

## **Some aspects of non-specific prevention of infections associated with the provision of medical care in medical organizations**

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**Abstract.** Healthcare-associated infections (HAI) are considered as one of the most acute problems of modern health care. Analyzed the statistical data, as well as the quality of registration of cases of HAI in medical organizations, identified the problems of infection control in medical organizations and ways to eliminate them.

**Keywords:** HAI, registration, statistics, damage, infection control, penalties for violations of the anti-epidemic regime.

Nosocomial infections (NE) are any clinically expressed diseases of microbial origin that affect the patient as a result of his hospitalization or visit to a medical institution for treatment, as well as hospital staff due to their activities, regardless of whether symptoms of this disease appear or do not appear during the time spent by these persons in the hospital. This definition was proposed by the WHO Regional Office for Europe in 1979. [4]

An infection is considered nosocomial if it first appears 48 hours or more after being in the hospital, provided that there are no clinical manifestations of these infections at the time of admission and the likelihood of an incubation period is excluded. [5].

In modern conditions of development of healthcare and humanity, prevention of healthcare-associated infections (HAI) is one of the global problems of the world. Today, the activities of a significant number of scientists, numerous healthcare practitioners and most large companies that present their products and services on the world market are subordinated to the solution of these serious issues.

At present, it is difficult to overestimate the social and economic damage that HAI inflicts annually on the world community. Thus, according to official statistics, in the United States more than 2 million patients suffer annually from HAI, 88000 patients die, the annual economic damage

is 4-10 billion dollars; in the UK, taking into account the registered HAI, inpatient treatment of patients increases by 3.6 million days, the annual economic loss is about 1 billion pounds [1-3].

The urgency of the HAI problem is determined by their widespread occurrence in medical institutions of various profiles and the significant damage caused by these diseases to the health of the population. [6]

The problem associated with the lack of registration of real cases of HAI in medical and preventive organizations (MPO) and, as a consequence, the provision of inaccurate statistics is of great importance. It is important to understand that the availability of statistics reflecting the real situation in the country will contribute to the improvement of methods for solving the existing problem.

According to statistics, HAI affects 5-10% of patients in hospitals, and ranks tenth among the causes of mortality in the population. In Russia, according to official statistics, approximately 30 thousand cases of healthcare-associated infections are registered annually ( $\sim = 0.8$  per 1,000 patients), but experts believe that their true number is at least 2-2.5 million people. Depending on the action of various factors, the incidence of NE fluctuates. [7]

Patients with HAI stay in the hospital 2-3 times longer than similar patients without signs of infection. On average, their discharge is delayed by ten days, the cost of treatment increases by 3 to 4 times, and the risk of death is 5 to 7 times. [7]

Registration of nosocomial infections is carried out in all treatment and prophylactic organizations in accordance with the current procedure for statistical accounting. For each detected case of nosocomial infection, an urgent notification is promptly sent to the territorial center of the FBUZ "Hygiene and Epidemiology". [7]

In matters of HAI prevention in hospitals, middle and junior medical personnel are assigned the main, dominant role of the organizer, the responsible executor, and also the controller. Daily, careful and strict fulfillment of the requirements of the sanitary-hygienic and anti-epidemic regime in the course of the performance of their professional duties and forms the basis of the list of measures for the prevention of HAI. [8]

The number of nosocomial infections (healthcare-associated infections, HAI) in Russia reaches 25-30 thousand cases per year, but this statistic is significantly underestimated, experts say. However, today we can talk about a clear underestimation of cases of nosocomial infection. The real figure is actually much higher - 2–2.5 million cases. Despite the fact that the number of nosocomial infections in the country as a whole has decreased by 20% over the past ten years, the error in the HAI statistics in Rospotrebnadzor was noted earlier. In particular, the department revealed facts of concealment of data on nosocomial morbidity and other violations in medical organizations, including cases of late isolation of patients, untimely start of anti-epidemic measures,

violation of the rules for maintaining functional rooms, as well as non-compliance with antiseptic requirements when working with sterile material. [10]

The way to solve the existing problem at present is to improve the quality of medical care by improving the infection control system inside the hospital, as well as by making changes to the regulated regulations regarding the control of the anti-epidemic regime.

First, the number of general cleanings should be at least doubled. At the moment, according to SanPiN 2.1.3.2630-10 "Sanitary and Epidemiological Requirements for Organizations Carrying out Medical Activities", general cleaning of the ward premises should be carried out at least once a month. General cleaning of the operating unit, dressing rooms, delivery rooms, treatment rooms, manipulation rooms, sterilization rooms and other aseptic rooms is carried out once a week. [11] We propose to increase the number of general cleaning up to 1 time per week in ward rooms, up to twice a week in operating and delivery rooms.

Secondly, it is necessary to increase the number of control checks in medical institutions by strengthening the epidemiological and microbiological control of the activities of the medical and prophylactic institution.

Thirdly, the proper control over the observance of sanitary rules and hygienic standards will be at the highest level if the degree of punishment for non-compliance is increased. According to Article 6.3. "Violation of the legislation in the field of ensuring the sanitary and epidemiological well-being of the population" of the Code of the Russian Federation on Administrative Violations, violation of the legislation in the field of ensuring the sanitary and epidemiological well-being of the population, expressed in violation of the current sanitary rules and hygienic standards, failure to comply with sanitary and hygienic and anti-epidemic measures, entails a warning or the imposition of an administrative fine on citizens in the amount of one hundred to five hundred rubles; for officials - from five hundred to one thousand rubles; for persons engaged in entrepreneurial activities without forming a legal entity - from five hundred to one thousand rubles or administrative suspension of activities for up to ninety days; for legal entities - from ten thousand to twenty thousand rubles or administrative suspension of activities for up to ninety days.

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