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Policy Brief

Study of the effectiveness of implementing clinical protocols in medical organizations: Conclusions and practical recommendations

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Abstract / Key Findings

This article analyzes the challenges of implementing clinical protocols (CP) in the healthcare system of Kazakhstan and proposes practical recommendations for addressing these issues. Key barriers have been identified based on the research conducted, such as inadequate awareness among healthcare workers, lack of motivation, and resource limitations. The authors suggest measures to enhance the effectiveness of CP implementation, including the development and introduction of indicators, the organization of continuous medical education, and a systematic monitoring system for introducing CPs into practice. The proposed recommendations can be used to develop healthcare policy and improve the practical activities of medical organizations.

What is the problem?

CPs in the Republic of Kazakhstan are systematic sets of evidence-based medicine recommendations aimed at standardizing diagnostic and therapeutic processes. Their use is driven by the need to improve the quality and safety of medical care. Regular updates of CPs in line with international standards help reduce the risk of complications and mortality, optimize the use of medical resources, and enhance patient satisfaction.

Although CPs are an important tool for standardizing medical care and improving its quality and safety, their implementation in Kazakhstan faces several challenges: insufficient awareness among healthcare workers, lack of a unified monitoring system, inadequate resource support, outdated and inaccessible CPs, lack of a motivation system to encourage healthcare workers to use CPs and organizational barriers.

Policy Options

Option 1: Provide comprehensive training for specialists of various profiles to ensure the successful development, implementation, and evaluation of CPs.

Option 2: Develop and implement a system of indicators to assess CP development, implementation, and evaluation processes.

Option 3: Ensure the systematic monitoring of CP implementation.

Vision for Policy Scenario Implementation

All 3 policy options are closely interconnected and complement each other. Training specialists will build the human resources needed for the development and implementation of CPs. The system of indicators will objectively assess the effectiveness of the actions taken. Systematic monitoring will allow for the rapid identification and resolution of emerging issues. Together, these measures will lead to the following outcomes: improved quality of medical care, optimized resource use, increased prestige for healthcare workers, enhanced patient satisfaction, and strengthened international cooperation.

Keywords: *clinical protocols, clinical guidelines, indicators, standardization, evidence-based medicine, implementation of recommendations, monitoring.*

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Introduction

The modern healthcare system faces several complex challenges, including ensuring the timeliness and quality of medical care, optimizing resource management, and adapting to rapidly developing information technologies.

The implementation of clinical protocols and guidelines into healthcare practice faces numerous barriers that vary depending on the country, context, and specific medical area. In some developing countries, healthcare workers may lack access to quality educational resources and up-to-date information. In developed countries, despite the availability of clinical guidelines, physicians may be overloaded with information and lack the time to study them. Medical organization (hereinafter referred to as MO) leaders may not attach sufficient importance to the implementation of clinical protocols or fail to provide the necessary resources. In addition, there is resistance to change on the part of healthcare workers, associated with both insufficient knowledge of the basics of evidence-based medicine and lack of motivation. In many countries, there are no clear mechanisms for updating and disseminating clinical guidelines, and there may be no system for monitoring and evaluating the effectiveness of their implementation [1,2].

Some foreign authors in their studies consider the main barriers to the implementation of clinical guidelines to be the lack of sufficient awareness of health workers; cultural characteristics, traditions, and social norms, especially if they contradict established ideas about medical practice and economic factors, since the development and updating of clinical guidelines require significant financial costs and additional costs for equipment and personnel training [3,4]. The search for approaches to the implementation of key positions of clinical guidelines in routine practice, the identification and elimination of barriers to the use of evidence-based medical interventions is carried out by implementation science [5], which studies methods that facilitate the systematic implementation of research results and other evidence-based practices in everyday practice, and therefore, improving the quality and effectiveness of medical services. The value of using implementation science is to identify barriers affecting the use of recommended interventions in everyday practice, the development of individual concepts for their elimination, and the testing of selected implementation strategies to assess the success of implementation [6].

Thus, the implementation of clinical protocols is a complex multifactorial process that requires an integrated approach. To successfully solve this problem, it is necessary to use implementation research methods, as well as take into account both international experience and the specific features of our country.

Description of the problem

According to numerous international studies, the process of implementing clinical guidelines developed based on the principles of evidence-based medicine is complex and multi-stage. Even though such guidelines have a high potential for improving the quality of medical care and improving patient outcomes, their implementation often faces various barriers. Studies show that the active development of evidence-based medicine does not always lead to its widespread use in clinical practice [7-12].

