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## Кыргызстанда кызамык оорусу күч алууда

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### МАКАЛА ЖӨНҮНДӨ МААЛЫМАТ КОРУТУНДУ

#### Негизги сөздөр:

Кызамык  
Вирустук инфекция  
Эпидемия  
Оору  
Эмдөө  
CDC (Ооруну көзөмөлдөө жана алдын алуу борбору)

*Киришүү.* Кыргыз Республикасында акыркы эки жылда кызамык менен ооругандардын саны кескин өстү. Оорулардын көбөйүшүнүн негизги себеби профилактикалык эмдөөдөн баш тартууда. Учурдагы кырдаалга байланыштуу жана инфекциянын андан ары жайылышын токтотуу максатында Кыргызстандагы кызамык оорусуна салыштырмалуу анализ жүргүзүүнү чечтик.

*Изилдөөнүн максаты* - Кыргызстандагы кызылчанын салыштырмалуу клиникалык жана эпидемиологиялык мүнөздөмөлөрүн изилдөө.

*Материалдар жана ыкмалар.* 2018-жылдан 2023-жылдын августуна чейинки мезгилде Бишкек шаарындагы Республикалык жугуштуу оорулар ооруканасынан алынган маалыматтарды талдап чыктык. Кызамык оорусунун 2469 учуру катталды, анын ичинен 1173 (48%) лабораториялык, 515 (21%) клиникалык тастыкталган жана 781 (31%) учур эпидемиологиялык аныкталды.

*Натыйжалар.* Кыргызстанда кызамык оорусу күч алууда. Кыргызстанда кызамык оорусунун көбөйүшү эмдөөдөн баш тартууга байланыштуу.

*Жыйынтыгы.* Бүткүл дүйнөдө кызамыкка каршы эмдөө милдеттүү түрдө жүргүзүлөт, ошондуктан эмдөө катуу жүргүзүлүп, ар кандай себептерден улам уруксат берилген учурларга жол берилбейт, ал эми Кыргызстанда кызамык оорусунун көп катталып жатышына Саламаттыкты сактоо министрлигинин буйругунун аткарылбагандыгы себеп болууда.

## Вспышка кори в Кыргызстане

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## ИНФОРМАЦИЯ О СТАТЬЕ

## РЕЗЮМЕ

*Ключевые слова:*

Корь  
Вирусная инфекция  
Вспышка  
Заболееваемость  
Вакцинация  
CDC (центр по контролю и профилактике заболеваний)

*Введение.* В Кыргызской Республике за последние два года наблюдается резкий рост заболеваемости корью. Основной причиной роста заболеваемости является отказ от профилактических прививок. В связи со сложившейся ситуацией и для того, чтобы остановить дальнейшее распространение инфекции, мы решили провести сравнительный анализ заболеваемости корью в Кыргызстане.

*Цель исследования.* Изучить сравнительную клинико-эпидемиологическую характеристику кори в Кыргызстане.

*Материалы и методы исследования.* Проанализированы данные Республиканской Инфекционной Больницы в Бишкеке за период с 2018 по август 2023 года. Зарегистрировано 2469 случаев кори, из них лабораторно подтверждено 1173 (48%) случаев, клинически подтверждено 515 (21%) случаев и эпидемиологически обусловлено 781 (31%) случай.

*Результаты.* В Кыргызстане заболеваемость корью продолжает расти. Рост заболеваемости корью в Кыргызстане связан с отказом от вакцинации.

*Выводы.* Вакцинация против кори обязательна во всем мире, поэтому вакцинация проводится строго и разрешительные моменты по разным причинам не допускаются, тогда как в Кыргызстане население не выполняет приказ Министерства здравоохранения и это связано с высокой заболеваемостью корью.

**Outbreak of measles in Kyrgyzstan**

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## ARTICLE INFO

## ABSTRACT

*Key words:*

Measles  
Viral infection  
Outbreak, incidence  
Vaccination  
CDC (Center for Disease Control and Prevention)

*Introduction.* In the Kyrgyz Republic there has been a sharp increase in the incidence of measles over the past two years. The main reason for the increase in morbidity is the refusal of preventive vaccinations. Due to the current situation and in order to stop the further spread of infection, we decided to make a comparative analysis of measles in Kyrgyzstan.

*The aim of the study.* To study the comparative clinical and epidemiological characteristics of measles in Kyrgyzstan.

*Materials and methods.* The data of the Republican Infectious Diseases Hospital in Bishkek for the period from 2018 to August 2023 are analyzed. 2,469 cases of measles were registered, of which 1,173 (48%) cases were laboratory confirmed, 515 (21%) cases were clinically confirmed and 781 (31%) cases were epidemiologically determined.

