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Abstract

In this article we examine the impact of evidence-based practice with its shift from individual autonomous practice based on personal experience and intuition (embodied knowledge) to collective control of work based on encoded knowledge (guidelines and protocols) on , midwife practice. We focus on the ways in which midwives use of partograms and associated vaginal examination to monitor and manage the progress of labour. The partogram represents (amongst other things) a timetable for dilation of the cervix during labour and women who fail to keep up with this timetable are shifted from a low to high risk category and subject to additional surveillance and intervention. In this article we draw on empirical evidence taken from two independent ethnographic studies of midwifery talk and practice in England undertaken in 2005-2007 and 2008-2010, to describe the ways in which midwives practice vaginal examinations during labour both complies with, while at the same time creatively subverts the scientific-bureaucratic approach to maternity care. We argue that the success of the labour care provision in the policy current context depends as much upon midwives' routine techniques of subversion, as it does upon midwifery compliance to standardised care policy objectives. Moreover, the suggestion is that although divergent in nature, each way of practicing is mutually dependent upon the other: the space afforded by midwifery creativity not only co-exists with the scientific-bureaucratic approach to care, it sustains it.

Introduction –

In this article we examine the impact on professional practice of clinical governance, measures design to standardise professional decision making using clinical evidence to reduce risks and increase efficiency. We examine the ways in which midwives are expected to manage labour and childbirth undertaking regular and intimate vaginal examination of mothers in labour to ensure that their labour is safe and 'on time'. When midwife examinations indicate that the labour is too slow and does not conform to the anticipated timetable then it becomes high risk and subject to medical intervention.

It is not our intention in the article to dispute the pervasiveness of the evidence-based approach to midwifery care which underpins practice, nor do we mean to challenge the enormity its hold upon the midwifery imagination, the data which we use in this article and have published elsewhere (Scamell 2011 and Scamell and Alaszewski 2012) provides adequate evidence for what Brown and Crawford aptly refer to as the self-regulation of 'deep management' (World Health Organisation 1996, 54) where practitioners police themselves to ensure practice is standardised. What we aim to do in this paper is use ethnographic evidence to engage with the ways midwives make sense of the limitations set out by the risk management mechanisms of clinical governance and how they creatively find space for both personal and professional autonomy.

We start this article with a background section that provides a brief introductory overview of current midwifery activity in the NHS and the technology of risk as it operates within the NHS maternity care provision in the UK. We then move on to discuss the the research studies which provided that the data which we use in this article. In the main Findings section of the article we use data from our field note and interviews data to examine how risk crystallises into meaningful action through midwifery talk and practice. We examine how institutional, clinical governance concerns with risk can, on the one hand, manifest into organisational technologies which centre the standardisation of care through the strict adherence to institutional protocols and meticulous record keeping. Yet at the same time a more covert meaning-making activities around risk exists where what might be described as quintessential midwifery skills, prioritising ideas around individualised care, faith in the physiological birth process and intuitive decision making, can find expression. In the Discussion section we develop the principle proposition that the success of the maternity service provision depends upon diverse and concurrent ways of knowing about and working with risk.

Controlling professional practice: clinical governance, and midwifery practice and the management of labour

Clinical governance and the standardisation of midwifery care

When the NHS was created in the UK in the 1940s individual clinicians in the new service were granted clinical autonomy, the right to manage and regulate their own work. However since the 1980s successive governments have seen such individual autonomy as problematic creating both costs and risks which have been evident in inquiries into avoidable harm and death (Alaszewski 2003 and Alaszewski and Brown 2012 pp. 114-139).

In 1997 the response of the new Labour Government was to launch a new initiative to improve the quality of professional practice and reduce risk through clinical governance:

A new initiative... to assure and improve clinical standards at the local level throughout the NHS. This includes action to ensure that risks are avoided, adverse events are rapidly detected, openly investigated and lessons learned, good practice is rapidly disseminated and systems are in place to ensure continuous improvements in clinical care. (Bryman 1998)

Clinical governance involves a major shift in the management of professional practice from a system based on individual autonomy in which individual professional use their professional judgement based on their personal knowledge and expertise to a system based on collective self-regulation in which all professional are expected to use encoded knowledge (Lam 2000), that based on evidence where possible, to adopt a systematic and uniform approach to decision-making care. As Flyn notes there is a tension in modern society 'between decisions governed by formalised rules and procedures, and action determined by tacit knowledge and individual expertise (2002 p.161). Clinical governance seeks to resolve this tension through the use of formalised rules and procedures. Clinical governance is a form of collective self-regulation based on what Harrison refers to as *scientific-bureaucratic* medicine where:

'a range of standardised procedures, workflows, protocols, templates and timescales, aim[s] to produce an audit trail against which key performance targets may be measured' (Walsh 2001, 146-146p 26).

