World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-33, April 2024
ISSN: 2749-3644

CORONAVIRUS IN THE REPUBLIC OF UZBEKISTAN DURING 2020-2023 RETROSPECTIVE EPIDEMIOLOGICAL ANALYSIS OF THE DISEASE (TASHKENT CITY AS AN EXAMPLE)

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Article history:
Received: January 20th 2024
Accepted: March 14th 2024

Abstract:
to evaluate the dynamics of formation and duration of maintenance of humoral immunity after administration of the 1st and 2nd doses of the BNT162b2 vaccine (Pfizer-BioNTech) in a group of children. Materials and methods. The research work used the results of the analysis of blood serum samples from 205 children in family clinics No. 16. Vaccine efficacy against SARS-CoV-2 was assessed in a retrospective population-based analysis using epidemiological, serological and statistical methods. Results: The results showed that IgM-Ab against SARS-CoV-2 was detected in 100% of cases on the 21st day after administration of the 1st component of the vaccine in the blood of vaccinated children (average positivity rate - 4.94), on the 30th day there was a natural decrease in the amount of IgM against SARS-CoV-2 (average positivity rate - 0. Conclusion: It is worth noting that on the 21st day of vaccination a significant decrease in IgM levels was detected, and on the 51st day these indicators leveled off. On the 21st day after vaccination with components 1 and 2, a direct positive correlation was revealed between the amount of IgM and IgG from 0.69 to 0.29 (r<0.05

Keywords: COVID-19 infection, prevention, vaccine

ANALYSIS OF LONG-TERM DYNAMICS OF THE DISEASE

Getting infected with coronavirus in the Republic of Uzbekistan when a retrospective epidemiological analysis was conducted, it was found that the rate of infection with coronavirus in the republic has increased sharply, When we analyzed the distribution of coronavirus infection by regions, it was found that the infection was spread unevenly, the highest rate was observed in Tashkent city, the rate of infection was 28,822.1 per 100,000 inhabitants.

Taking into account the high rate of morbidity in Tashkent, we conducted a retrospective epidemiological analysis of the incidence in Tashkent.

The following was revealed when the incidence rate in Tashkent city was analyzed by districts. In Bektemir district, it was found that the intensive rate of morbidity is higher than other districts (5502.1) per 100,000 inhabitants. In Sergeli district, the incidence rate was relatively low and was 307.5 per 100,000 inhabitants. This was due to the fact that during the pandemic, the number of citizens who came to the district from abroad was small compared to other districts, and this had an impact on the overall morbidity rate. In other regions of the city of Tashkent, the incidence rates are at different levels, the intensive rate of incidence in New Life District (1821.72), Uch Tepa District (1631.2), Almazor District (1337.3), Chilonzor District (1946.4), Yakkasaroy District (2493.5), in Yunusabad district (1955.95), in Shaikhontohur district (1605.78), in Mirzo Ulugbek district (2686.75), and in Mirabad district (2285.5) (Figure 3.1).

