



# Enhancing quality midwifery care in humanitarian and fragile settings: a systematic review of interventions, support systems and enabling environments

Caroline SE Homer ,<sup>1</sup> Sabera Turkmani,<sup>1,2</sup> Alyce N Wilson,<sup>1</sup> Joshua P Vogel,<sup>1</sup> Mehr Gul Shah,<sup>3</sup> Helga Fogstad,<sup>3</sup> Etienne V Langlois <sup>3</sup>

**To cite:** Homer CSE, Turkmani S, Wilson AN, *et al*. Enhancing quality midwifery care in humanitarian and fragile settings: a systematic review of interventions, support systems and enabling environments. *BMJ Global Health* 2022;**7**:e006872. doi:10.1136/bmjgh-2021-006872

**Handling editor** Seye Abimbola

► Additional supplemental material is published online only. To view, please visit the journal online (<http://dx.doi.org/10.1136/bmjgh-2021-006872>).

Received 12 July 2021  
Accepted 19 December 2021



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

<sup>1</sup>Maternal, Child and Adolescent Health Program, Burnet Institute, Melbourne, Victoria, Australia

<sup>2</sup>Faculty of Health, University of Technology Sydney, Sydney, New South Wales, Australia

<sup>3</sup>Partnership for Maternal, Newborn & Child Health (PMNCH), World Health Organization (WHO), Geneva, Switzerland

## Correspondence to

Professor Caroline SE Homer;  
[Caroline.homer@burnet.edu.au](mailto:Caroline.homer@burnet.edu.au)

## ABSTRACT

**Introduction** Women and children bear a substantial burden of the impact of conflict and instability. The number of people living in humanitarian and fragile settings (HFS) has increased significantly over the last decade. The provision of essential maternal and newborn healthcare by midwives is crucial everywhere, especially in HFS. There is limited knowledge about the interventions, support systems and enabling environments that enhance midwifery care in these settings. The aim of this paper is to identify the factors affecting an enabling environment for midwives in HFS and to explore the availability and effectiveness of support systems for midwives.

**Methods** A structured systematic review was undertaken to identify peer-reviewed primary research articles published between 1995 and 2020.

**Results** In total, 24 papers were included from Afghanistan, Bangladesh, Nigeria, Democratic Republic of Congo, South Sudan and Sudan, Ethiopia, Pakistan, Uganda and Liberia. There were two broad themes: (1) the facilitators of, and barriers to, an enabling environment, and (2) the importance of effective support systems for midwives. Facilitators were: community involvement and engagement and an adequate salary, incentives or benefits. Barriers included: security and safety concerns, culture and gender norms and a lack of infrastructure and supplies. Support systems were: education, professional development, supportive supervision, mentorship and workforce planning.

**Conclusion** More efforts are needed to develop and implement quality midwifery services in HFS. There is an urgent need for more action and financing to ensure better outcomes and experiences for all women, girls and families living in these settings.

**PROSPERO registration number** CRD42021226323.

## INTRODUCTION

In 2020, before COVID-19, approximately 23% of the world's population was estimated to be living in fragile settings, including 168 million people in need of humanitarian assistance and protection.<sup>1–3</sup> Women and

## Key questions

### What is already known?

- In 2018, it was estimated that nearly 136 million people were living in humanitarian settings, with significant impacts on the health and well-being of pregnant women, girls and newborn babies.
- Midwives are essential to the provision of maternal and newborn services in all settings.

### What are the new findings?

- There are considerable challenges in providing midwifery services, especially to ensure the safety and security of midwives and other health workers.
- Community engagement and support are essential to provide quality midwifery services.

### What do the new findings imply?

- Strong partnerships with communities should be created when midwifery services are developed and implemented in humanitarian and fragile settings.
- Safety and security for midwives are essential, both in their health facilities and when travelling to provide care.

children bear a substantial burden of the impact of humanitarian crises and fragile settings. The number of non-displaced women and children living dangerously close to armed conflict increased from 185 million women and 250 million children in 2000 to 265 million women and 368 million children in 2017.<sup>4 5</sup> Maternal and child health outcomes for those in humanitarian and fragile settings (HFS) are often poor<sup>6</sup> and are not on track to meet global, national or regional health targets.<sup>7</sup> Nine of 10 countries with the highest neonatal mortality rates are in conflict.<sup>8</sup> In these settings, health facilities are often not functional, and pregnant

women and girls lack access to trained providers with midwifery skills.<sup>9 10</sup>

Providing quality care for women and children in any context requires a competent and motivated workforce working within an enabling environment.<sup>11</sup> Midwives are critical for the provision of sexual, reproductive, maternal, newborn, child and adolescent healthcare. It has been shown that increases in the coverage of interventions delivered by midwives could save lives.<sup>12</sup> For example, a substantial increase in coverage of midwifery services (25% increase every 5 years) would avert an estimated 41% of maternal deaths, 39% of neonatal deaths and 26% of stillbirths. This would equate to 2.2 million fewer deaths per year by 2035. Even a more modest increase in coverage of midwife-delivered interventions (10% increase every 5 years) would avert 1.3 million deaths per year by 2035.

Midwives provide maternity services as well as other preventive health and treatment services. These include: promotion of breastfeeding; immunisation; immediate newborn care; comprehensive abortion care and post-abortion care; contraceptive services; screening and treatment of postnatal depression; and better support for victims of gender-based violence.<sup>13</sup> A shortage of midwives is a significant barrier to the provision of quality sexual, reproductive, maternal, newborn, child and adolescent health services.<sup>14</sup> This is especially the case in HFS where midwives, who are mostly women, may be deterred from working in these environments due to security concerns.<sup>9 10 15</sup>

The importance of effective midwifery services is evident, yet there is limited knowledge about the interventions, support systems and enabling environments that can enhance quality midwifery care in HFS. A supplement published with the 2021 State of the World's Midwifery Report presented three case studies from Bangladesh, Somalia and the refugee camps in Europe, in a project known as the Operational Refugee and Migrant Mothers Approach.<sup>16</sup> While this provided a unique and important perspective, it highlighted limited understanding of the role that midwives can play in HFS. The aim of this paper, therefore, is to present the findings of a systematic review of the literature on quality of midwifery services in HFS. It identifies and analyses evidence to inform future solutions to enhance quality midwifery care. The review set out to identify:

1. Factors affecting an enabling environment for midwives in order to provide high-quality maternity services in HFS.
2. Availability and effectiveness of the support systems for midwives.

## METHODS

We undertook a mixed-methods systematic review. An initial protocol was registered and published with PROSPERO in January 2021 (CRD42021226323) and the protocol reported according to the Preferred Reporting

Items for Systematic Reviews and Meta-Analyses checklist.<sup>17 18</sup> Our approach was to search, screen and identify eligible peer-reviewed studies using qualitative and/or quantitative data collection and analysis methods.<sup>19</sup>

## Defining HFS and an enabling environment

There is no universally agreed definition of an HFS. This review takes its definition of humanitarian settings from the Inter-Agency Working Group on Reproductive Health in Crises as contexts "... in which an event or series of events has resulted in a critical threat to the health, safety, security, or well-being of a community or other large group of people. The coping capacity of the affected community is overwhelmed, in-country infrastructure is disrupted, and external assistance is required. This can be the result of events such as armed conflicts, natural disasters, epidemics, or famine and often involves population displacement' (OECD, p2).<sup>2 20</sup> Fragile settings are those that have a combination of exposure to risk and insufficient coping capacity of the state, systems and/or communities to manage, absorb or mitigate those risk.<sup>2</sup> Fragility can lead to negative outcomes including violence, poverty, inequality, displacement and environmental and political degradation.<sup>2</sup>

Humanitarian settings and fragile states frequently overlap. To reflect this, the classification of HFS used in this paper categorises countries across a spectrum of fragility with four groupings: highest fragility, very high fragility, high fragility and fragile settings. This was based on triangulation of data from five classifications of humanitarian and fragile states, that is, OECD,<sup>2</sup> World Bank,<sup>21</sup> Fragile State Index,<sup>22</sup> the INFORM Severity Index,<sup>23</sup> and UNOCHA data on humanitarian response plans.<sup>1</sup> More information on the composite HFS classification can be found in online supplemental file 1.

We took the UNFPA definition of an enabling environment as one where midwives '... can practise to their full scope, are accountable for independent decisions within the regulated standard operating procedure, work within a functional health infrastructure with adequate human resources, equipment and supplies, have access to timely and respectful consultation, collaboration and referral, be safe from physical and emotional harm and have equitable compensation, including salary and working conditions' (UNFPA, p34).<sup>24</sup> Support systems included education, training and supervision, mentorship, psychosocial support and schemes for continuous quality improvement.<sup>25</sup>

## Eligibility criteria

Peer-reviewed primary research articles in English, published between 1995 and 2020, were eligible regardless of research design. Specifically, we included primary studies that used qualitative study designs such as ethnography, phenomenology, case studies, grounded theory studies and qualitative process evaluations. We also included studies that used both qualitative methods for data collection (eg, focus group

discussions, individual interviews, observation, diaries, document analysis, open-ended survey questions) and qualitative methods for data analysis (eg, thematic analysis, framework analysis, grounded theory). We also included randomised trials, non-randomised trials, controlled before-and-after studies, interrupted time series and repeated measures<sup>26</sup> and mixed-methods studies, provided they were primary studies and relevant to the review question.

