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Midwives' experiences of caring for pregnant women admitted to Ebola centres in Sierra Leone

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ABSTRACT

Objective: to explore and describe midwives' experiences of caring for pregnant women admitted to Ebola centres in Sierra Leone.
Design: a qualitative interview study with an exploratory and descriptive approach.
Setting: individual semi-structured interviews with midwives who provided care for pregnant woman in eight different Ebola centres in Sierra Leone during the Ebola outbreak in 2014–16.
Participants: 11 midwives, Sierra Leoneans and expatriates, who worked for three different humanitarian organisations in Sierra Leone during the Ebola outbreak in 2014–2016.
Findings: three themes emerged as a result of the analysis. The first theme described how personal and public fears of Ebola infection affected the midwives' professional and personal lives. Secondly, motivation and support influenced the midwives' ability to cope with challenging midwifery care and finally competency, creativity and courage was described as essential for improving clinical guidelines and learn for the future.
Key conclusions and implications for practice: midwives who worked in Ebola centres in Sierra Leone have a wide range of experiences in caring for pregnant women affected by Ebola. Their views should therefore be sought and considered when new guidelines are being developed on how best to provide care for pregnant women during an outbreak of Ebola virus disease, or any comparable infectious disease. Balanced information, sufficient training, adequate equipment and access to support by colleagues and peers would assist the midwives in coping with the challenges they face.

Introduction

In August 2014 the World Health Organization (WHO) declared the 2014 outbreak of Ebola virus disease (EVD) in West Africa a public health event of international concern (WHO, 2014a). At the time, EVD incidence and transmission were particularly prevalent in Liberia, Sierra Leone and Guinea. Before the outbreak of EVD, Sierra Leone was estimated to have the highest maternal mortality rate in the world (WHO, 2014b), a situation that deteriorated further with the arrival of Ebola.

EVD spreads from human to human through direct contact with body fluids from infected people. In pregnancy, symptoms of EVD can be difficult to distinguish from symptoms of various pregnancy-related and obstetrical complications. To detect and isolate all cases of EVD, a broad case definition was used, which most pregnant women with fever or bleeding would fit into (Table 1).

This resulted in a higher rate of suspected cases of EVD that later turned out to be negative amongst pregnant women compared to other patient groups (Garde et al., 2016; Johnson et al., 2016).

During the 2014–2016 EVD outbreak diagnosis was confirmed by analysing a sample of blood or other body fluids to detect virus RNA by using reverse transcriptase polymerase chain reaction (RT-PCR) assay (WHO, 2014c). There is no proven specific treatment for EVD, but supportive care such as rehydration, treatment of specific symptoms and coexisting morbidity improves the chances of survival (WHO, 2016a).

Several types of EVD care facilities were established in Sierra Leone during the EVD outbreak in 2014–2016 (Johnson et al., 2016). In this article, we have chosen to use the term "Ebola centre" to describe a purpose-built facility offering diagnostic testing, isolation and supportive care exclusively for patients with suspected or confirmed EVD. This includes both standalone Ebola Treatment Centres (ETCs), and Ebola Holding Units (EHUs) established in existing health care facilities (Johnson et al.,2016). To protect staff and patients from being

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Table 1
Case definition for suspected EVD used during the 2014–2016 EVD outbreak in West Africa (WHO, 2014c).

Case definition for suspected EVD infection	
Fever + contact with a suspected, probable or confirmed EVD case	
OR: fever + at least 3 of the following symptoms:	
Headaches	Anorexia/loss of appetite
Lethargy	Aching muscles or joints
Vomiting	Breathing difficulties
Diarrhoea	Difficulty swallowing
Stomach pain	Hiccup
OR: any person with inexplicable bleeding	
OR: any sudden, inexplicable death	

contaminated with infected body fluids, invasive procedures were limited to a minimum, and strict infection control measures were applied in these centres.

The latest flare-up of EVD in Sierra Leone was declared over on the 17th of March 2016. By then, an estimated 14,122 people had been infected by EVD, and 3955 persons had died from the disease in Sierra Leone (WHO, 2016b). No previous outbreak had affected so many people, and so many pregnant women. Before the outbreak, research concerning the specific needs of pregnant women affected by EVD was sparse, and as a result, clinical guidelines on how to care for pregnant women in this context were insufficient.

