Objective: There is currently a lack of data that records how midwives are expected to work in hospital settings. The aim of this study was to determine the prevalence of 12-hour shifts and current working practices of hospital-based midwives.

Design: An online survey conducted between December 2018 and March 2019. Descriptive data are summarised regionally and nationally.

Setting: NHS Trusts providing maternity services in hospital settings in the UK

Participants: The link to the survey was emailed to Heads of Midwifery in 155 NHS Trusts

Findings: Responses were received from 94 of the 155 NHS Trusts (60.65%). Some responses included data for more than one hospital, so results are summarised for 97 hospitals. 12-hour shifts were the most prevalent shift length, with only 4.1% of hospitals still routinely operating shorter shifts. 55% of hospitals limit the maximum number of consecutive shifts to three, but this can be influenced by different factors. More than half of midwives (55.67%) will be rostered to start a day shift within 24-hours of finishing a night shift. 70% of hospitals do not currently record the number of midwives working beyond their contracted hours, but 68% report formal methods of recording missed rest breaks. Regional differences were seen in the use of other personnel to support the midwifery workforce.

Conclusions: Shift schedules and the lack of formal methods to record the number of midwives working beyond their contracted hours may be a cause for concern due to the potential impact on recovery times. Further research is required to explore how working practices may affect midwives and their ability to provide care for women and their babies.

Keywords:
Shift length
12 hour shifts
Working patterns
Safe staffing
Midwives
Survey

Introduction

There is a wide variation in the organisation of maternity services within the National Health Services (NHS) across the United Kingdom (UK), with the availability of services and facilities being influenced by geographical location, unit size and different approaches in solutions and strategies to meet the needs of local women (Department of Health, Social Services and Public Safety, 2012; National Maternity and Perinatal Audit project team (NMPA), 2017). In the UK, most midwives work in the NHS in a range of settings, such as community, midwife-led units and/or hospitals, but they can also work in the independent sector or other settings. The implementation of national policies, resource issues and the rising complexity of care needs mean the configuration of maternity services are often subject to change. The recent implementation of midwifery continuity of carer models (CoC) will likely see more midwives deployed to work across both community and hospital settings (NHS England, 2017). The variety of care models in use result in differences in staffing provision and ultimately, the working practices of midwives (NMPA, 2017).

Shift work schedules differ across professions and tolerance may depend on contextual or individual factors (Tahghighi et al., 2017). Midwives working in hospital settings are likely to work a range of shift patterns, however, when shifts are poorly designed, or involve excessive working hours, it can result in fatigue and impaired performance (Health and Safety Executive, (HSE), 2006). Shifts exceeding 8-hours, night work and insufficient rest breaks have all been found to contribute to an increased risk of errors, accidents and injuries among shift workers across a range of industries (HSE, 2006). Fatigue due to night-work or long shifts has been a factor in many major incidents around the world (HSE, 2006) and has also been implicated in road traffic collisions or near misses in health professionals (Scott et al., 2007; McClelland et al., 2017). Many industries have policies to monitor the levels of fatigue among shift workers and will specifically consider the effect of fatigue in relation to any incidents or accidents, yet this approach does not appear to be adopted in healthcare settings. Gaba and Howard (2002) suggest *"If the same analysis were applied to accidents involving the care of patients in teaching hospitals, fatigue on the part of clinicians would almost ways be cited as a contributing factor".* One recent study has highlighted the negative impact of fatigue and poor sleep quality in ambulance personnel in England (Association of Ambulance Chief Executives (AACE), 2019). Working 12-hour shifts in general was associated with a 30% increased risk of being involved in an incident, with night shifts and consecutive 12-hour shifts increasing the risk further. These findings have led to a change in shift practices in one region of England, with plans to limit consecutive 12-hour day shifts to two and abolish 12-hour night shifts by March 2020 (AACE, 2019).

The use of 12-hour shifts within nursing settings worldwide varies but appears to be more common in the United States of America (USA) (Stimpfel and Aitken, 2013), Ireland and Poland (Griffiths et al., 2014). In 2009, it was estimated that 52% of nurses in the UK worked 12-hour shifts (Ball et al., 2015), with most other European countries utilising 8-hours shifts (Griffiths et al., 2014). Twelve-hour shifts are thought to be coming more prevalent in the UK (Unison, 2015), but there are currently no routine data collection methods to confirm this. Many early evaluations of 12-hour shifts among nurses in the UK, USA and Australia reported high levels of satisfaction or preference due to more time off (Fields and Loveridge, 1988; Freer and Murphy-Black, 1995; Gillespie and Curzio, 1996; Richardson et al., 2003; McGettrick and O'Neill, 2006; Dwyer et al., 2007), yet concerns persist over the potential detrimental impact of longer shifts on the quality of care (Todd et al., 1989; Stimpfel and Aiken, 2013), higher levels of burnout (Stimpfel et al., 2012; Dall'Ora et al., 2015), greater job dissatisfaction and higher intentions of leaving (Dall'Ora et al., 2015). Despite this, it appears that the only significant findings in relation to a perceived negative impact on care or safety is when shift length exceeds 12.5 hours (Rogers et al., 2004; Scott et al., 2006; Griffiths et al., 2014).

