

ABSTRACT

of the dissertation work of Makpal Askarovna Alchimbayeva on the topic
“Scientific justification for the mechanism of introducing tools to protect the
professional activity of medical workers” for the academic degree of Doctor of
Philosophy (PhD) in the specialty
"8D10103 - Public Health"

Relevance of the study. The World Health Organization (WHO) calls on governments and health officials to take action to address the systematic threats to the health and safety of health workers and patients. These include measures in areas such as protecting health workers from violence; strengthening their mental health; their protection from sources of physical and biological hazards; implementation of national programs in the field of medical personnel safety, as well as consideration of the safety of medical workers and patient safety as a single complex [WHO, 2020].

According to several studies, the prevalence of medical errors varies from 1 to 40%. It is estimated that about 17% of appointments in medical organizations lead to adverse events [Munn, 2015].

A report published by the U.S. Department of Health and Human Services estimated the cost of medical malpractice insurance at \$6.3 billion in 2002; with an additional \$60–108 billion in costs associated with the practice of defensive medicine, costs associated with supporting a health care provider in response to the threat of a medical malpractice lawsuit [Medical Malpractice. Implications of Rising Premiums on Access to Health Care. Washington, D.C. U.S. General Accounting Office, 2003].

According to information from the Bank of Judicial Acts of the Supreme Court of the Republic of Kazakhstan, from 2017 to 2019 in the Republic of Kazakhstan, 39 appeals were received to initiate administrative and criminal cases against medical workers, 90% of which were considered with a verdict. Analysis of the data obtained showed that the largest number of appeals is noted in the Karaganda and East Kazakhstan regions, while in the West Kazakhstan region there are no such appeals [Bank of Judicial Acts of the Supreme Court of the Republic of Kazakhstan, 2020].

It is worth noting that today in the Republic of Kazakhstan there is no system of professional liability insurance for medical workers. As part of the speech of the Head of State at the third meeting of the National Council of Public Trust on May 27, 2020, the Ministry of Health of the Republic of Kazakhstan was instructed to develop and implement a system of legal and financial protection and liability of medical workers, including guaranteeing professional activities. In this regard, the Ministry of Health of the Republic of Kazakhstan has developed a draft law "On introducing amendments and additions to some legislative acts of the Republic of Kazakhstan on health issues."

Studying and analyzing the existing structure of the prevalence of medical errors and organizing the implementation of an effective professional liability insurance system for medical workers is an important public health task that contributes to a timely analysis of the situation and the adoption of informed measures.

The relevance of this work lies in conducting a comprehensive medical and organizational analysis in order to implement an effective system of professional liability

insurance for medical workers in the Republic of Kazakhstan.

Purpose of the study

This dissertation research is to identify barriers associated with the implementation of the professional liability insurance system and formulate scientifically based approaches to improving the protection of professional liability of medical workers.

Research objectives

1. To conduct a comprehensive comparative analysis of international and domestic experience of the regulatory framework on the legal regulation of medical incidents;
2. To conduct a retrospective analysis of medical incidents over the past 5 years in the Republic of Kazakhstan;
3. To identify barriers to the successful implementation of the introduction of a professional liability insurance system for medical workers;
4. To develop and implement proposals for improving the organization of the professional liability insurance system for medical workers.

Scientific novelty:

First:

