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Strategies to Facilitate the Use of Assisted Childbirth by Nomads in Sub-Saharan Africa: Proposals from the Field in Mali

Stratégies pour Faciliter le Recours à l'Accouchement Assisté par les Nomades en Afrique Subsaharienne : Propositions de Terrain au Mali

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ABSTRACT

Nomadic populations have limited access to health services including childbirth assisted by a skilled health professional which exposes nomadic women to a significant risk of maternal mortality. Through this paper, we recommend, based on our experience in providing care as a physician and our expertise in conducting research in Mali nomadic communities, strategies that could help improve nomadic women's access to childbirth assisted by a skilled health professional. Our recommendations include: 1) Mobile phones (mHealth); 2) waiting homes; 3) community-based extensions, and 4) a system of transport for parturient women. These strategies are described as feasible, affordable, and more suited to the needs, expectations and sociocultural realities of nomadic populations.

RÉSUMÉ

Les populations nomades ont un accès limité aux services de santé, y compris à l'accouchement assisté par un professionnel de santé qualifié, ce qui expose les femmes nomades à un risque important de mortalité maternelle. Dans ce document, nous recommandons, sur la base de notre expérience en tant que médecin et de notre expertise en matière de recherche dans les communautés nomades du Mali, des stratégies susceptibles d'améliorer l'accès des femmes nomades à l'accouchement assisté par un professionnel de la santé qualifié. Nos recommandations sont les suivantes 1) les téléphones mobiles (mHealth) ; 2) les maisons d'attente ; 3) les extensions à base communautaire, et 4) un système de transport pour les parturientes. Ces stratégies sont décrites comme étant réalisables, abordables et mieux adaptées aux besoins, aux attentes et aux réalités socioculturelles des populations nomades.

INTRODUCTION

Although progress is being made, maternal mortality remains remarkably high, with approximately 303,000 women dying each year across the world (1). The risk of dying is even higher in sub-Saharan Africa (SSA) where the main causes of maternal mortality are obstetric complications. Such complications are mostly unpredictable but preventable when childbirth is assisted by a skilled health professional. Indeed, it is established that their support helps avoid these complications and maternal deaths (2). Unfortunately, most women do not benefit their support for many reasons including socio-cultural, economic and geographical barriers.

The nomadic population, defined as anyone living in a tent, caring for livestock and making seasonal migration, are mainly from rural areas (3). They are estimated to be 20 or 30 million people in the Sahel region and remain underestimated in most countries. In Mali, they include Tuareg, Maure and Fulani and have limited access to health services due to their lifestyle characterized by mobility within and across countries. The limited access to health services and particularly to reproductive health services such as assisted childbirth exposes nomadic women to a significant risk of maternal death. In the North of Mali, less than 5% of childbirths are assisted by a skilled health professional. To improve access to assisted childbirth in this part of Mali to reduce maternal death it was found to look for better strategies. This paper proposes four strategies based on our extensive experience as clinicians (MAAA, BAL) in nomadic communities and our expertise in conducting research on

the determinants of the use of assisted childbirth by nomads in Gossi, Mali (4). It comprised four sections, each corresponding to a strategy. The first one focuses on Mobile phones (mHealth), the second on waiting homes, the third on community-based extensions; and the fourth on the transportation of parturient women to health centres.

MOBILE PHONES (mHealth)

The World Health Organization (WHO) defined mHealth as an "*area of electronic health (e-health) that provides health services and information via mobile technologies such as mobile phones and PDAs (personal digital assistant)*" (5). mHealth is known as an essential tool for health care, health promotion and disease prevention. It is also known as very suited to nomadic communities which usually live in areas dealing with distance, climate change, insecurity and other factors of fragility. In Kenya and Ethiopia, it was used to facilitate assisted childbirth and contributed to changing professionals' and patients' behaviour, improving the use of maternal health services and reducing maternal mortality (6). Its implementation and use depend on a variety of factors, namely individual, technical, organizational, financial, ethical, socio-cultural, legal and regulatory factors (5).

During our activities in the field, both as clinicians and researchers (over 35 nomadic camps visited), we observed that there was at least one mobile phone available, generally belonging to the head of the family. Given that camps are not covered by the Internet network, which is limited to several kilometers around the location of the transmitting antenna, people are forced to travel by camel, motorcycle, or foot to reach a dune or mountain where they could capture the network. In this regard, nomadic women expressed the need for an extended Internet connection to interact with health workers directly and easily. They pointed out that mobile phones are useful for informing nomadic patients and communities about health services within a reasonable timeframe. Furthermore, in case of an obstetric emergency, the head of the medical station or an acquaintance in the village could be called easily to send a vehicle to evacuate the parturient woman. In short, mHealth can help facilitate the decision-making process for prompt access to care for nomadic women. For example, through SMS and/or direct calls, health workers can raise awareness and these women and their families throughout the pregnancy and childbirth period: an invitation to prenatal consultation and stress the importance of assisted childbirth, organization of the transport of parturient women from home to the health centres, etc. Such an approach would help remove some barriers to accessing and using information and maternal care for these communities.

