Journal of Asian Midwives (JAM)

Volume 7 | Issue 1 Article 3

6-2020

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Recommended Citation

Khatun, A, Jhumu, M A, Gregson, S, & Kemp, J. Developing and piloting a midwifery audit tool in Bangladesh's upazila health complexes (UHCs). Journal of Asian Midwives. 2020;7(1):7–22.

Developing and Piloting a Midwifery Audit Tool in Bangladesh's Upazila Health Complexes (UHCs)

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Abstract

Midwifery is a new profession in Bangladesh. Diploma-prepared midwives were first deployed in 2018. Recent studies suggest that newly qualified midwives in Bangladesh may not be able to fully perform their midwifery role due to a number of complex factors. This paper describes a pilot study of a midwifery audit undertaken in 2019 by the Bangladesh Midwifery Society, supported by the Royal College of Midwives. These two organisations are in a formal twinning partnership funded by UNFPA Bangladesh with support from UK-Aid, Sweden and Canada. The audit was successful in improving the quality of midwifery care and addressing health system challenges. It enabled midwifery leadership development and gender empowerment and built capacity for auditing practice and for advocating for midwives' roles. It also deepened midwives' engagement with their professional association. Further research is required to understand whether this tool should be scaled up across Bangladesh and/or adapted for other contexts.

Key Words: *Midwifery audit, quality improvement, leadership, twinning, midwives' associations, respectful maternity care*

Background

Investing in midwives is one of the most effective strategies for achieving good maternal and neonatal health outcomes and achieving the Sustainable Development Goals.[1,2,3]

Beyond preventing maternal and newborn deaths, quality midwifery care improves over 50 other health-related outcomes.[3] Despite huge progress in Bangladesh, there are still around 173 maternal deaths per 100,000 per year.[4] Since 2010, the Government of Bangladesh has been working to educate and deploy professional midwives to improve maternal and child health outcomes.[5] Prior to this, maternity care in Bangladesh was provided in hospitals by obstetricians and nurse-midwives and in the community by traditional birth attendants.[6] Nurse-midwives had completed three years of nursing education and an additional one year of midwifery education; this did not meet the international midwifery education standard of three years nursing plus 18 months midwifery, or three years direct-entry education.[7]

In 2010, a six-month post basic certificate programme in midwifery was commenced for existing nurse-midwives, upgrading them to certified nurse-midwives and enabling them to meet the international criteria for midwifery education. Following this, a 3-year direct-entry diploma course for midwives was initiated in 2013 by the Government of Bangladesh, with support from development partners.[6] In 2018 the first cohort of newly qualified diploma midwives was deployed in groups of four throughout rural Bangladesh in the Upazila Health Complexes (UHCs). UHCs are like large community health centres or small district hospitals.

A recent study of the new cadre of direct-entry diploma midwives in Bangladesh[8] identified that most of them are highly motivated and express high levels of job satisfaction. However, more than a third stated that they were unable to perform all of the skills within their scope of practice or their job description. Midwives reported not being able to perform their midwifery role because of a lack of equipment and supplies, being scheduled to work as nurses on general wards despite not having been trained for nursing duties, lacking permission from supervisors to perform routine midwifery tasks, and experiencing difficulties integrating into existing health systems.

Professional midwives' associations have a key role in strengthening the quality of midwifery care and thereby improving outcomes for women, their newborns and their families.[2,9,10,11] Twinning between midwives' associations is promoted by the International Confederation of Midwives.[9] In 2016, the Royal College of Midwives (RCM) was invited to enter a twinning relationship with the Bangladesh Midwifery Society (BMS) as part of the wider 'Strengthening National Midwifery Programme' supported by the United Nations Population Fund (UNFPA).[12]

There have been several notable successes resulting from this twinning relationship[13,14,] one of which is the growth in BMS' membership and communication systems and the ability to track issues arising from deployed midwives. During 2018 and 2019 it became clear that midwives in UHCs were raising similar concerns to those reported in the baseline study: a lack of opportunity to practice all of the competencies for which they had been trained, difficulties in negotiating professional space in clinical practice (e.g.: being blocked by supervisors from other cadres in being able to deliver/perform intrapartum care) and frequent deployment to perform nursing tasks. These issues have been further compounded by the recent COVID-19 crisis, with midwives struggling to receive the support and personal protective equipment they require. BMS was only formed in 2010 and has not yet developed the organisational maturity to address these issues. Therefore, the twinning project provided an ideal opportunity for the RCM and BMS to work together in finding a way forward.