In order for clinical guidelines to be truly useful, they must meet high-quality standards. This means that when developing them, it is necessary to carefully assess the reliability of the evidence, correlate potential benefits with risks, and take into account individual patient characteristics and economic aspects. In addition, the recommendations must be applicable in real clinical settings [8,13].

The review of sources revealed that implementing clinical guidelines based on the principles of Evidence-Based Medicine (EBM) is a complex challenge globally. Additionally, the adoption of these guidelines by healthcare professionals in clinical practice is still not at an adequately high level [14].

The key barriers to the implementation of CP are poor integration between health care organizations, lack of resources, lack of education, time and incentives for physicians, organizational, logistical, and financial problems in health care organizations, insufficient communication skills of health care workers and the ability of physicians to identify barriers and facilitators to implementation [1-4,15-17].

In the Republic of Kazakhstan, the concept of «standardization» of the quality of medical care was first regulated by the Law of the Republic of Kazakhstan dated June 4, 2003, N 430 «On the healthcare system» [18], and then by the Decree of the President of the Republic of Kazakhstan dated September 13, 2004, No.1438 in the State Program for Reform and Development of Healthcare of the Republic of Kazakhstan for 2005-2010, one of the priority tasks of managing the quality of medical care was defined as improving the protocols for diagnosing and treating diseases at all levels of providing medical care [19]. Over the past two decades, systematic work has been carried out to develop and approve protocols for diagnosing and treating. Today, paragraph 3 of Article 115 of the Code of the Republic of Kazakhstan «On public health and the healthcare system» regulates that healthcare entities provide medical care following the standards for organizing the provision of medical care, the rules for providing medical care, and are also guided by clinical protocols. A clinical protocol is a scientifically proven recommendation for prevention, diagnosis, treatment, medical rehabilitation, and palliative care for a specific disease or patient condition [20].

To assess the effectiveness of the use of CP, the order of the Ministry of Health of the Republic of Kazakhstan dated November 12, 2020, No.КР ДСМ-189/2020 «On approval of the methodology for the implementation and effectiveness of the implementation of clinical protocols in practical healthcare» was approved, which describes the algorithm of action of each link for the successful implementation of CP in practical medicine [21]. Since the introduction of CP into clinical activities, systematic monitoring of the implementation has not been carried out. For the first time in Kazakhstan in 2023, monitoring of the implementation of clinical protocols in medical organizations was carried out covering all regions of the country to assess how effectively the protocols are communicated to doctors and used in everyday practice [22].

Factors underlying the problem

Despite the fact that clinical protocols allow for standardizing medical care, improving its quality and efficiency, and rationally using healthcare resources, the implementation and application of clinical protocols in everyday practice often encounter barriers of various kinds.

In 2023, monitoring of the implementation of clinical protocol recommendations (hereinafter referred to as Monitoring) was carried out in medical organizations of all regions of Kazakhstan through a survey, questionnaires of specialized doctors and heads of medical organizations, a study of the work of the internal audit service of the medical organization, a selective analysis of medical records, which made it possible to identify barriers that hinder the effective use of clinical protocols in clinical practice in Kazakhstan.

For monitoring, a sample of clinical protocols was selected from among those relevant for 2019–2023. A selection of 33 clinical protocols was carried out in the context of 15 profiles for monitoring (Table 1).

20 regions of the Republic of Kazakhstan participated in the Monitoring, with the involvement of 60 medical organizations of 3 levels (regional, city, and district) in providing medical care in the context of each region.

Table 1 - List of profiles and nosologies for monitoring the CP

№	Profile	Title of Clinical Protocol
1	Obstetrics and gynecology	1) Medical abortion 2) Hypertensive conditions during pregnancy
2	Gastroenterology	1) Chronic hepatitis C 2) Ulcerative colitis
3	Hematology	1) Adult T-cell lymphomas 2) Adult mantle cell lymphoma
4	Cardiology	1) Pulmonary embolism 2) Chronic heart failure
5	Neurology	1) Cerebral venous thrombosis 2) Multiple sclerosis
6	Neurosurgery	1) Arteriovenous malformations of the brain 2) Congenital spina bifida
7	Neonatology	1) Neonatal resuscitation 2) Low birth weight infant care
8	Nephrology	1) Chronic kidney disease in adults 2) Thrombotic microangiopathies: typical and atypical hemolytic uremic syndromes
9	Oncology	1) Malignant neoplasms of the rectum 2) Lung cancer 3) Breast cancer 4) Cervical cancer
10	Ophthalmology	1) Diabetic retinopathy 2) Retinal detachment and breaks
11	Pulmonology	1) Community-acquired pneumonia in adults 2) Chronic obstructive pulmonary disease 3) Bronchial asthma
12	Rheumatology	1) Systemic lupus erythematosus 2) Ankylosing spondylitis
13	Traumatology and orthopedics	1) Shoulder fracture 2) Femoral fracture
14	Surgery	1) Esophageal variceal bleeding 2) Skin abscess, furuncle and carbuncle of other localizations
15	Endocrinology	1) Type 2 diabetes mellitus 2) Morbid obesity. Metabolic syndrome

Based on the results of the Monitoring in medical organizations, a number of barriers were identified, which were divided into two categories: internal and external.