- an international and domestic content analysis of the regulatory framework on the legal regulation of medical incidents was carried out;
- the dynamics of the prevalence of medical criminal and administrative offenses in the Republic of Kazakhstan over the past 5 years was analyzed;
- the experience of patients associated with causing harm to health and filing complaints, as well as eliminating the consequences of complications was analyzed;
- the opinions of patients were studied regarding the risks of harm and complications due to the fault of a medical worker, as well as on the introduction of a professional liability insurance system for medical workers in the Republic of Kazakhstan;
- the opinions of medical workers regarding complaints and changes related to improving the process of handling complaints in the healthcare sector in the Republic of Kazakhstan were studied;
- the impact of complaints on the quality of life, psychological well-being and health of medical workers was studied;
- the opinions of medical workers regarding the introduction of a professional liability insurance system for medical workers in the Republic of Kazakhstan were studied;
- for the first time, the results of a comprehensive analysis in the field of ensuring safe medical practice in the Republic of Kazakhstan were proposed, the opinions of patients and medical workers regarding the introduction of a professional liability insurance system for medical workers were studied, which are the basis for the development of proposals for improving the developed and proposed for implementation of the professional liability insurance system and formulated scientifically - substantiated approaches to improving the protection of professional liability of medical workers in the Republic of Kazakhstan.

Theoretical significance

The data obtained from the study can be used in training courses for students of medical educational institutions and advanced training courses, and are also recommended for use by medical associations and patient communities. The developed and implemented research tools can serve as a basis for further research.

Practical significance

1. A comprehensive comparative analysis of the international and domestic experience of the regulatory framework on the issues of legal regulation of medical incidents allows us to understand the existing system of accounting and registration of medical incidents, range of medical liability, restrictions and limitations of the insurance industry, which provides for legislative restrictions and other measures to reform the business administration extremely important under proposed health legislation

2. The analysis of the prevalence of medical criminal and administrative offenses in the Republic of Kazakhstan over the past 5 years made it possible to give a comprehensive description of the dynamics of epidemiological indicators, which contributed to achieving a deep understanding of the patterns of distribution of medical offenses among medical workers.

3. Barriers to the successful implementation of the professional liability insurance system for medical workers were identified, which provides a scientifically based judgment on the possible revision of the developed legislative requirements related to the implementation of the professional liability insurance system for medical workers.

4. The study of the opinions of patients and medical workers made it possible to identify the most important criteria for safe medical care for patients, as well as ongoing changes in the healthcare system and the feasibility of introducing the developed professional liability insurance system for medical workers. The problems of protective medical practice in medical organizations, in the opinion of medical workers, continue to remain relevant, which, along with the identified gaps associated with the developed system of professional liability insurance for medical workers, contributed to the development of a mechanism for improving the approaches of the professional liability insurance system for medical workers in the Republic of Kazakhstan.

5. The analysis and the results of the study are intended for use at various levels by health authorities, heads of primary care and hospitals, health departments, as well as the educational sphere, aimed at improving intersectoral, team, interdisciplinary cooperation to provide comprehensive care, focused on protecting the professional activities of medical professionals.

Materials and methods of the study

The study was conducted according to the following methodology:

Study design - observational/analytical/cross-sectional study.

Object of the study:

- Regulatory – legal documents that regulate the relationship between the patient and the medical professional and related medical errors;
- Official data related to the prevalence of registered medical criminal offenses;
- medical workers;
- patients.

The structure of the study is presented in four main stages:

The first stage is the study of international and domestic experience on the stated topic, using the PubMed, Google Scholar, BMJ Best practice databases.

The second stage is an analysis of registered criminal and administrative medical offenses among medical workers over the past 5 years in the Republic of Kazakhstan.

The third stage is to identify barriers that impede the successful implementation of the professional liability insurance system for medical workers; a sociological study was conducted. It consisted of two substages: the first – a patient survey (n = 139); the second was a survey of medical workers (n=173).

The fourth stage included the development, implementation and evaluation of recommendations implemented in the practical activities of healthcare organizations to improve the professional liability insurance system for medical workers.

Thus, the research design was a combination of several types of studies: descriptive study, cross-sectional study, analytical study.

Main provisions submitted for defense

1. Tort reform measures are extremely important within the framework of the proposed legislation in the field of healthcare, confirmed by content analysis in the field of legal regulation of medical liability in key legal regulations in the field of healthcare.