There is an ongoing shortage of midwives worldwide (Crisp et al., 2018), which may explain why much of the global midwifery workforce feels overworked and exhausted (World Health Organisation, 2016). In the UK there are currently challenges in the recruitment and retention of midwives (Royal College of Midwives (RCM), 2019), with dissatisfaction with staffing levels, working conditions and shift patterns being cited as reasons why midwives leave (RCM, 2016a). The same reasons have also been associated with higher levels of burnout in midwives (Hunter et al., 2018). The evidence from nursing settings remains conflicting, possibly due to the design limitations of the studies, with few controlling for important confounding variables, such as the number of consecutive shifts worked, the ability to take rest breaks or working beyond contracted hours, which may limit the strength of findings. Moreover, due to a lack of studies conducted in midwifery settings, where care populations and environments differ, it is unclear how the current evidence can be applied to the working patterns of midwives.

There is a need to explore the impact of shift length and working practices on midwives' emotional wellbeing and their ability to safely deliver care. The first aim of this research project was to determine the prevalence of 12-hour shifts and current working practices of midwives in NHS hospital settings across the UK. The next phase will involve an online survey of midwives across the UK, including those working in community or CoC models, to

examine factors related to wellbeing and job satisfaction, with the analysis controlling for shift length and other working practices to better understand how these may affect outcomes. The present paper reports on the first survey, an exploration of shift lengths and working practices, including methods to monitor staff reported measures related to midwifery safe staffing indicators.

Methods

Design

An 18-item online survey was developed to collate data on general characteristics of NHS Trusts; shift lengths and working patterns; and midwifery safe staffing indicators. An introductory page provided an overview of the purpose of the study and advised that responses could be saved and revisited but would not be logged until the survey was submitted. The survey was not expected to take more than 10 minutes to complete once data was collected. NHS Trusts can provide maternity care in more than one hospital, so the first two items collected information on the name of Trust and hospital to distinguish responses. This also served to permit reminder messages to be sent. Two closed response items gathered background information on region and Care Quality Commission (CQC) ratings for England. In Scotland, Wales and Northern Ireland, care quality is monitored by different organisations. Open responses were used to collect data on annual birth rates.

Five closed response items collected data on working patterns, with an additional closed response question conditionally displayed for positive answers indicating changes in shift length in the past three years. Four open response items collected data related to safe staffing indicators which were drawn from the National Institute for Health and Care Excellence (NICE) (2015) Safe Midwifery Staffing Guidance. Informed by NICE (2015) guidance, one further closed response item explored whether missed rest breaks were formally recorded, with a negative answer triggering a further closed question on escalation procedures. Respondents were able to select multiple answers relating to support personnel in use in maternity settings. Open-ended responses were conditionally displayed in questions that offered the option of ‘other’. The final two items were free text responses; the first was to provide participants with the opportunity to provide further comments in three categories: to elaborate on survey answers; indicate staff preferences; or highlight any concerns with current shift lengths. The final item allowed participants to provide an email address if they wished to receive a summary of the results. Apart from questions on region and shift length, all answers were optional, and therefore all submitted responses were

eligible for inclusion. The online survey was piloted among midwifery academics and an educational technologist, with minor modifications made to layout and functionality.

Distribution and sample

Purposive sampling was used following identification of Heads of Midwifery (HoM) across the UK. The names and email addresses of HoMs in England were obtained through the regional offices of NHS England. Contacts from Wales, Scotland and Northern Ireland were obtained directly from enquiries at local trusts. At the time of the survey, there were 155 NHS Trusts/Boards across the UK providing maternity services in hospital settings, although a number of merges were planned in 2019 so the number of Trusts will likely be reduced in the future. An introductory email, which included a participant information sheet detailing the aims of the study and pdf copy of the survey, were sent to all HoMs, followed by a further email one week later with the link to the live survey, which was administered through the secure online platform 'Online Surveys'. The survey was live for a period of 3-months, between December 2018 and March 2019. Two email reminders were sent at mid-point and between 9-10 weeks. Completion of the survey could be designated to another person at the discretion of the HoM.