Clinical governance and midwifery: timetables and the vaginal examinations

The National Institute for Health and Clinical Excellence (2007), a government-funded ‘arms-length’ agency has established guidelines for midwifery practice. These guidelines specify that all settings in which women give birth should come under the ‘oversight...of multidisciplinary clinical governance structures (p. 10)’ and that all individual births should be subject to surveillance and checking:

In all places of birth, risk assessment in the antenatal period and when labour commences should be subject to continuous audit. (The National Institute for Health and Clinical Excellence 2007 p. 10)

The National Institute for Health and Clinical Excellence report (2007, 33) labour provides a framework for the midwife decisions and activity by dividing normal into three stages based on physiological activities. By providing time limits for key stages the report effectively created a timetable for labour (see Table 1) and recommended that midwives should monitor the progress of the crucial part of labour, the established second stage against this timetable by recording the dilation of the dilation of the cervix on a graph or partogram: .

A pictorial record of labour (partogram) should be used once labour is established... Where the partogram includes an action line, the World Health Organization recommendation of a 4-hour action line should be used’ p. 26

Table 1 NICE definition of stages and time limits

Stages and sub-stages	Definition	Time limits
First Stage of labour		First baby, average 8 hrs, max 15 Subsequent, average 5, max 12

Established labour	Regular painful contraction during which cervix fully dilates from 4 cm	Should dilate at least 2cm in 4 hrs Dilation should not slow
Second stage of labour		
Passive phase	Fully dilated prior to involuntary expulsion contractions	
Active phase	Baby visible and involuntary expulsion contracts and/or active mothers effort to give birth	First baby 3 hours, intervention after 2 hours Subsequent babies 2 hours, intervention after 1 hour
Third stage of labour	Following birth expulsion of afterbirth and membranes	30 min with active management and 60 with physiological

The only way that a midwife can establish that labour is established and can monitor the progress of that labour is through an intimate and intrusive action, a vaginal examination. The guideline indicate that following the vaginal examination that identifies the cervix is 4 cm dilated and labour is established, the midwife should ask to exam a woman every four hours (Royal College of Obstetricians and Gynaecologists 2011) to ensure that she does not experienced increased risks by labouring for too long.

A vaginal examination is an intimate, internal clinical examination performed by midwives (and or obstetricians) primarily to assess progress in labour. The vaginal examination can be seen as being part of the safety technology employed by practitioners to reduce risk by

ensuring and protecting the wellbeing of mother and child. The premises upon which the routine practice of vaginal examination rests are that

- Spontaneous labour follows a predictable and lineal timetable
- labour progress can and should be measured against this expected timetable
- progress should be both closely monitored and recorded in the maternal notes – using a partogram and that midwives should intervene if a women's labour lags too far being the expected timetable
- without this surveillance birth is more risky, with increased risk of harm to both the mother and baby.

Although the evidence-base for this timetable is not clear and midwife researchers have expressed concerns about the routine use of the partogram to monitor all labours (Woodward 2003, 18-33; van Dijk 2001; Wood 2011, 42-43), the performance of regular vaginal examinations in labour to assess both progress and risk, continues to be a crucial component of standardised midwifery practice in the UK (World Health Organization 2010). Practicing midwives in the UK assess the progress of all labour using vaginal examinations, to check how whether the labour is 'on-time', that is conforms to the partogram timetable (Bewley, Newburn, and Sandall 2010, 1297; Walsh 2000, 276-278; Linty 2011, 35; World Health Organisation 1985, 436-437). As prescriptive health trajectories or time-tables, once recognised and legitimised through routine activity, it becomes the duty of health care professionals to detect any deviations from that norm (Garcia 1998). Midwives practicing in the UK are responsible and accountable for ensuring that each individual labour is subject to constant surveillance through the practice of regular vaginal examinations in an effort to detect risk and normalise (through medical intervention) those labours which fall are deemed to be too slow and by implication, what is assumed to be low risk (Walsh 2000, 276-278; Wrede, Benoit, and Sandall 2001, 28; Wray and Deery 2008, 227-243).

We have noted in this section health care in the UK has shifted from a system of clinical autonomy with independent practitioners using their knowledge and experience to make decisions and manage risk to a system of clinical governance in which professional practice is collectively managed through a system of agreed rules and procedures creating a scientific–bureaucratic approach to care. Within midwifery individual midwives are now required to

use an agreed timetable embodied in the partogram to manage labour so that they identify labours that are too slow and take action to minimise potential risk to mother and baby. To maintain their surveillance of the cervix, midwife are expected to undertake regular and intrusive internal vaginal examinations. Since there is little or no evidence on how midwives undertake this work in this article we explore the interpretive work midwives have to do when translating the scientific-bureaucratic approach to care, set out through institutionalised protocol, procedure and record keeping, into meaningful action.

Methodology: two studies

This article draws on two ethnographic research studies that used field study methods, participant observation and linked interviews in NHS birthing, settings to examine the ways in which midwives organised and talked about their work. The two studies had different foci, Study I examined midwives' and women's experiences of vaginal examination in labour and Study II examined how midwives made sense of and talked about risk. However given the centrality of partogram timetable and its links to vaginal examination both studies provided rich data on how and in what ways individual midwives used partograms and how this shaped their practice, management of risk and interactions with birthing mothers, especially through vaginal examinations. As we will show in the Findings section there was amount of consistency between the findings of the two studies even though the two investigations were geographically and historically distinct in that they were separated by 3 years and around 300 miles.

