

Measles in the Democratic Republic of the Congo needs urgent attention

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Measles, a highly contagious viral infection, remains a persistent threat to global public health, particularly in regions with inadequate healthcare infrastructure and limited access to vaccination programs.¹ In recent years, measles outbreaks have become an emerging problem in the world, especially in Sub-Saharan Africa including the Democratic Republic of Congo (DRC) with a substantial increase in the number of reported cases of measles, a highly contagious caused by measles virus, claims over 100,000 lives yearly global.² Measles is transmitted through respiratory droplets. It begins with fever, cough, runny nose, and red eyes, followed by a distinctive rash. Some of the public health challenges discovered include pneumonia, encephalitis, blindness, and death.³ Furthermore, ongoing conflicts and the displacement of populations have further exacerbated the situation of measles by disrupting healthcare services and hindering access to immunization programs. In 2019, over 182 countries in the world reported 300,000 cases, more than doubling from the previous year.⁴ A study revealed that African countries such as Botswana, Lesotho, Malawi, Namibia, South Africa, Swaziland and Zimbabwe, suffered large outbreaks of measles between 2009 and 2010.⁵ A recent report in 2023 found 1832 confirmed cases of measles between March to June where under-14 children accounted for most cases (86%), with the highest rates in the 1–4 and 5–9 age groups.³ An Ethiopian study in 2023 reported that seasonal patterns of measles outbreaks similarly occurred in Ethiopia toward the end of 2022.⁶ The number of reported cases of measles in Ethiopia was estimated to be greater than 1.5 million cases across all ages and 70,000 deaths would occur yearly.⁶ The situation of measles in the DRC between 2018 and 2020 highlights the persistent challenges in controlling and preventing measles outbreaks, despite ongoing vaccination efforts. The outbreak from 2018 to

2020 marked the largest ever documented, with over 458,000 suspected cases and 8000 deaths, primarily affecting children under five children, with only 41% of confirmed cases were vaccinated.⁷ This outbreak spanned multiple provinces, including Tshopo, Kasai, Maindombe, Haut Lomami, Kwilu, and South Kivu, and persisted for over 2 years, emphasizing gaps in vaccination coverage and healthcare access needed to effectively combat measles in the DRC.⁷

For instance, the measles outbreak in Katanga province from 2010 to 2011 unveiled the devastating impact of measles on the region's healthcare system and outbreak response capabilities.⁸ Despite past control efforts, including catch-up and follow-up vaccination campaigns, the province experienced a resurgence of measles cases, with higher attack rates observed among younger age groups.⁸ The inadequate routine vaccination coverage, coupled with suboptimal supplementary immunization activity coverage in previous years, contributed to the outbreak. In response, the non-governmental organization Médecins Sans Frontières in Paris, France, aided the Ministry of Health in Katanga Province by offering free treatment, enhancing surveillance, and implementing mass vaccination campaigns targeting children aged 6 months to 14 years.⁸ Control efforts are critical to reducing the mortality of measles in DRC. Given that measles continues to be a significant cause of preventable illness and death among children globally, it is crucial to give urgent attention to the measles crisis in the DRC in order to mitigate its devastating consequences on vulnerable communities. As such, the objective of this paper is to bring this issue to the forefront and to emphasize the need for immediate action to be taken. This comprehensive approach further aimed to mitigate the outbreak's impact and prevent further transmission.

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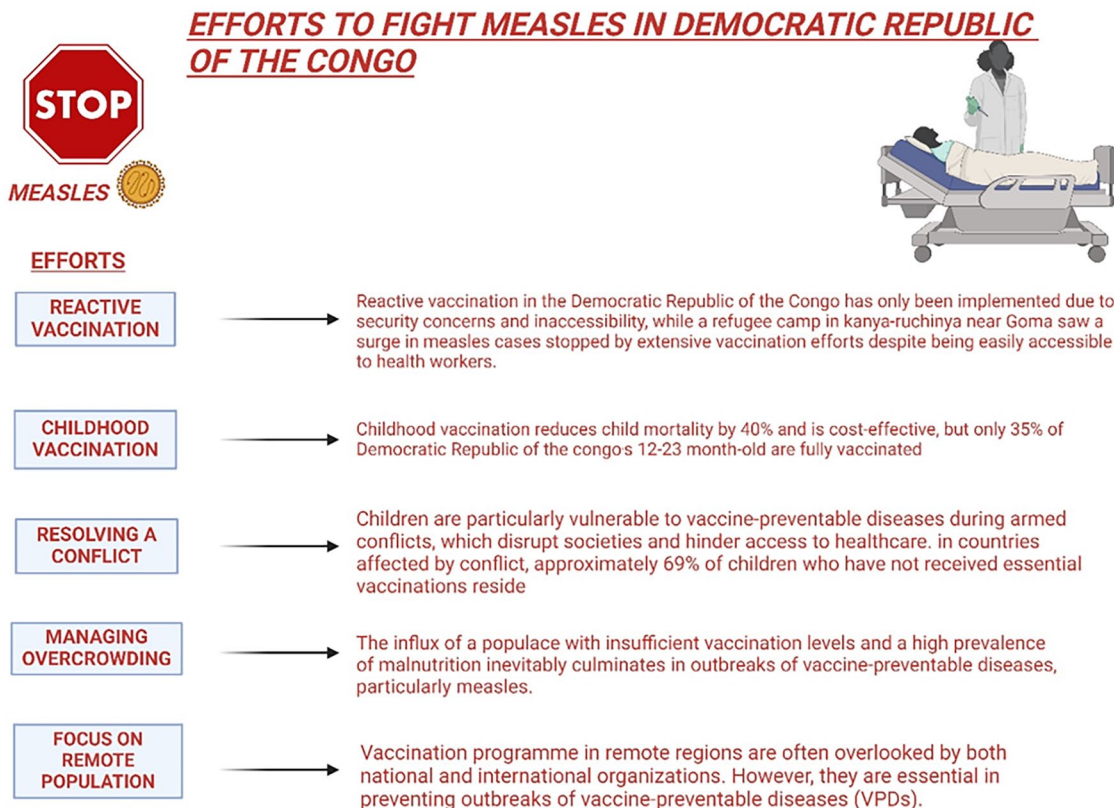