Ethics

Research ethics approval was obtained from The University of Hertfordshire Health, Science, Engineering and Technology Ethics Committee with Delegated Authority [HSK/PGR/UH/03471]. Consent was implied on completion of the survey. The name of the NHS Trust and hospital were removed from the dataset on completion of the initial analysis to maintain confidentiality.

Statistical analyses

Completed surveys were transferred to Excel spreadsheets with quantitative data analysed using descriptive statistics. Open-ended responses to question extension options, were framed by the context of the question and thus pre-categorised. Qualitative comments were manually coded against the predefined categories. Due to the number of mergers in NHS Trusts, some Trusts have more than one hospital providing maternity services, so the overall response rate was calculated on the total number of Trusts responding. All other data are calculated against the total number of responses from hospitals.

Findings

Ninety-eight responses were received but two were from the same hospital, with one largely incomplete, so only the completed survey was included. Out of the remaining 97 responses, three HoMs provided separate responses for two hospitals in their Trust. As some of the data differed, all were included in the main data set, but not in the calculation for response rates (RR). The overall RR was 60.65% (*n* = 94/155). RR varied for each individual country. In England, 61.24% of NHS Trusts responded (*n* = 79/129), which can be further divided by region: London 66.67% (*n* = 12/18); South 61.77% (*n* = 21/34); East of England (includes the Midlands) 67.57% (*n* = 25/37); North 52.5% (*n* = 21/40). In Northern Ireland, 40% of HoMs in Health and Social Care Trusts (*n* = 2/5) responded. Proportionately, the lowest response was from the HoMs of Health Boards in Wales with a 28.57% RR (*n* = 2/7), but highest from the HoMs of Health Boards in Scotland 78.57% (*n* = 11/14).

Trust characteristics

There was a wide range in the size of maternity units in Trusts across the UK, estimated through annual birth rates. Smaller community maternity units in Scotland have annual births rates between 25 and 50, with more remote units providing care for around 200 births a year. Of the nine hospitals with birth rates of 8000+, one was based in Scotland, with all others based in England. The last CQC ratings for England (n=80) revealed that five were rated as outstanding, 53 good, 21 required improvement and one was inadequate.

Results

Twelve-hour shifts appear to be the most prominent shift length across the UK, with shift lengths of 13-hours or more only being found in England (*Table 1*), but seen across different unit sizes (*Figure 1*). One hospital in the South of England reported shift lengths of 12.75 hours, so this was included in 13-hours category. For ease of reporting, 11 to 11.5-hour shifts and 12 to 12.5-hour shifts will be reported as 11-hour and 12-hour shifts respectively. Only four of the 97 hospitals report that shorter shift lengths are most commonly scheduled. In the qualitative comments provided by HoMs, seven indicated that short shift lengths were still an option, either on employee request, on occupational health advice or to make up monthly hours. Some comments suggest that shorter shifts are preferred by older midwives:

"Mixed shift patterns, including short days 6.25 hours are in place as a popular option for some midwives who find long shifts too difficult to manage. Interestingly this is a preferred option of midwives in the 40-55+ age bracket."
HoM 44, South of England

***"**We have the choice for short shifts 7.5 hours but only a few (older midwifery staff) take this option."*
HoM 1, Wales

However, shorter shift lengths can also prove to be difficult to facilitate in some Trusts:

"… when a specific member of staff prefers to work shorter shifts, it is difficult to facilitate within a rota where most staff work long day/night, and also impacts on availability to cover night shifts."
HoM 48, East of England

Over 70% of hospitals provide unpaid rest breaks of 1-hour, with most tending to split breaks into two separate rest periods. However, longer shift lengths did not necessarily equate to longer or more frequent rest breaks. Of the 22 hospitals that offer one 30-minute rest break, only four operated 7.5-hour shifts. One hospital provides a 30-minute break for shifts of 13-hours or more, and one hospital provides a 20-minute rest period during a 12-hour shift. Other rest breaks include two 45-minute breaks within a 12-hour shift (Northern Ireland and London) or one 45-minute rest break. Just over two-thirds of hospitals reported having a locally agreed method of formally recording missed rest breaks (see *Figure 2* for breakdown by unit size), but for those responding that they did not, an additional question was asked on whether an escalation plan or other procedures were in place, with less than half reporting that there was. Most hospitals report scheduling practices involving a maximum of three consecutive 12-hour shifts. Of those hospitals reporting a maximum of four consecutive shifts, one operated 11-hour shifts, with the remainder operating 12-hour shifts, and these types of schedules were seen across all unit sizes. However, four hospitals reported that requests from midwives can influence the number of consecutive shifts worked, and in one hospital in the North of England, this can result in up to six consecutive 12-hour shifts. One hospital in London noted that self-rostering on an e-roster system enabled midwives to choose their pattern of work. One hospital also noted that four consecutive shifts may occasionally be related to shift schedules involving two days, followed by two night shifts. In Scotland, midwives may be scheduled to work up to ten consecutive 7.5-hour shifts. Two hospitals stated that there was no limit or policy on the maximum number of shifts worked.

