4. Назаренко А.О. Ефективність дихальної гімнастики у хворих на гіпертонічну хворобу. *Медицина третього тисячоліття* : збірник тез міжвузівської конференції молодих вчених та студентів. Харків, 20 січня 2016 р. / Харківський національний медичний університет. Харків, 2016. С. 138–139.

5. Чорна Н.М., Войтенко Т.О. Вплив дихальної техніки йоги на артеріальний тиск та психоемоційний стан. *Теоретичні та прикладні аспекти фундаментальних медико-біологічних наук* : матеріали Всеукраїнської студентської науково-практичної конференції (м. Львів, 18 травня 2023 р.). Львів : Видавництво Львівської політехніки, 2023. С. 240–243.

DOI https://doi.org/10.30525/978-9934-26-401-6-24

ASSESSMENT OF THE RISK OF DEATH AND OCCURRENCE OF THE CORONAVIRUS DISEASE AMONG MEDICAL WORKERS IN UKRAINE IN 2020–2023

ОЦІНКА РИЗИКУ СМЕРТІ ТА ВИНИКНЕННЯ ЗАХВОРЮВАННЯ НА КОРОНАВІРУСНУ ХВОРОБУ СЕРЕД МЕДИЧНИХ ПРАЦІВНИКІВ В УКРАЇНІ 2020–2023 РР.

KorolenkoV. V.

Assistant Professor at the Epidemiology and Evidence-based Medicine Department, Bogomolets National Medical University Kyiv, Ukraine

Mohort H. A.

Candidate of Medical Sciences, Associate Professor at the Epidemiology and Evidence-based Medicine Department, Bogomolets National Medical University Kyiv, Ukraine

Короленко В. В.

асистент кафедри епідеміології та доказової медицини Національний медичний університет імені О. О. Богомольця м. Київ, Україна

Мохорт Г. А.

кандидат медичних наук, доцент кафедри епідеміології та доказової медицини, Національний медичний університет імені О. О. Богомольця м. Київ, Україна The risk of infection by the SARS-CoV-2 virus among medical workers was a concern in the early stages of the pandemic, in particular Dr. Li Wenliang, the Wuhan ophthalmologist who first raised concerns about the disease to the international community, died of the disease, probably contracted while on the job. [1]. As of May 8, 2020, 152,888 cases of SARS-CoV-2 infection, including 1,413 deaths, were registered worldwide among medical professionals. The mortality rate of medical workers was 0.52% [2].

According to the data of the Public Health Center of the Ministry of Health of Ukraine, as of May 4, 2023, 154,394 confirmed cases of COVID-19 among medical workers were registered in Ukraine, of which 1,256 were fatal [3]. Health workers can be exposed to occupational hazards that pose a threat of illness and even death.

As the level of transmission of SARS-CoV-2 in the population increases, the risk of occupational exposure among healthcare workers increases [4].

A systematic review described that occupational risk for healthcare workers may increase in certain clinical settings, including poor hand hygiene, long working hours, incorrect use or lack of personal protective equipment [5].

Some healthcare workers may be at greater risk of developing severe coronavirus disease due to chronic illness, older age, or pregnancy [6].

The aim of the study is to examine the chances of death and incidence of coronavirus disease among medical workers during the COVID-19 pandemic in Ukraine.

The following research methods were used in the work: epidemiological, statistical. We conducted a case-control analytical study on the chances of getting sick and dying from a coronavirus infection among doctors and non-doctors (other population) in Ukraine during the COVID-19 pandemic (2020–2023) and calculated the odds ratio (OR).

Data on the number of laboratory-confirmed cases of COVID-19 and deaths, in particular among medical workers, were obtained from the website of the Public Health Center of the Ministry of Health of Ukraine. Information on medical staff and population from the website of the State Statistics Service of Ukraine. Calculations were made in Microsoft Excel 2019.

The chance of a medical worker dying is: in 2020 OR=0.49, in 2021 OR=0.38, in 2022 OR=0.39, for the entire period of the pandemic OR=0.39. Therefore, doctors have a lower chance of dying compared to other population groups.

The chance of a medical worker getting sick is: in 2020 OR=5.63, in 2021 OR=4.0, in 2022 OR=4.5. Therefore, the chances of getting sick among medical workers are greater than among other population groups.

Medical personnel in Ukraine are less likely to die from a coronavirus infection, probably because they are better vaccinated than other population groups. At the same time, doctors have a higher chance (occupational risk) of getting sick despite a better level of vaccination, better protection with personal protective equipment and, in general, greater awareness of the new coronavirus disease.

References:

1. Petersen, E., Hui, D., Hamer, D. H., Blumberg, L., Madoff, L. C., Pollack, M., Lee, S. S., McLellan, S., Memish, Z., Praharaj, I., Wasserman, S., Ntoumi, F., Azhar, E. I., Mchugh, T. D., Kock, R., Ippolito, G., Zumla, A., & Koopmans, M. (2020). Li Wenliang, a face to the frontline healthcare worker. The first doctor to notify the emergence of the SARS-CoV-2, (COVID-19), outbreak. International journal of infectious diseases: IJID : official publication of the International Society for Infectious Diseases, 93, 205–207. https://doi.org/10.1016/j.ijid.2020.02.052

2. Bandyopadhyay, S., Baticulon, R. E., Kadhum, M., Alser, M., Ojuka, D. K., Badereddin, Y., Kamath, A., Parepalli, S. A., Brown, G., Iharchane, S., Gandino, S., Markovic-Obiago, Z., Scott, S., Manirambona, E., Machhada, A., Aggarwal, A., Benazaize, L., Ibrahim, M., Kim, D., Tol, I., Khundkar, R. (2020). Infection and mortality of healthcare workers worldwide from COVID-19: a systematic review. BMJ global health, 5(12), e003097. https://doi.org/10.1136/bmjgh-2020-003097

3. Коронавірусна інфекція COVID-19. Центр громадського здоров'я України / ЦГЗ. URL: https://www.phc.org.ua/kontrolzakhvoryuvan/inshi-infekciyni-zakhvoryuvannya/koronavirusna-infekciyacovid-19

4. Critical preparedness, readiness and response actions for COVID-19, 27 May 2021. WHO / World Health Organization. URL: https://www.who. int/publications/i/item/critical-preparedness-readiness-and-response-actions-for-covid-19

5. Chou, R., Dana, T., Buckley, D. I., Selph, S., Fu, R., & Totten, A. M. (2020). Epidemiology of and Risk Factors for Coronavirus Infection in Health Care Workers: A Living Rapid Review. Annals of internal medicine, 173(2), 120–136. https://doi.org/10.7326/M20-1632

6. Naveed, M., Naeem, M., Ur Rahman, M., Gul Hilal, M., Kakakhel, M. A., Ali, G., & Hassan, A. (2021). Review of potential risk groups for coronavirus disease 2019 (COVID-19). New microbes and new infections, 41, 100849. https://doi.org/10.1016/j.nmni.2021.100849