Both the studies used to inform this article had an interest in the micro analysis of midwifery talk and practice. While this research design was applied in broadly the same way, the emphasis and framing was slightly different in the two. Study I took place in England and involved 20 women and 10 midwives and was based on a feminist critical ethnographic approach (World Health Organisation 2000; Worth 2002). This investigation took place between 2005 and 2007 and of the researcher (xxxxxxx) concentrated exploring midwives' and women's experiences of vaginal examination in labour. Study II adopted an ethnographic discourse analysis approach (Esegbona- Adeigbe 2013, 32-36) with an emphasis on sociolinguistics, examining not only practice but more particularly the ways in

which midwives talked about and reflected on practice and in particular risk. This study took place between 2008 – 2010 in the South of England and the researcher (xxx xxxxx) worked along-side and talked to 33 midwives responsible for the delivery of intrapartum care in various clinical settings.

Both researchers were qualified midwives who engaged in participant observation, observing and talking to midwives about their practice and recording their observations and conversations in detailed ethnographic field notes and ethnographic interviews. In both studies data analysis took place alongside data collection so that emerging findings influenced choices around data collection techniques, sampling target interview structure and so on. In Study II analysis was aided by the qualitative data analysis software Atlas ti. In Study I all analysis was performed manually.

Access and ethics

In Study I the midwifery participants were accessed through the primary sample group of 20 birthing women. The researcher (xxx xxxx) attended the labours of these women and thereby gained access to her secondary sample – the midwives. The second study took a very different approach to recruitment which involved self-selection following a recruitment and information campaign targeted at all midwives working in the selected sites; subsequent recruitment was achieved through opportunistic, snowball technique (Levy 2004, 57-71) with some attention to purposeful structuring to maximise diversity (n33). Written consent and sequential verbal consent (Davies 2011, 38-42) was gained from all those involved in both studies and all transcripts and field notes were ‘cleaned’, with identifying features removed, prior to analysis and all the names used in this article are pseudonyms. Both researchers obtained the required research governance approvals through the sponsoring organisations and the hosting NHS Trusts. The Heads of Risk, Assurance and Legal Services and the Heads of Midwifery of the relevant services reviewed and approved the project protocols before the fieldwork started.

Findings

In this section of the article we will examine the ways in which the midwives in our study responded to and managed the scientific-bureaucratic, institutional protocols designed to guide their practices and ensure that they identified and managed risk correctly. We are particularly interested in how and when these midwives felt that they had to breach these protocols.

Self-regulation and the standardisation of care

All the midwives (total n43) involved in the two research projects were uneasy with the idea of rule breaking, they tended to see this as unnecessary risk-taking. Despite the constraints on their imposed by a protocol driven, standardisation approach to maternity care, when asked directly, the midwifery participants supported guidelines albeit as as Andrea, a senior community midwife involved in Study II, did in the following discussion recognising that the rules can only provide the context or ‘boundary’ for individual decisions::

I understand the need for protocols and guidelines because otherwise you wouldn’t know who was who and what was what. So I think you need those boundaries but within I think you need to assess each individual on their own merit and make their particular plan based on the whole picture.

When asked about their adherence to their adherence to protocols midwives in our study were often keen to acknowledge their understanding of the legal requirements for adherence, the level of monitoring and accountability. Dianna for example, another community based midwife in Study II saw her practice bound by the institution’s protocols aimed at standardising care:

Researcher: So in some respects protocols can restrict your better judgement?

Dianna: I think in some respects they are, they can. We are always told that protocols are there for guidelines they don’t have to be abided by. Having said that, if you go against the protocols people are likely to haul you up on it. Every time.(Study II)

Hilary, a midwifery manager in Study II said that she felt that her contract of employment made her feel obliged to adhere to protocols even when she did not agree with them::

‘erm, just because, because I signed a contract with them that I feel duty bound to adhere to the variety of different protocols and guidelines that have been put in place for me to work by. I don’t agree with a lot of them... I just think, I can’t, I just have to go along with what they say even if I don’t agree with it. (Study II)

Debbie, a community midwife participating in Study I, when describing transferring birthing women from home to hospital talked about how the pressure to conform to prescriptive care protocols and in particular to undertake vaginal examinations so she could let staff know how dilated the cervix was. Debbie often felt compelled to do a vaginal examination:

I have felt I needed to know that the cervix was doing before being able to transfer them in [to hospital] because I knew I'd be joining the regular system and they wouldn't tolerate me saying 'Oh I don't know how dilated she is. (Study I)

Thus when asked directly about protocols and guidelines midwives, as employees, said that they had to accepted the the standardisation of care and practice as encoded in and represented by institutional guidelines, even when they felt that these protocols did not support good practice. However the midwives in our studies accepted the importance of minimising risk and accepted that protocols were designed to minimise risk. Indeed when they felt that their protocol-based practice was challenged they reacted hostilely. For example in Study II, the research took part in a study session in which an independent midwife describe allowing a mother to labour in her own time and therefore not following the NICE guideline partogram timetable. During the discussion that followed the presentation several of the midwives made little effort to hide their contempt openly saying 'that's just ridiculous. No its worse than that, it's darn right dangerous.' When the independent midwife tried to defend her practice, another NHS said: 'Well that may well be how you do it dear but it is not how we do things in the NHS. I would hate to be an independent midwife.'