More than half of hospitals across the UK report short recovery times for midwives when finishing a night shift and starting a day shift, with less than 24-hours scheduled in between (see *Figure 2* for breakdown by unit size*)*. Six hospitals did not answer this question, which might indicate a lack of policy in this area. Fourteen hospitals have made changes to shift length in the past three years. Eight have moved to longer shift lengths, with five indicating that they moved to shorter shift lengths, although all these hospitals still report shift lengths of 11-hours (*n* = 2) or 12-hours (*n* = 3). One further hospital reported that more scheduled breaks have been included in a shift, but no change to actual shift length.

Three questions related to NICE (2015) staff reported measures of safe staffing indicators, and two assessed local measures employed to record missed rest breaks (*Table 2*). Most respondents (70%) reported that the proportion of midwives working beyond their contracted hours, whether paid or unpaid, was not collected or recorded in the first six-month period of 2018. Nearly a quarter of the respondents did not answer this question, which may suggest that data may not be formerly collected. One HoM in the South of England reported that time owed is recorded for individuals to ensure pay or time owed is received, but the percentage is not recorded. One HoM in the North of England reported 'less than 5%', so this may be based on an estimate. Just three HoMs reported actual percentages, which ranged from 6% in the South, to 20% in both London and the East of England.

Results related to sickness and use of bank or agency staff should be treated with caution due to the number of non-responders, particularly on the use of bank staff and the extent of estimations evident within the responses. Over three-quarters of hospitals provided data on sickness rates in the first six-months of 2018. The mean sickness rates were 6.28% in Scotland, 4.5% in Wales, 8% in Northern Ireland (based on one response), 3.36% in London, 3.65% in the South region, 4.46% in the East, and 4.67% in the North. Twelve responses were based on estimates or ranges in values, and whilst these were included in the data table, they were excluded in calculating the mean sickness rates for each region. In the qualitative comments, one HoM in Scotland related higher sickness rates with long shifts, yet another in the South of England that recently moved to longer shifts, found no increase in sickness levels as a result.

More than half of the hospitals did not report on the percentage of shifts that have been covered by bank midwives, so mean rates are not reported. In Scotland, one hospital reported rates of 0.07%, and one stated that it varies per ward area, being higher in areas with vacancies. In Wales, one hospital reported a rate of 2%, with the other hospital estimating this to be around 5%. No data were provided for Northern Ireland. In London

there was a range of estimates on the use of bank midwives, from 7% up to 75% of shifts. In the South it ranged from 3.5 to 10% and in the East of England from 2.3 to 10.6%. Only two hospitals in the North of England provided this data, which ranged from 7 to 10%. The use of agency staff to cover shifts appears to be minimal across the UK. In Northern Ireland, agency midwives are not used, and this appears to be the trend across most hospitals in the UK. However, one hospital in Scotland reported that 50% of shifts on the labour ward were covered by agency midwives due to ongoing vacancies and being unable to recruit midwives. In Wales, one hospital reported a rate 0.09% for the first six-months of 2018. In London, the use of agency staff varied between 2.9% and 11%, and in the South of England, rates ranged from 0.1 to 4%. One hospital reported rates of 10.83% but could not differentiate between agency staff and those provided by NHS Professionals. In the East of England, rates ranged from 0.4 to 9%. One hospital in the North of England reported use of agency staff as 'minimal'.

There was a range of personnel used to support midwifery services (*Table 3*). Most hospitals have maternity care assistants (MCA), but one hospital in Scotland and one in the East of England specified the use health care assistants instead of MCAs. One hospital in London uses maternity support workers (MSW) in place of MCAs, whereas one hospital in the South of England uses MSW's in addition to MCAs. The second most common group of personnel used to support midwifery services are those related to theatre teams and recovery, which appears more prevalent in the East of England, as does the use of nursery nurses on postnatal wards. All hospitals indicated the use of other supporting personnel including breastfeeding supporters (London, South, North), trainee nursing associates (South, East), assistant practitioners (East), postnatal discharge co-ordinators (South), nurses in high dependency unit (London), special care baby unit nurses and dietician (Scotland) and Band 2 clinical support workers (East). Differences were noted in strategies to support the midwifery workforce. In one hospital in the South of England, MSWs work in community conducting hearing and newborn blood spot screening, but they are also responsible for the day five review of the baby. In Northern Ireland, one hospital is working with educators to train MSWs to scrub in theatre instead of a midwife or staff nurse, and in the postnatal ward, a staff nurse is employed due to the inability to fill midwifery posts with midwives.