The population of interest was midwives/nurse-midwives, according to the scope of practice defined by the International Confederation of Midwives,<sup>27</sup> as well as the women, girls and children in their care. Any practices or interventions that targeted health workers working outside the scope of midwifery practice were excluded. Interventions that focused on nurses, obstetricians and gynaecologists, paediatricians or community health workers were excluded. Eligible studies were categorised according to the four categories: highest fragility, very high fragility, high fragility or fragile settings.

We excluded case reports or case series, letters, editorials, commentaries, reviews, study protocols, conference abstracts or other article types that did not provide primary data and/or were not peer-reviewed. Specific cost-effectiveness studies were also excluded but studies that included costing data as part of implementation and feasibility were included.

### Search strategies

Searches were conducted between November and December 2020. Databases searched were: PubMed/MEDLINE; Academic Search Complete (EBSCO); EMBASE; CINAHL (EBSCO); Web of Science; Scopus; Nursing and Allied Health (ProQuest); Maternity and Infant Care (Ovid). We conducted an online hand search by checking reference lists of identified articles. With the support of librarians, a search strategy was created using predefined terms and synonyms for the intervention, population and setting (online supplemental file 2).

### Study selection

Titles and abstracts of all search results were imported into Endnote and duplicates removed. The online review software Covidence was used to screen titles, abstracts and full texts.<sup>28</sup> Two authors independently reviewed each title and abstract against the eligibility criteria, with potentially relevant articles included for full-text review. Full texts were recovered and independently assessed for eligibility by two reviewers. Disagreements at any stage were resolved by discussion or by involving a third reviewer. Where more than one paper reported the same study, the papers were collated to ensure the primary study was the unit of interest.

We used the Mixed Method Appraisal Tool (MMAT) for assessing the quality of studies.<sup>29</sup> MMAT is a quality assessment instrument for quantitative, qualitative and mixed-methods studies in a single tool.<sup>30</sup>

### Patient and public involvement

Patients and the public were not directly involved in this review.

### Analysis

The findings of each study were imported into NVivo V.12. Coding process was undertaken with a focus on our two research objectives: factors affecting an enabling environment and the availability and effectiveness of support systems for midwives.

We initially took an inductive approach. We identified and extracted categories and concepts that emerged from the data and developed codes highlighting the key issues. As we proceeded through the coding, additional ideas emerged which were organised as concepts.<sup>31</sup> The next stage was to undertake a deductive process using our two objectives to identify other concepts relating to these areas specifically. A mind map was developed in NVivo to connect the concepts with our objectives and build a comprehensive picture of the issues.<sup>32</sup> Our objectives developed into the two key themes and we identified a series of subthemes.

We summarised the findings by type of publication, method, context of the study, type of intervention and level of fragility. As studies varied in their method, context and outcomes used, it was not possible to pool data for a formal meta-analysis.<sup>33</sup> We therefore undertook a narrative synthesis.<sup>31</sup> Narrative synthesis has been used in previous systematic reviews where the quantitative and qualitative results are integrated to inform the findings.<sup>34 35</sup> We did not undertake any assessment of meta-bias(es), such as publication bias across studies or selective reporting within studies.

### RESULTS

In total, 2500 citations were identified and imported into Endnote and Covidence (table 1).<sup>18 36</sup> After irrelevant and duplicate citations were removed, 461 potentially eligible papers were identified (figure 1). We were able to screen the full text of 422 papers, identifying 39 papers for assessment. During a data extraction and quality assessment phase, a further 15 papers were excluded, as there was inadequate or vague information about the study population or interventions. For example, it was unclear whether midwives were included in the study or their contribution could not be identified. Ultimately, 24 papers were included in the review. Included articles were summarised and categorised according to their relevance to the objectives of the study (table 2).

Of the 24 studies, 14 were qualitative, 7 mixed methods and 3 quantitative. Most studies were descriptive (n=16). Of the countries included, seven are low-income countries and three are lower-middle-income countries.<sup>21</sup> Three countries are categorised as having highest fragility, two as very high fragility, two as high fragility and three as fragile settings. These countries included Afghanistan,<sup>37–43</sup> Bangladesh,<sup>44–48</sup> Nigeria,<sup>49–52</sup>

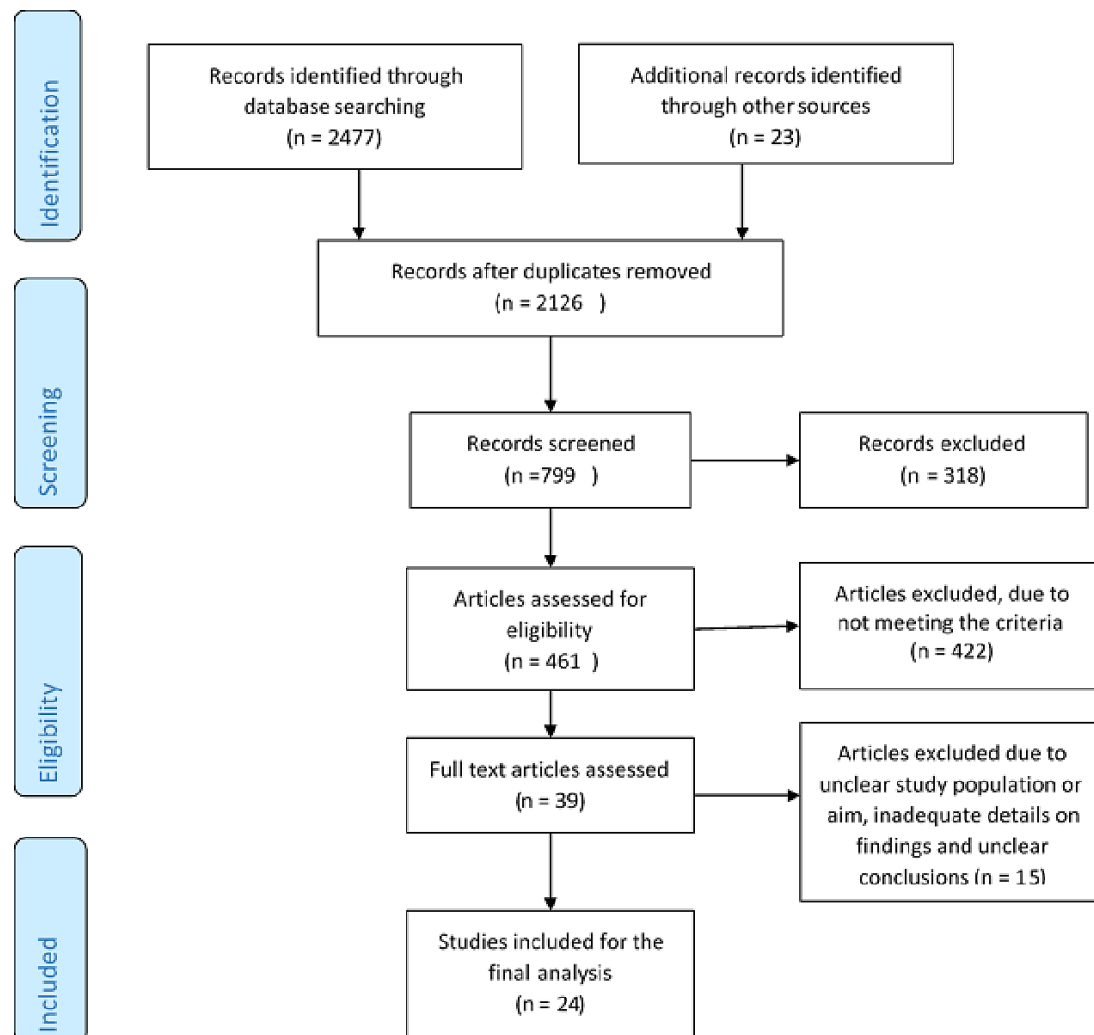
**Table 1** Results of database search

Data source	Results	Duplicate removed	Unrelated articles removed	Reviewed abstracts and titles
CINAHL (EBSCO)	237	185	113	68
Pubmed/Medline	236	236	76	58
Web of Science	268	247	86	63
Nursing and Allied Health	12	12	4	4
Scopus	314	275	47	47
EMBASE(OVID)	229	168	59	59
Academic Search Complete (EBSCO)	744	698	228	122
Maternity & Infant Care (OVID)	87	76	37	37
Hand searched	23	NA		2
Total	2477 (+23 hand search)	2126	779	461

NA, not available.