Increasing BMS' capacity for advocacy is a desired outcome of the twinning project. Gathering evidence is an important step for advocacy[15] so both twinning partners discussed how best to collect evidence to support advocacy for midwives in Bangladesh. Shared values and equity are important critical success factors for twinning projects[16]; therefore it was agreed to co-produce a piece of work focused on developing an enabling environment for midwives, improving the quality of midwifery care in UHCs in Bangladesh and building the capacity of young midwifery leaders. A staged approach was deemed prudent for the following reasons: first, ensuring that any intervention would not result in negative repercussions for midwives; secondly, carefully considering how any identified challenges and opportunities might be addressed locally; lastly, determining whether external relationships with high-level national bodies needed to be established or deepened.

Poor-quality care is a bigger barrier to reducing mortality than insufficient access and there is increasing recognition that maternal mortality cannot be reduced without improvements in service delivery.[17] Auditing practice can improve the quality of health services by providing local maternity systems with insight into what is going well, what is not, and what needs to change.[18,19, 20] However, audit is used less frequently in middle- and low-resource settings, especially by midwives.[21] Therefore, this project provided opportunity to build BMS' capacity in facilitating audit and disseminating findings.

Methods

Development of the midwifery audit tool

Audits measure practice against a clinical standard and the audit cycle involves five stages: preparing for audit; selecting criteria; measuring performance level; making improvements and sustaining improvements.[22] The aim was for a simple tool that could be used during a 2-hour clinical site visit and could be easily scaled up for use by midwives. A literature search was conducted in relation to midwifery audit and maternity standards to identify suitable validated tools for assessing the midwives' practice environment and working conditions. A local scoping exercise also identified relevant tools or resources already in use within Bangladesh.

Several national and international standards or similar were identified to inform development of the data collection tool.[23-28] Some maternity service audit tools, currently in use by an NGO in Bangladesh, were identified; however, these were deemed too complicated for use by novices and did not specifically address midwives' working conditions. An existing tool was identified from Uganda[29]; although this was designed for a mentorship project, it included many relevant questions and was specifically designed to be used by a professional midwives' association. In discussion with the BMS executive team, it was agreed that this audit tool could be modified and expanded to include components that would report on midwives' working conditions and professional midwifery space in Bangladesh.

Forty questions were agreed and grouped around five different themes (Table 1). These allowed for good practice to be highlighted, as well as identification of problems.

Table 1: Audit Tool Completed at time of visit

Questions	**Answer Yes or No, give details where possible**
GENERAL	
1. Number of births	
2. Is there a Birth register?	
3. Do women pay for care?	
ENVIRONMENT	
4. Is there a separate room for birth?	
5. Are there hand washing facilities?	
6. Are there facilities for sterilisation of instruments?	
7. Is there a system for waste disposal?	

8. Is there privacy for women giving birth or having an examination?
9. Is there 24-hour electricity with generator back up?

CLINICAL CARE ANTENATAL

10. Is there equipment available for screening for pre-eclampsia (working blood pressure machine and urine testing)?
11. What is the system and arrangements for antenatal appointments?
12. Is there a tape measure for fundal height measurement?
13. Is there a room reserved for antenatal consultations?

CLINICAL CARE LABOUR

14. Is the partogram used for labour?
15. Is there a Pinard's stethoscope or doppler for recording fetal heart rate in labour?
16. Is there neonatal resuscitation equipment available? (bag valve mask, penguin sucker)
17. Are there facilities to assist women to achieve upright positions in labour? (e.g. birth ball, birthing stool/chair)
18. In which position do women most commonly give birth?
19. Is there a written referral method for transfer?
20. Is there evidence of routine delayed cord clamping?
21. Is there evidence of routine skin to skin contact between mother and baby for at least one hour after birth?
22. Are women encouraged to have a birth partner present throughout labour and birth?
23. Are there emergency equipment and drugs available for PPH?