Qualitative observations

Fifty-one HoMs provided additional comments in the final free-text question. Of these, 22 elaborated on their survey answers. The remaining comments were pre-categorised into

two themes, all based on the opinions of HoMs: staff preferences (*Box 1*) and concerns (*Box 2*). Twenty-five HoMs suggested that most midwives prefer working 12-hour shifts, primarily related to having more days off each week, but also due to travelling, parking and childcare. One HoM in the South of England reported that parking is a major problem on short shifts, especially the late shift. One HoM in Northern Ireland reported that 95% of midwives work part-time for a better work-life balance, with newly qualified midwives very rarely wanting to work full-time. HoMs also suggest that some midwives are resistant to working anything other than long shifts, regardless of any detrimental effect, although one Trust is considering a formal consultation about shift lengths. Fifteen HoMs indicated their own concerns related to longer shifts, primarily related to recruitment in community, implementation of continuity of carer models and time available to attend meetings or training. Other concerns were related to the wellbeing of staff and ability to maintain safety.

Discussion

This is the first study to describe shift lengths and working practices for midwives working in hospital settings across the UK. The findings suggest that 12-hour shifts are the most prevalent shift length in hospital settings. Shift lengths between 11 and 11.5-hours are unusual as they would not fit a two-shift system. Two responses from the same Trust, but different hospitals, reported 11- and 12-hour shifts. It may be that of the eleven hospitals that reported using 11-hour shifts, this related to actual paid time on shift, rather than total shift length. If the total length of these shifts is assumed to be 12-hours, then the prevalence rises to 88%, or just under 95% if 13-hour shifts are included. This is significantly higher than the last estimate of 52% within the UK nursing profession ten years ago (Ball et al., 2015), and supports Unison's (2015) assertion that they were becoming more prevalent.

The optimal number of consecutive 12-hour shifts is debatable and may depend on several variables, including individual characteristics or whether day or night shifts are worked. Most hospitals appear to limit the number of consecutive long shifts worked to a maximum of three, which may reflect the suggestions of earlier studies (Mills et al.,1983; Richardson et al., 2007). However, a more recent study (Hazzard et al., 2013) reported that many nurses thought that three consecutive 12-hour shifts were unworkable. Good practice in shift scheduling suggests at least two nights full sleep when switching from night to day shifts (HSE, 2006) but with less than half of hospitals in this study reporting a policy of at least 48-hours rest between finishing a night shift and starting a day shift, it raises concerns over a midwife's ability to recover before returning to provide care. Many safety critical industries in the UK use the Fatigue and Risk Index Tool, developed by the HSE, to help identify any

specific aspect of shift schedules that may increase the risk of fatigue. This tool considers workload, type of activity, shift length, direction of rotation and rest breaks (HSE, 2006). A recent pilot study in the UK explored the feasibility of using this tool to assess fatigue-related errors and levels of sleepiness against doctors' rotas (Cumber and Greig, 2019). The results showed that nearly half of all shifts analysed indicated an increased risk of fatigue-related errors, and more than half of all shifts increased the likelihood of high levels of sleepiness. However, the study had to assume that rest breaks were taken, and that only 'actual' rostered hours were worked, and it acknowledged that this tool cannot account for all possible factors that may contribute to fatigue. Nevertheless, it was suggested that this tool could be used to better understand fatigue in relation to shift rotas for doctors and it would be interesting to explore outcomes in a range of international midwifery settings.

A culture of expected self-sacrifice has long since been suggested in midwives (Kirkham, 1999) and this still appears prevalent today (RCM, 2016b) with many midwives working unpaid beyond contracted hours (National NHS Staff Survey Co-ordination Centre, 2019) and high levels of missed rest breaks (Unison, 2015), all of which is likely to be exacerbated by problems with staffing. NICE (2015) suggest the regular review of midwifery safe staffing indicators. However, nearly 95% of hospitals either do not have systems in place to record the proportion of midwives working beyond their contracted hours or did not answer the question; and 30% of hospitals do not have formal procedures in place to record missed rest breaks. This questions the ability for maternity units to safely review staffing and further raises safety concerns due to the amount of time midwives may be on duty. NHS Trusts are currently required to publish ward level data on actual versus planned staffing to establish whether staffing requirements are being met (Department of Health, 2014) but it could be argued that the same transparency in reporting requirements should also be applied to staff reported measures as a further indicator of safe staffing. Other personnel are being utilised to support midwifery services, sometimes taking over the responsibility traditionally associated with the midwife's role, particularly in the postnatal period. From the data collected, it is not possible to determine whether the use of support personnel complement or substitute midwives, but with one hospital reporting that the use of nursing staff was due to difficulties in recruiting midwives, there is some indication to suggest that for some, it might be the latter.