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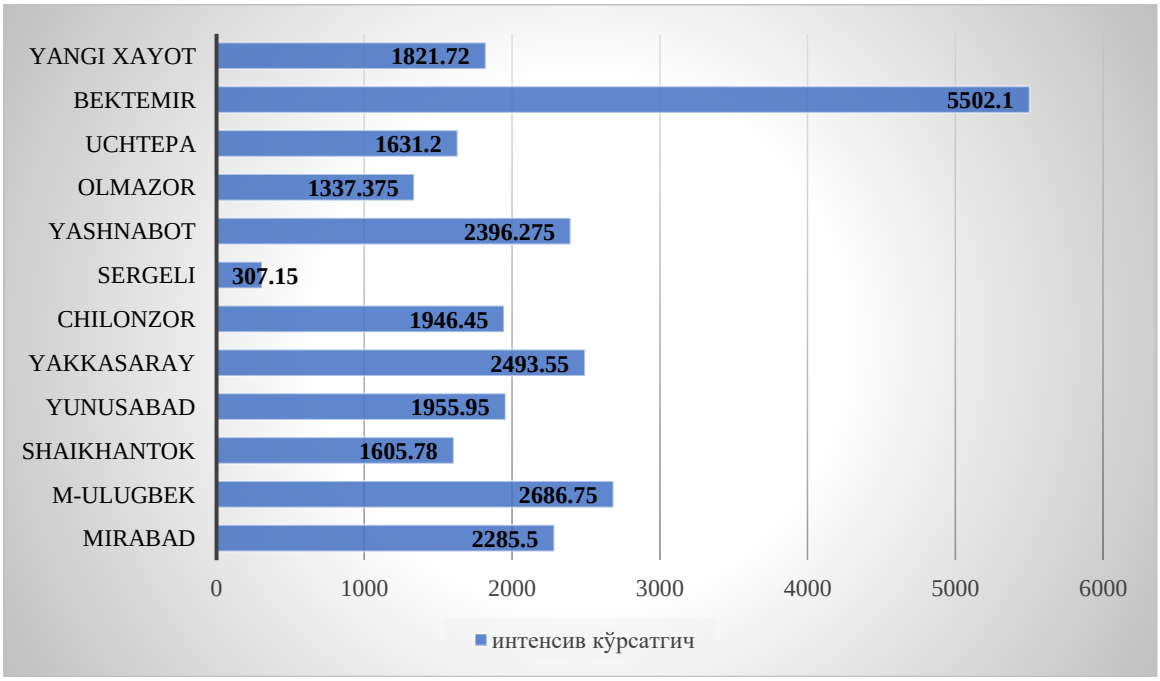

Figure 3.1. Regional distribution of coronavirus cases in Tashkent (2020-2023) Intensive rate per 100,000 inhabitants

When we analyze the long-term dynamics of morbidity in the city of Tashkent, we can see that the incidence decreased sharply by 2023 . In the period from March 15, 2020 to January 2022, an increase in the dynamics of infection with COVID-19 was observed among the population living in all administrative regions of the city of Tashkent. Since January 2022 , the incidence rate has gradually decreased and reached 2130.67 per 100,000 population , and 273 in 2023 .

During these years, there was an increase in the dynamics of the incidence of COVID-19, and 4 periods of increase were identified, the first increase was in June-September 2020: from 49.9 to 630.3 per 100,000 population, the second increase was in June-July 2021 in: increased from 302.9 to 1320.1, the third period of increase in December 2021-January 2022: from 59.5 to 809.36, the fourth period was observed in June-September 2022, the incidence rate was 41.57 increased to 494.96. It can be seen that the highest rates of thrips disease occurred in June-July in 2021. As a result of effective preventive and anti-epidemic quarantine measures By the end of 2023, from 2024, coronavirus in all regions of the Republic of Uzbekistan with morbidity rates have decreased sharply. **Table 3.1.** The long-term dynamics of the disease is presented in Table 3.1.

Table 3.1
Dynamics of infection of the population with coronavirus in the city of Tashkent (2020-2023, intensive indicator)

Year	Abs. indicator	Show int	Population
2020-1			0.00
2020-2			0.00
20-3	70	2,875	2434782.61
20-4	458.0	18.8	2436170,21
20-5	177	7.21	2454923.72
20-6	1226	49.9	2456913.83
20-7	10220	409.5	2495726.50
20-8	13633	545.2	2500550.26

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20-9	14651	580.5	2523858.74
20-10	15909	630.3	2524036,17
20-11	5123	202.9	2524889.11
20-12	1059	41.9	2527446.30
21-1	566	22.1	2561085.97
21-2	677	26.3	2574144.49
21-3	2731	96.6	2827122.15
21-4	5206	184.28	2825048.84
21-5	4504	159.4	2825595.98
21-6	8559	302.9	2825685.04
21-7	38294	1320.1	2900840.85
21-8	25574	881.3	2901849.54
21-9	750	25.81	2905850.45
21-10	4273	146.9	2908781.48
21-11	2186	74.9	2918558.08
21-12	1742	59,589	2923358.34
22-1	23712	809.36	2929722.25
22-2	6288	213.9	2939691.44
22-3	70	2.3756	2946624.01
22-4	458	15.54	2947232.95
22-5	177	6.0023	2948869.60
22-6	1226	41,537	2951565.56
22-7	10220	345.6839	2956458.15
22-8	13633	460,866	2958124.36
22-9	14651	494.9619	2960025.75
22-10	329	11,106	2962356,37
22-11	1694	57,104	2966513.95
22-12	1719	57,882	2969785.65
23-1	672	22,624	2970236.55
23-2	905	30,311	2985678.12
23-3	558	18,673	2988145.71
23-4	702	23,465	2991569.58
23-5	684	22,811	2998458,11
23-6	507	16,891	3001585.39
23-7	469	15,364	3052564.57
23-8	1066	34,109	3125215.31
23-9	1018	31,846	3196545.36
23-10	400	12,443	3214567.30
23-11	302	9,267	3258524.85
23-12	235	7,194	3266547.74

