

AP09058465 «Assessment of water, sanitation and hygiene (WASH) situation in rural medical institutions of the Karaganda region for an effective response to the COVID-19 pandemic»

Relevance

Outbreaks of infectious diseases and fatal epidemics will continue until WASH infrastructure and community hygiene skills improve. COVID-19 pandemic has confirmed this hypothesis, since hand hygiene is an important element in containing it. The lack of data on WASH services in medical institutions by region and on a nationwide scale is currently an obstacle to an effective response to the COVID-19 pandemic in Kazakhstan. An analysis of the situation with an up-to-date assessment of current WASH services will help develop recommendations for improving access to them and contribute to sustainable results in the fight against COVID-19 in rural medical institutions.

Objective: To develop recommendations to improve access to adequate water supply, sanitation and hygiene (WASH) in rural medical institutions to prevent and control COVID-19, improve the quality of health care and protect medical personnel.

Expectations

This project will assess the level of WASH in rural medical institutions according to the hierarchical ladder of WASH services proposed in Joint Monitoring Program (JMP) by the WHO and UNICEF, satisfaction of patients and staff with the current access to and quality of WASH services by district and season, and WASH biosafety by district. Based on the findings, some recommendations will be developed to improve access to adequate WASH conditions for the prevention and control of COVID-19 and other infectious diseases in rural medical institutions.

Research team

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Publications

In 2021, based on the materials of the research work, the following were published:

1. Omarova A.O., Belyayev I.A., Akhmetova S.B., Yerdosov N.Zh., Ismailov Ch.U., Kharin A.D. Challenges of microbiological safety of water supply, sanitation and hygiene. Literature review // Nauka I Zdravookhranenie [Science & Healthcare]. - 2021. - 4(Vol.23). - P.46-57 (*recommended by the Committee for Quality Assurance in Education and Science of the MES of the RK*).
2. Omarova A. Analysis of the current situation with water, sanitation and hygiene (WASH) in rural hospitals // European Journal of Public Health. - 2021. Vol.31, Suppl.3. - P. 129. doi.org/10.1093/eurpub/ckab164.340 (*IF=2,391 in Web of Science; quartile-Q1 on public health, environmental protection and occupational health*).

Approbation

The main results of the research work were presented in *an oral report* at:

- the 14th European Public Health Conference 2021 “Public Health Futures in a Changing World”, November 10-12, 2021.

Achieved results for 2021

1. The basic level of WASH services is available in the surgical buildings, the therapeutic building and the skin and venereology center of the RCH. In the CDH, the hospital town located in the village of Topar has basic water supply services and limited sanitation and hygiene services; the outpatient clinic of the village of Samarka and the paramedic-obstetric station of the village of Esengeldy have basic water supply services and limited hygiene services, and there are no sanitation services.
2. The degree of satisfaction of patients and staff with the current access and quality of WASH services in the CDH is higher than in the RCH. The probable reason for such results may be greater awareness of the urban population about the impact of WASH on the outcome of treatment and the recovery time of patients.
3. In the CDH, there is a systematic appearance of common coliform bacteria and thermotolerant coliform bacteria in drinking water, but the percentage of positive samples is less than in the RCH and the microbial load is significantly lower. The presence of microorganisms of characteristic infectious agents associated with the provision of medical care, such as *Ps. aeruginosa* and *A. baumannii*, is noted in the RCH.

Information for potential users

The target consumers will be specialists from the organizations of sanitary and epidemiological surveillance, the regional department of health care and environmental monitoring. Materials will also be available for students and teachers of “KMU” NC JSC and used in the educational process.