Limitations

Whilst the number of responses were similar to a recent RCM (2019) national survey of HoMs, the method of distribution via email may have affected the response rate. Contact

details where checked prior to launch and any follow-ups, but it was noted that there were vacancies and movement of HoMs between Trusts during the survey period. The use of optional responses resulted in some questions being unanswered, however, as no data currently exists on working practices in hospital settings, it was felt that completion of any part of the survey would contribute to the knowledge base, albeit with results interpreted in light of this. The study did not explore the availability of CoC models which are likely to involve significant changes in how midwives are expected to work (NMPA, 2017). However, at the time of the study, 85% of Trusts in England, Wales and Scotland were still preparing to roll out CoC (Blotkamp, 2019), so future research is recommended to better capture this data.

Conclusion

Longer shift lengths now appear to be the norm for midwives working in hospital settings in the UK. Differences in the maximum number of consecutive shifts scheduled and a high prevalence of short recovery times between night to day shifts raise concerns over a midwife's ability to recover. With few hospitals collecting data on the number of midwives working beyond their contracted hours, the full monitoring of safe working practices is limited. The option of utilising a fatigue-risk index in healthcare settings is an interesting area that warrants further investigation. Future research should also analyse a range of variables to determine whether it is shift length or associated working practices that have the most significant impact on a midwife's wellbeing and ability to safely deliver care.

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Table 1. Shift lengths and working practices

Survey question	Scotland (*n*=12)	Wales (*n*=2)	N.I. (*n*=2)	London (*n*=12)	South (*n*=22)	East (*n*=26)	North (*n*=21)	Total UK *n*=97 (%)
What is the most common shift length for midwives working in hospital settings? (Total shift length including unpaid rest breaks)								
7.5 hrs or less	3	-	-	-	-	-	1	4 (4.12)
8 or 8.5	-	-	-	-	-	-	-	-
9 to 9.5	-	-	-	-	-	-	-	-
10 or 10.5	-	-	-	-	1	-	-	1 (1.03)
11 or 11.5	2	-	-	3	2	2	2	11 (11.43)
12 or 12.5	7	2	2	9	17	22	16	75 (77.32)
13 or more	-	-	-	-	2	2	2	6 (6.19)
What is the length of the unpaid rest period in a typical shift?								
1 x 1 hour	-	-	-	9	8	6	4	27 (27.84)
2 x 30 minutes	8	1	1	1	9	12	10	42 (43.30)
1 x 30 minutes	4	1	-	-	4	8	5	22 (22.68)
20 minutes	-	-	-	-	-	-	1	1 (1.03)
Other	-	-	1	2	1	-	1	5 (5.16)
What is the maximum number of consecutive shifts a midwife may be scheduled to work?								
Two	-	-	-	1	5	5	3	14 (14.43)
Three	4	2	2	6	12	15	13	54 (55.67)
Four	6	-	-	4	5	4	1	20 (20.62)
Five or More	1	-	-	-	-	-	1	2 (2.06)
No Maximum	-	-	-	-	-	-	1	1 (1.03)
Unanswered	1	-	-	1	-	2	2	6 (6.19)
When switching from night to day shifts, please indicate the next possible allocated shift								
Day shift within 24 hours of completing night shift	8	-	2	8	10	13	13	54 (55.67)
Day shift with at least 2 full nights sleep in between	4	1	-	4	11	10	7	37 (38.14)
Unanswered	-	1	-	-	1	3	1	6 (6.19)
Have there been any changes of shift length in the past three years?								
Yes	-	1	-	-	5	4	4	14 (14.43)
No	12	1	2	12	17	22	17	83 (85.57)