2. There was an increase in mortality rates for medical criminal offenses resulting in the death of the victim for the period from 2020–2021. In total, there was a significant increase in the number of administrative penalties imposed in 2018 and from 2020 to 2021. The largest number of medical offenses was registered in the city of Astana, followed by the South Kazakhstan region. Mostly, offenses in medical practice were associated with improper performance of professional duties.

3. Most physicians believe that if a complaint were made against them, they believe management will not support them and that the complaint process is unfair and overly punitive.

- Every second medical worker believes that if a medical worker is acquitted, but during the investigative process suffered financial losses, it should be possible to file a claim for compensation of lost earnings or legal costs.

- Health care workers who have experienced complaints from patients or their relatives have a significant risk of moderate/severe depression, anxiety and suicidal thoughts.

4. The developed mechanism for improving the professional liability insurance system for medical workers allows us to effectively increase the satisfaction of medical workers with the quality of the professional liability protection provided to medical workers in the Republic of Kazakhstan.

Conclusions

Based on the results of the study, we made the following conclusions:

1. The existing system of accounting and registration of medical incidents in the Republic of Kazakhstan, in terms of self-assessment within the framework of internal examination of the quality of medical services, does not allow properly determining the structure and a number of features of the prevalence of medical incidents. The lack of reliable data on medical incidents, analysis and development of effective strategies to prevent and minimize risks prove difficult. Health care tort reform is key to improving incident reporting, creating transparent mechanisms for self-assessment of health care quality, and ensuring the highest standards of patient safety.

2. The vast majority of registered medical criminal offenses were identified under Article 317 “Improper performance of professional duties by a medical or pharmaceutical worker,” where rates vary from 2.05 per 100 thousand population in 2017

to 1.92 per 100 thousand population in 2021 year, where the highest rate was 2.51 per 100 thousand population in 2019. For other types of medical criminal offenses over the 5-year period, relatively stable indicators were noted. In total, there was a significant increase in the number of administrative penalties imposed in 2018 and from 2020 to 2021. It was also revealed that the largest number of persons brought to justice was in the form of an administrative fine during the study period.

3. It was found that more than half of the female respondents (64.7%) responded that they had demanded but not received a refund. Also, 78.8% of study participants believe that if a complaint were filed against them, they are confident that management will not support them. The share of doctors, 49.5%, believes that if they suffered financial losses during the investigative process, it should be possible to file a claim for compensation of lost earnings or legal costs ($p = 0.030$). Additionally, statistically significant differences were found ($p=0.059$), namely that 50% of healthcare workers sometimes experience bad mood, feelings of depression or hopelessness, which have ever been subject to an informal complaint/formal complaint from patients or their relatives. In general, medical workers have a very positive attitude towards the introduction of a professional liability insurance system for medical workers in the Republic of Kazakhstan.

4. A mechanism was developed to improve the professional liability insurance system for medical workers in the Republic of Kazakhstan, which covers a set of organizational activities provided by an interprofessional team. The results of implementing the mechanism can be considered satisfactory, and the mechanism itself can be proposed for replication.

Practical recommendations

1. The identified increase in indicators of medical offenses demonstrates the importance of implementing a mandatory system of professional liability insurance for medical workers, thereby contributing to the development of defensive medicine through the prism of improving expert activities, further developing the institution of mediation for resolving medical disputes, as the most accessible and effective way of pre-trial conflict resolution.

2. It is necessary to ensure that, at the legislative level, the management of healthcare organizations facilitates the provision of legal assistance to their medical workers during legal proceedings on issues related to employee liability.

3. It is recommended at the legislative level to review complaints from a medical organization with the involvement of the internal audit service and specialized medical associations using elements of mediation.

4. It is necessary to ensure the opportunity to file a claim for compensation of lost wages or financial costs for legal services in case if a medical worker is acquitted, but during the investigative process suffered financial losses.

5. It is recommended to implement methodological recommendations that present the basic requirements for changing the safety culture in medical organizations, taking into account reporting and principles of training related to medical incidents, based on best international experience.