*Results.* In Kyrgyzstan, the incidence of measles continues to grow. The increase in the incidence of measles in Kyrgyzstan is associated with the refusal of vaccination.

*Conclusions.* Measles vaccination is mandatory all over the world, therefore vaccination is carried out strictly and permissive moments are not allowed for various reasons, whereas in Kyrgyzstan the population does not comply with the order of the Ministry of Health and this is due to the high incidence of measles.

Introduction

Measles is an acute viral infection, which spread rapidly by direct (person to person) and air. It primarily affects the children under 5 and seasonal variation is not prominent. Measles incidence and mortality decrease dramatically after invention of vaccine in 1960 around the world. After that, the largest outbreak was seen in USA center for disease control and prevention (CDC). From this country, this disease was spread all over the world. The main disease vehicle was travelers. It was stopped by wide administration of vaccine in neighboring countries (WHO).

The incidence decrease over time gradually because of vaccination that reinforced by law. Thus, the rate of unvaccinated decreased dramatically. It can be seen that in the Kyrgyz Republic over the past two years there has been a sharp increase in the incidence of measles, the main reason for the increase in incidence is associated with the refusal of preventive vaccination (CDC). Due to the current situation and in order to stop the further spread of Infection, we decided to make a comparative analysis of Measles in Kyrgyzstan.

*The purpose of the article.*

To study the comparative clinical and epidemiological characteristics of measles in Kyrgyzstan.

Materials and Methods

In general, the situation with measles remains tense. Since the beginning of the school year, cases of measles have become more frequent among students in secondary schools and preschool institutions, as well as among children who have not been vaccinated. To localize a measles outbreak, quarantine is introduced in organized groups, when educational institutions are temporarily transferred to distance learning until the end of the incubation period [1]. We analyzed data from Republic Infectious Hospital in Bishkek, for the period from 2018 to August 2023. There were 2469 cases of measles have been registered, of which 1173 (48%) cases have been laboratory confirmed 515 (21%) cases have been clinically confirmed and 781 (31%) epidemiologically related cases.

Figure 1 shows the percentage of measles cases confirmed epidemiologically, clinically and laboratory. Almost half of all measles cases (48%) were laboratory confirmed. 1/3 of all cases (31%) had a known epidemiological history. 21% of measles cases were clinically confirmed.

Figure 2 shows that 88% of those not vaccinated are due to refusal for religious reasons, testing the quality of the vaccine, decreased immunity of the body, low

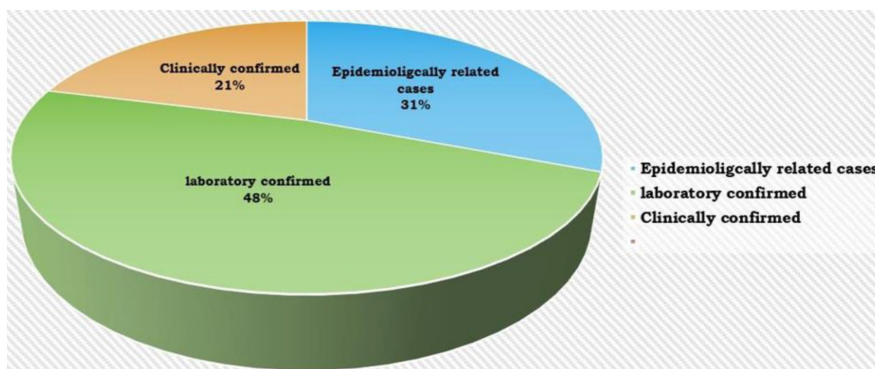


Figure 1. Measles outbreaks in Kyrgyzstan.

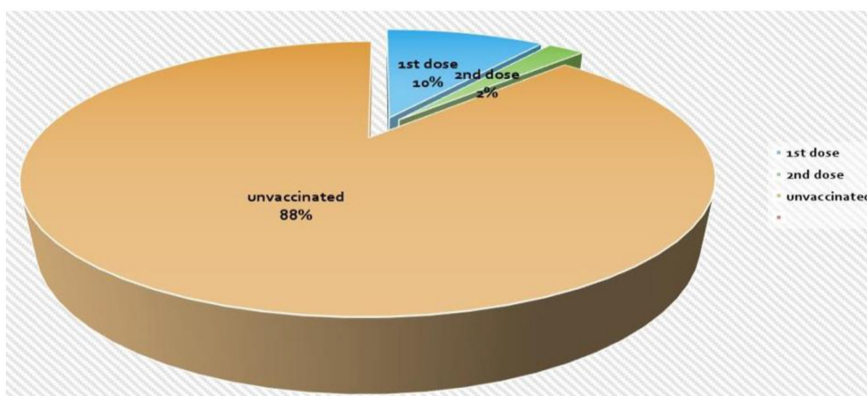


Figure 2. Vaccination status of the population in Kyrgyzstan.

