



Immunoprophylaxis Work Performed in Children and the Socio-Hygienic Factors that Affect Them (Literature Review)

1. Adilova Z. U.
2. Usnaddinov A. G.
3. Oxunova M. T.

Received 2nd Mar 2023,
Accepted 3rd Apr 2023,
Online 19th May 2023

Abstract: Immunoprophylaxis is of great importance in the prevention of infectious diseases. The article provides an analysis of data on the immunoprophylaxis of countries and studies the factors influencing the formation of attitudes to vaccination among the child population, as well as data on problems with vaccination among the population, parents and medical workers.

Keywords: immunoprophylaxis, vaccination, risk factors of immunoprophylaxis, children.

¹ Senior lecturer at the School of public health, Tashkent Medical Academy, Tashkent, Uzbekistan

² 1st year Master of the School of public Health, Tashkent Medical Academy, Tashkent, Uzbekistan

³ Assistant of the Department of Rehabilitation, Folk Medicine and Physical Education

In order to achieve the effectiveness of immunoprophylaxis in the clinical course and treatment, prevention of infectious diseases, a number of scientifically based studies are being conducted in the world. It is of great importance in this regard, including determining the duration of immunity after vaccination, determining the epidemiological and immunological effectiveness of vaccines used in preventive and epidemiological recommendations, studying collective immunity, identifying the causes of epidemic outbreaks of diseases controlled by vaccines, identifying unpleasant cases that occur after vaccination, developing comprehensive strategic directions for safe vaccination of the population from infectious diseases, scientific justification of the strategy [1, 2, 4, 7, 12,13,14].

In the Decree of the President of the Republic of Uzbekistan dated December 7, 2018 No. 5590 «On comprehensive measures to radically improve the health care system»... in our country, tasks such as improving the efficiency, quality and popularity of medical care provided to the population, the introduction of high-tech methods of treatment, diagnosis and treatment, maintaining a healthy lifestyle and disease prevention are set. Based on this, it is especially important to determine the epidemiological and immunological effectiveness of vaccines used in preventive and epidemiological recommendations to improve immunoprophylaxis measures.

Infectious diseases remain one of the main causes of high morbidity, despite the various methods of treatment and prevention currently used to combat them. The most effective preventive measure is vaccination, which is recognized as one of the greatest medical achievements of mankind [2, 3, 6, 10]. According to WHO, vaccination programs around the world save the lives of 6 million children every year and prevent the disability of 750,000 children. Every year vaccination gives humanity 400 million additional years of life [2,4,8].

Immunoprophylaxis of a number of infectious diseases in the last two centuries has saved millions of human lives. Immunization of the population, carried out on all continents, has led to the global eradication of smallpox, the limitation of the incidence of polio and a significant reduction in the prevalence of other vaccine-preventable diseases. You should be aware of the possible risk of vaccination, although it has a number of advantages that outweigh the risk of developing the disease, which has been irrefutably proved by the history of mankind in the era of immunization. The example of developed countries clearly shows that effective vaccination makes it possible to eliminate natural infections such as polio, diphtheria [14, 15].

Most unvaccinated children live in the poorest countries, disproportionately in unstable and conflict-affected countries. Almost half of the children live in just 16 countries-Afghanistan, the Central African Republic, Chad, the Democratic Republic of the Congo (DRC), Ethiopia, Haiti, Iraq, Mali, Niger, Nigeria, Pakistan, Somalia, South Sudan, Sudan, Syria and Yemen [20].

There are cultural and country-specific inconsistencies and barriers to vaccination. For instance, access to the human papillomavirus vaccine was banned in Catholic schools in Calgary, Canada in 2008. However, public demand successfully led to the lifting of this ban in 2013, and the HPV vaccine became available to schools that previously did not have access [19].

A study conducted by South Korean scientists examined the vaccination coverage of urban and rural children aged 24-35 months and showed that only slightly more than 50% of children received the fourth dose of the DPT vaccine. The authors believe that timely immunization coverage can be improved by introducing immunization reminder services and using computer databases of the population that collect and consolidate information about immunization of the population [21].