The primary ones were external barriers associated with insufficient material and technical equipment, drug provision and availability, incomplete staffing of medical personnel, and imperfection of the CP.

Along with external barriers, internal barriers were identified as associated with a lack of awareness, ignorance, or low commitment of doctors to implement the recommendations of the CP and a lack of additional education.

The barriers that impede the implementation of the CP in practice can be conditionally distributed taking into account the levels of medical care (Figures 1-3).

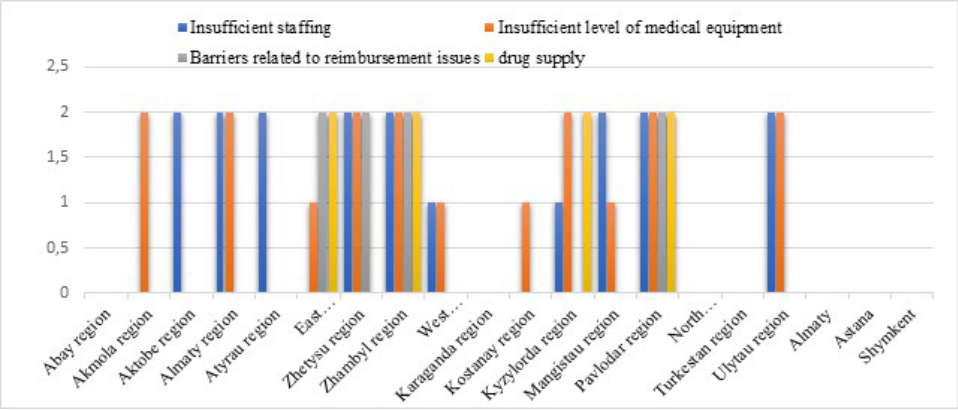

Figure 1 - Barriers to medical care provision at the regional level (in hospital settings)

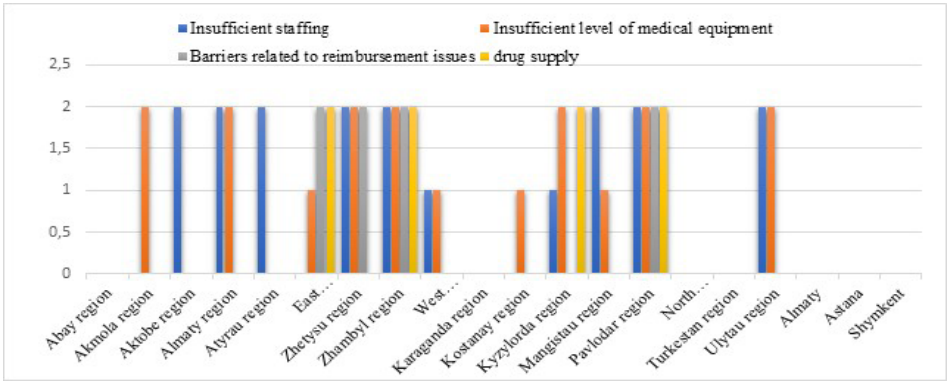

Figure 2 - Barriers at the city level of providing medical care (in outpatient, inpatient, and inpatient-replacing conditions)

