VOLUME 40, NUMBER 7
July 2023

ISSN 0189 - 160X

WAJM

WEST AFRICAN JOURNAL OF MEDICINE

ORIGINALITY AND EXCELLENCE IN MEDICINE AND SURGERY

OFFICIAL PUBLICATION OF
THE WEST AFRICAN COLLEGE OF PHYSICIANS *AND*
WEST AFRICAN COLLEGE OF SURGEONS

www.wajmed.org

WEST AFRICAN JOURNAL OF MEDICINE

TABLE OF CONTENTS

WEST AFRICAN JOURNAL OF MEDICINE

EDITORIAL

Addressing the Outbreak of Diphtheria in Nigeria

It is with great enthusiasm that we present another edition of this Journal, which contains a rich and wide array of articles from various specialties and subspecialties. This is coming at a time when various states in Nigeria are grappling with an increasing outbreak of Diphtheria, a potentially deadly disease. In this edition, Oyedeji *et al* drew attention to this ongoing outbreak by reporting their experience with 3 cases of faucial Diphtheria in two teaching hospitals in southwest Nigeria. It is worrisome that despite being a vaccine preventable disease, the country is still struggling with the challenge of these recurring outbreaks.

Diphtheria is a highly contagious bacterial infection caused by *Corynebacterium diphtheriae.* It is transmitted from person-to-person through respiratory droplets and primarily affects the nose, throat, and airways, leading to breathing problems, fever, and the development of a thick membrane in the throat. Toxins released by the bacteria have the ability to damage various organs and cause serious problems or even death.[1,2]

Diphtheria continues to be a public health problem in many low-resource nations, especially where vaccination coverage are suboptimal, in addition to poor living conditions.[2–3] There has been an alarming increase in the disease in the country since December, 2022. The Nigeria Centre for Disease Control and Prevention (NCDC) was first notified of suspected diphtheria cases in Kano and Lagos states on December, 1st 2022. By the third week of January, 2023, more than 100 cases had been confirmed and the NCDC officially declared an outbreak of Diphtheria in Lagos and Kano States on January 20, 2023.[1–4] Apparently, there has been a rapid spread to other states.

According to the NCDC, as of June 30th, 2023, there have been more than 2000 suspected cases reported across 24 states out of which 798 have been confirmed. About 80 deaths have been recorded among all confirmed cases yielding a case fatality rate of 10%. More than 95% of the confirmed cases were recorded in Kano state and the majority (71.7 percent) of the 798 confirmed cases occurred among children aged 2–14 years.[4]

The recurrence of these outbreaks in the country has been attributed to several factors. The most critical of these are the inadequate levels of vaccine coverage and poor access to healthcare among the population. The people at the greatest risk of contracting diphtheria are unvaccinated or incompletely-vaccinated children, as Oyedeji *et al* illustrated by their case reports. Healthcare professionals, hospital frontline workers, and anyone who comes into contact with suspected or confirmed diphtheria cases are also at risk.[1–5] The National Immunization Coverage Survey (NICS) estimates that 3.1 million (14%) children have received no vaccinations or have skipped doses. Additionally, 49% of these children only received the first dose of the PENTA vaccine, and only 33% of them received the full course of the PENTA valent vaccine.[6]

There is thus an urgent need for all stakeholders to intensify efforts geared towards addressing all the barriers and factors militating against adequate immunization coverage. The prompt identification and containment of diphtheria outbreaks is further hampered by inadequate disease surveillance and very weak and ineffective response systems.[3–5] The surveillance systems and response to the ongoing outbreak need to be strengthened at all levels of government and among different agencies that are involved. There is a need to raise public awareness, and establish an effective strategy for prompt detection of suspected cases, contact tracing and administration of prophylactic treatment to close contacts. The public should also be reminded of the importance of good personal and household hygiene, frequent hand washing and avoiding close contact with sick people. Due to lack of adequate diagnostic capacities across the country, there is a delay in confirmatory diagnosis of many cases, with its attendant consequences. This must also be urgently addressed.[1–3]

The World Health Organization (WHO) recommends prompt administration of diphtheria antitoxin (DAT) and antibiotics for the management of Diphtheria.[1] However, as highlighted I the reports by Oyedeji *et al,* the DAT is not readily available in the country thus leading to increased mortality. The authors however demonstrated the use of compatible plasma transfusion as a potential alternative to DAT. While they continue to play their roles in the containment of the outbreak, it is critical to remind all health professionals on the need to ensure appropriate universal precautions, maintain a high index of suspicion for the disease, isolate suspected cases and report such to the relevant authorities.

