

Tracking the 2024 measles outbreak: updates from Iraq

Alyaa Younis Ali¹, Raghad Emad Salman¹, Alyaa Hashim Alghairi¹, Saad Ahmed Ali Jadoo^{2*}

Abstract

The history of measles spans centuries, marked by devastating outbreaks until the identification of the measles virus in the early 20th century and the subsequent development of a vaccine in 1963. Despite vaccination efforts, measles resurged globally in 2019 after years of decline. The COVID-19 pandemic further disrupted vaccination campaigns, leading to missed doses and heightened risks of outbreaks. By November 2020, over 94 million individuals were at risk of missing vital vaccines. As of May 2024, around 63 countries faced genuine measles outbreaks, with Iraq ranking third, reporting approximately 25,429 cases. Iraq's healthcare system, already strained by decades of crises, struggles to manage the outbreak amidst challenges such as limited access to healthcare, vaccine hesitancy, and the suspension of vaccination campaigns. Urgent interventions are needed to address these challenges and prevent further escalation of the measles outbreak in Iraq.

Keywords: Measle, Virus, Outbreak, COVID-19, Iraq

Correspondence: Saad Ahmed Ali Jadoo
(saadalezzi@uodiyala.edu.iq)

¹Department of Family and Community Medicine, College of Medicine, University of Diyala, 32001, Diyala, Iraq

How to cite: Ali A, Salman R, Alghairi A, Ali Jadoo SA. Tracking the 2024 measles outbreak: updates from Iraq. *Journal of Ideas in Health*. 2024 Apr. 30 ;7(2):1049-1051
<https://doi.org/10.47108/jidhealth.Vol7.Iss2.341>

Article Info: (Narrative Review)

Received: 5 April 2024

Accepted: 30 April 2024

Published: 30 April 2024

© The Author(s). **2024 Open Access** This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

The Creative Commons Public Domain Dedication waiver (<https://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article unless otherwise stated.

Journal Home page: <https://www.jidhealth.com>

e ISSN: 2645-9248

cases and mortality rates. Subsequent vaccination efforts, including the introduction of the measles, mumps, and rubella (MMR) vaccine, further contributed to the control and near-elimination of measles in many parts of the world. Despite significant advancements, periodic outbreaks persist, often exacerbated by clusters of communities with low vaccination rates and hesitancy towards immunization [1,2]. Following consistent global advancements from 2010 to 2016, reported measles incidents surged steadily until 2019. In fact, 2019 witnessed a global resurgence of measles, marking the highest tally of reported cases in 23 years [3]. Prior to the onset of the coronavirus pandemic, the world was already contending with a measles resurgence. Notably, numerous countries continue to grapple with ongoing outbreaks [4]. While 2020 has seen a decrease in reported measles cases, the imperative measures to contain COVID-19 have inadvertently disrupted vaccination efforts, undermining endeavors to prevent and mitigate measles outbreaks. By November 2020, over 94 million individuals faced the risk of missing out on vital vaccines due to the suspension of measles campaigns across 26 nations [3].

Unfortunately, the effect of COVID-19 pandemic has not expired until the measles outbreak returned to cast a shadow over the world again. Following three years of declines in measles vaccination coverage, in 2022, 37 countries experienced large or disruptive measles outbreaks compared with 22 countries in 2021 and that number ticked up to 51 countries in 2023 [5]. The measles outbreak persists, reaching its highest number of cases in the past decade during the first third of 2024. As of May 2024, around 63 countries are currently facing genuine measles outbreaks, with Africa reporting 34, Asia 9, Europe 8, and the Middle East 12 instances [4].

According to the centers for disease control and prevention (CDC), the risk of measles outbreaks has heightened due to COVID-19, as over sixty million doses of measles-containing vaccines were postponed or missed between 2020 and 2022 owing to pandemic-related delays in supplementary immunization activities [4]. This scenario heightens the likelihood of larger outbreaks occurring globally in early 2024, with an estimated nine out of ten unvaccinated individuals expected to contract the measles virus upon exposure.

