the non-mandatory status of breastfeeding education.

Provision of education for breastfeeding

There was some evidence that education for breastfeeding was improving. More training had been

offered in recent years, with regular seminars and postgraduate courses. However, access to such courses was not always easy and the interested were most likely to attend rather than those most in need. It was also apparent that such training did not reach those for whom breastfeeding support was not a large part of their job.

Many respondents were experienced health professionals and had completed their training many years ago. This could, to some extent, explain the limited use of research-based information that respondents described. However, respondents who provide education to a range of professional groups suggested there were still many gaps in provision despite the increasing use of evidence based information in the curriculum.

Breastfeeding was not seen as a priority issue by many educators, for example, those teaching nursery nurses, children's nurses and the then-ENB (English Nursing Board) course for neonatal nurses. Courses with a small amount of input on breastfeeding tended to concentrate on the nutritional content of breast milk and sometimes promotion of breastfeeding, but rarely provided any educational content to develop skills to support breastfeeding women. Even midwives reported problems with having breastfeeding recognized as an important area:

Historically there has been far more pressure to provide professional update in babies' foetal monitoring rather than breastfeeding update as the litigation risks are higher in the former area ... (Supervisor of midwives)

An accredited, post-registration course taught in the city centre for some years, which included both biomedical and psychosocial aspects of breastfeeding knowledge, was almost universally valued by respondents. Those who had attended it reported increased confidence. A midwife, when asked what parts of her education she had found useful, said:

(I) needed to watch an experienced midwife giving advice. (I) got it in (my) course [basic training] 'by osmosis' picking up bits of advice, not like the (specialist breastfeeding course) where things began with 'because ...'. In spite of this, the course had restricted access, and there was no plan to use the skills of graduates in any structured way.

The future: recommendations for improving education for breastfeeding

Women were asked what kinds of training health professionals supporting breastfeeding women should have. Women's responses focused on communication skills. They emphasized the emotional aspects of care, particularly the need for health professionals to understand women's feelings and to offer support taking their emotional needs into account. Basic skills, such as being able to 'make sure the baby is on right', were also seen as crucial and sometimes lacking.

Respondents offered a range of suggestions for future education and learning about breastfeeding. Many felt it was important to enable consistent teaching and practice both across professional groups and between secondary and primary care, and that better coordination was necessary to achieve this. Several respondents felt that education should be multidisciplinary, involving all groups involved in the care and support of pregnant women and breastfeeding mothers.

Respondents suggested a broad base of appropriate education, with a sound evidence base, at pre-registration levels, as well as opportunities for post-registration education for updating. However, there was some disagreement about whether this should be mandatory for all staff in contact with mothers. Most health professionals for whom contact with breastfeeding women was a significant part of their work thought it should be mandatory, while others with less contact were more cautious about this.

There was a mismatch between the training women felt health professionals needed and the kinds of training provided. Women emphasized the basic skills required for breastfeeding and importance of understanding their feelings, but many practitioners said that this was not what they were taught. Developing skills for breastfeeding was seen as important by many practitioners, as illustrated by the following quote from a midwife:

They should work with a skilled person, someone who is capable, who knows and can teach. ... Mentors need to be particularly skilled in communication.

Practitioners did not simply wish for teaching by example but also wanted clear explanations and rationales.

Discussion and conclusions

This study used qualitative interviews with a purposive sample of health professionals and others involved in the care of breastfeeding women, as well as women themselves. We endeavoured to reach a cross section. Inevitably, however, there was a strong representation of those who were very interested in the subject area, including some who had been involved in the promotion and support of breastfeeding for some years. Participating childbearing women came from a wide range of social class groups and ethnic backgrounds, but all had initiated breastfeeding.

While note-taking rather than full transcripts could be considered a limitation of the study, the quality of the notes was ensured by returning them to respondents for checking and amendments. Respondents did amend material that did not fully reflect their views, and some used it as an opportunity to add additional points.

The likely positive bias in attitudes to breastfeeding in this sample has not resulted in a favourable picture of their education and preparation. Although there was strong interest and concern about this topic, participants from most professional groups felt inadequately prepared to support breastfeeding women, and there was a mismatch between what women wanted and what health professionals provided. Practitioners had achieved their knowledge and skills in spite of the systems in which they worked, rather than because of them. For some staff, there seemed to be a sense that colleagues who supported breastfeeding were zealots. This view has been reflected in the media coverage of a recent unpublished study (Frean 2005). If this view is reflected throughout the health service, it will allow breastfeeding to continue as a minority activity, seen as an optional extra for the committed. This could prevent breastfeeding from being built into basic, mainstream care, and there would be implications for the provision of routine continuing professional

development in breastfeeding, as some staff may not wish to attend.

A deficit in education and training for all professional groups involved with pregnant and breastfeeding mothers has been identified. There was very rarely evidence of informal shared learning among professional groups, and no evidence of involvement by normal mechanisms to ensure education and practice standards, such as continuing professional development for medical staff. Discussion of this issue within supervision for midwives was seen as being of low priority. There was no evidence of the 'deep' learning necessary to achieve the appropriate level of skill (e.g. Miller *et al.* 1994). Others have identified similar problems (Cooke *et al.* 2003; Cantrill *et al.* 2004).

Where sound educational opportunities were available, such as specialized breastfeeding and lactation courses, these were not built on or used by health services. Most graduates of this course were not called on by their colleagues for support and advice. The option of building on this resource to develop a system to which referrals could be made by less knowledgeable professionals was not used. Failing to exploit education and training in this way seems to be a poor use of NHS investment.

As a consequence of the problems described, students encountered a chaotic learning environment where it was not possible to observe sound, consistent practice, and to learn from it. This calls into question the potential of health services to respond to policy recommendations that support increases in the initiation rates of breastfeeding and exclusive breastfeeding until 6 months of age (Department of Health 2002; WHO 2003).

Simply addressing the educational issues is not enough. Changes in practice are also needed to allow those who have experienced sound education to use their knowledge in practice settings. The UNICEF Baby Friendly Initiative has launched good practice standards in the provision of pre-registration education (in the first instance for health visiting and midwifery) for university departments willing to offer sufficient time and content to allow qualifying practitioners to show evidence of being able to practise in line with Baby Friendly standards (UNICEF UK

Baby Friendly Initiative 2002). Care in the range of relevant practice settings should therefore be examined on a regular basis, through clinical governance mechanisms, to ensure that it is accurate and consistent. Further, practitioners should be encouraged to recognize and address their own learning deficits, perhaps through mentorship as well as formal learning opportunities.

The scale of the problems identified in this study, which are of long standing and include all professional groups working with breastfeeding women, suggest that not only may changes in education and practice be needed, but also large-scale changes in attitude and culture across the health service and wider society (Renfrew *et al.* 2005) if the public health policy goals for increasing breastfeeding rates are to be met. Not only could the national target to increase breastfeeding initiation by 2% annually (Department of Health 2002) prove difficult to achieve, but input by health professionals to supporting low-income women in line with the proposed new 'Healthy Start' scheme (Department of Health 2005) could prove to be ineffective.

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