6. It would be appropriate to involve clinical psychologists to provide physical and psychological comfort of patients and medical workers during and after trials. This will make it possible to promptly identify and solve psychological problems, including

depression, as well as provide social support to those who need it.

7. In order to increase the motivation of interprofessional team members, involved in the implementation of methodological recommendations and the mechanism of the professional liability insurance system for medical workers, it is necessary to use a set of measures, which may include remuneration based on the KPI system, review and/or redistribution of the workload on medical personnel, non-material methods of encouragement, as well as other motivational tools for healthcare managers.

8. Conduct awareness-raising work among medical representatives community, patient representatives and discuss the proposed changes with all stakeholders and take into account their views.

Approbation of the dissertation

The main provisions of the dissertation were presented at:

The research materials were presented at the following conferences: international scientific and practical conference of students and young scientists "Insurance medicine. Science. Education" 12/21/22/2020, Nur-Sultan, RK, 14th European Public Health Conference "The Future of Public Health in a Changing World", November 10-12, 2021, Brussels, interdisciplinary conference of young people scientists "COVID-19. Clinic. Diagnostics. Treatment. Prevention" February 24, 2021, Nur-Sultan, Republic of Kazakhstan, international scientific conference of students and young scientists "FARABI ALEMI" April 6-8, 2021, Almaty, Republic of Kazakhstan, 75th international scientific and practical conference of students medical universities and young scientists "MODERN MEDICINE AND PHARMACEUTICAL: NEW APPROACHES AND CURRENT RESEARCH" May 18, 2021, Samarkand, Uzbekistan, international scientific and practical conference: "KAZAKHSTAN MAIN DIRECTIONS OF DEVELOPMENT: PAST, PRESENT, FUTURE", V international conference: "YOUTH AND SCIENCE: NEW TRENDS OF INDEPENDENCE", international scientific and practical forum "High technologies in modern surgery" 2023 May 17-18, 2023, Kazan, Russian Federation.

Publications on the topic of the dissertation

Based on the materials of the dissertation research, 13 scientific works were published, of which 3 articles were published in scientific publications recommended by the Committee for Ensuring Control in the Sphere of Education and Science of the Republic of Kazakhstan; including 3 publications in journals indexed by Scopus databases, where 2 articles were published in the International Journal of Healthcare Management, which at the time of publication of the article had an 84th percentile; 8 theses were published in the proceedings of International scientific conferences. 4 certificates of state registration of rights to the copyrighted object of the Republic of Kazakhstan were received.

Author's personal contribution

The author of the study made a direct contribution to the conceptualization of the study, the formulation of its goals, objectives and program development, collected and analytically processed the primary material, and also independently performed all types of statistical analysis. In addition, the author personally described the results of the dissertation research, developing its main provisions, conclusion, conclusions and practical recommendations.

Implementation of research results

Based on the results of the study, methodological recommendations were developed “Methodological recommendations for practical healthcare organizations on the implementation of a system of recording and analysis of incidents in order to improve patient safety,” which presents the basic requirements for changing the safety culture in medical organizations, taking into account the recording and analysis of medical incidents together with self-assessment checklist based on best international experience (WHO, Eurostat). The methodological recommendations were discussed and approved at a meeting of the Expert Council of the RSE at the National Research Center for Healthcare Development of the Ministry of Health of the Republic of Kazakhstan (minutes of the meeting of the Department for the Development of Education and Science of the RSE at the NSCHR No. 325 dated June 27, 2022).

Practical recommendations of the dissertation research were introduced into the practice in the Medical Center Hospital of the President’s affairs Administration of the Republic of Kazakhstan, Astana. Acts of introducing the results of research work into the activities of practical healthcare organizations.

Scope and structure of the dissertation

The dissertation consists of an introduction, 3 sections, a conclusion, conclusions, practical recommendations, and a list of references, including 122 references. The dissertation is presented on 109 pages of typewritten text, illustrated with 23 tables, 8 figures, and contains 4 appendices.