Figure 1. Distribution of shift length by unit size

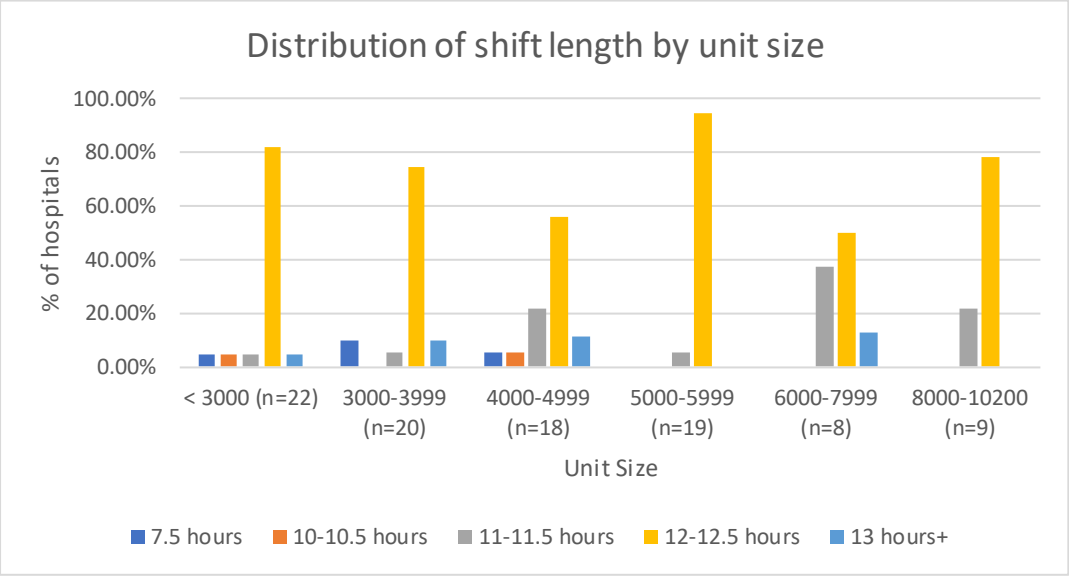
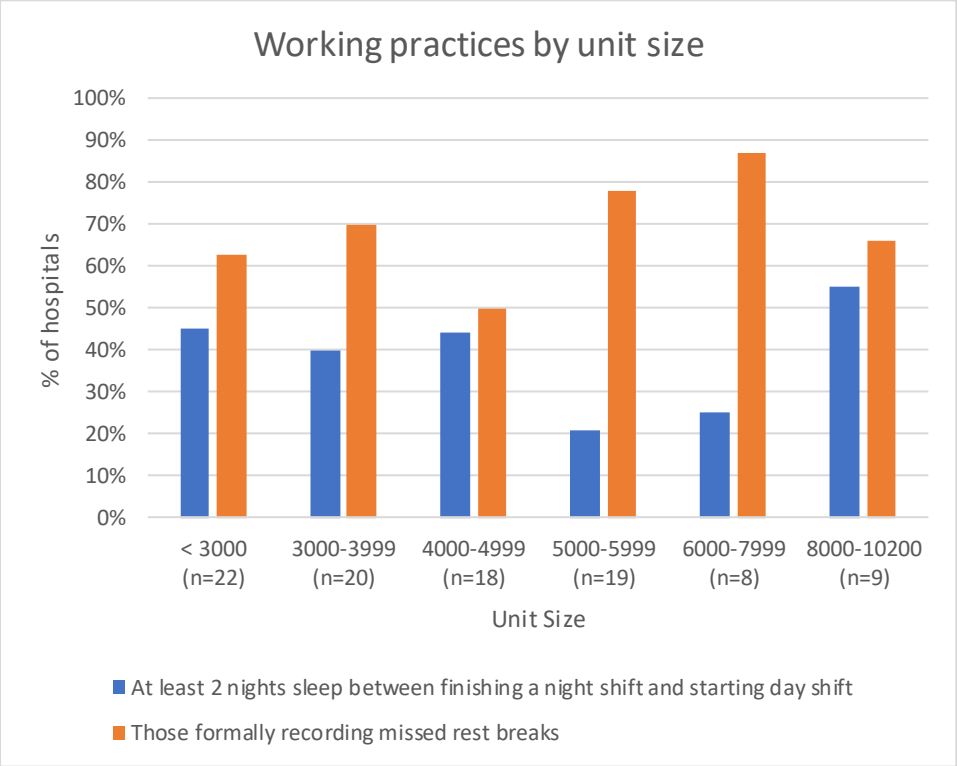


Figure 2. Working practices by unit size



Note: due to the number of non-responses or estimations for most safe staffing indicators, presenting data by unit size was not feasible.