Democratic Republic of Congo (DRC),<sup>53 54</sup> South Sudan and Sudan,<sup>55 56</sup> Ethiopia, Pakistan, Uganda and Liberia. Afghanistan (n=7), Bangladesh (n=5), Nigeria (n=4), DRC (n=2) made up most of the studies (table 2). The

definition and scope of practice for midwives were often unclear for some countries, such as Nigeria, South Sudan, DRC and Ethiopia. However, studies in Afghanistan, Bangladesh, Pakistan, Sudan and Liberia specified



**Figure 1** PRISMA flow chart showing search results, screening and included papers.



**Table 2** Characteristics of included studies

#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
1	Arnold, 2018 <sup>37</sup>	Afghanistan	Highest Fragility	Parallel worlds: An ethnography of care in an Afghan maternity hospital	Assess midwifery services to explore underlying issues for staff behaviours	Midwives, doctors and senior officials	Qualitative/critical ethnography 23 Interviews were conducted with senior doctors and midwives, resident doctors, newly qualified midwives and care assistants	Although healthcare providers generally look the same in hospitals across the globe, this study reveals they have different ways of understanding the world. They may work in a 'caring' profession but perceive the purpose of work from innate social norms and values, which, for example, can result in guarding their skills rather than sharing them. A sense of responsibility to strangers might clash with kinship obligations, the institutional culture, and the wider social environment. Furthermore, public health institutions may not only provide care, they may also be lucrative sources of income for political elites.
2	Arnold, 2019 <sup>38</sup>	Afghanistan	Highest Fragility	Villains or victims? An ethnography of Afghan maternity staff and the challenge of high-quality respectful care	Assessment of midwifery services to explore culture of care.	Midwives, doctors and care assistants	Qualitative/ethnographic study 23 Interviews were conducted with senior doctors and midwives, resident doctors, newly qualified midwives and care assistants (2 senior midwives, 8 midwives with 6 months–10 years' experience)	Most staff members were simply endeavouring to survive in a tough working environment where the lack of a shift system inevitably resulted in staff exhaustion, poor performance and the constant risk of mistakes leading to censure by management. Doctors and midwives concurred that they did not provide care as they had been taught and blamed the workload, lack of a shift system, insufficient supplies and inadequate support from management.
3	Kim, 2013 <sup>39</sup>	Afghanistan	Highest Fragility	Assessing the capacity for newborn resuscitation and factors associated with providers' knowledge and skills: a cross-sectional study in Afghanistan	Assessment of emergency obstetric and newborn care training/services	Midwives and doctors	Quantitative/cross-sectional study 142 midwives and 82 doctors	Over 90% of facilities had essential equipment for newborn resuscitation, including a mucus extractor, bag and mask. More than 80% of providers had been trained on newborn resuscitation, but midwives were more likely than doctors to receive such training as part of preservice education (59% and 35%, respectively, $p<0.001$ ). Training was associated with greater knowledge ( $p<0.001$ ) and clinical skills ( $p<0.05$ ) in a multivariable model that adjusted for facility type, provider type and years of experience offering emergency obstetric and newborn care services.
4	Mansoor, 2012 <sup>40</sup>	Afghanistan	Highest Fragility	Midwifery training in post-conflict Afghanistan: tensions between educational standards and rural community needs	Compare performance of midwifery graduates who were selected through community mobilisation with those who admitted through a national examination.	Midwifery graduates and students	Mixed method/retrospective survey. MW student records of the 178 trainees were reviewed and data extracted for demographics, selection method, performance in knowledge and skills, and deployment status and location.	96% of midwifery graduates selected by communities were employed, compared with 74% chosen by the Institute of Health Sciences (IHS) and 82% by the National University Entrance Examination (NUEE). 63% of community-selected graduates were working in rural locations, compared with 43% recruited by IHS and 9% by the NUEE. While fewer midwifery graduates selected by communities had completed high school and their academic performance was slightly lower during training, there was no difference in their pass rates and acquisition of practical skills.

Continued

**Table 2** Continued

#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
5	Thommesen, 2020 <sup>41</sup>	Afghanistan	Highest Fragility	"The midwife helped me. Otherwise I could have died": women's experience of professional midwifery services in rural Afghanistan—a qualitative study in the provinces Kunar and Laghman	To explore experiences of midwifery care	Women	Qualitative/exploratory study 39 women participated—25 who had given birth during the last 6 months, 11 mothers-in-law and three community midwives in the provinces of Kunar and Laghman	Many of the women greatly valued the trained midwives' life-saving experience, skills and care, and the latter were important reasons for choosing to give birth in a clinic. Women further appreciated midwives' promotion of immediate skin-to-skin contact and breastfeeding. However, some women experienced rudeness, discrimination and negligence on the part of the midwives. Moreover, relatives' disapproval, shame and problems with transport and security were important obstacles to women giving birth in the clinics.
6	Wood, 2013 <sup>42</sup>	Afghanistan	Highest Fragility	Factors influencing the retention of midwives in the public sector in Afghanistan: A qualitative assessment of midwives in eight provinces	Evaluation of factors associated with midwifery (MW) deployment	Midwives and other stakeholders	Qualitative Stakeholders n=33, MW students n=35, MW currently employed n=17; MWs formerly employed n=16, CHWs n=16	Several factors affect a midwife throughout her career in the public sector, including her selection as a trainee, the training itself, deployment to her preassigned post, and working in clinics. Overall, appropriate selection is the key to ensuring deployment and retention later on in a midwife's career. Other factors that affect retention of midwives include civil security concerns in rural areas, support of family and community, salary levels, professional development opportunities and workplace support, and inefficient human resources planning in the public sector.
7	Zainullah, 2014 <sup>43</sup>	Afghanistan	Highest Fragility	Establishing midwifery in low-resource settings: Guidance from a mixed-methods evaluation of the Afghanistan midwifery education programme	Evaluation of costs and graduate performance outcomes of the two types of preservice midwifery education programmes	Midwives	Quantitative analysis of midwifery graduates' performance and cost analysis to estimate the resource required to educate a midwife. midwifery school graduates (n=138)	Graduates (n=101) achieved an overall mean competency score of 63.2% (59.9%–66.6%) on the clinical competency assessment compared with 57.3% (49.9%–64.7%) for Institute of Health Sciences graduates (n=437). Reproductive health activities accounted for 76% of midwives' time over an average of 3 months. Approximately 1% of childbirths required referral or resulted in maternal death. On the basis of known costs for the programmes, the estimated cost of graduating a class with 25 students averaged US\$298 939, or US\$10 784 per graduate.
8	Bogren, 2018 <sup>45</sup>	Bangladesh	Fragile Setting	Opportunities, challenges and strategies when building a midwifery profession. Findings from a qualitative study in Bangladesh and Nepal	Assess strategies for establishment of midwifery Education	Midwives	Qualitative	Global and national standards brought together midwifery professionals and stakeholders, and helped in the establishment of midwifery associations. The challenges were national commitments without a full set of supporting policy documents, lack of professional recognition, and competing views, interests and priorities.

Continued

**Table 2** Continued

#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
9	Bogren, 2018 <sup>46</sup>	Bangladesh	Fragile Setting	What prevents midwifery quality care in Bangladesh? A focus group enquiry with midwifery students	Assess midwifery services in relation to quality of care	Midwifery students	Qualitative 67 midwifery students	Professional barriers include heavy workloads with a shortage of staff who were not utilised to their full capacity within the health system. The reason for this was a lack of recognition in the medical hierarchy, leaving midwives with low levels of autonomy. Economical barriers were reflected by lack of supplies and hospital beds, midwives earning only low and/or irregular salaries, a lack of opportunities for recreation, and personal insecurity related to lack of housing and transportation. The social barriers preventing midwifery quality care arise from Bangladeshi cultural norms that have been shaped by beliefs associated with religion, society, and gender norms. This puts midwives in a vulnerable position due to cultural prejudice.
10	Bogren, 2018 <sup>47</sup>	Bangladesh	Fragile Setting	Development of a context-specific accreditation assessment tool for affirming quality midwifery education in Bangladesh	Assess the feasibility of development of a context-specific accreditation assessment tool for midwifery education	Midwives	Mixed methods (using quantitative and descriptive questionnaire). 123 nursing educators teaching the 3 years diploma midwifery education programme.	Provides insight into the development of a context-specific accreditation assessment tool for Bangladesh. Important components to be included in this accreditation tool are presented under the following categories and domains: 'organisation and administration', 'midwifery faculty', 'student body', 'curriculum content', 'resources, facilities and services' and 'assessment strategies'. The identified components were a prerequisite to ensure that midwifery students achieve the intended learning outcomes of the midwifery curriculum, and hence contribute to a strong midwifery workforce. The components further ensure well-prepared teachers and a standardised curriculum supported at policy level to enable effective deployment of professional midwives in the existing health system.
11	Bogren, 2015 <sup>48</sup>	Bangladesh	Fragile Setting	Towards a midwifery profession in Bangladesh—a systems approach for a complex world	Assess how stakeholders promote midwifery profession	Midwives	Qualitative/explorative study. Government n=4; academia n=3; Professional association n=9; NGOs n=6	Collaboration between organisations was valued, as more could be achieved compared with what an individual organisation could do. Significant results of this were that two midwifery curricula and faculty developments had been produced. Although collaboration was mostly seen as something positive to move the system forward, the approach to reach the set goal varied with different interests, priorities and concerns, both on individual organisational level and at system level. Frequent struggles between individual philosophies and organisational mandates were seen as competing interests for advancing the national priorities. It would appear that newcomers with innovative ideas were denied access on the same terms as other actors.
12	Zaman, 2020 <sup>44</sup>	Bangladesh	Fragile Setting	Experiences of a new cadre of midwives in Bangladesh: findings from a mixed method study	Assess experiences of Midwifery students on their midwifery education and their first clinical post as qualified midwife	Midwives	Mixed method Interviewing 329 midwives and conducting six focus group discussions with 43 midwives and midwifery students.	Most of the midwives were satisfied with different dimensions of their education programme, with the exception of the level of exposure they had to the rural communities during their programme. Out of 329 midwives, 50% received tuition fee waivers, while 46% received funding for educational materials and 40% received free accommodation. The satisfaction with the various aspects of the current posting was high and nearly all midwives reported a desire to work in the public sector in the long run. However, a significant proportion of the midwives expressed concerns with equipment, accommodation, transport and prospect of transfers.