This outbreak of diphtheria brings to the fore the constant danger posed by infectious illnesses and the need of vaccination and herd immunity in halting their spread. This underscores the need for increased efforts towards expanding immunization coverage in the country.

One of the measures, among several, that the World Health organisation (WHO) has proposed is school-based vaccination as a supplement to the routine infant immunization.[7–8]

In some countries, checking vaccination status of children is a mandatory part of routine school entry-checks and the opportunity is utilized to identify those with incomplete or no vaccinations and administer such. It has been shown that this approach improves vaccination coverage in such countries. As the WHO has emphasized, for this initiative to be effective, it must be integrated into each country's school health services, a fundamental component of school health policy. [7–8]

Nigeria has a school health policy but its implementation has been severely limited in scope, grossly ineffective, and does not yet include routine school-based vaccination. This is an area to which relevant stake-holders and policy makers need to pay close attention. As highlighted in another article by Adebayo *et al,* the low level of awareness among school teachers regarding the content of the national school health policy calls for concern. The authors assessed the level of awareness regarding the National School Health Policy (NSHPo) among teachers in selected primary schools in Oyo State, and checked for availability of the NSHPo document in the respective schools. The policy document was not sighted in any of the schools while the level of awareness regarding the policy and its principles was suboptimal. This is apparently one of the factors militating against effective implementation of the school health policy in the country.

In another study, Owobu *et al* documented the poor knowledge and mastery of basic life support (BLS) among medical students and doctors in two teaching hospitals in the south-south region of Nigeria. The study further demonstrated the positive impact of a video teaching method in improving BLS knowledge among the participants. The importance of regular mandatory BLS training, as obtains in many developed countries, was emphasized. This will however require easy access to such training.

Once again, we appreciate all our authors, reviewers and other stake-holders for their unceasing contribution and support towards the success of the Journal. We look forward to the continuous partnership of all our stakeholders and submissions of more high quality manuscripts for prompt consideration and publication in this Journal.

Professor Gregory E. Erhabor
Editor-in-Chief,
West African Journal of Medicine,
Yaba, Lagos, Nigeria;
Department of Medicine,
Obafemi Awolowo University/
Obafemi Awolowo University Teaching
Hospitals Complex,
Ile-Ife, Osun State, Nigeria

REFERENCES

1. Agrawal R, Murmu J, Kanungo S, Pati S. Nigeria on alert: Diphtheria outbreaks require urgent action – A critical look at the current situation and potential solutions. *New Microbes and New Infections.* 2023; **52:** 101100.
2. Medugu N, Musa-Booth TO, Adegboro B, Onipede AO, Babazhitsu M, Amaza R. A review of the current diphtheria outbreaks. *African Journal of Clinical and Experimental Microbiology.* 2023; **24:** 120–129.
3. Adegboye OA, Alele FO, Pak A, Castellanos ME, Abdullahi MA, Okeke MI, Emeto TI, McBryde ES. A resurgence and re-emergence of diphtheria in Nigeria. *Therapeutic Advances in Infectious Disease.* 2023; 10. doi:10.1177/20499361231161936.
4. Nigeria Centre for Disease Control and Prevention (NCDC), 2023. Official Statement following the first reported confirmed case of Diphtheria in FCT Abuja. Available at: https://ncdc.gov.ng/news/489/official-statement-following-the-first-reported-confirmed-case-of-diphtheria-in-fct-abuja [Accessed 22 July 2023].
5. Aborode AT, Ajagbe AO, Adewunmi RO, Fasawe AS. Resurgence of diphtheria outbreak in Nigeria. *New Microbes and New Infections.* 2023; **53:** 101125.
6. National immunization coverage survey (NICS). Available at: https://www.jhsph.edu/ivac/wp-content/uploads/2018/04/Nigeria-NICS-National-Brief.pdf [Accessed 22 July 2023].
7. World Health organization (WHO). School Vaccination. Available at: https://www.who.int/teams/immunization-vaccines-and-biologicals/essential-programme-on-immunization/integration/school-vaccination [Accessed 22 July 2023].
8. Feldstein LR, Fox G, Shefer A, Conklin LM, Ward K. School-based delivery of routinely recommended vaccines and opportunities to check vaccination status at school, a global summary, 2008–2017. *Vaccine.* 2020; **38:** 680–689.