

## DECENTRALISED MODEL OF CARE (DMC) IN RESPONSE TO A DIPHTHERIA OUTBREAK IN KANO, NIGERIA: STRATEGY IMPLEMENTATION

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### **General data**

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**Topic:** Vaccination and vaccine preventable diseases in children

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### **Abstract**

**Background and objectives:** Diphtheria is a vaccine preventable disease caused by toxicogenic *Corynebacterium diphtheriae*. Since declaration of an outbreak in Nigeria in December 2022, Kano state has been its epicentre, with 77% of the 12,581 confirmed cases nationally. In response, a Decentralised Model of Care (DMC) for delivering proximal, fast, and easily accessible curative and preventive community-based health care was introduced in Kano. Here, we describe implementation of this DMC and assess its impact in reducing mortality from diphtheria during this outbreak.

#### **Methods:**

Components of DMC:

- OPD for the triaging and management of mild cases
- Contact clinic (mobile and fixed) to improve access to preventative care for close contacts

Main packages of DMC:

- Health and Infection Prevention and Control promotion
- Chemoprophylaxis and vaccination for close contacts
- Identification and management of simple cases
- Referral of complicated cases
- Training of health workers

DMC was implemented within existing public health facilities for outpatient services, and in the community for the management of close contacts. The selection of facilities was guided by epidemiological data analysis and mapping.

Chi-square testing was used for analysing statistical significance on mortality before and after the implementation of DMC.

**Results:** Between weeks 2 and 48 of 2023, the health facilities included in this study managed a total of 12,662 suspected diphtheria cases. From this, 1,987 cases (136 deaths; CFR 6.84%) were managed before implementation of DMC (before week 34), and 10,675 cases (611 deaths; CFR 5.72%) were managed after its implementation (from week 34 to 48). One-tailed Chi-square testing showed a statistically significant difference in mortality before and after implementation (p-value 0.02).

**Conclusions:** DMC may have contributed to the reduction of mortality in healthcare facilities. Upon in-depth analysis of the impact of DMC, it may be recommended for implementation in

large outbreaks. Further studies, however, need to be conducted to assess the role of DMC in improving patients' access to healthcare and reducing the burden on healthcare facilities during massive outbreaks.

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**Ethical statement**

**This study:** Fulfils the exemption criteria set by the MSF ERB and was approved for submission by the WACA Medical Director.