PRACTICE EDUCATION AND TRAINING

24. Have all midwives and nurses had training in neonatal resuscitation in the last year? (including on-line learning platform)
25. Have all staff had training in postpartum haemorrhage management in the last year? (including on-line learning platform)
26. Do students have a named mentor at the beginning of their placement?
27. Do students have a review half-way through their placement at the Health centre?
28. Is there a summative discussion at the end of the placement?
29. What paperwork is there to support the student placement and reviews?

STAFF WELFARE
30. Is there a designated room or area for staff rest?
31. Can staff access a drink whilst on duty?
32. What staff accommodation is there?
33. If on call, where do staff sleep?
WORKING CONDITIONS
34. Number of midwives
35. Is the job of the midwife entirely midwifery?
36. Are midwives asked to perform non- midwifery tasks for which they have not been trained?
37. What % of time do midwives spend on non-midwifery jobs?
38. How many midwives work in the labour room?
39. If there is a serious problem or emergency who can the midwife call for help?
40. Who are the local responsible seniors to whom you have accountability?

Selection of sites

Four different UHCs in the north and northeast of Bangladesh were selected. A balance was sought between finding sites representative of most UHCs across Bangladesh, versus accessibility and safety.

Piloting the audit tool

The tool was piloted in 2019 by a small team comprising a young midwife leader, a senior BMS Executive member and an RCM volunteer advisor. Permission for site visits was obtained in advance. Opening meetings were held at each UHC with local senior officers, doctors, nursing supervisors and midwives. The visit to maternity wards/rooms was facilitated by the senior nurse supervisor and a doctor, with other staff including midwives. Questions were posed in each area and answers recorded on the audit form. At the end of the visit verbal feedback was given to the UHC's senior medical officer in charge regarding good practices and any opportunities for change identified. Where the audit team agreed that problems must be addressed as a matter of urgency, they were discussed with the local senior officer and escalated to the regional deputy civil surgeon. A simple report was subsequently written and shared with the regional civil surgeon and with the BMS executive team.

Data Analysis

Data were initially analysed on-site and immediate feedback was given to midwives and senior officials in each UHC. Following the visits, the audit team reviewed the data in more depth and organised the findings into themes.

Re-implementation of the audit

It was planned that each of the four UHCs would be re-audited within 12 months to identify whether the audit process had been instrumental in effecting change. Unfortunately, due to restrictions in travel and reduced project funding it was not possible to revisit all four UHCs. However, because anecdotal data from BMS suggested that significant improvements had been made in at least one UHC, a visit to that UHC was planned to coincide with an in-country placement by the same volunteer RCM advisor. The same team then visited the UHC, eight months after the previous audit, to re-implement the clinical audit. The team also conducted informal qualitative interviews with women and their families who had received care from staff in the UHC. This allowed for triangulation of the audit data. The process of re-audit completed the 'plan, do, study, act' cycle of quality improvement[30] which can ensure that new ideas improve quality before implementation on a wider scale.

Ethical issues and risk reduction

As this was audit rather than research, research ethics committee approval was not sought. However, efforts were made to minimise any risk of harm or abuse to midwives during and after site visits by the participation of BMS President and RCM advisors and by engagement with key stakeholders at every stage. The BMS twinning project manager also provided telephone support for midwives. Local police escort was secured for one site visit in a volatile area.

Results

Five themes were identified from the initial audit data: midwifery practice, workforce, facilities and equipment, interprofessional working and practice education. Positive features and problems identified for each of these five themes are outlined in Table 2.