Continued

Table 2 Continued

#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
13	Adegoke, 2020 <sup>49</sup>	Nigeria	Very High Fragility	Job satisfaction and retention of midwives in rural Nigeria.	Assess job satisfaction of midwives who trained through Midwifery Service Scheme (MSS)	MSS midwives	Mixed method using job satisfaction survey, focus group discussions (FGDs) and exit interviews. This study included all the 119 MSS midwives in the 51 primary healthcare facilities.	The MSS programme is a short-term solution to increase SEA coverage in rural Nigeria. MSS midwives were dissatisfied with the short-term contract, lack of career structure, irregular payment, poor working condition, inadequate supervision and poor accommodation being offered by the programme, which all contribute to poor retention of MSS midwives.
14	Erim, 2018 <sup>50</sup>	Nigeria	Very High Fragility	The spill-over effect of midwife attrition from the Nigerian midwives service scheme	Assess trends in the use of obstetric (ie, antenatal and childbirth) services	Women who used obstetric services	Quantitative/retrospective analysis of Nigerian Demographic and Health Surveys	The MSS led to a 5 percentage point increase in the use of antenatal services at rural public sector clinics, corroborating findings from a previous study. This change was driven by women who would not have sought care otherwise. There was a 4 percentage point increase in the use of birthing services at urban public sector clinics, and a concurrent 4 percentage point decrease in urban home deliveries.
15	Etiaba, 2020 <sup>51</sup>	Nigeria	Very High Fragility	'If you are on duty, you may be afraid to come out to attend to a person': fear of crime and security challenges in maternal acute care in Nigeria from a realist perspective	Adding extra security measures in health facilities	Facility managers, a programme midwife and a pre-existing (before programme) health worker	Qualitative/exploratory study. 35 in-depth interviews and 24 focus groups with purposively identified key informants. Policy-makers (n=9), programme managers (n=10), facility managers (n=8) and facility health workers (n=8). FGDs were conducted with eight groups of service users, eight groups of village health workers and eight groups of WDCs. Health workers comprised nurses, midwives and community health extension workers.	The presence of a male security guard in the facility was the most important security factor that facilitated provision and uptake of services. Others include perimeter fencing, lighting and staff accommodation. Lack of these components constrained provision and use of services, by impacting on behaviour of staff and patients. Security concerns of facility staff who did not feel safe to let people into unguarded facilities, mirrored those of pregnant women who did not use health facilities because of fear of not being let in and attended to by facility staff.

Continued



Table 2 Continued

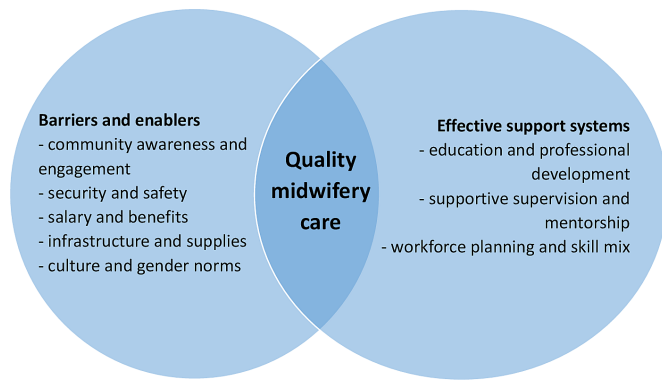
#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
16	Exley, 2016 <sup>52</sup>	Nigeria	Very High Fragility	Persistent barriers to care; a qualitative study to understand women's experiences in areas served by the midwives service scheme in Nigeria	Impact evaluation of the quality of midwifery services provided by MSS	Women, midwives, policy-makers	Qualitative 73 semistructured interviews were conducted; 43 women, 16 midwives and 14 policy-makers	The majority of participants reported that there had been positive improvements in maternity care as a result of an increasing number of midwives. However, despite improvements in the perceived quality of care and an apparent willingness to give birth in a primary health centre, more women gave birth at home than intended. There were some notable differences between states, with a majority of women in one northern state favouring home birth, which midwives and community members commented stemmed from low levels of awareness. The principal reason cited by women for home birth was the sudden onset of labour. Financial barriers, the lack of essential drugs and equipment, lack of transportation and the absence of staff, particularly at night, were also identified as barriers to accessing care.
17	Baba, 2020 <sup>54</sup>	DRC	Very High Fragility	Developing strategies to attract, retain and support midwives in rural fragile settings: participatory workshops with health system stakeholders in Ituri Province, DRC	Development of strategies to attract, retain and support midwives	Midwives	Qualitative participatory research design. Participant were: managers n=12, midwives n=16 and nurses n=13, and non-governmental organisation n=4, church medical coordination n=2 and nursing school representatives n=2	The study revealed that participants acknowledged that most of the policies in relation to rural attraction and retention of health workers were not implemented, while a few have been partially put in place. Key strategies embedded in the realities of the rural fragile Ituri province were proposed, including organising midwifery training in nursing schools located in rural areas; recruiting students from rural areas; encouraging communities to use health services and thus generate more income; lobbying NGOs and churches to support the improvement of midwives' living and working conditions; and integrating traditional birth attendants in health facilities. Contextual solutions were proposed to overcome challenges.
18	Baba, 2020 <sup>55</sup>	DRC	Very High Fragility	'Being a midwife is being prepared to help women in very difficult conditions': midwives' experiences of working in the rural and fragile settings of Ituri Province, Democratic Republic of Congo	Assess experiences of current and ex-midwives to future career aspiration	Midwives	Qualitative/exploratory study. Interviews with 26 midwives and 6 ex-midwives and 3 focus group discussions with 22 midwives	Midwives faced many work challenges: serious shortages of qualified health workers; poor working conditions due to lack of equipment, supplies and professional support; and no salary from the government. This situation was worsened by insecurity caused by militia operating in some rural health districts. Midwives in those settings have developed coping strategies such as generating income and food from farm work, lobbying local organisations for supplies and training traditional birth attendants to work in facilities. Despite these conditions, most midwives wanted to continue working as midwives or follow further midwifery studies. Most ex-midwives had left the profession for family-related reasons.
19	Lori, 2013 <sup>57</sup>	Liberia	Fragile Setting	Promoting access: The use of maternity waiting homes to achieve safe motherhood	Evaluate access and quality of services in Maternity waiting home (MWH)	Women	Qualitative/exploratory study. eight focus groups were held with 75 participants from congruent groups of MWH users, MWH non-users and family members	The availability of MWHs decreased the barrier of distance for women to access skilled care around the time of childbirth. Food insecurity while staying at an MWH was identified as a potential barrier by participants

Continued

Table 2 Continued

#	First author, year	Countries	Fragile classification	Title	Intervention	Target group	Methodology	Results/outcomes
20	Mugo, 2018 <sup>55</sup>	South Sudan	Highest Fragility	Barriers Faced by the Health Workers to Deliver Maternal Care Services and Their Perceptions of the Factors Preventing Their Clients from Receiving the Services: A Qualitative Study in South Sudan	Maternal and newborn health services	Maternal and child health (MCH) professionals	Qualitative/ exploratory study. 18 in-depth-interviews with MCH staff including midwives/nurses, trained traditional birth attendants, gynaecologists and paediatricians.	Limited support from the health system, such as poor management and coordination of staff, lack of medical equipment and supplies and lack of utilities such as electricity and water supply were major barriers to provision of health services. In addition, lack of supervision and training opportunity, low salary and absence of other forms of non-financial incentives were major elements of health workers' demotivation and low performance. Furthermore, security instability as a result of political and armed conflicts impact services delivery.
21	Nakano, 2018 <sup>56</sup>	Sudan	Highest Fragility	Exploring roles and capacity development of village midwives (VMW) in Sudanese communities	Evaluate comprehensive assistance to improve maternal and child service delivery based on the continuum of care	Midwives and women	Mixed-method/ cross sectional/ descriptive survey of 57 VMWs and 151 community women were interviewed	The monthly average number of VMW assisted home births increased. The annual average number of emergency cases referred by VMWs increased from 1.6 to 3.5, and the percentage of VMWs using official monthly reports increased from 33% to 80%. VMWs reported improved bonds with their supervisors and relationships in the community.
22	Kaye, 2000 <sup>82</sup>	Uganda	Fragile Setting	Quality of midwifery care in Soroti District, Uganda	Assessment of quality of emergency obstetric and newborn care services	Midwives and women	Mixed method/ Cross-sectional descriptive study. A total of 36 midwives out of 76 were interviewed.	Many midwives were providing care of poor quality for both antenatal and delivery care due to their inability to identify and manage women with, or at risk of, pregnancy complications.
23	Yigzaw, 2017 <sup>61</sup>	Ethiopia	High fragility	Quality of midwife-provided Intrapartum Care in Amhara Regional State, Ethiopia	Assess performance was used to determine competence of midwives in providing care during labour, delivery, and the first 6 hours after childbirth	Midwives	Mixed method/ cross-sectional study using multiple data collection methods. A total of 150 midwives and 56 health facilities were included in the study.	There are gaps in provision of quality intrapartum care in government health facilities in Amhara Regional State of Ethiopia. There were major deficits in availability of essential physical resources and mechanisms for continuous performance and quality improvement. A significant proportion of midwives were also found incompetent.
24	Ahmed, 2017 <sup>58</sup>	Pakistan	High Fragility	Community midwives' acceptability in their communities: A qualitative study from two provinces of Pakistan	Evaluation of community midwives (CMW) service utilisation	CMWs, female health supervisors and managers in maternal neonatal and child health (MNCH)	Qualitative using 34 in-depth interviews and 9 focus group discussions with 100 participants	CMWs experienced restrictions from their families, especially husbands and in-laws, to be independently available to attend to women during pregnancy and delivery. Communication between the communities and MNCH programme was found to be weak. Therefore, CMWs had to struggle to win the trust of pregnant women and persuade them to use their services. Most CMWs attributed low utilisation of their services to inherent taboos prevalent in the communities under which they relied more on unskilled traditional birth attendants. Gender sensitivity and fears of insecurity in many conflict-hit areas affected CMWs' mobility within their own communities, which restricted the access of rural women to skilled maternal and child care.