Background

The history of measles dates back to many centuries, with several documented outbreaks as early as the nineteenth century. However, the virus responsible for measles was not identified until the early 20th century when scientists began to isolate and characterize the pathogen [1]. Prior to the development of a vaccine, measles outbreaks were frequent and often devastating, particularly in densely populated areas. The first measles vaccine was licensed in 1963, leading to a dramatic decline in measles

Situation of Iraq

The emergence of measles cases in Iraq, while not entirely unexpected, presents a significant challenge to an already strained healthcare system. Iraq's health infrastructure has faced recurring crises over the past three decades, including three notable measles outbreaks. The first outbreak in 1997 occurred amidst the unjust sanctions imposed on Iraq by the United Nations Security Council from 1990 to 2003. Subsequently, the second outbreak transpired during the internal armed conflict from 2006 to 2009 (Figure 1) [6,7]. Now, in 2024, the country faces another surge in measles cases following the COVID-19 pandemic. Each of these outbreaks has placed immense pressure on Iraq's healthcare resources, exacerbating existing challenges and highlighting the urgent need for sustained public health interventions and strengthened healthcare infrastructure to effectively manage and mitigate the impact of infectious diseases like measles. Additionally, Iraq finds itself confronting a significant challenge as it ranks third on the list of countries grappling with a measles outbreak, reporting approximately 25,429 cases according to the CDC (Table 1) [4]. This surge in measles cases underscores the ongoing vulnerability of Iraq's healthcare system and the persistent threat posed by infectious diseases in the region [8]. Despite efforts to control the spread of measles through vaccination campaigns and public health initiatives, the country continues to face obstacles in effectively managing the outbreak. Factors such as inadequate healthcare infrastructure, limited access to healthcare services in remote areas, and vaccine hesitancy among certain segments of the population, suspension of measles vaccination campaigns due to COVID-19 pandemic contribute to the challenges in controlling the spread of measles in Iraq. The reported figures of measles outbreaks may not reflect the true extent due to many seeking treatments in private clinics instead of public institutions [9].

Reports from the private sector suggest cases are prevalent among infants, including those under one year and even as young as two months. Unvaccinated mothers and children, exacerbated by the COVID-19 pandemic, pose a risk for future epidemic waves [10]. Implementing health system reforms such as the introduction of Diagnosis-Related Groups (DRG) and universal health coverage (UHC) is crucial for controlling epidemics like COVID-19 and newly emerged measles outbreaks in Iraq [11]. DRG facilitates efficient resource allocation and cost containment, enabling better preparedness and response to outbreaks. UHC ensures equitable access to healthcare services, including preventive measures and vaccinations, essential for epidemic control. By strengthening the health system, Iraq can enhance its capacity to manage public health emergencies, mitigate the spread of infectious diseases, and safeguard the well-being of its population.

Table1: Number of cases per top ten countries experienced measles outbreak 2024-up to 30 April 2024

Rank	Country	Number of Cases
1	Azerbaijan	28,787
2	Kazakhstan	28,660
3	Iraq	25,429
4	India**	15,183
5	Kyrgyzstan	11,723
6	Russian Federation	11,537
7	Pakistan	8,648
8	Yemen	8,558
9	Burkina Faso	4,810
10	Nigeria	4,701

Source: <https://www.cdc.gov/globalhealth/measles/data/global-measles-outbreaks.html>

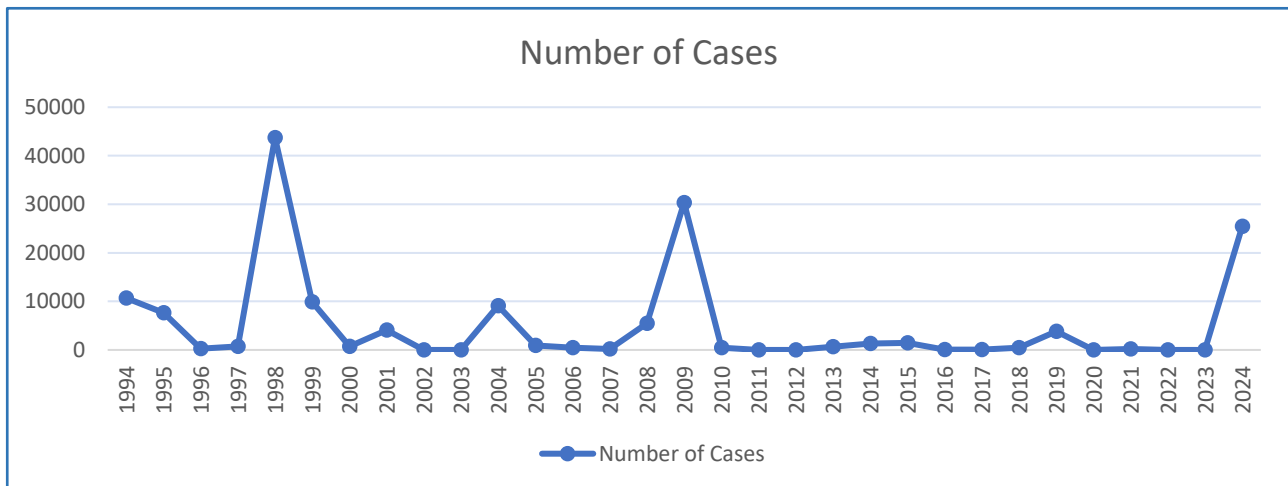


Figure 1: Number of measles cases in Iraq over three decades (1994-2024), adopted from: https://apps.who.int/gho/data/view.main.1520_62?lang=en

Conclusion

In conclusion, Iraq's placement as the third-ranked country for measles outbreaks in 2024, with approximately 25,429 reported cases according to the CDC, underscores the urgent need for strengthened healthcare systems and vaccination campaigns. The situation highlights the challenges posed by interrupted healthcare services, conflicts, and the ongoing COVID-19 pandemic.