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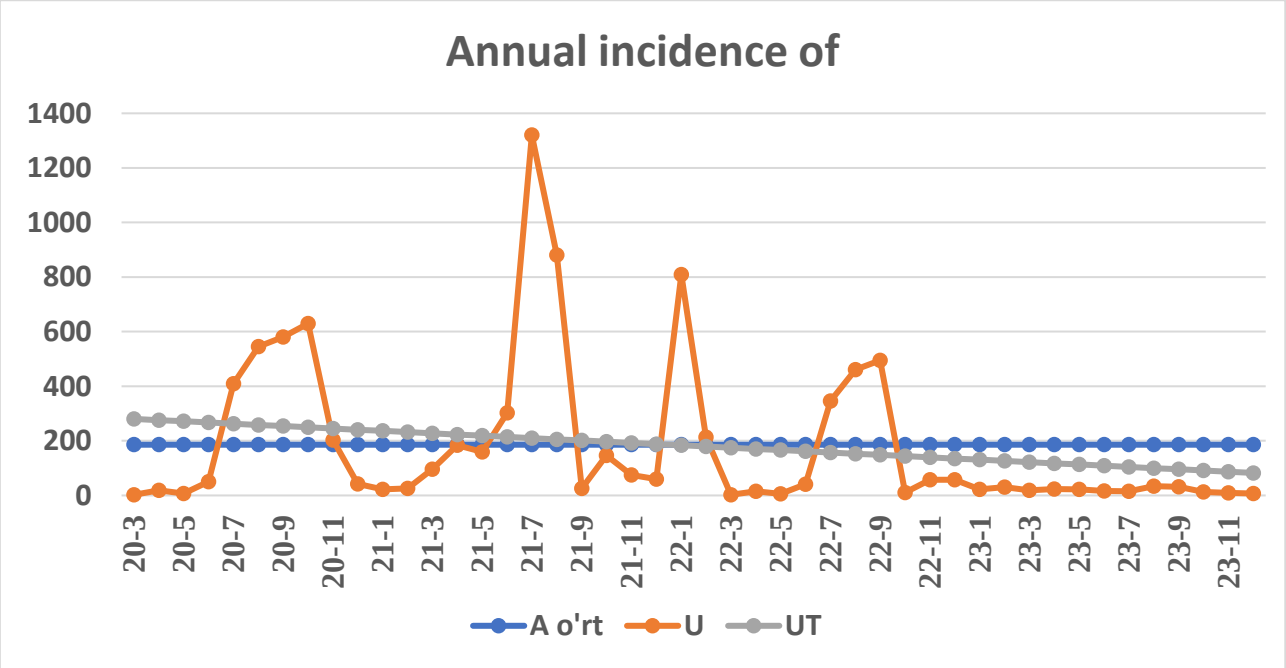
Figure 3.2. Tashkent with coronavirus in the city illness dynamics (2020-2023) to 100,000



COVID -19 in the city of Tashkent was 2 times higher than the average rate of infection in the republic. The increase in the rate of the disease was due to the improvement of the number and quality of laboratory tests , as well as the use of molecular genetic methods such as IFA (detection of specific antibodies), PCR, etc.

3.1.2. Annual dynamics of the disease

Annual dynamics of the coronavirus disease We studied based on the results of the epidemiological analysis of the disease observed in the city of Tashkent in 2020-2023. The increase in the incidence of the disease without seasonality was associated with the introduction of new strains of the virus into our republic. During the research years (2020-2023) in the dynamics of the incidence of COVID -19 in the city of Tashkent, it is possible to distinguish 4 different seasonal cycles of increase in incidence (summer-autumn, spring, autumn-winter, summer-autumn). (See Table 3.2).

