

Giving response to the question of managing obstetric emergencies in remote areas: motorcycle ambulances as an innovation opening the door to a fight against home births

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INTRODUCTION

Maternal and neonatal mortality persist as significant public health issues in Benin. In the department Couffo, from January 2019 to March 2021, more than 50% of maternal deaths in the Aplahoué Djacotomey and Dogbo health originated from the commune of Aplahoué, highlighting challenges related to geographical accessibility and delayed referrals to care.

METHODS

- Selection of 10 villages based on the recorded number of maternal deaths, distance from the health centre, road conditions, and vehicle availability. Conducted documentary research.
- Utilized a participatory and inclusive approach, involving village assemblies, individual interviews to explore solutions aimed at reducing home deliveries and addressing delays.
- Conducted an analysis and prioritization of problems and solutions, leading to the selection of the motorcycle ambulance.
- Defined the community's role and outlined the desired health model.
- Establish a community detection and rapid referral system.
- Implemented four lines of action, accompanied by operational choices.

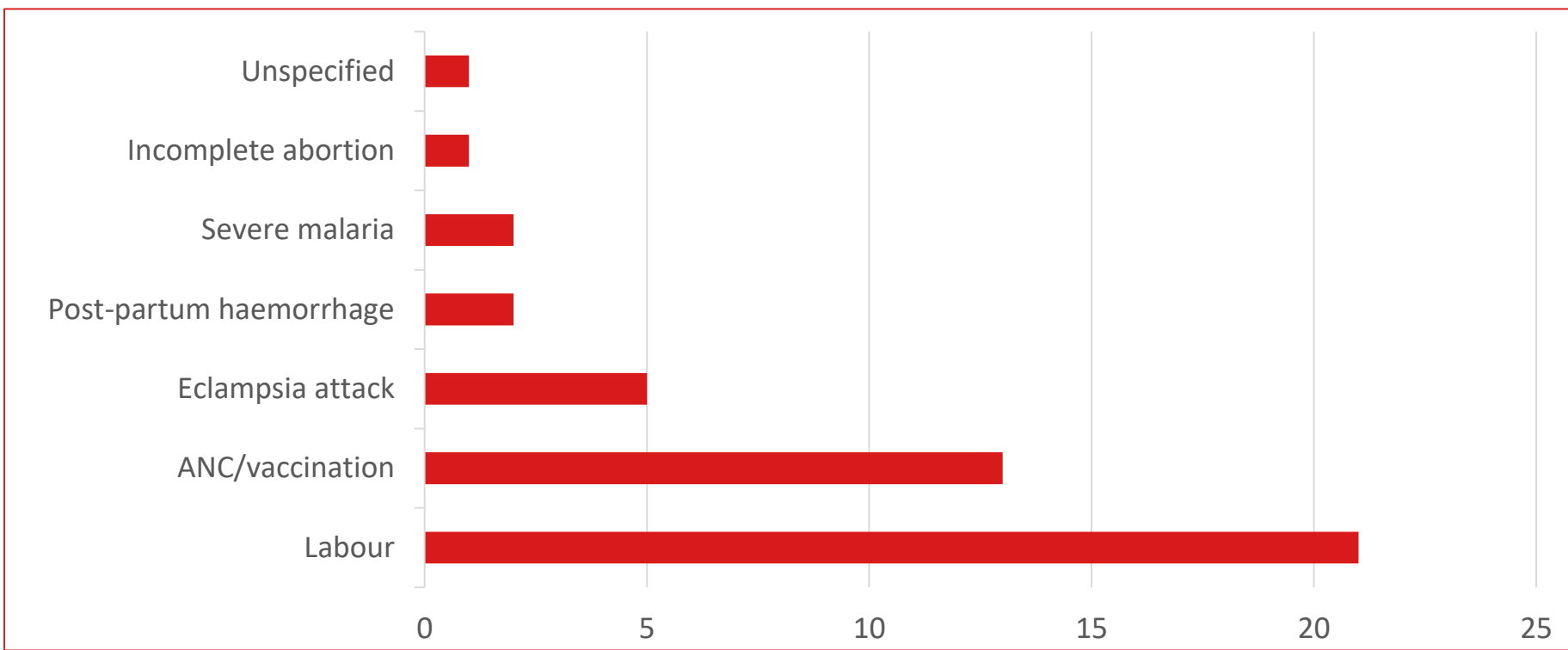
RESULTS

Changes in community involvement

- 798 individuals mobilized across 10 villages for needs identification and prioritization.
- 70 management committee members received training, gaining autonomy in operation and management, resulting in the rehabilitation of tracks, construction of 10 sheds, collection of membership fees and cultivation of community fields to generate financial resources.
- Identified and trained 16 traditional birth attendants supporting social mobilization and referral accompaniment. In one quarter, 20 awareness-raising sessions were conducted, reaching 314 people, including pregnant women and their husbands.
- Health workers were trained and equipped to provide quality care and services to referred cases, implementing advanced strategies with the assistance of midwives.

