

## THE ROLE AND TASKS OF MEDICAL STAFF IN PREVENTING HOSPITAL INFECTIONS

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### **Abstract**

This article provides a comprehensive scientific and theoretical overview of the mechanisms of origin of hospital (nosocomial) infections, the factors that cause their spread in medical institutions, as well as the responsibility and practical activities of medical personnel in preventing such infections. Hospital infections are one of the serious global problems of the modern healthcare system, which leads to prolonged treatment, additional costs, disability and even an increase in mortality. According to the World Health Organization, millions of patients acquire additional infections in hospital settings every year, which undermines the effective use of the healthcare system.

The abstract also comprehensively analyzes the central role of medical personnel in the spread of infection within the hospital, their professional hygiene skills, compliance with hand hygiene protocols, adherence to the principles of asepsis and antiseptics when working with patients, as well as their tasks in controlling disinfection and sterilization processes. Measures aimed at reducing infection in the most sensitive departments for the spread of infection - intensive care, intensive care, surgery, neonatal departments, burn centers and dental offices - are of particular importance.

This article also highlights the clinical forms of hospital infections, risk groups, new epidemiological risks arising from antibiotic resistance of microorganisms, the need to regularly update the knowledge and skills of medical workers. The effectiveness of continuous epidemiological training, simulation exercises, and infection control training programs among employees is scientifically explained.

As for preventive measures, this article covers the 5 moments of hand hygiene, ensuring a sterile environment, correctly separating clean and dirty zones, correctly

performing invasive procedures, using personal protective equipment, the activities of the hospital's internal infection control commission, the importance of the epidemiological surveillance system, and modern solutions for infectious disease control algorithms.

In general, the abstract provides an in-depth analysis of the strategic role of healthcare workers in the prevention of hospital infections, not only in preventing the spread of infection, but also in timely identification, assessment, and control of infection risks, ensuring epidemiological safety, and maintaining patient health. This article serves as practical and scientific guidance for healthcare workers, epidemiologists, surgeons, nurses, and managers of medical institutions.

**Relevance of the topic:** Hospital infections observed in hospitals around the world today pose a major threat to health. According to the World Health Organization, millions of patients contract infections in hospitals every year, a significant number of which end in death. Operating rooms, intensive care units, intensive care units, and wards with patients with poor sleep are areas with a high risk of infection. Reducing hospital infections is also a national priority in the healthcare system of Uzbekistan, and strengthening strict epidemiological control in medical institutions is an urgent issue. The primary role in this is assigned to medical workers.

**Purpose of the topic:** The main purpose of the article is to study the role and responsibility of medical workers in the prevention of hospital infections, analyze effective prevention strategies, and develop practical recommendations to reduce infections in hospitals.

**Keywords:** Hospital infection, nosocomial infection, asepsis, antiseptics, hand hygiene, sanitation, disinfection, sterilization, medical worker, epidemiological control.

**Main part:** Hospital infections are non-preexisting infectious diseases that occur during the treatment of patients or after visiting a medical institution. They are high-risk and are considered an epidemiological problem that is monitored at the state level in the healthcare system. The main sources of hospital infections are patients, carriers, medical equipment, the environment, infected hands and incorrect practices of medical personnel.

The role of a medical worker in preventing hospital infections is invaluable. Because it is doctors, nurses and sanitation workers who are the leading factor in the chain of transmission of infection, and their level of knowledge, skills and compliance with sanitary and hygienic requirements determine the level of safety. First of all, the most effective measure is to observe hand hygiene, properly use

antiseptics, wash hands in 5 important cases, as well as clean hands before and after each manipulation.

Sterilization of instruments and equipment also requires special responsibility. Each surgical instrument, needle, syringe, catheter, dressing material must undergo complete disinfection stages. If sterilization rules are not followed, dangerous microorganisms such as staphylococcus, streptococcus, pseudomonas can be transmitted to patients. Therefore, the work processes of the central sterilization department must be under strict control.

Another task of a medical worker is the correct use of personal protective equipment. This includes masks, gloves, gowns, shields, shoe covers and glasses. Individual protective equipment must be worn constantly in each department, depending on the level of infectious risk. Conducting special training among employees and organizing annual planned training sessions will help reduce the risk of infection.

A medical worker must also strictly follow the rules for placing patients. Severely infectious patients are placed in separate isolation rooms. If the flow of patients in the wards is not properly organized, the rooms are not sufficiently disinfected, or the posts are not properly equipped, nosocomial infections increase. Therefore, daily and weekly disinfection regimens must be strictly followed.

Also, a medical worker must use antimicrobial drugs correctly and under control. The arbitrary use of antibiotics increases drug resistance of microbes and causes the development of hospital infections. It is very important to prescribe antibiotics only on the basis of clinical indications and follow antimicrobial therapy protocols.

The next task of a medical worker is to properly sort, collect, transport and dispose of medical waste. If infected materials are mixed with general waste, they pose an epidemiological threat not only to patients, but also to the entire medical institution. Therefore, separate containers and colored bags are used for each type of waste.

At the same time, the medical staff's educational work with patients and their relatives is also an important part of protecting against hospital infections. The importance of reasonable hygiene, the correct use of masks, outerwear, and timely hand washing should be regularly explained to patients.

**Conclusion:** Hospital infections are one of the most pressing problems of modern medicine, and the role of a medical worker in their prevention is invaluable. With a thorough knowledge of the source, routes and risk factors of infection, medical workers are at the center of epidemiological safety. Strict adherence to hand hygiene, proper use of personal protective equipment, complete

sterilization of equipment and compliance with all disinfection procedures significantly reduce the spread of hospital infections.

The sanitary and hygienic condition of a medical institution, the level of knowledge and skills of employees, as well as the availability of regular training courses on infection control determine the effectiveness of preventive measures. Experience shows that the level of nosocomial infections decreases sharply when medical workers pay attention to hygiene and infectious safety.

In conclusion, the prevention of hospital infections is not just a set of individual measures, but a process that requires continuous monitoring, a systematic approach and a responsible attitude of each medical worker. The provision of safe, high-quality and modern medical services in the healthcare system begins with medical personnel. Each of their mistakes can lead to the spread of infection, but each correctly performed procedure can save thousands of lives.

Therefore, strengthening the knowledge and skills of medical personnel in infection control, implementing standards in accordance with international requirements, and increasing the culture of prevention remain a priority task of the healthcare system.

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