Table 2: Themes identified from the data

Theme	Positive features noted in UHCs (n=4)	Problems identified (n=4)
1. Midwifery Practice	• 20-30% rise in facility birth (4). • Women attending for 4 antenatal (AN) visits (4) • Using partogram in labour (4) • Women encouraged to eat/ drink and mobilise in labour (4) • Delayed cord clamping and skin-to-skin contact facilitated by midwives (4) • Women contacted prior to delivery to encourage facility birth (1) • Emergency PPH tray (3) • Emergency eclampsia tray (1)	• No women attending for recommended 8 AN visits (4) • Nurse-midwives not always facilitating delayed cord clamping and skin-to-skin contact • No emergency PPH tray (1) • No emergency eclampsia tray (3)
2. Workforce	• 4 midwives deployed to each UHC	• Difficulties covering midwife shifts 24/7 (4) • Midwives unable to take rostered days off (4) • Midwives redeployed to general nursing duties (4) sometimes unsupervised
3. Facilities and equipment	• All UHCs reported existing emergency transfer arrangements, dedicated birthing room with privacy screens, PN area/ward, hand washing facilities, waste disposal and sterilisation facilities	• No private space for AN/postnatal (PN) checks (1) • Incomplete equipment for monitoring women (1) • No neonatal resuscitation equipment (1) • Mouth to mouth resuscitation for neonates (1) • Insufficient delivery sets (1) • No normal birth equipment (ball/stool) • No spotlight for suturing (2)
4. Interprofessional working	• Assistance from certified nurse-midwives	• Nurses not relinquishing intrapartum care to midwives (4)
5. Practice Education	• Student midwives undertaking practice learning (1)	• Overcrowding of students in practice & accommodation (1) • Midwives not receiving any CPD since deployment (4)

Re-audit results

The re-audit visit found that all serious problems initially reported had been addressed and that progress had been made in improving the facilities at the UHC. Equipment shortages had been resolved and midwives reported that they were now able to perform their role fully. A new antenatal consulting room had been made available to the midwives by a senior local official. Women interviewed by the audit team appreciated the new facilities and commented that they appeared professional and private. Women were satisfied with their care and trusted the midwives. The number of facility births at the UHC had risen from an average of 45-50 to 70 births per month since the initial audit.

Discussion

Encouragingly, all UHCs were meeting some elements of the standard operating procedures for midwives contained within Bangladesh's (2017) draft National Standard for Midwives.[25] There was some demonstration of evidence-based practice, respectful maternity care, good documentation and effective referral systems. Most UHCs had equipment to facilitate normal birth, e.g. birthing balls and stools; some had appropriate emergency equipment whilst others did not. Other standards were not being met as the professional space for midwives to practice was not being relinquished or facilitated by other health professionals. These challenges mirror the 'health system bottlenecks to quality care' found in a research study[31] across 12 countries, including Bangladesh. However, the same study highlighted the positive role of clinical audit in improving quality of care. Availability of health workers is not enough to ensure quality of care; health workers must be empowered and adequately supported by the health system.[28]

This pilot project demonstrated that the audit cycle was successful in bringing about change. Prior to the audit taking place, midwives in all four UHCs had already made significant improvements to the care of women and their babies, resulting in an increase in facility births. Further improvements were made following the initial audit and interviews with women during the re-audit confirmed that these improvements were appreciated by service users and their families. This audit demonstrated a simple process to give accurate information about the reality of midwives practising in rural UHCs in Bangladesh, including identification of good practice and enabling factors for midwives in the clinical environment. It also identified some serious problems that had not previously been acknowledged by local senior officers. The audit team was received with great enthusiasm and the midwives working in the UHCs were proud to showcase their achievements since deployment. Midwives were

very receptive to ideas for improvements, starting to initiate changes even before the site visit had finished!

The audit also highlighted significant workforce challenges for midwives, along with difficult interprofessional relationships and lack of opportunities for leadership and professional development. These findings resonate with WHO's (World Health Organization) 2016 global survey of midwives' experiences[32], which found widespread reports of disrespect, gender discrimination and subordination, and professional barriers to leadership and development. Encouragingly, this survey also found that midwives have the solutions to these problems; when their voices are heard, quality of care can improve. This audit in Bangladesh allowed the voices of midwives to be heard and enabled interprofessional collaboration, leadership development and, ultimately, improvements in the quality of maternal and newborn care.