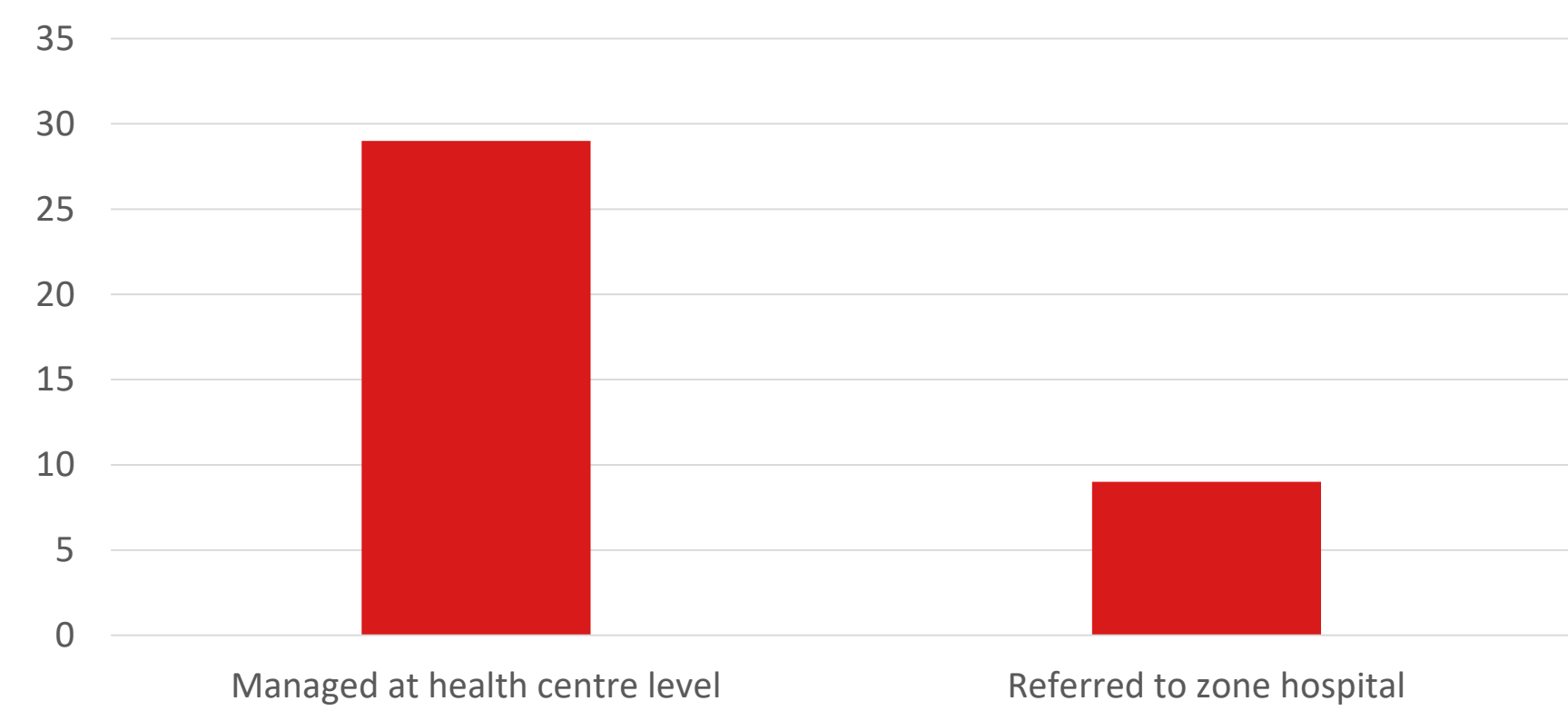


Breakdown by indication for referral



In 64.4% of cases (n=45), obstetrical causes were identified, with labor being the most frequent reason (46.7% of cases). Additionally, 5 cases of eclampsia (11%) and 2 cases of post-partum hemorrhage (5%) were referred following home deliveries.

Outcome of referred cases



- 23.7% (n=38) of obstetrical emergencies referred from the community to health centres were subsequently transferred to the zone hospital.
- Of the referred obstetrical emergencies, 76.3% had a favourable outcome at the primary health centre level, indicating that early referral couples with the provision of quality of care resulted in positive outcomes. Additionally, 29.8% (n=57) of nocturnal referrals (between 6 p.m. and 6 a.m.) were reported, showcasing that traditional birth attendants (TBA) facilitates referral decisions, reducing delays and offering alternative means of referral to the zone hospital in the event of ambulance unavailability.

Reducing average transport time

- Average transport time for community emergencies has been reduced to 62.9 minutes (with a standard deviation of 18.9 minutes) compared with an average of 2 hours before the action research.
- The words of the husband of an abortion victim testify to this: *"I am a living witness to the importance of this motorcycle ambulance in the community because I would lose my wife if I took my own motorcycle to take her to the health centre"*.
- *"The arrival of the motorcycle ambulances has given us a sigh of relief in terms of referrals, because they assist not only with referrals from targeted villages to the health centre but also with referrals to the hospital in cases where the ambulance is unavailable,"* says a midwife.

Unexpected findings