Table 3.2
COVID-19 in the city of Tashkent (2020-2023, intensive view)

Year	1	2	3	4	5	6	7	8	9	10	11	12	General
2020			81.27976	16.99379	6.567471	45.48994	379,2065	505.8437	543.6159	590.2932	190.0856	39.29351	2398,669
2021	20.71903	24.7823	99.97113	190.5711	164.8737	313,3112	1401,792	936,1632	27.45454	156.4177	80.02083	63.76774	3479,845
2022	857.3994	227.3671	2.531122	27.40843	6.400122	44.33079	369.5438	492,954	529.7638	11.89627	61.25315	62.15712	2693,005
2023	21.0454	28.34239	17.4752	21.98493	21.42121	15,878	14.68793	33.38452	31.88127	12.52702	9.457902	7.359626	235.4454

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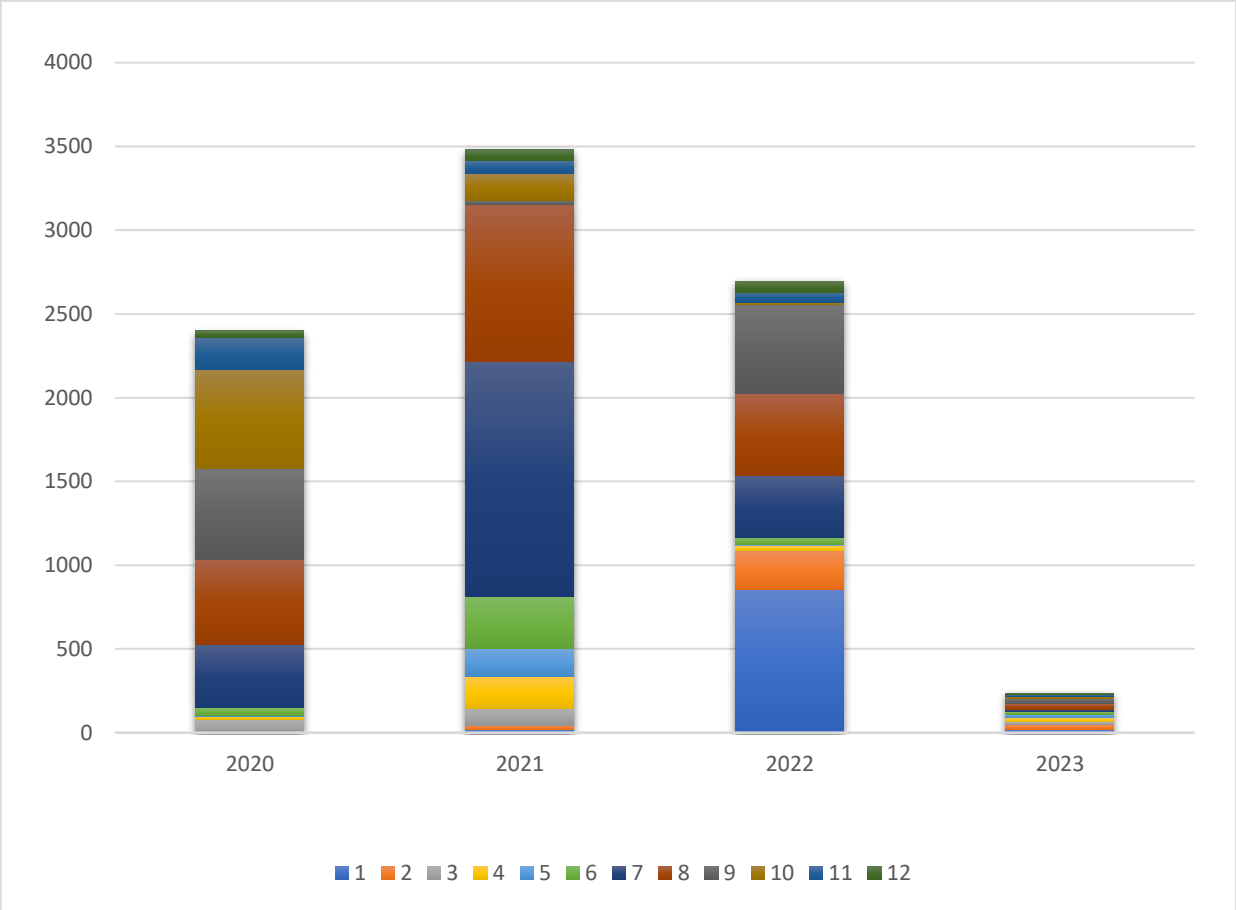