The project also met with challenges. Auditing should be a transparent process, without confrontation or judgement.[22] However, some senior officers found the audit results difficult to handle; midwives demonstrated admirable strength in respectfully negotiating changes. Some identified gaps required urgent attention, i.e. lack of emergency equipment causing risk of serious harm to both midwives and their clients. Qualitative research exploring the factors enabling quality midwifery care in Bangladesh may shed light on issues of professional space and hierarchy which will help midwives to be established as respected maternity care providers. Certified Nurse-Midwives in Bangladesh have been educated to international standards for midwifery education and yet do not hold the title 'Midwife' nor wear the same uniform as the new cadre of Diploma Midwives. This may be aggravating the difficulties midwives experience in fitting into the practice environment, and causing confusion for other healthcare professionals and maternity service-users.

A professional midwives' association should provide guidance, advice and information to its members about the quality of midwifery care; it should also advocate for midwives, women and their newborn and should communicate with relevant bodies on issues impacting its members and the midwifery profession.[33] The audit provided BMS with opportunity to engage with its members, to be visible in practice and to actively support members in their workplace. Midwives expressed pleasure that their professional association was taking an interest in them, allowing them to expose difficult practice issues and to seek a resolution to them. During the pilot, BMS was able to inform midwives about its

organisational development, to raise awareness of its new online learning platform for members and of the 'Safe Delivery App', a free resource to guide midwifery practice.[34] The audit results also provided BMS with evidence to inform its advocacy role.

Effective leadership is essential to drive quality improvement.[35] This study provided a unique opportunity to develop young midwife leaders (YML) as the two midwives leading this initiative were part of a bespoke YML development programme, delivered within the twinning partnership. Skills learned included conducting a clinical audit as part of quality improvement, negotiation, advocacy, interprofessional collaboration, stakeholder analysis and engagement, writing, presentation, communication (including English language skills) and team leadership. As they were both women, and local senior officers were mostly men, it also facilitated female empowerment.

Limitations

Midwives are deployed in remote and rural areas of Bangladesh, many of which are not considered feasible for foreign travellers to visit; therefore, the study was conducted in more accessible UHCs. The audit was not able to cover all areas of midwifery practice as it was designed to be completed within a limited period of time. Inclusion of other practices known to affect maternal and infant outcomes (such as early and sustained breast feeding) could be considered prior to scaling up the audit tool across Bangladesh or elsewhere.

A reduction in project funding and the current COVID-19 crisis have limited opportunities for international travel and support with negative effects on re-audit and any plans for scaling-up. Positive changes were observed in the one re-visited UHC; however, similar changes may not have been observed in others. Nor may such changes be observed if the audit were rolled out across Bangladesh.

Conclusion

The transformation seen at one of the four UHCs described in this audit, demonstrates the power of a simple audit tool to identify problems, to raise concerns at the appropriate level and to empower individual midwives to change practice. The audit also appeared to improve the morale of midwives, to enable leadership development and gender empowerment, and to deepen midwives' engagement with their professional association. It facilitated midwives' skills in advocating for quality improvement at a local level. This was a small pilot audit and the outcomes may not be replicable in other contexts nor sustained

without ongoing support and intervention. The audit tool, however, can be adapted for use elsewhere or scaled up within Bangladesh.

Midwives in Bangladesh face social, professional and economic barriers which mean they are not able to perform their job to their full potential.[36] Whilst the Government of Bangladesh is to be congratulated on its commitment to midwifery, the midwifery workforce needs urgent expansion to ensure that there is 24/7 coverage for midwifery services in each UHC. More advocacy is needed at a national level to ensure that UHCs make dedicated space for midwives to practice high quality maternity care, and for women to be cared for in a safe and acceptable environment. Midwives also need support from seniors in negotiating professional space amongst nurses and nurse-midwives who, until recently, have been the maternity care providers. If all midwives in Bangladesh who have been educated to international standards for midwifery education would be allowed to hold the title 'midwife' and wear the same uniform in practice, this might alleviate some of the workplace challenges highlighted in this study.

Midwives' associations have a key role in planning and policy decisions at a country level.[37] This audit helped BMS to demonstrate its capacity to advocate for change. Policy makers should therefore ensure that BMS has a seat at the table in all discussions about midwifery and wider maternity issues.

This pilot of a midwifery audit tool showed promising results and should now be tested on a wider scale. Further research exploring the factors enabling quality midwifery care in Bangladesh is needed.