A study conducted in Brazil examined the risk factors on refusing to vaccinate children against measles for a certain period of time. The results showed that the decision on vaccination is influenced by age, region of residence, marital status and level of education. It was found that children often delay vaccination against measles because their parents forgot about the timing of vaccination or voluntarily decided to postpone vaccination. This problem can be solved by using several sources of information when reminding parents about the planned date of vaccination [22].

In 2018, 41,043 cases of measles were registered in the European Region, and in the first eight months of 2019 - 90,012 cases [5, 17]. In European countries, Ukraine (1899.11 per 100,000 population) and Georgia (1261.02 per 100,000 population) are the leaders in morbidity. The most critical situation for measles is in African countries, where 177,539 cases were registered in the first eight months of 2019, of which 150,000 are in Madagascar (the incidence rate is 6064.6 per 100,000 population, which corresponds to the order of values before vaccination) [15, 23, 24]. The development of unfavorable epidemic conditions in continental countries is facilitated not only by insufficient vaccination coverage and interruptions in the supply of immunobiological drugs, but also by a high risk of non-compliance with the storage conditions of vaccine preparations.

The most important feature of measles and rubella viruses is the lack of influence of their genetic diversity on the effectiveness of the corresponding vaccines [8, 9]. In Moscow, timely vaccination (including measles) in 2012 accounted for 21% of the number of vaccinated children, and in 2017 - only 1.7%. In the Ural Federal District, only $42.5 \pm 3.4\%$ of children were vaccinated against measles,

rubella and mumps within the deadlines set for 2019 [6]. The main reasons for non-compliance with the vaccination schedule were temporary medical withdrawal and refusal of parents (legal representatives).

Thus, there are groups of factors affecting vaccination in children, these are historical, socio-cultural, environmental, systemic, economic or political factors.

In primary health care and educational organizations (preschool organizations and schools), medical personnel should carry out preventive work to form a positive attitude to immunoprophylaxis mainly in groups of parents in which there is a high diagnostic coefficient of negative influence on the formation of attitudes to vaccination.

REFERENCE

1. Абдурахимов, Б., Хайитов, Ж., Сафаров, Х., & Улмасов, Ж. (2023). Особенности заболеваемости работников предприятий медной промышленности.
2. Байбусинова А. Ж. Отношение, барьеры и проблемы вакцинопрофилактики в современном мире: обзор литературы / А. Ж. Байбусинова, А. К. Мусаханова, Г. М. Шалгумбаева // Наука и Здоровоохранение. – 2016. – Т. 3. – С. 123–134
3. Брико, Н. И. Иммунопрофилактика инфекционных болезней в России: состояние и перспективы совершенствования / Н. И. Брико, И. В. Фельдблюм // Эпидемиология и вакцинопрофилактика. –2017. -Т. 93. – № 2. – С. 4–9.
4. Вакцинация для всех: простые ответы на непростые вопросы : Руководство для врачей / С. В. Ильина, Л. С. Намазова-Баранова, А. А. Баранова. – Москва : ПедиатрЪ, 2016. – 199 с.
5. Всемирная организация здравоохранения: Корь- Европейский Регион. Новости о вспышках заболеваний (обновление от 6 мая 2019)/ ВОЗ// Эпидемиология и Вакцинопрофилактика. – 2019. – Т.19. – №3. – С. 12.
6. Голубкова, А.А. Эпидемический процесс кори в условиях разных стратегий вакцинопрофилактики в крупном промышленном центре Среднего Урала/ А.А. Голубкова, Т.А. Платонова, С.С. Смирнова, С.А. Ковязина// Эпидемиология и Вакцинопрофилактика. – 2019. – Т.18. – №1. – С. 34-42.
7. Ерофеев, Ю. В. Вакцинация – приоритетное направление профилактики (опыт Омской области по организации иммунизации против ветряной оспы) / Ю. В. Ерофеев, М. Б. Костенко, О. В. Мигунова [и др.] // Эпидемиология и вакцинопрофилактика. – 2012. – Т. 64. – № 3. – С. 45–47
8. Иммунопрофилактика7–2014: справочник. / В. К. Таточенко, Н. А. Озерецковский, А. М. Федоров. – Москва : ПедиатрЪ, 2014. – 199 с.
9. Лавров, В.Ф. Основы иммунологии, эпидемиологии и профилактики инфекционных болезней/ В.Ф. Лавров, Е.В. Русакова, А.А. Шапошников, А.В. Иваненко, С.Н. Кузин. – Учебное пособие для врачей. – М.: ЗАО «МП Гигиена», 2007. 368 с.
10. Лыткина, И.Н. Унификация системы управления эпидемическим процессом кори, эпидемического паротита и краснухи/ И.Н. Лыткина, И.В. Михеева // Эпидемиология и Вакцинопрофилактика. – 2011. – Т.56. – №1. – С. 8-14
11. Маматкулов, Б., Авезова, Г. С., Абдурахимов, Б. А., & Адилова, З. У. (2019). Тоғ-кон саноатидаги ишчилар касалланиши, улар саломатлигига ишлаб чиқариш омилларининг таъсири. Тиббиётда янги кун, 4(28), 191-195.