Other hidden ways of knowing: using intuition and experience

However nestling quietly alongside this apparent acceptance of the organisation's clinical governance agenda and its commitment to minimising risk were other more covert and subversive ways of knowing and doing. This hidden knowledge was in many instances irreconcilable with standardisation of care principal of clinical governance. This is not to say that these midwives were ever in the business of ignoring risk, on the contrary their hidden knowledge and covert activity centred around a concern to reduce risk. The reason this less visible way of being a midwife was at odds with the encoded knowledge ratified through the institution's risk management technologies was because it involved a process of risk reframing where tacit professional discretion and intuition could be legitimately expressed

and acted upon. Interestingly those midwives, who openly talked about relying upon hidden knowledge in their daily work, understood that expressions of such tacit midwifery could only take place at the margins of daily activity.

For example, Silvia, a senior midwife working in a birth centre described how she managed some labours, explaining that she just knew:

That baby is just going to come. And that is intuition. We do use intuition but we know... if someone sat in front of me, when a mistake has been made and I say: 'I used intuition', they are going to say: 'What are you talking about?' So that is the world we live in, isn't it? I suppose official midwifery can be quite different from actual midwifery?' (Study II)

Similarly Mary, a community midwife explained

we are told with our notes... you, you write your notes very carefully because basically for the next 25 years you can be called to account for them. And how can you possibly put in there, my instinct tells me that?. So it is one of those things that you have got to keep to yourself or maybe share, you know I will sometimes say, when you do a hand-over I will sometimes say 'Actually I haven't been very happy with this or that' (Study II)

Thus the midwives in our studies were aware of protocols with their encoded knowledge but they also recognised less visible and more personal ways of knowing such as intuition.

Risk reframing: vaginal examinations and the partogram timetable

Given the strict timetable encoded in the partogram, midwives in both studies had developed practices that gave them a degree of control of and flexibility within the timetable. In Study II Donna a community midwife referred to '*the midwife's VE*' (vaginal examination) when describing the ways in which she and her colleagues did not accurately record their findings, for example delaying recording that the cervix had dilated to 4 cm, and delaying that a mother had started established labour:

Donna: Well, you can always do a midwife's VE of course [laughs].

Researcher: What is that?

Donna: I'm not sure I should say [laughs]. Oh well, you know, it is a time when you have to be a bit... you know, liberal with how you record your findings. (Study II)

Midwives were concerned that when they identified the on-set of established labour, they were effectively starting a stop-watch and this would lead to an implementation of a raft of seemingly benign intensive surveillance technologies to ensure the labour went to timetable

and if it did there would be another set of interventions. Therefore midwives could and did use creative acts of discretion to prevent the stopwatch starting. For example the following extract is from a conversation between a midwife, Jane, and a labouring woman, Samantha, following a vaginal examination that took place shortly after her admission. The examination indicated that Samantha was 5 cm dilated and therefore in established labour but as the following extract from field notes indicates the Jane the midwife chose to record it as 2-3 cm there was 'no need' to start the more intensive surveillance:

Jane told her (the mother) that she had done well but that she was in the early stages of her labour.

'Between you and me,' she said 'your cervix can stretch right up to five centimetres but we shan't write that down just yet, there is no need. It will only mean a load of hassle.'

Jane recorded in the notes that the cervix was two to three centimetres dilated; importantly, Samantha (the mother) was not diagnosed as in labour...

Later, during handover, Jane described Samantha as being five centimetres dilated, but explained to the midwives who were taking over care that she hadn't bothered putting it in the notes like that. None of the on-coming staff reacted to this and nodded in approval' (Field Notes Study II).

The reaction of the other midwives in the staffroom during this handover was particularly interesting as it suggested that the underestimating of examination results, in relation to cervical dilatation of the cervix, was common practice. This practice has been recorded elsewhere in the professional literature indicating that this may well be the case (Linty 2011, 35; Nursing and Midwifery Council 2008). The rationale for postponing the onset of intensive surveillance appeared to justify this covert practice and was spoken about freely during midwife-midwife, and even midwife-client, talk. By underestimating Samantha's dilatation, Jane was able to avoid having to commence labour care monitoring, allowing Samantha to labour at her own, individual pace, which may or may not fall within the standardised protocol's trajectory. Or put another way, by recasting the encoded knowledge underpinning the standardised management of labour protocol as a source of risk in itself, Jane, with the approval of the other oncoming midwifery staff, was able privilege a professional judgement which functioned to subvert the confines set by the institutions primary adaptations.