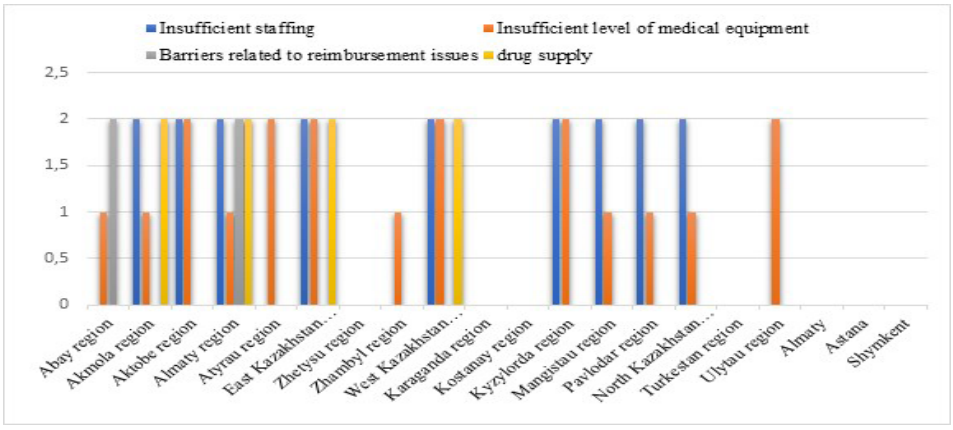

Figure 3 - Barriers at the district level to the provision of medical care (in outpatient, inpatient, and inpatient-replacing conditions)

The results of the analysis of the reasons for non-compliance with clinical protocols indicate the need for a systematic approach to solving this problem. In addition to individual patient characteristics, such as drug intolerance and concomitant pathology, organizational factors associated with providing medical organizations with the necessary resources have a significant impact. 54,06% of respondents highly rated the need to implement and monitor clinical protocols based on the principles of Evidence-based medicine (Figure 4).

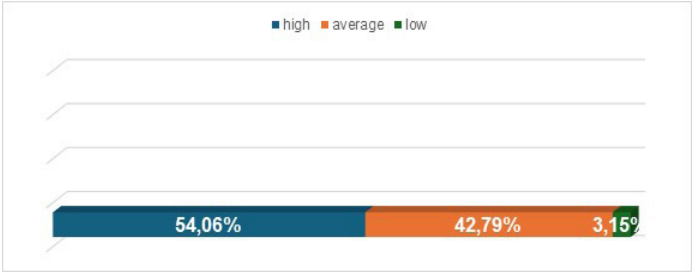

Figure 4 - The need to implement the CP

The data obtained during the survey indicate the need for additional activities aimed at raising awareness among healthcare workers about the importance of implementing and monitoring clinical protocols based on the principles of evidence-based medicine. This is evidenced by the relatively low ratings (42,79% - average rating, 3,15% - low rating) from respondents.

The survey results indicate that clinical protocols have significant potential as a tool for supporting medical decision-making, although they need further development and adaptation to fit the specific contexts of medical practice. According to 91,46% of respondents, clinical protocols assist doctors in making clinical decisions, while 8,54% hold the opposing view.

The survey results indicate the need to improve the system of using clinical protocols. The identified problems include insufficient relevance of clinical protocols (49,18%), limited availability of the methods recommended in them (7,33%), as well as other factors indicated by 40,72% of respondents. In addition, 2,77% of respondents noted the lack of access to clinical protocols (Figure 5).

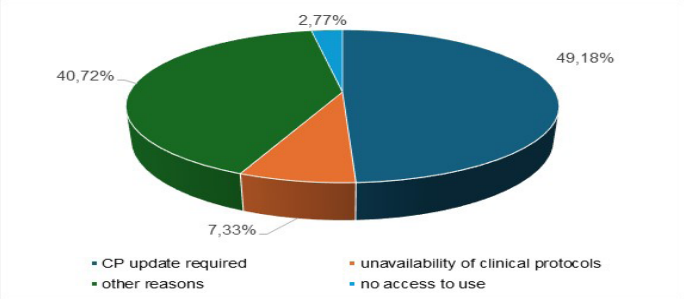

Figure 5 - Reasons for the irrelevance of the CP

According to the survey data, almost a quarter of the heads of medical organizations (21,8%) reported the absence of both formal and informal educational activities for medical personnel, which indicates the scale of the problem.

An analysis of the needs of the heads of medical organizations showed that the most popular formats for training medical personnel in the principles of using clinical protocols are face-to-face seminars (52,88%), distance learning courses (32,69%), and standard training programs for the postgraduate education system (14,42%). In general, 77,31% of the surveyed managers noted the need to organize such events.

For successful monitoring of the implementation of clinical protocols into practice, not only external but also internal monitoring of the clinical protocol is necessary, in this regard, an important role is assigned to a specialist responsible for the implementation of clinical protocols in a medical organization. However, 12,71% of the surveyed managers indicated the absence of such a position in their organizations. The appointment of a specialist responsible for the implementation of clinical protocols is a necessary but not sufficient condition. To ensure the successful implementation of clinical protocols, targeted training of specialists in the field of evidence-based medicine and clinical protocols is required. This will improve the quality and efficiency of using clinical protocols in medical practice.

