EDITORIAL

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An Outbreak of Measles in Iraq

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Measles is a highly contagious illness which can be prevented by a vaccine. It needs to be interrupted from transmission through population-based immunity [1]. The causative agent (measles virus) is a negative strand ribonucleic acid (RNA) virus [2]. Measles is considered a serious public health problem because its causative virus is transmitted through droplets or aerosols, can induce systemic infection, and suppress the immune response even following a long period of getting the infection [3]. The standard vaccination of children against measles is through attaining a two-dose immunization schedule, as a single dose can only provide 15% immunity. It is necessary to reach and maintain 95% of the population immunization against measles [4]. Despite the presence of an effective and safe attenuated live virus vaccine, measles is still considered a dangerous disease worldwide resulting in the death of 136,000 (mostly children) in the year 2022 [5]. Measles outbreaks are suspected and should be declared when the number of cases reported in a region exceeds the usual number of cases. The increment rate of reported measles cases and deaths from this illness in 2022 is 18% and 43% respectively, in comparison with the year 2021 across the globe [6].

The public primary healthcare centers in Iraq provide essential, free of charge services to all people. Therefore, all children can take vaccines through the Iraqi national program of immunization [7]. The standard schedule of immunization to reach herd immunity comprises a single dose of measles vaccine at the age of 9 months and two doses of mumps, measles, and rubella (MMR) vaccine that are administered at 18 and 24 months of age. Additionally, now and then, the Iraqi Ministry of Health, in collaboration with the World Health Organization (WHO), performs vaccination campaigns for children countrywide. The goal of these campaigns is to immunize the majority of children and decrease the number of severe and deadly MMR cases. Moreover, these campaigns are considered part of Iraq's commitment to the WHO to combat the spread of measles and rubella countrywide for the years 2012–2020.

Despite great efforts from all countries in collaboration with the WHO to prevent measles epidemics, outbreaks of measles occurred in different nations, including developing and developed countries [8–10]. The most important risk factor for the measles outbreak is the reduction in vaccination coverage rate [8]. In Iraq, many reasons might lead to a reduced vaccination coverage rate, including; fear of vaccination, lack of screening for child immunization, inhabitant in rural regions, extreme age of the mothers, multiparty, false contraindications to getting the vaccine, forgotten cards of the immunization, unavailability of the vaccine, crowding, careless mothers toward a vaccine, lack of appropriate cooperation between child health care providers and primary care health doctors, forgetfulness of the mothers estimated to be about 30% of the reasons for only taking an incomplete dose of vaccine, social problems, and health disorders of the child [11]. Improper ways of importing vaccine are another factor that might reducing the vaccination coverage rate [5]. Furthermore, the immigration of people from neighboring nations like Syria could be a possible source of measles outbreaks in Iraq. Lastly, the genetic diversity of the measles virus could probably play a role in this outbreak.

Owing to the COVID-19 pandemic, there has been a sharp decrease in the vaccination coverage rate of measles in Iraq. For example, in one study from Nasiriyah government, there was a reduction of the vaccination coverage rate from 83.7% in 2018 to 63.6% in 2020. [12]. As a consequence, the reported cases of measles have increased in number, reaching 11595 on March 12, 2024 and Iraq is considered the 5th country among the top 10 countries in the world, as indicated in Table 1 [13].

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Table 1. Top ten countries with measles outbreaks in the world.

Rank	Country	Cases Number
1	Kazakhstan	21740
2	Azerbaijan	13720
3	Yemen	13676
4	India	13220
5	Iraq	11595
6	Ethiopia	9042
7	Kyrgyzstan	7601
8	Russian Federation	7594
9	Pakistan	5812
10	Indonesia	5648

Certain measures should be taken by the Republic of Iraq (Ministry of Health) to prevent measles in the country, these include increasing the awareness of the parents regarding the national timely immunization program, a proper way of identifying and immunizing infants and children, finding a rapid way of distribution of measles vaccines to all regions including distal and rural areas, perform frequent health campaigns to facilitates immunization of larger number of children, increasing the number of primary health care centers to accommodate the increment of the population, specific precautions should be undertaken at the hospital level to prevent the transmission of the virus from an infected individual to healthcare workers, visitors, and other patients (this is considered the main way of transmission of measles virus by a recent study from Spain [9]), and great care is needed for vaccinated the children of the immigrant families from neighboring countries like Syria.

To sum up, measles is the most contagious infectious disease. It is one of the preventable infectious illnesses caused by a vaccine. Despite the great measure taken by all nations and the WHO, the measles outbreak is still a great threat to the world, causing larger cases of morbidity and even mortality. The Iraqi Republic, especially the Ministry of Health, should provide a standardized method to eliminate the outbreaks of measles by increasing the vaccination coverage rate of children.

ETHICAL DECLARATIONS

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Ethics Approval and Consent to Participate

Not required.

Consent for Publication

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Availability of data and material

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Competing interests

The authors declare that there is no conflict of interest.

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Authors' Contributions

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