CHW, community health worker; DRC, Democratic Republic of Congo; NGOs, non-governmental organisations.



**Figure 2** Barriers and enablers and effective support systems for quality midwifery care in humanitarian and fragile settings.

the International Confederation of Midwives standards and scope of practice for the midwives in their reporting.

The two themes based on our objectives were (1) the facilitators and barriers to an enabling environment, and (2) the importance of effective support systems for midwives. Subthemes were identified under each of these main categories (figure 2).

### Facilitators of, and barriers to, an enabling environment for midwives

Facilitators included community involvement and engagement and an adequate salary and other incentives or benefits to attract and retain midwives. Barriers included security and safety concerns, culture and gender norms and a lack of infrastructure and supplies.

### Community awareness and engagement

Ten studies discussed the importance of community involvement to facilitate quality midwifery services. Two studies highlighted the importance of community collaboration with the health system to provide a safe environment for midwives.<sup>51 57</sup> One showed how an engaged community in Liberia positively influenced service provision by helping to construct a maternity waiting home:

The community helps because to construct the building, the community provided sand, they provided bricks, and they provided gravel. They help a whole lot so that the waiting home can be built, so that their sisters, their cousins, will have access to the place there...The community is very happy with the maternal waiting home being in this area. Other areas do not have access to a place like this, so they are really suffering [Liberia].<sup>57</sup>

In this study, the community understood the role and function of midwives and supported women's access to services. Where there is no trust from the community, women will use local untrained birth attendants despite the availability of a trained midwife, as shown in studies from Pakistan, Nigeria and Bangladesh.<sup>45 53 54 58</sup> In the absence of communication, information sharing or trust building with the community, traditional birth attendants may guide women and girls away from midwives. For example, a manager from Pakistan explained:

[there was a] poor response of communities [toward midwives] because of their trust upon TBAs [traditional birth attendants] and lack of marketing of [midwifery] services. TBAs also misguide the people about community midwives as they have apprehensions that community midwives were their competitors [Pakistan].<sup>58</sup>

When there is a lack of trust from the community, midwives feel unsafe and unprotected, and fear that the community might hold them responsible for any maternal deaths.<sup>53 55 57</sup> For example:

... if a woman dies during delivery, then you will be in trouble with the whole community, as everyone in the village will be pointing at you that you are the person who killed their mother, their sister [Democratic Republic of Congo].<sup>53</sup>

Coordination with traditional healthcare providers, such as traditional birth attendants, was essential to facilitate access to midwifery services. For instance, a midwife said:

Services of the community midwives are better utilised when they are offered in coordination with some other health care provider within the same communities [Pakistan].<sup>58</sup>

In the DRC, one study reported that, due to trusting relationships, traditional birth attendants had been recruited into the health service to support midwives:

The head nurse, in partnership with the health centre committee, and the midwife organised a census where they identified different birth attendants in their area, recruited them for a training on basic midwifery practices, and after they completed, they were integrated to support the midwife in the health centre maternity services [Democratic Republic of Congo].<sup>53</sup>

### Security and safety

Nine papers described how security and safety concerns were significant barriers for midwives to provide services. These resulted from war, civil unrest, bombing, smuggling and sexual harassment.<sup>39 41 42 46 49 51 53 55 58</sup> This included physical as well as psychological safety issues, although most papers focused on the physical aspects. Concerns about safety and security contributed to low staff retention and lack of job satisfaction. For example, in Afghanistan, the Taliban frequently attacked health facilities and midwives were unable to travel to a woman's home to attend a birth.<sup>41 42</sup> Similarly, in the DRC, maternity care facilities had been attacked and robbed by militias.<sup>53 54</sup> Travelling to and from these facilities was stressful and difficult for midwives, as the militias patrolled roads and attacks on midwives had occurred. Midwives were reluctant to refer women and girls with complications to referral hospitals as the roads were dangerous to travel on.<sup>51</sup> A midwife in Afghanistan said:

The most challenging thing is safety. This problem with lack of security is very, very difficult and challenging for us, both for me as a midwife to go to work, and also for

the women in labour. When going to the clinic we use the same road as the bombers ... we are on the roads where something happens every day ... Something ... an explosion, a suicide ... or something else ... It makes moving from one place to another very dangerous and difficult [Afghanistan].<sup>41</sup>

Midwives in South Sudan were afraid to attend births at night, even in their own community, due to threats of attack by smugglers.<sup>55</sup> One said:

The night shift is very dangerous. Sometimes there are thieves who will beat the midwife at night demanding money from them. All of us here are women and we don't have strength to fight if anyone attacks us. We only pray to God, so we can be safe at night [South Sudan].<sup>55</sup>

Similar situations were described in Nigeria where a lack of security and an absence of staff accommodation made health workers feel unsafe within the facility, especially at night when no other staff were present<sup>49 51</sup>:

... some already married midwives were asked by their husbands to return back home: 'I don't know specifically why others left but for me why I left... there was no water in the community, no electricity, no market, the accommodation is very poor. No security, no protection, young boys in the village come to peep and open our curtains when we sleep [Nigeria].<sup>49</sup>

In Bangladesh, midwives also had to deal with high-risk transportation, unsafe accommodation and sexual harassment. One said:

One of the sisters [midwife] told me her story. She works for Upazila Health Complex, and her house is quite far from her workplace. Every day she has to walk there and she has experienced teasing by men on the way to work, and it makes her feel unsafe [Bangladesh].<sup>46</sup>

Midwives in Bangladesh also expressed their fear of harassment when working night shifts:

... if a midwife works night shifts she is considered immoral and she has to subject herself to different forms of harassment such as teasing—the making of unwanted sexual remarks or advances by a man to a woman in a public place, and physical and sexual violence [Bangladesh].<sup>46</sup>

In Nigeria, a specific intervention to address safety and security issues for midwives was put in place.<sup>51</sup> The community assigned a security guard at the health facility, installed a secure fence around the facility and provided accommodation for midwives within the health facility. This improved service utilisation:

Availability of staff accommodation within the health facility resulted in more health workers living within the facility, thus making health workers feel safe at night, being aware that other co-workers and their families were living in the facility. This increased the provision of 24h services, and utilisation, especially at nights, which explained how security personnel and healthcare staff were available during nocturnal obstetric emergencies [Nigeria].<sup>51</sup>

## Salary and benefits

Salary and other incentives or benefits were important facilitators, especially to attract midwives to work in these areas and to retain them. A lack of adequate salary was frequently mentioned as a barrier by midwives:

We are paid less by the state government, and also there is no promotion, no bonus or reward, and the salary is not enough for us to feed our families. [South Sudan].<sup>55</sup>

One study from the DRC gave an example of local support in the areas where the government could not pay the salary to the midwives:

... the local chief could give a piece of land so that the local population cultivates for the midwives working in the health facilities, or they can grow food for all health workers in the health facility as they do not benefit much from the health facilities [Democratic Republic of Congo].<sup>59</sup>

Another study from Bangladesh also reported a lack of provision of quality services by midwives as they have to work in different jobs to generate an adequate salary. One midwife said:

Working two different jobs makes a midwife exhausted and increases the chances of her [midwife] not performing appropriately [Bangladesh].<sup>60</sup>

## Infrastructure and supplies

Twelve studies reported infrastructure to be a barrier. This included the poor physical condition of the facilities and a lack of essential medicines and equipment.<sup>39 44 46 48 49 52–55 61</sup> One midwife from Bangladesh said:

If an emergency patient comes to the hospital and we are running out of medicine and equipment, we have to ask the patient's family to buy those things from the pharmacy. It takes more time to provide emergency services to the patient, which places the woman in danger [Bangladesh].<sup>46</sup>

