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

Hashim JUMA[1], Dagemlidet Tesfaye WORKU[1], Philip Eghosa EVBUOMWAN[2], Yves KATUALA[1] , Yanu MBUYi[2], Sanjay Kumar YARLAGADDA[3], Franck ALE[1], Ismael ADJAHO[1], Matthieu RODRIGUES[1], Maria FIX[3], Suleiman HUDU[3], Rani MARCHAl[3]

[1]MSF- WaCA, Abidjan;

[2]MSF- WaCA, Abuja;

[3]MSF-WaCA, Kano.

Background and objectives

- Diphtheria is a vaccine preventable disease.
- Mostly affected the children.
- In Nigeria's high scale outbreak, Kano state has been the epicentre of the outbreak since declaration of the outbreak in Dec. 2022
- It accounted for 77 % of all confirmed cases reported in Nigeria, with **12,581** between week 2 to week 48 of 2023.
- Low vaccination coverage is the main leading cause with other factors.

Cont.: Background and objectives

DMC: Implemented in Kano in week 34 (2023).

- Designed to be close to the affected communities, with curative and preventive health care that is fast, accessible.
- **Contribute to the reduction of morality by reducing late presentation and complicated cases.**
- DMC was implemented to pragmatically ease the burden on healthcare facilities.

Methods

Rationale:

- Patient centred and community-based approach
- Improve access to health care related to Diphtheria case management.
- Early detection and treatment of diphtheria cases and close contacts to reduce morbidity and mortality.

All contribute to reduced mortality

Components of DMC

Out-patient (OPD):

- For the triaging and management of mild cases.
- Referral of complicated cases to DTC.

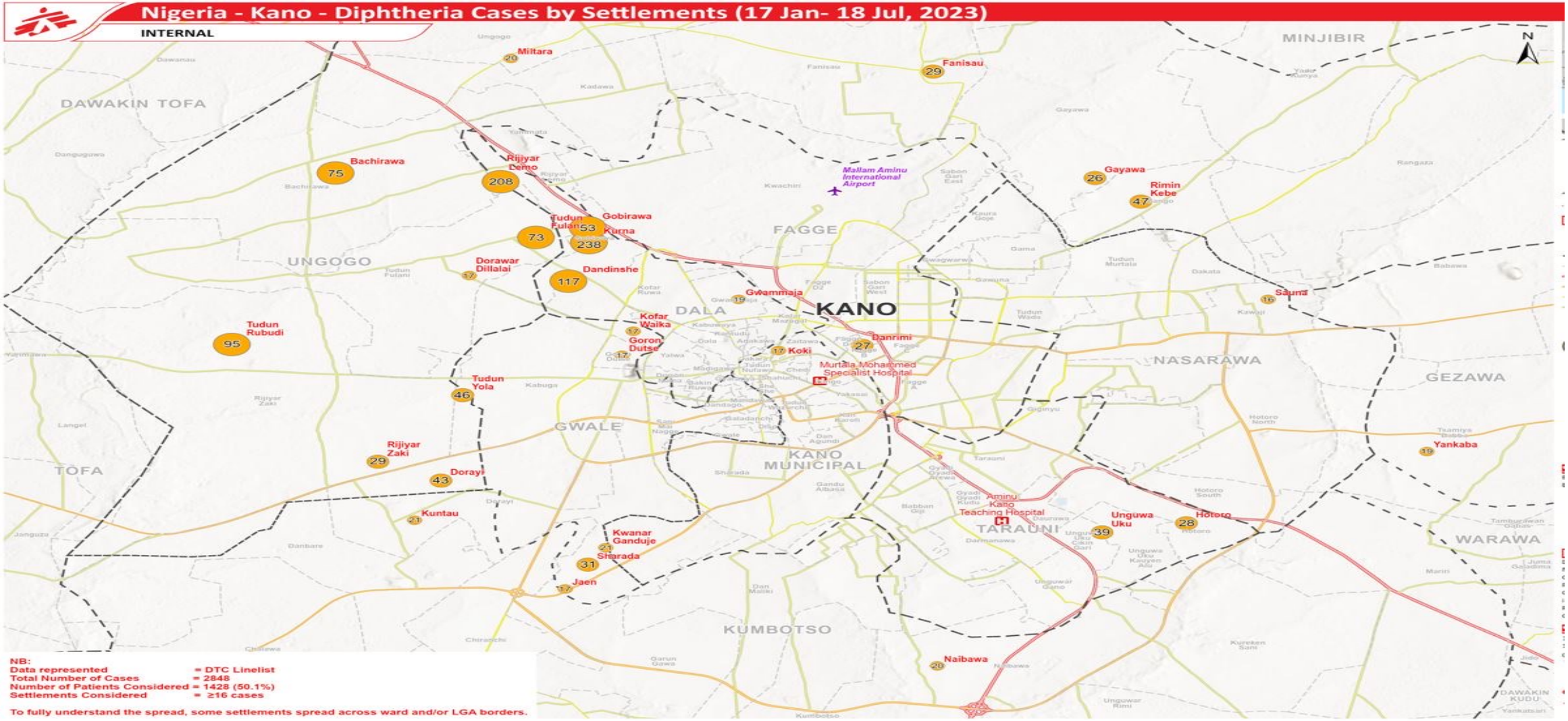
Contact clinic (mobile & fixed):

- To improve access to the preventative care for close contacts.

Main packages of DMC

- Health and IPC promotion.
- Chemoprophylaxis and vaccination for close contacts.
- Identification and management of simple cases.
- Referral of complicated cases
- Training of health workers.

Map 1: Sample of GIS map to guide Diphtheria DMC activities



This map is for information purposes only and has no political significance. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by MSF.

DMC is implemented within

- Existing public health facilities for outpatient services, and
- In the community for the contact clinic.
- Selection of facilities is guided by epidemiological data analysis and mapping.
- Chi-square testing was used for statistical analysis on mortality before and after DMC implementation

Results

- A total of 12,662 suspected case (Week 2 and 48 of 2023).
- DMC before VS after implementation: 1,987 cases,136 deaths (CFR 6.84%) **vs** 10,675 cases, 611 deaths (CFR 5.72%)
- One-tailed Chi-square testing showed statistically significant difference in mortality before and after implementation of DMC (p value 0.02)

Conclusions

DMC may have contributed to:

- The reduction of mortality
- Easing the burden on healthcare facilities
- It may be recommended for implementation in big outbreaks upon in-depth analysis of its impact
- Additionally, this study highlights the need for further studies on the impact of DMC in the access to health care and reducing the burden on healthcare facilities in Massive outbreaks

Acknowledgement

- Special thank you to MSF- West and Central Africa for the support in the implementation of the activities and conduction of the study
- To the Members of the Ministry of Health in Kano and the Nigeria Centre for Disease Control and Surveillance for the partnership in the control of the outbreak and the studies done
- Lastly, to the collaborating partners in the shared common goals of controlling the outbreak and furthering the understanding of Diphtheria

Ethical Statement

- The study was done with ethical clearance from the health authorities of Kano State, Nigeria
- The study was validated by the Medical Director, MSF- West and Central Africa
- It was accepted by MSF Ethical Review Board