



## **MODERN PROBLEMS OF ENSURING SAFETY IN ANESTHESIOLOGY AND INTENSIVE CARE.**

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<b>Received:</b> September 14 <sup>th</sup> 2023 <b>Accepted:</b> October 14 <sup>th</sup> 2023 <b>Published:</b> November 20 <sup>th</sup> 2023	As you know, unwanted incidents and complications in medicine, including anesthesiology and resuscitation, are not new. In the middle of the last century, the first works appeared in Russia and abroad demonstrating complications with various anesthetic treatments. According to the US Institute of Medicine, medical errors claim annually from 44 to 98 thousand lives of patients in American hospitals.
<b>Keywords:</b> Problems in anesthesiology and resuscitation, intensive care.	

### **INTRODUCTION:**

It should be noted that this is more than the number of deaths from car accidents, breast cancer or AIDS. Hospitals for Europe's Hospital Quality Working Group reported that in 2008, one in ten patients in European hospitals suffered a preventable harm or adverse treatment effect. In a recently published review that included an analysis of 80,000 medical records, the total number of adverse events was 10.2%, of which 43.5% were preventable, while more than half of the patients had no or minimal adverse effects, and 8.4% of cases were fatal. Complications associated with surgery amounted to 49.6%, while complications associated with various manipulations amounted to 15.1%. According to other data, the prevalence of adverse events and complications in hospitals in developed countries ranges from 3.2% in the USA to 16.6% in Australia. The World Health Organization shows disappointing data: about 234 million operations performed worldwide annually are associated with 1 million deaths and 7 million complications, half of which are preventable. In the structure of complications and adverse events in hospitals, complications in anesthesiology and intensive care occupy a special place, but over time their number decreases. Thus, with the introduction of pulse oximetry and capnography into everyday practice from 1968 to 1980, due to early verification of respiratory predictors of adverse reactions, the mortality rate from these complications decreased from 2.1:10,000 to 1:10,000.

The American Association of Anesthesiologists founded the "Closed Complaints Project" in 1985, in which it analyzed data from insurance companies on the development of complications of anesthesia and resuscitation. The most common incidents were related to nerve damage (21%), difficult tracheal intubation (12%), esophageal intubation and

inadequate ventilation (7% each) [7, 11]. Currently, anesthesiology and resuscitation has made a big leap in terms of safety thanks to rapid scientific and technological progress, fundamentally different methodological approaches, and the creation of new drugs. However, in Russia, until recently, the wear and tear of the anesthesia-respiratory equipment stock, the absence or limited number of monitoring equipment, the lack of drug dosing systems, modern diagnostic devices, etc. were recorded. It should be noted that thanks to the "Program for the Modernization of Health Care of the Subjects of the Russian Federation" there has been some improvement in equipment hospitals, but this is clearly not enough. In Russia, compared to developed countries, the ratio between working – serviceable anesthesia and respiratory equipment and non-working or limitedly usable equipment still remains high. Presenting the doctor-patient relationship model from the "doctor-patient" perspective would be misleading. There is a third link in this chain, which should ensure the work of medical workers, supply them with equipment and create optimal conditions for performing assigned tasks. Poor infrastructure and equipment, shortages and poor quality of medicines, deficiencies in areas such as waste management and infection control, poor performance of medical staff due to low motivation or qualifications, amid severe underfunding of health services in almost all major areas. Items of current operating expenses seriously increase the risk of adverse events compared to the level observed in industrialized countries [1]. The current WHO concept of patient safety places responsibility for adverse events primarily on structural, organizational and operational deficiencies in the health care system, rather than on individual health care workers or health care products. Working in such conditions requires fundamentally different methodological, technical and



organizational solutions, which were found, introduced into everyday practice and ultimately fundamentally changed the content of the work of anesthesiologists [1]. To improve the system, it is necessary to make significant efforts to work with patients, correct severe concomitant pathology, move to a more active participation of anesthesiologists in the preparation of patients, and improve the technology of an integrated approach, based on modern international standards. According to V. Pareto's principle: "20% of efforts give 80% of the result, and to achieve the remaining 20% of the result, 80% of the effort is required." In other words, if we want to improve safety in anesthesiology, we must use maximum resources. In modern conditions, we must not forget about the trend of an increase in the number of older and more severely ill patients, the complication of surgical interventions, the expansion of indications for them, the increase in the individual workload on the doctor, the emergence of new drugs and devices, as well as simply randomness - all this creates dangers in the work of anesthesiologists. Thus, more and more efforts have to be made, activating the motivation for activity. However, without external incentives to update motives for performing a certain type of activity, all efforts are short-term in nature. Economic studies related to medicine focus on the significance and contradictions of economic and non-economic incentives to work. In recent decades, special attention has been paid to analyzing the effectiveness of changes in the organization of remuneration to improve the efficiency and quality of medical care provided to the population. As a result, most medical organizations today exist in an involuntary disharmony between a high level of regulatory and technical equipment and an unacceptably low level of employee interest in effective and high-quality work. Reducing government spending on healthcare as a certain "sphere that burdens the economy" (economic process) over time leads to deterioration in the health of the population, a reduction in healthy life expectancy, and an increase in disability (social result) [5]. According to the Accounts Chamber (2006), the economic damage to Russia due to unsatisfactory medical care by 2015 could amount to \$300 billion. Today in our country, mortality from "avoidable causes" is three times higher than in a number of developed countries. Thus, if in 1990 mortality rates in Russia were 1.4–1.7 times higher than in France, Germany, the Netherlands and Great Britain, then already in 2003 they were 2.3–2.6 times higher. Mortality from circulatory diseases, as well as

infectious and parasitic diseases, is two or more times higher than similar rates recorded in Europe, the USA and Japan. But back in the mid-1960s, the avoidable mortality rate in Russia was approximately the same as in the UK. Refusal to make a monetary assessment of social resources (losses) for "moral and ethical reasons" can lead to irreparable social consequences. For example, discussions about the pricelessness of human life in practice often turn into ideas about the freeness of this life, which are very beneficial to a number of managers. After all, if a person's life is worth nothing, then why make significant expenses to ensure its safety.

### **CONCLUSION:**

In a number of developed countries, estimates of the cost of human life have long been an important element of economic policy, causing a serious social effect. Practice shows that these estimates should not only exist, but also be significant. Anesthesiology and resuscitation has become safer than before and, in comparison with other disciplines, it occupies one of the leading positions in patient safety. Undoubtedly, at present, the knowledge and competence, safety and vigilance of the anesthesiologist-resuscitator are the most important elements in the development of safe medicine. However, the view on the importance of safety should be comprehensive, aimed at increasing the requirements for medical technologies, improving the equipment of medical institutions, and providing them with modern medicines.

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