Limited access to water supply and other utilities were also a barrier to the delivery of quality services.<sup>51 55 61</sup> One healthcare professional from Nigeria said:

It has been months and there is no power at the hospital. Without power you cannot operate, you cannot sterilise or save women's lives in obstetric emergencies and all the blood in the blood bank was destroyed due to the electricity [Nigeria].<sup>51</sup>

## Culture and gender norms

Culture and gender norms impeded recruitment of midwives and the provision of quality midwifery care. Some communities do not believe that young unmarried women should become midwives, especially in countries with high fragility such as Pakistan, Nigeria, South Sudan and Afghanistan. Families do not allow their daughters to provide home-based services due to insecurity and traditional norms.<sup>41 42 51–56 58</sup>



**Availability and effectiveness of the support systems for midwives**  
Thirteen studies reported issues related to the availability and effectiveness of support systems for midwives. They included: midwifery leadership education and professional development; supportive supervision and mentorship; and workforce planning.<sup>39 44 45 48 49 52–55 61</sup>

### Education and professional development

The importance of education and professional development for midwives as a support mechanism was the focus of 13 studies from Afghanistan, Bangladesh, Nigeria, the DRC and Uganda.<sup>39 40 43 45 47–49 53 54 62</sup> Most studies identified education for midwives as a means to improve quality, build capacity and overcome midwifery shortages. However, it was challenging for midwives to access quality in-service education or travel to other areas to receive training, due to the lack of safety and security. One study from Uganda reported poor quality of care was due to poor or inadequate pre-service education or continuing professional development for midwives.<sup>62</sup>

The issue of safety and security concerns limiting midwives' professional development was highlighted by a midwife from the DRC:

Most training is organised in the urban areas, and they could not attend as they were asked to pay for their own transport, which they cannot afford, and travel is risky given that the militia was patrolling the roads [Democratic Republic of Congo].<sup>53</sup>

The lack of academics to educate and support midwives was also a challenge, for example:

The opportunity for collaboration is in standards, for example, of faculty development; there isn't an existing cadre of midwives who can teach in the country because it's no academic tradition, so how do you develop a good cadre of academic faculty for midwifery? [Bangladesh]<sup>45</sup>

In some cases, the relative scarcity of pregnant women made it difficult for midwives to maintain their skills.<sup>39 43</sup> As a result, emergency obstetric and newborn care services were not always available in health facilities in Afghanistan<sup>39 42</sup>:

If she [midwife] is in an environment where she is unable to practice the skills she has learned, this is very demotivating and may cause them to leave the profession [Afghanistan].<sup>42</sup>

### Supportive supervision and regulation

Supportive supervision and regulation of midwives plays a critical role in improving quality care. Six studies reported significant gaps in this area such as irregular supervision or supervision by a non-clinical person. Sometimes, due to insecurity, supervision did not happen. Supervision was often seen as a means just to gather medical records data and provide administrative feedback rather than to provide support for the midwives.<sup>39 49 54</sup> If a clinical problem was identified by the supervisory team, there

was often no structured follow-up or practical intervention offered to midwives.<sup>39 47</sup> For example:

Supportive supervision will require a fundamental change. The role of supervisors, currently is focused on documentation and paperwork and [supervisors] lack the expertise to serve as role models for providers. Supervisors should be encouraged to observe providers with patients, offer constructive feedback and instruction on good care, and enlist management support [Afghanistan].<sup>39</sup>

Midwives in Sudan who received frequent supportive supervision, such as follow-up training and clinical feedback, reported an improvement in their ability to manage emergency cases, make decisions and record data.<sup>56</sup> One midwife said.

The presence of supervisors helps me a lot when I deal with emergency cases and decisions about referral [Sudan].<sup>56</sup>

### Workforce planning

Two studies highlighted how a lack of workforce planning was a barrier to providing midwifery services.<sup>42 44</sup> In these studies from Afghanistan and Bangladesh, midwives had to provide services in clinical areas in which they believed they were not competent and had not received adequate training, including dispensing medications, management of non-communicable diseases and administration.<sup>42 44</sup> In Bangladesh, almost 40% of the tasks a midwife performed were unrelated to their scope of practice.<sup>44</sup>

Two studies discussed the issue of mixed roles and task shifting for midwives as a workforce solution.<sup>42 44</sup> In some HFS, such as the DRC and Afghanistan, midwives are the only providers in health facilities. They have to provide all clinical services to women, as highlighted by an Afghan midwife:

I was the only female there working under serious conditions. Most of the pregnant women here had disorders in their childbirths so it was difficult to help them all by myself [Afghanistan].<sup>42</sup>

One suggestion for HFS to increase the number of midwives in rural and insecure areas was the training of other cadres of health professionals in midwifery skills.<sup>54</sup>

## DISCUSSION

This review aimed to identify the factors affecting an enabling environment for midwives in HFS and explore the availability and effectiveness of the support systems for midwives. An enabling environment ensures that midwives are working and living in an environment that is safe, with access to all resources to provide services to the community. The facilitators to an enabling environment included community involvement and engagement and having an adequate salary and other incentives or benefits to attract and retain midwives. Across many of the studies included in this review, safety and security were noted as critical barriers that prevent midwives from delivering services and accessing quality education and training for professional development. These issues are



amplified in conflict settings, where they impact people's health-seeking behaviours and lead to a shortage of healthcare workers, specifically female health workers.<sup>63</sup> Other barriers included culture and gender norms and a lack of infrastructure and supplies. Gender was also linked to salary and benefits—midwives are almost always women and gender pay gaps are evident in many countries.<sup>24</sup>

Our review showed that specific policies and actions are required to protect midwives in HFS and to address the safety of all health workers, protect health facilities and mitigate the indirect impacts of conflict on sexual, reproductive, maternal, newborn, child and adolescent health outcomes. The rights of health workers to protection and security are mandated in international humanitarian law (applicable in times of armed conflict) and international human rights law (in situations that do not reach the threshold of armed conflict).<sup>64</sup> Some domestic laws also recognise these rights. Furthermore, following increasing violence against health workers and health facilities in recent years,<sup>65</sup> in 2016 the United Nations Security Council unanimously adopted Resolution 2286, which strongly condemned attacks against health workers in conflict situations.<sup>66</sup>

A number of studies highlighted the need to strengthen support systems for midwives and enable them to provide quality services. A number of specific measures to support midwifery services in HFS were identified, including access to, and availability of, emergency obstetric and newborn care and midwife-led services. For example, a case study from Afghanistan noted that comprehensive emergency obstetric and newborn care is inaccessible in most provinces.<sup>67</sup>

A common thread in this review was the need to strengthen the support systems for midwives to enable them to provide quality services. Additionally, evidence suggests that lifesaving reproductive, maternal, newborn, child and adolescent health services frequently become disrupted in HFS.<sup>67</sup> A paper synthesising findings from 10 case studies from conflict settings found that essential maternal and newborn health interventions were not clearly prioritised. Also, predefined packages of priority services were commonly not agreed on or implemented.<sup>67</sup> The studies included in our review identify a number of specific measures to support midwives in providing midwifery services including access to, and availability of, emergency obstetric and newborn care and midwife-led services. These measures are needed in all settings but there are additional challenges in HFS, especially due to safety and security concerns.

This review has also highlighted the essential role of community engagement, awareness, trust and support in delivering secure and safe care to women and girls in HFS. These factors may address issues of access, acceptability, safety and security, although the latter two can be challenging in an acute conflict environment. Community engagement also means working with traditional birth attendants who are trusted by the community on

preventative health. This includes raising their awareness of the importance of facility-based childbirth, uptake of sexual, reproductive, maternal, newborn, child and adolescent health services and the critical role played by midwives in improving health outcomes. An earlier review also highlighted the importance of community engagement and the critical need for recruitment and training, support and security.<sup>15</sup> Our review further highlights the need for community acceptance and the building of trust. Many women in HFS are migrants and may receive care from people or systems that are unfamiliar to them. They may face language barriers and issues of cultural acceptability. If they are from a minority or persecuted population, they may possibly mistrust officials or other groups. Building of trust with the community, perhaps through community leaders or traditional birth attendants, is likely to facilitate greater uptake of skilled sexual, reproductive, maternal, newborn, child and adolescent health services.