Midwives indicated that they wanted to minimise risks to the pregnant women and at times saw the prescribe pathways and timetables as potentially hazardous so at crucial points in the

process when the clock started ticking; start of established labour and onset of birth midwives created 'grey areas' that enabled them to delay the start of the stop watch. As Nina an obstetric unit midwife noted how she delayed the 'end' of the first stage of labour when her experience and personal knowledge indicated that a other needed more time for a normal birth by recording that there was an anterior lip, that is the baby's head had not having quite passed out of the womb into the vagina:

'I might document that there's an anterior lipⁱ when there isn't and that ... a lot of that is because I know I'm going to get a normal delivery in here but I know it's going to take [the woman] a bit longer and I don't want them to start pushing yet so if I say she's an anterior lip that'll buy us a bit more time ...' (Study II2)

Participants from both studies felt that they had to use their own experience and considered professional judgement to 'make the system' work and to override the timetable or at least delay the start of the stop watch when they felt that the labouring woman could do with more time so that they had the opportunity to birth spontaneously in their own time. However there were also occasion on which midwives created delayed the clock to suit there own convenience. For example in Study I there was some evidence of self-interested manipulation of time. For example Nina who indicated that she identified a 'lip' to buy a labouring women time also acknowledge that she sometimes invented a lip if she was coming to end of her shift and wanted to pass responsibility on a midwife on the next shift:

'Conversely, if [the woman is] fully [dilated] and I'm going home in a minute, I don't want to start pushing ... I'm going to turn her on her side and say she's got a lip and let the next person take over' (Study I)

The midwives in both studies were willing to disregard the partogram timetable when they felt it was safe to do so and when there were potential benefits, usually for the labouring women but on occasion for themselves. However, data from Study I shows that when midwives did disregard the official timetable they sometimes felt the need to reassure themselves that the labour was progressing satisfactorily and to do this some midwives adopted a covert strategy to gather more clinical information on the progress of the labour; they undertook undocumented vaginal examinations, sometimes without the permission of the labouring mothers. These covert examinations were referred to as : *the quickie*. An obstetric unit midwife, Gemma, described the quickie in the following way:

Gemma: Oh the quickie, well, a quickie, you have a quick feel to see what you're doing. yeah.

Researcher: And what's the difference between a quickie and a regular vaginal examination?

Gemma (without any hesitation): 'Oh the quickie's undocumented' (Study I).

For some midwives the unofficial quickie has become part of routine practice. For example in Study I the researcher recorded the use of the quickie in the following way:

Anna (the mother) was in the second stage of labour and, although I could not see what was happening, I hear her give a small yelp of discomfort and protest 'Ow!'.

Belinda, the midwife, apologises saying 'OK, just checking'. It was apparent that she had done a vaginal examination without consent and I am shocked at what I have just witnessed.

In some birthing units the disregard of the official partogram timetable and the use of the quickie to monitor women's labour was part of routine albeit covert practice. Claire an experienced midwife from Study I describe how she observed and learnt about the practice which she refers to as 'top dip' in the birthing unit she trained in:

Well,, when I was in the unit where I trained I used to notice there were two ways in which the qualified midwives practised, and one was the big procedure and the four-hourly thing, and the other was they used top dip in all the time! We weren't encouraged to do that, it was sort of 'don't look at me, I'm just going to find something out'. (Study I).

Developing an alternative approach to practice: managing documents

While midwives claimed that they accepted the principals of clinical governance, with its emphasis on standardisation care grounded in official timetable to ensure safety and minimise risk, in practice they often subverted and disregarded the official timetable and engaged in covert forms of practice, for example the quickie. Effectively different ways of knowing about birth and being a midwife co-existed. The drivers behind this creativity were diverse, ranging from a concern to provide mothers with an opportunity for a normal birth to managing the conflicting demands of the job.

The disregard of the official partogram timetable and the use of alternative techniques to monitor the progress of labour such as the quickie, was so systematic that they formed part of an alternative form of midwife practice, albeit one which was covert. For example Claire an experienced midwife describe how she observed and learnt about this alternative approach to practice while she was training:

Well,, when I was in the unit where I trained I used to notice there were two ways in which the qualified midwives practised, and one was the big procedure and the four-hourly thing, and the other was they used top dip in all the time! We weren't encouraged to do that, it was sort of 'don't look at me, I'm just going to find something out'. (Study I).

A key element in this alternative approach to practice is the management of information and recording. As we have already noted some midwives deliberately under documented the findings from vaginal examinations so that they could retain control of the situation. As Karen, a hospital midwife indicated that she concealed information that a woman was fully dilated and therefore ready to give birth by underreporting her finding and reducing the chance that there would be medical intervention that would curtail the length of labour:

Oh (laughing) I was with a woman last week and I assessed her and she was fully [dilated] and I just thought

'They [the doctors] don't need to know that' so I wrote down that she was 8cms [dilated]' (Study I)

By under recording her findings in the medical records Karen was able to actively enervate the limitations imposed by policy based surveillance regimes in an effort to create space where the mother could labour *in her own time*. Through this creativity this midwife was able to reframe her risk priorities and express her professional discretion rather than confine her practice to the scientific-bureaucratic restraints set by the labour progress trajectory set down through the hospital's partogram and protocols. By under recording the mother's cervical dilatation in the official record Karen bought herself and the labouring mother she was caring for some time.