Addressing these issues requires collaborative efforts between governments, healthcare providers, and international organizations to ensure adequate access to vaccines, healthcare infrastructure, and public health education. Failure to do so may perpetuate the cycle of preventable diseases and jeopardize public health outcomes.

Abbreviation

COVID-19: Coronavirus Disease; MMR: Measles, Mumps, Rubella; CDC: Centers for Disease Control and Prevention; DRG: Diagnosis Related Groups; UHC: universal Health Coverage;

Declaration

Acknowledgment

None

Funding

The authors received no financial support for their research, authorship, and/or publication of this article.

Availability of data and materials

Data will be available by emailing saadalezzi@uodiyala.edu.iq

Authors' contributions

All authors equally conceived and designed the study, analyzed and interpreted the data; drafted the manuscript; and revised the manuscript.

All authors read and approved the final manuscript.

Ethics approval and consent to participate

We conducted the research following the declaration of Helsinki. However, the "Review Article" needs no ethical approval.

Consent for publication

Not applicable

Competing interest

The authors declare that they have no competing interests.

Author Details

¹Department of Microbiology, College of Medicine, University of Diyala, 32001, Diyala, Iraq

²Department of Family and Community Medicine, College of Medicine, University of Diyala, 32001, Diyala, Iraq

References

- Centers for Disease Control and Prevention (CDC), Measles History. Available from: <https://www.cdc.gov/measles/about/history.html> [Accessed on 23th April 2024].
- World Health Organization (WHO), History of Measles Vaccine. Available from: <https://www.who.int/news-room/spotlight/history-of-vaccination/history-of-measles-vaccination> [Accessed on 24th April 2024].
- World Health Organization (WHO), Worldwide measles deaths climb 50% from 2016 to 2019 claiming over 207 500 lives in 2019. Available from: <https://www.who.int/news/item/12-11-2020-worldwide-measles-deaths-climb-50-from-2016-to-2019-claiming-over-207-500-lives-in-2019> [Accessed on 23th April 2024].
- Centers for Disease Control and Prevention (CDC), Global Measles Outbreaks. Available from: <https://www.cdc.gov/globalhealth/measles/data/global-measles-outbreaks.html> [Accessed on 24th April 2024].
- World Health Organization (WHO), Global measles threat continues to grow as another year passes with millions of children unvaccinated. Available from: <https://www.who.int/news/item/16-11-2023-global-measles-threat-continues-to-grow-as-another-year-passes-with-millions-of-children-unvaccinated> [Accessed on 23th April 2024].
- World Health Organization (WHO), Measles Reported cases by WHO region (Reported cases by country). https://apps.who.int/gho/data/view.main.1520_62?lang=en [Accessed on 23th April 2024].
- Reliefweb, three die of measles in Diwaniyah Province. Available from: <https://reliefweb.int/report/iraq/iraq-three-die-measles-diwaniyah-province> Accessed on 23th April 2024].
- Ali Jadoo SA, Alhusseiny AH, Yaseen SM, Al-Samarrai MAM, Mahmood AS. Evaluation of health system in Iraq from people's point of view: a comparative study of two different eras. *Journal of Ideas in Health*. 2021 May 20 ;4(2):380-8. doi: 10.47108/jidhealth.vol4.iss2.100.
- Ali Jadoo SA, Yaseen SM, Al-Samarrai MAM, Mahmood AS. Patient satisfaction in outpatient medical care: the case of Iraq. *Journal of Ideas in Health*. 2020 Aug. 26 ;3(2):176-82. doi: 10.47108/jidhealth.vol3.iss2.44.
- Ali Jadoo SA. The second wave of COVID-19 is knocking at the doors: have we learned the lesson? *Journal of Ideas in Health*. 2020 Oct. 8 ;3(Special1):183-4. doi: 10.47108/jidhealth.vol3.isspecial1.72.
- Ali Jadoo SA, Aljunid SM, Nur AM, Ahmed Z, Van Dort D. Development of MY-DRG casemix pharmacy service weights in UKM Medical Centre in Malaysia. *Daru*. 2015 Feb 10;23(1):14. doi: 10.1186/s40199-014-0075-4.