12. Mamatkulov B.M., Tolipova G.K., Adilova Z.U., Nematov A.A. Problems of immunoprophylaxis: factors influence on the formation of attitude to immunoprophylaxis (Проблемы иммунопрофилактики: факторы влияние на формирование отношения к иммунопрофилактике), 3 (53) 2023 «Тиббиётда янги кун», Тошкент с.118-124
13. Mamatkulov, B., Urazaliyeva, I., Tolipova, G., & Musayeva, O. (2023). The Significance of Factors in Forming Attitude to Immunoprophylaxis and the Problems of Immunoprophylaxis. *INTERNATIONAL JOURNAL OF HEALTH SYSTEMS AND MEDICAL SCIENCES*, 2(4), 7-14.
14. Ниязматов Б.И., Кудашева Л.В., Шумаров С.Б., Мустафаев Г.М. История организации и развития санитарно-эпидемиологической службы Республики Узбекистан. – Ташкент, 2008. – с. 301.
15. Ноздрачева А.В., Эпидемиологические особенности кори и краснухи на этапе их элиминации среди различных групп населения в условиях мегаполиса, Дисс. на соис. учен. степени: канд.мед.наук, Москва 2020, с. 160
16. Саидалиев С.С. Специфическая иммунопрофилактика инфекционных заболеваний в Республике Узбекистан //Медицинские новости №12, 2017, с.41-43
17. Abdurakhimov, B. A., Khaitov, J. B., Safarov, K. K., Khakberdiev, K. R., Buriboev, E. M., & Ortiqov, B. B. (2022). INTEGRAL ASSESSMENT OF RISK FACTORS AFFECTING THE HEALTH OF EMPLOYEES OF A COPPER PRODUCTION MINING. *Oriental renaissance: Innovative, educational, natural and social sciences*, 2(12), 1442-1449.
18. Moss, W.J. Biological feasibility of measles eradication/ W.J. Moss, P. Strebel // *J. Infect. Dis.* – 2011. – V.204. – №1. – P.47–53
19. Guichon J.R., Mitchell I., Buffler P., Caplan A. Citizen intervention in a religious ban on in-school HPV vaccine administration in Calgary, Canada *Prev Med*, 57 (November (5)) (2013), pp. 409-413
20. Immunization Supply Chain Interventions to Enable Coverage and Equity in Urban Poor, Remote Rural and Conflict Settings, UNICEF 2020, p44.
21. Kim, E. Y. Related Factors of Age-Appropriate Immunization among Urban-Rural Children Aged 24-35 Months in a 2005 Population-Based Survey in Non-san, Korea / E. Y. Kim, M. S. Lee // *Yonsei Med J.* – 2011. – V. 52. – № 1. – P. 104–112.
22. Patricia, L. Factors affecting compliance with the measles vaccination schedule in a Brazilian city / L. Patricia, H. B. Carvalho, R. Saconi [et al.] // *Sao Paulo Med J.* – 2008. – V. 126. – № 3. – P. 166–171.
23. World Health Organization: Measles and Rubella Surveillance Data (12 August 2019) [Electronic resource]/ WHO- 2019. – Available at: https://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/active/measles_monthlydata/en/
24. World Health Organization: WHO-UNICEF estimates of MCV1 coverage (1985-2018) [Electronic resource]/ WHO// Available at: http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragemcv1.html