Table 2. Midwifery safe staffing indicators

Survey question	Scotland (*n*=12)	Wales (*n*=2)	N.I. (*n*=2)	London (*n*=12)	South (*n*=22)	East (*n*=26)	North (*n*=21)	Total UK *n*=97 (%)
On average, what was the recorded proportion of midwives working beyond their rostered shift length (paid or unpaid) in the six-month period of January to June 2018. Please indicate if it is not currently recorded.								
Not collected/recorded	10	2	2	7	17	16	14	68 (70.10)
Less than 5%	-	-	-	-	-	-	1	1 (1.03)
6-10%	-	-	-	-	1	-	-	1 (1.03)
> 10%	-	-	-	1	-	1	-	2 (2.06)
Unanswered	2	-	-	4	3	9	6	24 (24.74)
What was the recorded proportion (%) of midwifery sickness in the six-month period of January to June 2018?								
< 5%	2	1	-	8	18	14	10	53 (54.64)
5-10%	7	1	1	1	2	4	6	22 (22.68)
> 10%	-	-	-	-	-	-	-	-
Unanswered	3	-	1	3	2	8	5	22 (22.68)
On average, in the past six-month period of January to June 2018, what was the % of shifts that have been covered by use of bank midwives?								
< 5%	1	1	-	2	1	1	-	6 (6.19)
5-10%	-	1	-	2	8	6	2	19 (19.59)
> 10%	-	-	-	4	-	1	-	5 (5.16)
Not recorded/available	3	-	1	-	5	2	2	13 (13.40)
Unanswered	8	-	1	4	8	16	17	54 (55.67)
On average, in the past six-month period January to June 2018, what was the % of shifts that have been covered by the use of agency midwives?								
< 5%	-	1	-	1	3	1	1	7 (7.22)
5-10%	-	-	-	1	-	1	-	2 (2.06)
> 10%	1	-	-	1	2	-	-	3 (3.09)
Agency not used	7	1	2	4	13	17	18	62 (63.92)
Not recorded	-	-	-	-	-	-	-	-
Unanswered	4	-	-	5	4	7	2	22 (22.68)
Do you have a locally agreed method of formally recording missed rest breaks?								
Yes	5	2	1	7	15	18	18	66 (68.04)
No	7	-	1	5	7	7	3	30 (30.93)
Unanswered						1	-	1 (1.03)
Is there an escalation plan or other procedures in place regarding missed rest periods? *[This question was conditionally displayed on a negative answer to above question]*								*n* = 30 *(%)*
Yes	2	-	-	5	3	2	2	14 (46.67)
No	5	-	1	-	4	5	1	16 (53.33)

Table 3. Personnel used to support midwifery services

Survey question	Scotland (*n*=12)	Wales (*n*=2)	N.I. (*n*=2)	London (*n*=12)	South (*n*=22)	East (*n*=26)	North (*n*=21)	Total UK *n*=97 (%)
Please indicate whether any of the following personnel are routinely used to support midwifery services (tick all that apply)								
Operating department nurses/assistants in recovery areas	7	2	-	7	9	17	10	52 (53.61)
Obstetric nurses on postnatal ward	-	-	-	1	5	2	-	8 (8.25)
Nursery nurses on postnatal ward	7	-	-	4	8	13	3	35 (36.08)
Maternity Care Assistants	10	2	2	11	22	23	19	89 (91.75)
Other	3	1	1	3	2	3	1	14 (14.43)
Unanswered	-	-	-	-	-	1	2	3 (3.09)

Box 1. Staff preferences

“Staff prefer the 12-hour shifts, they are resistant to change to core shifts.”
HoM 19, Scotland

“We have surveyed our staff in the last 3 years and there was an overwhelming reluctance to anything other than long shifts.”
HoM 3, East of England

“Staff asked for a review of shift length and introduction of standard hours shift in 2018 as only 11.5 hours offered in hospital. Pilot planned and offered however only 3 members of staff wanted to commit therefore unable to implement. Staff request wanting to work shorter hours but not attend work more frequently and do not want to reduced hours.”
HoM 9, South of England

“… any suggestion to change back to shorter shifts meets with huge resistance.”
HoM 14, East of England

“*… I would like to move to shorter shifts however I do not believe the workforce would welcome this change.”*
HoM 43, Midlands

Box 2. HoM's concerns

Community and continuity of care:

"… we have encountered problems recruiting midwives to the community as they do not work 12 hr shifts. Unfortunately, a 12 hr shift pattern in the community would impact on continuity."
HoM 2, East of England

"We struggle to get midwives to go into community as they do not want to work 5 days per week."
HoM 13, South of England

"… we are starting to introduce continuity of carer across all aspects with staff reluctant to move from 3 full days to 5."
HoM 30, North of England

"I feel that long shift patterns is detrimental to any continuity of care over several days as part time staff are only in 1-2 shifts a week."
HoM 1, Wales

Midwives wellbeing:

"… We have just completed a Safety culture survey and one of the factors staff mentioned was burn out and shifts/shift patterns."
HoM 18, South of England

"… busy long shifts can be stressful and have a negative impact on physical and emotional wellbeing."
HoM 8, Midlands

"Lack of breaks."
HoM 46, Midlands

"… I believe the longer shifts lead to burn out and lower morale when it is busy."
HoM 13, South of England

"Staff very inflexible with 12-hour shifts, little recognition of impact of emotional wellbeing and tiredness - often site stress but when ask to reduce to short shifts refuse due to wanting 4 days off."
HoM 29, North of England