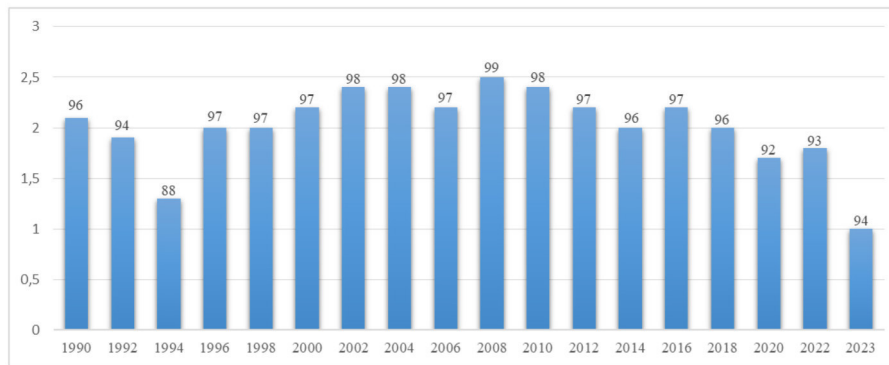


Figure 3. The history of vaccination in Kyrgyzstan from 1990 to 2023.

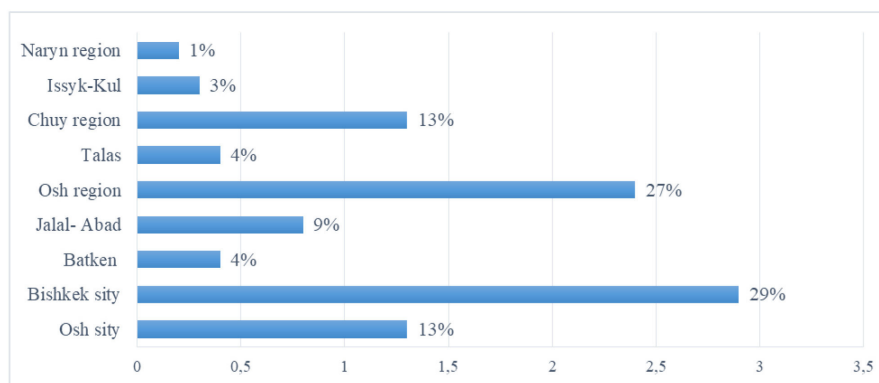


Figure 4. Incidence of measles according to region in Kyrgyzstan.

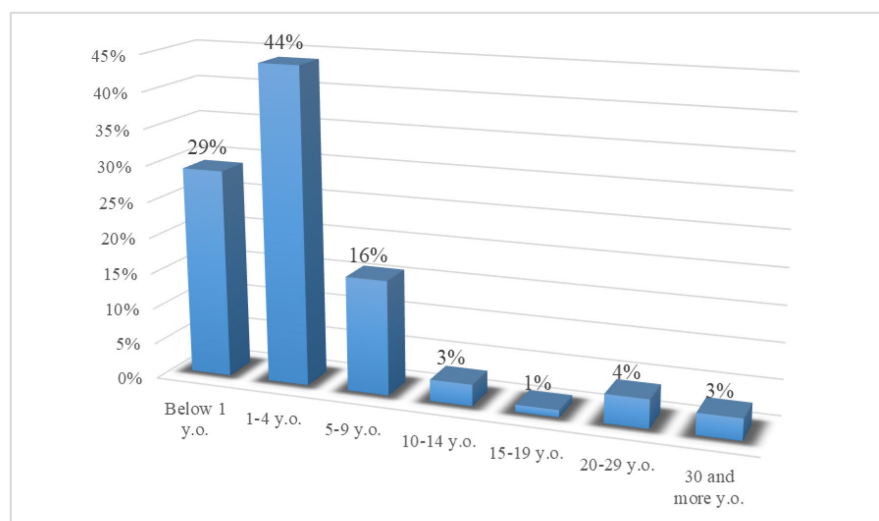


Figure 5. Incidence of measles according to age in Kyrgyzstan.

level of education in rural areas, medical withdrawal due to personal diseases, and lack of satisfactory reasons for vaccination on the part of medical workers.

This chart (Fig. 3) shows the history of vaccination in Kyrgyzstan from 1990 to 2023. It was found that their percentage decreased in 1994, which was as-

sociated with the collapse of the Soviet Union, although after the formation of the Kyrgyz Republic it began to rise again. However, after 2018, a slight decrease in percentage is visible, which is associated with the movement against vaccination among the population [2].