Acknowledgements

Thanks are due to the Directorate General of Nursing and Midwifery, the Government of Bangladesh; UNFPA Bangladesh; BMS President; BMS staff; BMS Executive Committee; BMS Young Midwife Leaders; RCM staff and librarian; RCM volunteer advisors

Disclaimer

This project was funded by UNFPA Bangladesh with support from UK-AID, Sweden and Canada.

References

1. Renfrew MJ, McFadden A, Bastos MH. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet.* 2014; 384: 1129-1145
2. UNFPA (2014) *The state of the world's midwifery: a universal pathway, a woman's right to health*. Available at: www.unfpa.org/sowmy [accessed 11 September 2017]
3. World Health Organization. *Strengthening quality midwifery education for Universal Health Coverage*. 2019. Available at https://www.who.int/maternal_child_adolescent/topics/quality-of-care/midwifery/strengthening-midwifery-education/en/ [accessed 15 April 2020]
4. World Bank. *Maternal Mortality Ratio, Bangladesh.* Available at https://data.worldbank.org/indicator/SH.STA.MMRT?locations=BD [accessed 17 April 2020]
5. Chilvers R, Van Look, ten Hoope-Bender P. *RMNH Workforce Assessment.* Barcelona, Spain: Ministry of Health and Family Welfare, Bangladesh, UNFPA, ICS Integrare; 2014.
6. Bogren M, Begum F and Erlandsson K (2017) The Historical Development of the Midwifery Profession in Bangladesh. *Journal of Asian Midwives.* 2017. 4(1):65-74
7. International Confederation of Midwives. *Global Standards for Midwifery Education.* 2013 Available at https://www.internationalmidwives.org/assets/files/general-files/2018/04/icm-standards-guidelines_ammended2013.pdf [accessed 15 April 2020]
8. Zaman R, Sabur MA, Khaled A and Islam S. *Final report: Baseline study on trained diploma midwives in Bangladesh.* Oxford Policy Management and Mitra and Associates. 2019. Available at https://www.gov.uk/dfid-research-outputs/baseline-study-on-trained-diploma-midwives-in-bangladesh [accessed 15 April 2020]
9. Moyo N, Bokosi M. *Twinning as a Tool for Strengthening Midwives Associations.* International Confederation of Midwives. 2014
10. Lopez S, Nove A, ten Hoope-Bender P, de Bernis L , Bokosi M , Moyo N, Homer C. A descriptive analysis of midwifery education, regulation and association in 73 countries: the baseline for a post-2015 pathway. *Human Resources for Health*. 2016. 14:37
11. International Confederation of Midwives. *Association.* 2018. Available at https://www.internationalmidwives.org/our-work/association/ [accessed 15 April 2020]
12. UK Aid. Development Tracker: *Strengthening midwifery in Bangladesh*. 2019. Available at https://devtracker.dfid.gov.uk/projects/GB-1-204079 [accessed 15 April 2020]

13. Kemp J and Moran C (2018) A world of difference. *RCM Midwives Magazine*. Spring edition: 61-65
14. Moyo N. Report: *RCM and BMS Twinning Review: End of Phase 1*. The Royal College of Midwives. 2018
15. Kare S, Chowdhury N and Kazi V. *The power of evidence in advocacy*. 2007. Available at https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/251.pdf [accessed 15 April 2020]
16. Cadée F,. Nieuwenhuijze M, Largo-Janssen A, de Vries R. From equity to power: Critical Success Factors for Twinning between midwives, a Delphi study. *Journal of Advanced Nursing*. 2018. 74:1573–1582
17. Kruk M, Gage A, Arsenault C, Jordan K, Leslie H, Roder-DeWan S, Adeyi O, Barker P, Daelmans B, Doubova S, English M, García Elorrio E, Guanais F, Gureje O, Hirschhorn L, Jiang L, Kelley E, Lemango E, Liljestrand J, Malata A, Marchant T, Matsoso M, Meara J, Mohanan M, Ndiaye Y, Norheim O, Reddy K, Rowe A. High quality health systems—time for a revolution: Report of the Lancet Global Health Commission on High Quality Health Systems in the SDG Era. *Lancet Global Health*, 6(11):1196
18. Graham W. Criterion-based clinical audit in obstetrics: bridging the quality gap. *Best Practice and Research: Clinical Obstetrics and Gynaecology*. 2009. 23:375-88
19. Pirkle C, Dumont A, Zunzunegui M. Criterion-based clinical audit to assess quality of obstetrical care in low- and middle-income countries: a systematic review, *International Journal for Quality in Health Care*. 2011. 23(4): 456–463
20. NHS. *Implementing Better Births: a resource pack for local maternity services*. 2017. Available at https://www.england.nhs.uk/wp-content/uploads/2017/03/nhs-guidance-maternity-services-v1-print.pdf [accessed 17 April 2020]
21. Gicheha E, Richens Y, Kivai R, Lavender T. Why clinical audit is important in midwifery: experiences from Kenya. *African Journal of Midwifery and Women's Health*. 2017, 11(2): 62-65
22. Benjamin A. Audit: how to do it in practice? *British Medical Journal*. 2008. 336(7655): 1241–1245
23. World Health Organization. *Standards for improving quality of maternal and newborn care in health facilities*. 2016. ISBN: 978 92 4 151121 6