The Lancet Series on Women's and Children's Health in Conflict Settings has identified key interventions to be delivered and prioritised in conflict situations. This draws on the work of the Bridging Research & Action in Conflict Settings for the Health of Women & Children Consortium.<sup>4 5 8 67 68</sup> An adequate health workforce is key to the delivery of these life-saving interventions. Health workforce solutions include task shifting and task sharing; rotation of senior staff to remote areas; hiring local staff to nurture trust with local communities and value the sense of duty of local staff in their own country.<sup>67</sup>

A focus on midwives is needed in HFS as midwife-delivered interventions have an important impact on maternal and newborn health outcomes.<sup>12</sup> These interventions are critically needed in all populations, especially in HFS, to reach those who are hardest to reach. It is necessary to have clarity on the role and scope of practice of the midwife and the means to support and provide an enabling environment. The latter includes professional development, supervision, mentorship and the need to have midwives in leadership positions at every level in the health system to ensure prioritisation and health service delivery. These critical elements have also been identified in the State of the World's Midwifery Report 2021.<sup>24</sup> Furthermore, the World Health Assembly highlighted the importance of the midwifery workforce in 2021 when it endorsed the WHO's Global Strategic Directions for Nursing and Midwifery 2021–2025. It also endorsed an accompanying resolution calling on governments to protect, safeguard and invest in the global nursing and midwifery workforces, with a focus on education, jobs, leadership and service delivery.<sup>69</sup>

Many of the challenges identified in this review will also be relevant to countries categorised as low-income and/or low-resource contexts. This is, in part, due to the fact that most low-income countries are also humanitarian and/or fragile contexts. For instance, of the 27 countries defined as low income by the World Bank for 2021, 23 are included in the classification of HFS used in this paper.<sup>70</sup>

Therefore, these challenges need to be accounted for in efforts to enhance quality midwifery-led services in low-resource settings. It is imperative for these recommendations and statements to result in increased investments in the role and safety of midwives in HFS. More research on the best way to achieve this is also urgently needed.

### Strengths and limitations

This review used a predefined protocol to contribute to the global evidence on enhancing quality midwifery services in HFS and increase attention for such an under-researched area. We only searched journal articles in English with an acceptable level of quality; therefore, we may not have captured all available information. Research on the role of midwives in HFS may not have been captured in the search strategy, as often midwives are invisible in the overall health workforce. For example, we did not find evidence from some expected countries, such as Somaliland and Somalia. Due to the definition and scope of practice for midwives being unclear for some countries (Nigeria, South Sudan, DRC and Ethiopia) data from all these contexts are missing.

Most studies were from postconflict zones; rather than those in an active and widespread conflict situation. Subsequently, we realise that countries included in this review have or are undergoing their own contextualised issues and fall on a broad spectrum of 'HFS'; therefore, the contextualised challenges, findings and mitigation strategies identified in this review may not apply in all contexts. Additionally, because of the dearth of knowledge on this issue, we realise that this review has not been able to explore in-depth the various nuances in providing quality midwifery services in different types of HFS.

### CONCLUSION

This review has highlighted a number of key facilitators and barriers towards the provision of quality midwifery care in HFS. It has explored the mutually reinforcing impacts of an enabling environment, support system and service improvement on enhancing the quality of midwifery care in HFS settings. Key issues include the need to enhance safety and security measures for midwives delivering both facility and community based sexual, reproductive, maternal, newborn, child and adolescent health services, particularly in conflict settings. Stronger community engagement is needed, including collaboration with traditional birth attendants. Midwives require training, mentoring and supportive supervision and should be paid in a timely way. Leadership capacity should be addressed. Strengthening each of these areas should happen simultaneously to enhance midwifery care in HFS.

This review has shown that more efforts are needed to develop and implement effective, acceptable and feasible interventions to enhance quality midwifery services in all countries, especially in HFS. However, many gaps exist in the evidence base. Our review, and the State of the

World's Midwifery Report,<sup>24</sup> provide a unique opportunity for more action and financing in this space to ensure better outcomes and experiences for all women, girls, babies and families living in HFS.

**Twitter** Etienne V Langlois @EtienneVincentL

**Contributors** EVL, MGS and HF had the original idea for the review. CH wrote the original proposal and protocol, was contracted by PMNCH to undertake the review and led the overall review. ST further developed the protocol with JPV, EVL, MGS, HF and ANW, submitted the protocol to PROSPERO. All authors contributed to the design of the review. ST led the review process and with CH identified, screened and analysed the findings. All authors contributed to the interpretation of the analysis and the writing of the manuscript and actively participated in the final version for submission. CH is responsible for the overall content as the guarantor.

**Funding** The Partnership for Maternal, Newborn & Child Health commissioned the Burnet Institute to undertake this review and provided funding.

**Competing interests** None declared.

**Patient consent for publication** Not applicable.

**Ethics approval** Human research ethical approval was not required as we used existing literature.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** No data are available.

**Supplemental material** This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

### ORCID iDs

Caroline SE Homer <http://orcid.org/0000-0002-7454-3011>

Etienne V Langlois <http://orcid.org/0000-0002-4853-2511>

### REFERENCES

- OCHA. Global humanitarian overview United nations office for the coordination of humanitarian Affairs; 2021. Available: <https://reliefweb.int/report/world/global-humanitarian-overview-2021-enarfrres> [Accessed 09 Dec 2020].
- OECD. States of fragility 2020, 2020. Available: <https://www.oecd-ilibrary.org/content/publication/ba7c22e7-en> [Accessed 09 Dec 2020].
- Inter-Agency Working Group on Reproductive Health in Crises. *Inter-Agency manual on reproductive health in humanitarian settings*. New York: Women's Refugee Commission, 2019.
- Bendavid E, Boerma T, Akseer N, *et al*. The effects of armed conflict on the health of women and children. *Lancet* 2021;397:522–32.
- Gaffey MF, Waldman RJ, Blanchet K, *et al*. Delivering health and nutrition interventions for women and children in different conflict contexts: a framework for decision making on what, when, and how. *Lancet* 2021;397:543–54.
- Wagner Z, Heft-Neal S, Wise PH, *et al*. Women and children living in areas of armed conflict in Africa: a geospatial analysis of mortality and orphanhood. *Lancet Glob Health* 2019;7:e1622–31.
- Bornemisza O, Ranson MK, Poletti TM, *et al*. Promoting health equity in conflict-affected fragile states. *Soc Sci Med* 2010;70:80–8.
- Wise PH, Shiel A, Southard N, *et al*. The political and security dimensions of the humanitarian health response to violent conflict. *Lancet* 2021;397:511–21.