Figure 3.3. Tashkent with coronavirus in the city illness dynamics (2020-2023) to 100,000

Analysis of morbidity among younger groups of children

When we analyze the morbidity in the period 2020-2023 by age groups of young children, we can see an upward trend in the dynamics of the incidence of coronavirus among children aged 0-7 and 7-18 in 2020 (4878 in July 2021; 878 in July 2022) (1, 53±0.13), and from 2022, the incidence in children aged 0-7 increased (3314 in July 2021; 2704 by July 2022) (1.09±0.13) (P>0.05) and that from July 2022, it was found that the incidence remained 3 times higher in children aged 0-7 compared to children aged 7-18 we can see (see table 3.3) (see figure 3.5).

Table 3.3
Incidence of coronavirus among young children per 100,000 population (2020-2023)

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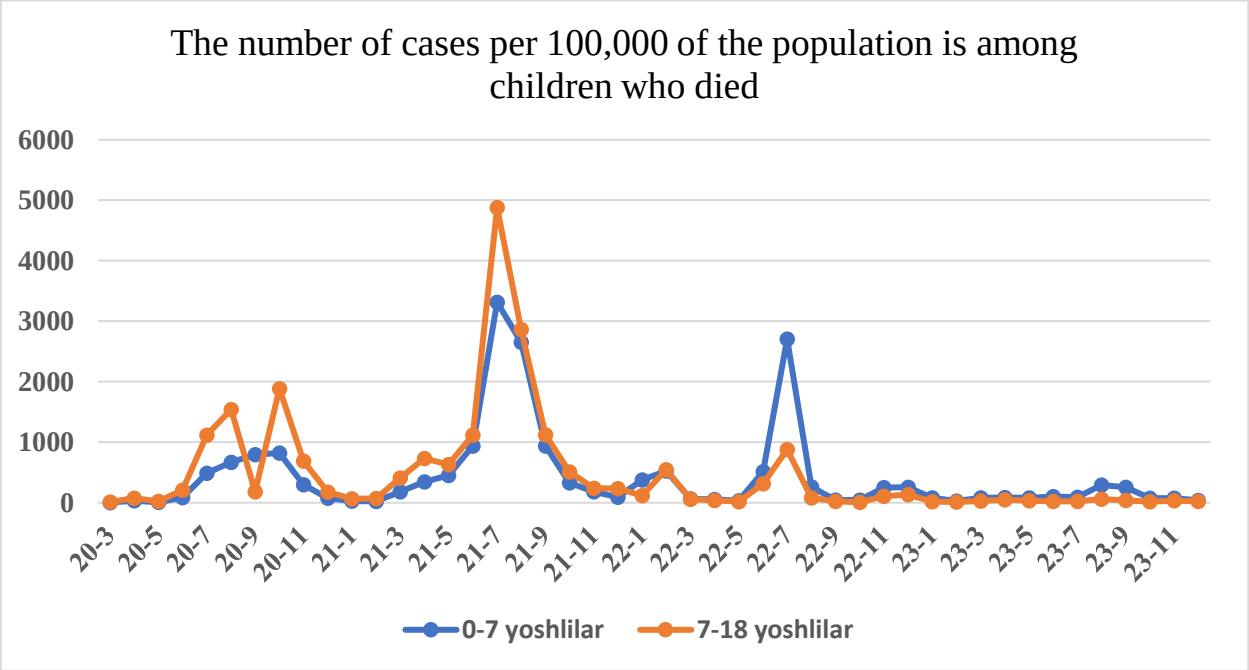

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