Figure 1. Shows efforts to fight measles in the Democratic Republic of the Congo.

Like other African countries, the DRC aims to eliminate measles by 2020. In 2017, the World Health Organization advised that countries striving for measles elimination should administer two doses of the vaccine, with at least 95% coverage, to all children in every district. By providing the second dose of the measles vaccine in the second year of life, the accumulation of susceptible children is reduced by immunizing those who did not respond to the first dose (Figure 1).

Additionally, vaccination sessions in the second year of life enable infants who missed their vaccine doses to catch up on their primary vaccine doses, thereby increasing the overall number of immunized children.⁷ To improve the immunization system in the DRC, the Mashako plan was launched in 2019. This emergency plan focused on five key areas aimed at increasing vaccination coverage. These areas included expanding the number of immunization sessions by 20%, reducing vaccine stockouts by 80% in local health

centers, regularly monitoring and evaluating progress, conducting monthly inspections of vaccination activities in health zones by inspectors, and ensuring coordination and funding.⁷ However, several obstacles impede effective outbreak response and vaccination efforts, especially limited access to healthcare facilities, particularly in rural areas. This results in underreporting of measles cases, leading to underestimated attack rates in affected regions. Additionally, variations in surveillance system performance across districts underscore the need for standardized surveillance protocols and capacity-building initiatives. Despite the implementation of mass vaccination campaigns, resource constraints, and logistical challenges hinder the timely and comprehensive coverage of target populations.⁸ The DRC faces a pressing and urgent challenge with regard to measles. Despite global efforts to eradicate this highly contagious disease, measles continues to plague the DR Congo, posing a significant threat to the population.¹ The country's ambitious goal of

eliminating measles by 2020 has been severely hindered, with evaluations indicating that it remains significantly off-track in achieving this,¹ underscoring the urgent need for comprehensive intervention strategies. To achieve success in overcoming the obstacles faced by the DRC, a comprehensive strategy is necessary from the Congolese government. This includes bolstering the healthcare infrastructure, improving surveillance capabilities, and mobilizing resources for a timely response to outbreaks. In addition, tailored vaccination plans that consider the age distribution of cases and local epidemiological circumstances are crucial for maximizing the effectiveness of vaccination campaigns and controlling the transmission of measles. As the primary cause of the resurgence of measles in DRC is the low vaccination coverage rates in many parts of the country, it is crucial to increase awareness about the importance of vaccination and improve access to immunization services, especially in remote and underserved areas. Strengthening healthcare infrastructure, training healthcare workers, and ensuring a steady supply of vaccines are also vital steps towards controlling measles outbreaks in the DRC.

Declarations

Ethics approval and consent to participate

Ethical approval is not applicable.

Consent for publication

Consent for publication is not applicable.

Author contributions

Khadija Motunrayo Musa: Conceptualization, Funding acquisition, Validation, Visualization.

Malik Olatunde Oduoye: Conceptualization; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – review & editing.

Muhammad Saeed Qazi: Investigation, Validation, Visualization, Writing – original draft.

Komal Zulfqar: Data curation; Validation; Visualization; Writing – review & editing.

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Competing interests

The authors declare that there is no conflict of interest.

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References

1. Coulborn RM, Nackers F, Bachy C, *et al.* Field challenges to measles elimination in the Democratic Republic of the Congo. *Vaccine* 2020; 38: 2800–2807.
2. Moss WJ. Measles. *Lancet* 2017; 390: 2490–2502.
3. Oduoye MO, Zuhair V, Marbell A, *et al.* The recent measles outbreak in South African Region is due to low vaccination coverage. What should we do to mitigate it? *New Microbes New Infect* 2023; 54: 101164.
4. Dunn JJ, Baldanti F, Puchhammer E, *et al.* Measles is back - considerations for laboratory diagnosis. *J Clin Virol* 2020; 128: 104430.
5. Shibeshi ME, Masresha BG, Smit SB, *et al.* Measles resurgence in southern Africa: challenges to measles elimination. *Vaccine* 2014; 32: 1798–1807.
6. Nazir A, Oduoye MO, Tunde AM, *et al.* Measles outbreak in Ethiopia amid COVID-19: an effect of war-induced hampering of vaccination and pandemic. *Ann Med Surg (Lond)* 2023; 85: 1336–1339.
7. Sodjinou VD, Mengouo MN, Douba A, *et al.* Epidemiological characteristics of a protracted and widespread measles outbreak in the Democratic Republic of Congo, 2018–2020. *Pan Afr Med J* 2022; 42: 282.
8. Grout L, Minetti A, Hurtado N, *et al.* Measles in the Democratic Republic of Congo: an outbreak description from Katanga, 2010–2011. *BMC Infect Dis* 2013; 13: 232.

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