24. Royal College of Midwives. *High Quality Midwifery Care*. 2014. Available at https://www.rcm.org.uk/media/2354/high-quality-midwifery-care.pdf [accessed 15 April 2020]
25. Government of Bangladesh. *National guidelines for midwives*. 2017.
26. White Ribbon Alliance (2019) *Respectful maternity care charter*. Available at https://www.whiteribbonalliance.org/respectful-maternity-care-charter/ [accessed 18.04.2020]
27. World Health Organization. *Recommendations on antenatal care for a positive pregnancy experience*. 2016. Available at https://apps.who.int/iris/bitstream/handle/10665/250796/9789241549912-eng.pdf?sequence=1 [accessed 15 April 2020]
28. World Health Organization. *Global strategy on human resources for health: workforce 2030*. 2016. Available at https://www.who.int/hrh/resources/pub_globstrathrh-2030/en/ [accessed 15 Jan 2019]
29. Kemp J, Shaw E, Nanjego S and Mondeh K. Improving student midwives' practice learning in Uganda through action research: the MOMENTUM project. *International Practice Development Journal*. 2018. 8(1):7
30. HQIP. *Guide to quality improvement methods*. 2015. Available at https://www.hqip.org.uk/resource/guide-to-quality-improvement-methods/#.Xpo-TMhKiUk [accessed 18 April 2020].
31. Sharma G, Matthews M, Dickson K, Weeks A, Hofmeyr G, Lavender T, Day L, Mathews J, Fawcus S, Simen-Kapeu A, de Bernis L. Quality care during labour and birth: a multi-country analysis of health system bottlenecks and potential solutions. *BMC Pregnancy and Childbirth*. 2015. 15:S2
32. World Health Organization. *Midwives' voices, midwives' realities: findings from a global consultation on providing quality midwifery care*. 2016. Available at https://www.who.int/maternal_child_adolescent/documents/midwives-voices-realities/en/ [accessed 17 April 2020]
33. ICM. *Member Association Capacity Assessment Tool*. 2011. Available at https://www.internationalmidwives.org/assets/files/association-files/2018/04/macat-eng.pdf [accessed 16 April 2020]
34. Maternity Foundation. *Safe Delivery App*. 2020. Available at https://www.maternity.dk/safe-delivery-app/ [accessed 16 April 2020]
35. The Health Foundation. *What's leadership got to do with it? Exploring links between quality improvement and leadership in the NHS*. 2011. Available at

https://www.health.org.uk/sites/default/files/WhatsLeadershipGotToDoWithIt.pdf [accessed 17 April 2020]

36. Bogren M, Erlandsson K. What prevents midwifery quality care in Bangladesh? A focus group enquiry with midwifery students. *BMC Health Services Research.* 2018. 18:639
37. Lopez S, Titulaer P, Bokosi M, Homer C, ten Hoope-Bender P. The involvement of midwives' associations in policy and planning about the midwifery workforce: A global survey. *Midwifery*. 2015. 31(11), pages 1096-1103.