- 9 Beek K, McFadden A, Dawson A. The role and scope of practice of midwives in humanitarian settings: a systematic review and content analysis. *Hum Resour Health* 2019;17:5.
- 10 Turkmani S, Currie S, Mungia J, *et al*. 'Midwives are the backbone of our health system': lessons from Afghanistan to guide expansion of midwifery in challenging settings. *Midwifery* 2013;29:1166–72.
- 11 WHO. *Who recommendations on antenatal care for a positive pregnancy experience*. Geneva: World Health Organization, 2016.
- 12 Nove A, Friberg IK, de Bernis L, *et al*. Potential impact of midwives in preventing and reducing maternal and neonatal mortality and stillbirths: a lives saved tool modelling study. *Lancet Glob Health* 2021;9:e24–32.
- 13 Renfrew MJ, McFadden A, Bastos MH, *et al*. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet* 2014;384:1129–45.
- 14 Filby A, McConville F, Portela A. What prevents quality midwifery care? A systematic mapping of barriers in low and middle income countries from the provider perspective. *PLoS One* 2016;11:e0153391.
- 15 Miyake S, Speakman EM, Currie S, *et al*. Community midwifery initiatives in fragile and conflict-affected countries: a scoping review of approaches from recruitment to retention. *Health Policy Plan* 2017;32:21–33.
- 16 UNFPA. *The State of the World's Midwifery - Supplements*. New York: United Nations Population Fund, 2021.
- 17 Homer C, Turkmani S, Wilson A. A systematic review of interventions, support systems and enabling environments to enhance quality midwifery care in humanitarian and fragile settings (protocol). CRD42021226323: prospero, 2021. Available: [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=226323](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=226323) [Accessed 10 July 2021].
- 18 Moher D, Shamseer L, Clarke M, *et al*. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Syst Rev* 2015;4:1.
- 19 Langlois E, Daniels K, Akl E, eds. *Evidence synthesis for health policy and systems: A methods guide*. Geneva: World Health Organization, 2018.
- 20 Inter-Agency Working Group on Reproductive Health in Crises (IAWG). Inter-Agency field manual on reproductive health in humanitarian settings. Available: [https://resourcecentre.savethechildren.net/pdf/iafm\\_on\\_reproductive\\_health\\_in\\_hs\\_2018.pdf/2018](https://resourcecentre.savethechildren.net/pdf/iafm_on_reproductive_health_in_hs_2018.pdf/2018)
- 21 World Bank. Classification of fragile and Conflict-Affected situations, 2020. Available: <https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations> [Accessed 09 Dec 2020].
- 22 Fragile States Index. Fragile States Index 2020 – Annual Report, 2020. Available: <https://fragilestatesindex.org/2020/05/08/fragile-states-index-2020-annual-report/> [Accessed 09 Dec 2020].
- 23 Poljansek K, Disperati P, Vernaccini L. *Inform severity index, Eur 30400*. Luxembourg: Publications Office of the European Union, 2020.
- 24 UNFPA. *The State of the World's Midwifery*. New York: United Nations Population Fund, 2021.
- 25 International Confederation of Midwives. *Building the enabling environment for midwives: a call to actions for policy makers*. The Hague: ICM, 2021.
- 26 Cochrane Effective Practice and Organisation of Care (EPOC). EPOC resources for review authors, 2017. Available: [https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/what\\_study\\_designs\\_should\\_be\\_included\\_in\\_an\\_epoc\\_review.pdf](https://epoc.cochrane.org/sites/epoc.cochrane.org/files/public/uploads/Resources-for-authors2017/what_study_designs_should_be_included_in_an_epoc_review.pdf) [Accessed 09 Nov 2020].
- 27 ICM. *International definition of a midwife*. The Hague: International Confederation of Midwives, 2017.
- 28 Covidence systematic review software, veritas health innovation Melbourne, Australia. Available: [www.covidence.org](http://www.covidence.org)
- 29 Hong QN, Fàbregues S, Bartlett G, *et al*. The mixed methods appraisal tool (MMAT) version 2018 for information professionals and researchers. *Education for Information* 2018;34:285–91.
- 30 Hong QN, Pluye P, Fàbregues S, *et al*. Improving the content validity of the mixed methods appraisal tool: a modified e-Delphi study. *J Clin Epidemiol* 2019;111:49–59.
- 31 Dixon-Woods M, Agarwal S, Jones D, *et al*. Synthesising qualitative and quantitative evidence: a review of possible methods. *J Health Serv Res Policy* 2005;10:45–53.
- 32 Brault MA, Kennedy SB, Haley CA, *et al*. Factors influencing rapid progress in child health in post-conflict Liberia: a mixed methods country case study on progress in child survival, 2000–2013. *BMJ Open* 2018;8:e021879.
- 33 Walton M, Harrison R, Burgess A, *et al*. Workplace training for senior trainees: a systematic review and narrative synthesis of current approaches to promote patient safety. *Postgrad Med J* 2015;91:579–87.
- 34 Frantzen KK, Fetters MD. Meta-integration for synthesizing data in a systematic mixed studies review: insights from research on autism spectrum disorder. *Qual Quant* 2016;50:2251–77.
- 35 Hong QN, Pluye P, Bujold M, *et al*. Convergent and sequential synthesis designs: implications for conducting and reporting systematic reviews of qualitative and quantitative evidence. *Syst Rev* 2017;6:61.
- 36 Page MJ, McKenzie JE, Bossuyt PM, *et al*. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71.
- 37 Arnold R, van Teijlingen E, Ryan K, *et al*. Parallel worlds: an ethnography of care in an Afghan maternity hospital. *Soc Sci Med* 2018;216:33–40.
- 38 Arnold R, van Teijlingen E, Ryan K, *et al*. Villains or victims? an ethnography of Afghan maternity staff and the challenge of high quality respectful care. *BMC Pregnancy Childbirth* 2019;19:307.
- 39 Kim YM, Ansari N, Kols A, *et al*. Assessing the capacity for newborn resuscitation and factors associated with providers' knowledge and skills: a cross-sectional study in Afghanistan. *BMC Pediatr* 2013;13:140.
- 40 Mansoor GF, Hill PS, Barss P. Midwifery training in post-conflict Afghanistan: tensions between educational standards and rural community needs. *Health Policy Plan* 2012;27:60–8.
- 41 Thommesen T, Kismul H, Kaplan I, *et al*. "The midwife helped me ... otherwise I could have died": women's experience of professional midwifery services in rural Afghanistan - a qualitative study in the provinces Kunar and Laghman. *BMC Pregnancy Childbirth* 2020;20:140.
- 42 Wood ME, Mansoor GF, Hashemy P, *et al*. Factors influencing the retention of midwives in the public sector in Afghanistan: a qualitative assessment of midwives in eight provinces. *Midwifery* 2013;29:1137–44.
- 43 Zainullah P, Ansari N, Yari K, *et al*. Establishing midwifery in low-resource settings: guidance from a mixed-methods evaluation of the Afghanistan midwifery education program. *Midwifery* 2014;30:1056–62.
- 44 Zaman RU, Khaled A, Sabur MA, *et al*. Experiences of a new cadre of midwives in Bangladesh: findings from a mixed method study. *Hum Resour Health* 2020;18:73.
- 45 Bogren M, Erlandsson K. Opportunities, challenges and strategies when building a midwifery profession. findings from a qualitative study in Bangladesh and Nepal. *Sex Reprod Healthc* 2018;16:45–9.
- 46 Bogren M, Erlandsson K, *et al*. Members of the Midwifery Faculty Master's degree holders in Sexual and Reproductive Health and Rights. What prevents midwifery quality care in Bangladesh? A focus group enquiry with midwifery students. *BMC Health Serv Res* 2018;18:639.
- 47 Bogren M, Erlandsson K, *et al*. Development of a context specific accreditation assessment tool for affirming quality midwifery education in Bangladesh. *Midwifery* 2018;61:74–80.
- 48 Bogren MU, Wigert H, Edgren L, *et al*. Towards a midwifery profession in Bangladesh – a systems approach for a complex world. *BMC Pregnancy Childbirth* 2015;15:325.
- 49 Adegoke AA, Atiyaye FB, Abubakar AS, *et al*. Job satisfaction and retention of midwives in rural Nigeria. *Midwifery* 2015;31:946–56.
- 50 Erim DO, Offiong HE, Kim C, *et al*. The spillover effect of midwife attrition from the Nigerian midwives service scheme. *BMC Health Serv Res* 2018;18:295.
- 51 Etiaba E, Manzano A, Agbawodikezu U, *et al*. "If you are on duty, you may be afraid to come out to attend to a person": fear of crime and security challenges in maternal acute care in Nigeria from a realist perspective. *BMC Health Serv Res* 2020;20:903.
- 52 Exley J, Pitchforth E, Okeke E, *et al*. Persistent barriers to care; a qualitative study to understand women's experiences in areas served by the midwives service scheme in Nigeria. *BMC Pregnancy Childbirth* 2016;16:232.
- 53 Baba A, Theobald S, Martineau T, *et al*. 'Being a midwife is being prepared to help women in very difficult conditions': midwives' experiences of working in the rural and fragile settings of Ituri Province, Democratic Republic of Congo. *Rural Remote Health* 2020;20:5677.
- 54 Baba A, Martineau T, Theobald S, *et al*. Developing strategies to attract, retain and support midwives in rural fragile settings: participatory workshops with health system stakeholders in Ituri Province, Democratic Republic of Congo. *Health Res Policy Syst* 2020;18:133.
- 55 Mugo NS, Dibley MJ, Damundu EY, *et al*. Barriers faced by the health workers to deliver maternal care services and their perceptions of the factors preventing their clients from receiving the

- services: a qualitative study in South Sudan. *Matern Child Health J* 2018;22:1598–606.
- 56 Nakano K, Nakamura Y, Shimizu A, *et al*. Exploring roles and capacity development of village midwives in Sudanese communities. *Rural Remote Health* 2018;18:4668.
- 57 Lori JR, Wadsworth AC, Munro ML, *et al*. Promoting access: the use of maternity waiting homes to achieve safe motherhood. *Midwifery* 2013;29:1095–102.
- 58 Ahmed J, Ur Rehman S, Shahab M. Community midwives' acceptability in their communities: a qualitative study from two provinces of Pakistan. *Midwifery* 2017;47:53–9.
- 59 Baba A, Martineau T, Theobald S, *et al*. Developing strategies to attract, retain and support midwives in rural fragile settings: participatory workshops with health system stakeholders in Ituri Province, Democratic Republic of Congo. *Health Res Policy Syst* 2020;18:133.
- 60 Bogren M, Erlandsson K, Byrskog U. What prevents midwifery quality care in Bangladesh? A focus group enquiry with midwifery students. *BMC Health Serv Res* 2018;18:N.PAG-N.PAG.
- 61 Yigzaw T, Abebe F, Belay L, *et al*. Quality of Midwife-provided intrapartum care in Amhara regional state, Ethiopia. *BMC Pregnancy Childbirth* 2017;17:261.
- 62 Kaye D. Quality of midwifery care in Soroti district, Uganda. *East Afr Med J* 2000;77:558–61.
- 63 Bridging Research and Action in Conflict Settings. *Women's and Children's Health in Conflict Settings: Barriers and Facilitators to Delivering Effective Services Engaging and Empowering a Localized Innovative Health Workforce*. Geneva: PMNCH, 2021.
- 64 ICRC. Respecting and protecting health care in armed conflicts and in situations not covered by international humanitarian law - Factsheet, 2021. Available: <https://www.icrc.org/en/document/respecting-and-protecting-health-care-armed-conflicts-and-situations-not-covered> [Accessed 09 July 2021].
- 65 Druce P, Bogatyreva E, Siem FF, *et al*. Approaches to protect and maintain health care services in armed conflict - meeting SDGs 3 and 16. *Confl Health* 2019;13:2.
- 66 United Nations. *Security Council adopts resolution 2286 (2016), strongly Condemning attacks against medical facilities, personnel in conflict situations*. New York: United Nations, 2016. <https://www.un.org/press/en/2016/sc12347.doc.htm>
- 67 Singh NS, Ataullahjan A, Ndiaye K, *et al*. Delivering health interventions to women, children, and adolescents in conflict settings: what have we learned from ten country case studies? *Lancet* 2021;397:533–42.
- 68 Bhutta ZA, Gaffey MF, Spiegel PB, *et al*. Doing better for women and children in armed conflict settings. *Lancet* 2021;397:448–50.
- 69 WHO. *Who global strategic directions for nursing and midwifery 2021-2025*. Geneva: World Health Organization, 2021.
- 70 The World Bank. The world by income and region, 2021. Available: <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>