The diagram below (Fig. 4) shows that Bishkek and

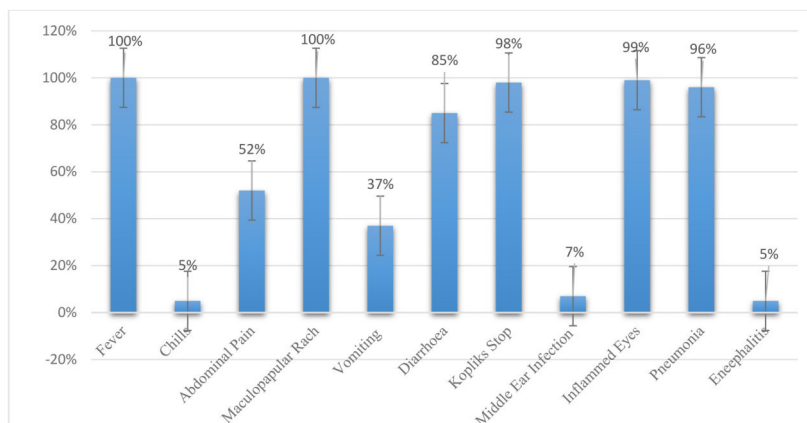


Figure 6. Clinical signs and symptoms of measles in Kyrgyzstan.

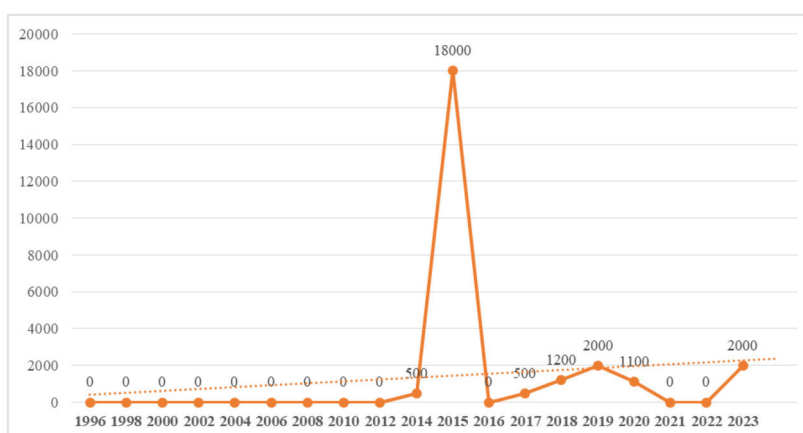


Figure 7. Reported cases of measles in Kyrgyzstan.

Osh region have the highest percentage due to migration and close contact in public places.

Studying measles by age category, the diagram (Fig. 5) shows that the incidence of measles was high in children under 1 year of age and from 1 to 4 years of age (29 % and 44%, respectively). In children over 5 years of age, the incidence is much lower (16%), as most children over this age have been vaccinated.

A study of clinical manifestations, as can be seen in the diagram (Fig. 6), showed that the most characteristic signs and symptoms in patients with measles are fever, maculopapular rash and Koplik spots. These symptoms were detected in almost 95-100% of patients. Other equally important symptoms, such as vomiting, diarrhea and abdominal pain, also accompanied measles patients, the incidence of which ranged from 36% to 83%. Frequent complications were pneumonia, enteritis, conjunctivitis, which occurred in 85-100% of patients; complications such as otitis media and meningoen- cephalitis were not excluded, amounting to 2 and 4%, respectively.

Diagram below (fig. 7) shows that before 2014 there was practically no measles disease. But from 2014 to 2016 there was a huge outbreak due to a sharp increase

in the number of unvaccinated people. A slight increase in incidence also occurred in 2017-2020. Unfortunately, from 2022 there has been an increase in incidence again to the present day. The epidemiological situation remains tense.

#### Result

A study of morbidity statistics by age, region and vaccination history in Kyrgyzstan showed that the main percentage of measles cases were children under 12 months old - unvaccinated, children from 12 months to 4 years old who received the first dose but did not complete the full vaccination cycle, as well as children and adults who, for whatever reason, have not been vaccinated at all. The Ministry of Health of Kyrgyzstan announced a deterioration in the epidemiological situation due to an increase in measles cases.

#### Conclusion

The incidence of measles in Kyrgyzstan continues to increase. The increase in measles incidence in Kyrgyzstan is associated with refusal of vaccination. Clini

cal manifestations were of the same nature. Measles vaccination is mandatory worldwide, so vaccination should be strict and compulsory. Permissive measures are not allowed for various reasons. Therefore, in Kyrgyzstan, a high increase in incidence is associated with failure to comply with the order of the Ministry of Health [3, 4, 5, 6,7,8,9].

**Жазуучулар ар кандай кызыкчылыктардын чыр жоктугун жарыялайт.**

**Авторы заявляют об отсутствии конфликтов интересов. The authors declare no conflicts of interest.**

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