Given that this alternative approach to practice is not officially sanctioned and such underreporting could result in disciplinary action, learning about it has to be covert and junior and student midwives have to learn about it by working alongside and observing experienced midwives with learning being a form of 'we can know more than we can tell' (Polanyi 1966 p4). Hattie an independent midwife described her covert learning about the ways in which midwives could create 'grey area' in the following way:

You have midwives having ridiculous conversations where, you know, you're in there as the student saying 'oh I think she's fully dilated' and your midwife who's with you is saying 'oh she's probably got a bit of a lip' and [you're thinking] 'I'm sorry, I'm sorry, am I being a bit slow here?' (Laughs) 'Am I supposed to say she's got a bit of a lip? You know, I'm thinking 'this is mad, this is mad...' (Study I)

It is clear that while midwives publically endorse the prescribed evidence approach to practice in which their actions in relationship to labour such as vaginal examinations are oriented to and controlled by the official timetable embedded in the partogram, there exists an alternative approach to practice in which individual midwives use their professional judgement to subvert the timetable creating delay and space for labour to develop in its own time and own speed.

Discussion

Risk and time As Brown, Heyman and Alaszewski (2013) have noted time is inextricably linked to risk as risk involves the possibility of undesirable outcomes in the future and risk management involves minimising the possibility of such undesirable outcomes. Indeed the development of risk and risk management can be link to the development of standardised and abstract time, time measured by mechanical and electronic devices and is abstracted from and imposed on the rythms of everyday life of individual and group living. For example the influential Royal Society (1993) study report specified that was an adverse event that occurred during a specified time period, by implication such a period must be one that can measured and objectively defined. The development of such abstract time systems underpins the development of timetables. For example in the early 19th century in England as the railway system expanded railway companies created timetables based on standard measured time effectively standardising time across England using London or Greenwich Mean Time. Such timetables provided a mechanism for predicting and managing the future, so that passengers could plan journeys, the railway companies could manage resources and could reduce the likelihood of accidents; if trains ran to the timetable they should no collide. The partogram timetable also designed to reduce uncertainty and manage the future. By creating a time framework for labour it enables midwives to different mothers who are having a normal and safe or low-risk labour; that is each stage takes place within the specified time, from mothers whose labour is delayed and are therefore classified as high-risk and are seen as needing need more surveillance and possibly medical intervention. Midwives tend to see the partogram as part of evidence practice, that is it is based on systematic evidence from past cases. However such evidence could only be obtained before the timetable and the associated

risk classification become part of prescribed practice as once the form part of practice they are part of a self-fulfilling prophecy, women whose labour is delayed are treated as high risk and subject to intervention associated with that categorisation making it impossible to assess whether or not the delay would be associated with other negative outcomes.

Abstract measured time is a key feature of modernity, but it continues to exist alongside and interactive with personal time. Abstract standardised time is ubiquitous in late modern societies; many individuals wear watches and most listen to radio or television that is programmed on and continually informs the audience what the time is. Standard time provides the context for personal time but individuals chose how to use this time. For example the length of an individual's life or marriage is measured in standard time but individuals chose identify and mark out significant time passage such as birthdays or wedding anniversaries. Furthermore individuals can actively manipulate time. For example xxx and Brown examined the ways in which individuals respond to a negative cancer prognosis that gives them a defined maximum length of life, one expressed in standard time of weeks or months left to live. However xxx and Brown show how these individuals use different ways of thinking about life, for example focussing on the immediate here and now and disregarding their inevitable death.

All the midwives in the study were aware of the importance of time in labour and most of the time accepted and worked within the partogram timetable undertaking regular vaginal examinations to check that women's labour was going to schedule. However occasionally midwives chose to disregard the timetable sometimes deliberately misrepresenting the results of their vaginal examination, for example by recording 2-3cm dilation when they felt it was actually 4cm or indicating that there was a 'lip' so that the second stage had not started even though the cervix was fully dilated. . In some cases the standard time progress of a woman's labour clashed with midwives own time, for example full dilation coincided with the end of a shift and the midwife invented a lip so she could hand over the woman and finish her shift. However more often midwives chose to do this because the felt that the partogram timetable imposed an artificial and potentially risky constraint on a woman's labour. They were confident in and preferred to rely on the on the signs and signals from the labouring woman's body. They felt that the prescribed timetable was too rigid and they wanted to make it more flexible so that it would fit better with the woman's own body rhyme increasing the probability that the woman would have a spontaneous vaginal delivery and reducing the

probability of unnecessary medical intervention. The midwives did not substitute their own timetable for partogram timetable rather they relied on their observation of the woman's body. Much of this was external, for example frequency and nature of contractions but to confirm this they occasionally undertook internal examination and since they had moved away from the official timetable and did not want to record the findings some of these examinations were informal and undocumented 'quickies'.