- Community-initiated actions include track rehabilitation, construction of motorcycle ambulance sheds, and contributions in villages before the arrival of the ambulances. Sustainable funding is ensured through a community field in Volly-Latadji, where harvests generate funds, acknowledging that "people don't have the means and don't understand having to contribute when their wife is not pregnant or ill".
- The closure of isolated maternity clinics without skilled attendants led to a reactivation of home births, prompting massive and instantaneous support from communities expressing their expectations for consideration in their well-being.
- Traditional birth attendants provide support for community mobilization and referral of parturients to centres, aiming to reduce the number of home births

DISCUSSION

- Awareness of the importance of early healthcare access, the significance of motorcycle ambulances, and the sense of ownership of the initiative have all increased.
- The access of pregnant women to healthcare has improved in the covered localities, with referrals to the health centre being well-received and care provided that aligns with the community's needs.
- Motorcycle ambulances prove highly beneficial for women of childbearing age, yielding promising results and fostering productive collaboration and synergy of action between the community and healthcare providers.

LESSONS LEARNED

- A participative and inclusive approach that clarifies everyone's contributions facilitates a more comprehensive consideration of individual needs and expectations, promoting greater commitment.
- Building upon existing foundations: The past existence of solidarity funds in certain villages has streamlined the mobilization of resources.
- The non-functionality of a community experiment always demands dispassionate analysis and cautious decisions rooted in a profound understanding of the causes. This is crucial because the presence of traditional birth attendants, thoroughly analysed and considered during the action research, has rendered the model more systemic and integrated in the fight against preventable maternal deaths.