WAITING HOMES

Waiting homes are defined as housing near health facilities where women can stay before and after childbirth (7). They are proposed as a promising intervention to facilitate skilled birth attendance. They have been implemented in several African countries where they have helped remove physical barriers to assisted childbirth and reduce maternal mortality. Initially, they targeted women at risk of developing obstetric complications. Then after, all those who would have difficulty accessing an assisted delivery. They were integrated into health centres or in their proximity in traditional tents. Parturients are advised to stay there for one to four weeks before delivery and sometimes seven days after delivery (7). They facilitate access to the health centre, especially when labour starts at night, reduce transport costs, and provide a "familiar" and safe environment for the parturient and her family. Therefore, waiting homes are used when distances between home and health centres are remote or when parturients are at risk of complications. They could thus facilitate the use of assisted delivery by nomads.

In the field, we observed that many nomadic women and their families moved near the health centre (e.g., homes for relatives, community and/or religious charities) to wait for their delivery. The proximity of the health centre allows them to have quick access to health services as soon as contractions start, or in the case of high-risk pregnancies that require several weeks or months of follow-up. For these women and their families, the distance, the lack of appropriate means of transport, and the repeated calls to the matron leave them no option other than to move closer to the health centre, for example by staying with family or community contacts living in the city. It is a model close to "waiting homes", however informal and not systematic for all women and families who may need it, particularly those who do not have a family and/or community network that can be mobilized.

Based on these field findings, it would be beneficial to install "waiting homes" so that all nomadic women and their families in need can use them systematically. This strategy would increase better pregnancy and childbirth care for all, especially those who cannot benefit in any way from the so-called "informal" accommodation and care services. In some situations, especially to avoid cultural shocks and/or feelings of distress related to the changing environment and living conditions, it is important to install equipped traditional tents to house nomadic women waiting for their delivery in or near the health centres. For women who do not wish to stay in these tents, host families could be identified, notably by capitalizing on the community and/or religious accommodation model already in place.

COMMUNITY-BASED EXTENSIONS

Community-based extensions, consisting of community health workers (CHWs) and traditional birth attendants (TBAs), are defined as individuals who are designated and trained within a community and who are closely linked to the health system (8). In Sub-Saharan, they are considered an important element in efforts to improve access to and use of maternal care. According to our experience and observations, women often prefer them to qualified staff because they offer culturally more appropriate care and services. When linked to health services, TBAs and CHWs could also play an important role in improving maternal health knowledge as well as access and use of services by nomadic women. However, to the best of our

knowledge, there is no evidence that they can contribute to reducing maternal mortality.

In the field, we observed that CHWs and TBAs are playing a role close to that of community-based extensions. However, these agents play a minor role in maternal health. CHWs are more involved in vaccination. On their side, the TBAs mainly work in most nomadic camps (traditional role), but often without any real link and/or contact with the formal health services. Their role is usually limited to giving advice and cutting the umbilical cord at the time of delivery. These community-based extensions could play a more important role, especially in helping to convince and refer nomadic women to skilled birth attendants. In this regard, their work should be expanded to include activities to promote healthy behaviours, health education and community awareness to remove sociocultural barriers to skilled birth attendance while ensuring "cultural safety" about their lifestyle and environment. For these community-based extensions to be effective and sustainable, it is important to address issues related to their recruitment and retention, motivation, role, acceptance by nomads, and their integration into health services.

FACILITATING TRANSPORTATION OF PARTURIENT WOMEN TO HEALTH CENTRES

Transportation of women to health facilities plays an important role, particularly in remote and isolated areas, in making assisted delivery effective. Some approaches have provided transportation for parturients, such as in South Sudan, where a system of free ambulances has significantly increased the number of assisted deliveries and reduced the costs of care (9). In Nigeria, communities realized that it was unrealistic to have ambulances for their health area (10). They negotiated with local transporters to provide emergency transport, which mobilized 13 to 16 drivers per year and reduced the cost and delay of assisted delivery.

As for nomadic women, they use weekly transport available on market day in the village for routine consultations. In emergencies, to make up for the lack of transport for women in childbirth, nomads call on family members, tribes or friends who have a vehicle. If not, they have to borrow or rent one. According to our observations and testimonies in the field, renting vehicles is expensive given the living conditions of these populations. In addition, these vehicles are generally in very poor technical condition (e.g., risk of a breakdown in the middle of the road, lack of comfort), and/or may arrive late in the case of an obstetric emergency.

To overcome these difficulties and to ensure that safe transport is available when and where it is needed, agreements should be established with local transporters, including the setting of affordable and guaranteed tariffs in advance. These transporters, by means of aids and benefits (e.g., guarantee of a minimum level of activity, help with vehicle maintenance, subsidized fuel costs, symbolic recognition within the community), should be able to guarantee the availability of vehicles in good technical condition and a minimum of comfort for the people transported. This will reduce waiting times and the risk of complications associated with the delay in taking care of these women.

CONCLUSION

Skilled birth attendance is very low among nomadic women in SSA, which exposes them to high mortality and morbidity. Through this paper, four strategies that could improve skilled birth attendance among nomadic women are proposed. These strategies were chosen based on our rich clinical and research experience in nomadic settings. They are effective in other rural contexts in SSA and seem feasible, affordable, adapted to the contexts, and suited to nomads' needs, expectations, and sociocultural realities. The innovative aspect would be the combination of these four strategies, which could lead to larger expected outcomes. Future research is needed to implement these strategies on a large scale in nomadic environments and evaluate their effectiveness.

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