A2 Risk, timetables and the control of professional work

During the 20th century there was an on-going struggle over the control of work. In the early part of the century this struggle was most evident in the industrial sector and central to this struggle was the control of time. Time was a key part of Taylor's attempt to introduce 'Scientific Management' to the work place. Taylor (1911) noted how workmen developed different ways to complete tasks and argued that through systematic observations, 'accurate, minute, motion and time study', managers could identify the most efficient methods and train workers to use them. Taylor's work laid the foundation for the mechanisation of work and the development in the 1920s of assembly line production in which the speed of the assembly line provides a time structure for the work of individual operatives (Hounshell, 1984). This Fordist system of production was a sophisticated mechanism for controlling and disciplining work. However, as the Hawthorne experiments in the early 1930s (especially those involving the production line in the bank wiring room) and subsequent research such as Benyon's (1973) at Ford factory in Dagenham found the assembly line did not completely shift the control of work and time to managers. Workers could and did influence the speed of the line through, social norms about work rates and productivity levels.

Until the 1970s, service work especially that undertaken by professionals was not subject to the same scrutiny, for example when the NHS was created in the UK in the 1940s clinicians in the new service were granted clinical autonomy, the right to manage and regulate their own

work. Despite evidence in the 1950s and 1960s that front-line workers subverted the official aims of service organisations to make their work more manageable and to fit their view of the world, it took the economic crisis of the 1980s and the rising cost (and increased media coverage of evident failures, especially ‘preventable’ deaths) of the health care system to stimulate state concern about the quality of professional work and to seek to change how professional practiced.

The control and standardisation of clinical practice is a central part of clinical governance but rather than being an external managerial system it has been presented as a change managed and led by clinicians through the development of evidence-based practice. The shift involves a move from individual autonomous practice based on personal experience and intuition (embodied knowledge) to collective control of work based on encoded knowledge (guidelines and protocols) and a scientific-bureaucratic approach to care. This collective control of practice involves a system in which clinical outcomes of individual clinicians (risks in the future) are monitored to ensure that they are based on agreed guidelines (decisions in the present) which are grounded in clinicians systematic reviews (evidence from the past). , Harrison (2001, 146-146) has described the shift in clinical practice in the following way:

[It] translates professional practice into a range of standardised procedures, workflows, protocols, templates and timescales, [and] aims to produce an audit trail against which key performance targets may be measured. (Harrison 2000:26).

Midwives in both our studies accepted the logic and legitimacy of evidence-based practice and as we have noted they were hostile to and critical of practitioners who overtly and explicitly rejected this approach to practice. Thus our findings support Brown and Crawford’s (1996, 54) view that health care practitioners working in the NHS have ‘become self-regulating ‘deep(ly) managed’ subjects under a largely hands-off management regime’ (p 67). Far from suggesting that the midwives have not successfully internalised the scientific-bureaucratic approach to care, we are simply suggesting that this internalisation should not be thought of as totalising. that the the midwives involved in these studies ostensibly sought to comply standardised behaviours expected of them by the encoded knowledge of the

institutions in which they practiced, for example they accepted the partogram timetable for managing labour, they undertook the prescribed vaginal examinations, recorded the findings on the partogram and summoned help when the labour exceeded time limits.

However these same midwives were willing and able to engage in covert activities that undermined the timetable and concealed risk. In their day to day practice the midwives involved in these two studies were busy balancing two divergent and concordant concerns with risk. On occasions, these midwives chose to understand the organisational protocols aimed at regulating and standardising care as a security against the low probability but high consequence risk of harm to the labouring women and her baby. This understanding manifest in enthusiastic compliance with the organisation's risk management technologies. However, on other occasions, these same midwives actively and creatively refuted and resisted those very same technologies as they were committed to reducing the risk of medical intervention, potentially high probability with potential of harm to mother and baby. This means that the managerial and policy maker's version of the organisation's activities were both realised and simultaneously unsettled through midwifery activity. If midwives are seen as the front-line workers, or as Lipsky defines them, street-level bureaucrats then the:

decisions of street-level bureaucrats, the routines they establish, and the devices they invent to cope with uncertainties and work pressures, effectively become the public policies they carry out' (Lipsky, 1980: xii).

The evidence-based approach grounded in scientific-bureaucracy approach to health care has eroded professional powers of expert discretion. According to Harrison's account, scientific-bureaucratic medicine rejects the possibility that personal experience, however critically examined, ever be accepted as a source of valid knowledge. However this approach has not removed totally removed front-line staff judgement and discretion. Indeed it is possible to argue that such standardised approaches are too rigid to deal with the uncertainties of actual practice and can only work if they front-line staff use their judgement. Traynor (1997) presents a persuasive account of nursing staff agency, where improvisation at the point of service delivery operates to resist the Fordist underpinnings of scientific-bureaucratic styles of NHS management. Wells (1999, 5-18) similarly presents empirical evidence to show how

the operations of street-level bureaucracy, played out by NHS community mental health care professionals, diverge away from the intentions of policymakers and managers. Ruston (2006) has more recently published an account of NHS nurses actively devising contingency techniques in order to subvert the strict practice algorithms of NHS Direct and in the midwifery literature this same sense of multiplicity in the meaning making and agency around how risk is perceived and acted upon has been described by Weir (1983) as happening in the US. In short, there is a body of literature which stretches back ten years providing compelling evidence of how street-level bureaucracy operates in within health care provision, calling into question the totalizing scope of the strictly regulated and audited risk managements mechanisms of scientific-bureaucratic medicine.