Studies from previous outbreaks arrived at estimations of 90% mortality rates for EVD infected pregnant women, and 100% mortality rates for infants born by infected mothers (Mupapa et al., 1999; WHO, 1978). EVD is spread through bodily fluids, and infected pregnant women and their infants were thought to have low chances of survival. Reports from the 2014–2016 outbreak in West Africa stated that pregnant women suspected for EVD were therefore sometimes denied access to healthcare facilities in fear that they would contaminate others during delivery (Money, 2015). In response, some organisations chose to employ midwives and obstetricians to work in their Ebola centres to find safe ways of providing tailored care for pregnant women with suspected or confirmed EVD.

During and after the epidemic, many studies about EVD and pregnancy have been published, several of which highlight the practical and ethical challenges regarding management of pregnancy in the context of an EVD outbreak (Black, 2015; Caluwaerts et al., 2016; Henwood et al., 2017). Although it is likely that midwives have been involved in caring for many of the cases presented in the published scientific literature, few studies include midwives' experiences (Bell et al., 2017; Kollie and Winslow, 2016), and none of the studies published to date focus specifically on midwives' experiences of caring for pregnant women. As a result, we decided to conduct a study aiming to explore and describe midwives' experiences of caring for pregnant women admitted to Ebola centres in Sierra Leone.

Methods

A qualitative research design with a descriptive and exploratory approach was employed. This study design is useful when previous research on the topic of interest is scarce and when personal experience is the chosen source of information (Schneider et al., 2013).

A request to invite both Sierra Leonean and expatriate midwives to participate in the study was initially sent to an organisation that had employed midwives in their Ebola centres. This request resulted in the participation of six midwives. Furthermore, five midwives were recruited by means of snowball sampling (Patton, 2002). The total of eleven study participants, who worked for three different humanitarian organisations, originated from nine countries on four continents, and had an average age of 43 years. They had various degrees of professional midwifery experience, ranging from no previous employment history prior to being assigned to the Ebola centre, to more than 20 years of professional experience in various fields of midwifery, from homedeliveries to highly specialised university hospitals, administrative and teaching positions. Altogether, the midwives had worked in eight different Ebola centres, in periods from six weeks to eighteen months, ranging from October 2014 until after the outbreak was declared over in March 2016.

The first author conducted individual semi-structured interviews with the midwives, initiated by an open-ended question asking them to describe why they had decided to start working in an Ebola centre. They were asked to describe various situations in the context of providing midwifery care, and were encouraged to communicate freely about their experiences. Furthermore, the interview guide was developed by the first author and assessed by the second author and contained questions about practical and emotional dilemmas they had encountered related to midwifery and infection control measures. At the end of the interview, the midwives were asked to reflect on the most challenging and the most rewarding part of their experience.

The interviews were conducted between August 2016 and January 2017, and lasted between 20 and 85 minute (mean duration: 52 minutes). They were carried out in English in the manner most convenient to the study participants, either face to face or via video or audio calls. The interviews were digitally recorded and transcribed verbatim.

Ethical considerations

Approval for the study was granted by the Norwegian Social Science Data Service (NSD: 48072) and the Sierra Leone Ethics and Scientific Review Committee (SLESRC). In addition, it was assessed by the Regional Committee for Medical and Health Research Ethics in Norway (REC: 2016/513) and was considered to be outside the remit of the Health Research Act (2008). The study was conducted in accordance with the WMA Declaration of Helsinki Principles for Medical Research in Human Subjects (WMA, 2013). Written informed consent to participate in the study was obtained from all study participants. The midwives were advised that participation was voluntary and that they could withdraw from the study without giving reasons. They were offered time during the interview to talk freely about traumatic situations, and they were given the possibility to contact the first author after the interview was given should they need further debriefing.

Data analysis

Data were analysed using systematic text condensation, a four-step strategy for thematic cross-case analysis (Malterud, 2012). First, both authors read each interview to get an overall impression and find preliminary themes. We then identified meaning units in the transcripts describing the midwives' experiences of caring for pregnant women admitted to an Ebola centre and organised them into code groups. In step three, we identified subgroups in each code group (Table 2), and meaning units in all subgroups were summarised and condensed. Finally, the condensates were elaborated and presented as an analytic text (Malterud, 2012).

Findings

Three themes emerged as a result of the analysis. The first theme described how personal and public fears of Ebola infection affected the midwives' professional and personal lives. Secondly, motivation and support influenced the midwives' ability to cope with challenging midwifery care and finally competency, creativity and courage was described as essential for improving clinical guidelines and learning for the future.