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# Data on recent measles cases at the Jalal-Abad city of Kyrgyzstan

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### **Abstract:**

Measles caused by the virus is highly infectious and sometimes fatal, but it is prevented through vaccination. In Kyrgyzstan, measles cases were initially documented in September 2023, with a notable escalation observed between November and December of the same year. Children aged 3-5 years and 1-2 years exhibited the highest prevalence rates, followed by infants under one year old. Unvaccinated children constituted the majority of cases, with schoolchildren and kindergarten attendees also affected. Surprisingly, a significant proportion of measles cases occurred in vaccinated children, primarily those who received the MMR or Rubella-measles vaccine. Doctors identified 22 recent measles outbreaks and none of the 75 contacts recorded in these outbreaks acquired the disease. Therefore, it is of interest to report an analysis of measles outbreak spike at Jalal-Abad city of Kyrgyzstan in 2023.

Keywords: Measles, Preventive vaccinations, Kyrgyz, mumps and rubella (MMR), rubella-measles vaccine.

### Background:

Measles infection is a highly contagious acute viral disease that is transmitted by airborne droplets and can lead to serious complications (croup, pneumonia) and sometimes death [1]. Despite the preventive measures aimed at eliminating measles carried out in all countries of the world, this problem remains relevant [2]. Measles cases have been reported in many European countries, Southeast Asian countries, parts of Africa, the Russian Federation, the Republic of Kazakhstan, and the Kyrgyz Republic [3]. In order to stop the spread of measles, vaccination is the best option. Getting the vaccination helps the body fight against the infection and is safe. [4]. A significant percentage of the population that has not been vaccinated and has never had measles, in addition to inadequate vaccination coverage in indicator groups of children and occupational risk groups of adults are factors that indicate the complexity of the epidemic situation. [5]. The World Health Organization reports that in the Russian Federation, the greatest incidence rates are seen in

children less than one year old, and that the age range of 25 39 accounts for the biggest portion of the morbidity structure. [6]. Therefore, it is of interest to establish the patterns in the spread of measles infection so as to evaluate the effectiveness of improving epidemiological surveillance of them.

# Methodology:

The data of patients with confirmed measles infection from January 2023 to December 2023 were collected from the Annual reports of the Department of Disease Prevention and State Sanitary and Epidemiological Supervision of the Ministry of Health of the Kyrgyz Republic using Form No. 1 and 18 to store in databases. The analysis of the incidence of measles infection is done using annual dynamics, age group and gender. Assessment of epidemiological features for measles infection is then completed. Data was subjected to statistical processing using the Excel software package as shown in Figure 1.



Figure 1: Flowchart showing the methodology for collecting and analyzing data on patients with confirmed measles infection from Jan 2023 to Dec 2023.

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Table 1: The incidence of measles in the population by month in the territory of the family doctors group No. 8 and in the family medicine centers of the city of Jalal-Abad (per 1000 children).

Months	IV	V	VI	VII	VIII	I	ı	Ш	Total
Family Doctors Group N8	-	-							

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