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In this article we have provided new evidence on sense of deep management described by Brown and Crawford (2003), where professional discretion and traditional ideas such as intuition, coexist, albeit awkwardly, with voluntary compliance to the organisational risk management technologies. Just as Lipsky suggested that ‘low level decision making of street level bureaucrats’ (2001p 84) operates to moderate management control and facilitate expressions of discretion, we want to point out that this street level bureaucracy is itself tamed by an understanding that encoded forms of practice prevail within the maternity services. That is to say, the data described in this article indicates that any concordant ways of practice, exist only at the edges of an otherwise omnipresent professional preoccupation with compliance with the technologies of scientific-bureaucratic health care provision.

However it is our contention that the midwifery activity described in this article operated to relocate the loci of risk towards the risk technologies themselves and the limitation imposed upon practice by those technologies. The instances described above reveal that in some contexts practitioners grasp the opportunity to act upon a mutual and apparently pervasive understanding that the very technologies devised to mitigate the risks associated with birth (in the form of NICE algorithms and Trust protocols) can and perhaps should be understood themselves a site of significant, secondary risk. Inevitably, once this relocation of risk had taken place, the midwives involved tended to see it as their professional responsibility to devise mechanisms through which they could protect the mothers in their care and

themselves from these perceived risks. Moreover, these devices had to be such that they could take place without detection from the institutions primary adaptation technologies of surveillance. This is not to suggest that any of the midwives introduced in this paper saw themselves as risk-takers. On the contrary, they saw their subverting endeavours as, on the one hand, a way of protecting the women in their care from the iatrogenic risks introduced through the strict application of the institutions risk technologies. And on the other, a way of ensuring the system worked by protecting their own interests.

This contention raises an interesting and rather unsettling proposition. If, as has been suggested, midwifery activity operating within the cracks of the organisation, is done to mitigate perceived harms introduced through clinical governance and the risk technologies it begets, then it is logical to propose that the midwives involved in this study understand that the successful operations of these technologies relies, in part at least, upon their creative acts of subversion. That is to suggest that these dissident expressions of professional autonomy can be understood as representing a crucial component to the successful running of the maternity care services in their present form. As such, rather than being antithetical to the institution's risk technology, the acts of professional discretion described in this paper might be better understood as being an integral and essential part of that institution's scientific-bureaucratic, risk technologies.

Conclusion

In this paper we have explored the multiplicity of meaning and meaning-making involved in midwifery based street-level bureaucracy. While the midwives involved in this study generally saw the scientific bureaucracy of clinical governance as being good for client safety, at the same time they were constantly in the business of devising circumventing techniques to provide the autonomy necessary for them to offer the women they were working with a sense of individualised care and to facilitate normal birth.

The scientific-bureaucratic maternity service assumes a technical rational view of maternity care where the deliverer of a service, in this case the midwife, is thought to be someone who simply acts as a compliant agent for conveying encoded knowledge as it is set out in the institution's rules and guidelines under the auspices of the clinical governance agenda. By using ethnographic data it has been possible to look at the multidimensional, complex and

socially embedded processes involved in everyday midwifery activity in labour rooms in the UK. We have looked at how risk operates at different levels in midwifery discourse, some more covert than others, and have therefore have been able to illustrate how cracks within the dominant risk paradigm operate to create space where other professional priorities can be, all be it tentatively, voiced.

It is important to conclude that these concordant ways of knowing about risks, where clinical governance itself can be recast as a source of risk, should not be thought of as being oppositional in nature. Far from it. Not only does the evidence presented in this paper demonstrate that midwives are not simply compliant or passive agents in the delivery of maternity care, it also suggests that their work at the margins of the risk functions in unexpected ways. The proposition being made here is that the scientific-bureaucratic nature of the maternity services depends upon the covert activity where midwives express and act upon their hidden knowledge.

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ⁱ 'Anterior lip' is a midwifery expression used to describe the final stages of the first stage of labour (the onset of regular painful contractions to full dilatation of the cervix). This expression refers to the neck of the womb and describes the baby's head has not having quite passed out of the womb into the vagina. Importantly, the mother is not expected to actively push out her baby until the anterior lip (or cervix) is no longer palpable on vaginal examination although evidence for this practice is weak.

Despite the unprecedented shift towards the standardisation of practice that underpins the development of clinical governance in the UK, an increasing body of literature describes how those responsible for the delivery of care, those dealing with the uncertainties of everyday practice, actively translate such standardised, encoded knowledge and practice into manageable contingency (Harrison 2000, Ruston 2006). Within this literature, multiplicity of meaning tends to be emphasised, along with a marked disconnect between the codified sets of prescribed actions in the standardisation of care model and actual 'street-level' working practices of health professionals. Drawing from two ethnographic studies looking at midwifery talk and practice in the UK, this paper shows how the reality of the day to day workings of the maternity services (where a scientific-bureaucratic approach to service provision is privileged) can be captured by observing its frontline workers as they pragmatically deal with the practicalities of providing care to women as they give birth.