In addition, the survey results indicate the need to improve the system for assessing the use of clinical protocols, including through the introduction of mechanisms for regular feedback between medical personnel and administration.

Taking into account all of the above barriers, including limited material and human resources, drug supply, and training, addressing issues of ensuring the availability and quality of medical services (assistance) for the population at the regional level remains relevant and requires the adoption of systemic measures.

Three options to solve the problem

Option 1. Offering comprehensive training for specialists across various fields to effectively develop, implement, and evaluate clinical protocols.

Providing comprehensive training for specialists in various fields to successfully implement the process of developing, implementing, and evaluating clinical protocols is one of the most pressing issues in modern medicine. The need for such training is due to the ever-growing volume of medical knowledge, the development of new technologies, and increasing demands on the quality of medical care. The lack of proper training of specialists can lead to many problems, such as inefficient use of resources, low quality of medical care, slower implementation of innovations, and, as a result, decreased patient satisfaction [23].

The main reasons for this problem are:

-rapid development of medical science: the emergence of new diagnostic and therapeutic methods requires constant updating of specialists' knowledge;

-the complexity of clinical protocols: modern protocols are often multifactorial and require a deep understanding of various aspects of the disease;

-lack of uniform training standards: existing systems for training specialists do not always provide a sufficient level of knowledge and skills for working with clinical protocols;

-insufficient motivation of specialists: lack of incentives for continuous professional development can reduce the effectiveness of training [1-4, 24-26].

In addition, in the studies of foreign authors, great importance is attached to the inclusion of the issue of studying clinical guidelines in educational programs [27].

In foreign studies devoted to the implementation of clinical guidelines, the inclusion of patient representatives in clinical guideline development groups, which is a necessary condition for ensuring a patient-centered approach, is a separate issue. The GRADE methodology, widely used in the development of recommendations, emphasizes the importance of taking into account the values and preferences of patients when determining outcome priorities, identifying trade-offs, and formulating recommendations [28, 29]. Accordingly, systematic training of specialists interacting with patient representatives is a key factor in the successful inclusion of patient preferences in the development of clinical guidelines. Studies demonstrate that preliminary training contributes to a deeper understanding of the needs and values of patients [30].

Based on this to solve the above problem, it is necessary to take the following steps:

-development and implementation of effective educational programs that should be adapted to the needs of various categories of specialists and cover all stages of working with clinical protocols - from development to evaluation of implementation;

- the integration of modern educational technologies, such as online courses, simulation models, and interactive training, makes training more accessible and effective;

-the creation of educational platforms, not only for posting CP but also for educational materials and self-assessment tools;

-stimulation of continuous professional development: introduction of regular advanced training in evidence-based medicine into professional standards;

-involvement of specialists in the process of protocol development, which will increase their level of involvement and motivation to apply new knowledge in practice;

-creation of communities of practicing EDM doctors for the exchange of experience and knowledge between colleagues, contributing to the improvement of the level of professionalism;

-development, implementation, and evaluation of the effectiveness of educational programs for systematic and step-by-step training of all levels of education (bachelor's degree - master's degree - residency (doctoral studies));

-development of educational programs for specialists interacting with patient representatives.

Thus, ensuring comprehensive training of specialists is a key factor in the successful implementation and use of clinical protocols in medical practice. An integrated approach, including the development of effective educational programs, the use of modern technologies, and the creation of a stimulating environment, will improve the quality of medical care and patient satisfaction.

Policy Option 2. Develop and implement a system of indicators for the process of developing, implementing, and evaluating clinical protocols.

The development and implementation of a system of indicators that allows for an objective assessment of the effectiveness of the processes of creating, implementing, and evaluating clinical protocols is a pressing issue for modern medicine. Such a system allows not only to monitor the compliance of protocols with modern scientific data but also to identify bottlenecks in the process of their development and implementation, as well as to assess their impact on the quality of medical care [31-33].

Considerable experience in the development and application of such indicator systems has been accumulated in global practice. Many countries, including the United States, Great Britain, Canada, and the European Union, have developed and implemented their systems for evaluating clinical protocols. These systems typically include a wide range of indicators covering all stages of the protocol life cycle: from development to effectiveness assessment.

The US Agency for Healthcare Research and Quality (AHRQ) has developed some tools for assessing the quality of clinical guidelines, including the AGREE II tool, which allows for assessing the transparency, validity, and applicability of guidelines [34,35]. According to the definition of the process of developing indicators with qualitative indicators, AHRQ QI includes 4 stages:

1. Indicator development (definition of the indicator application area, literature review, evidence-based synthesis);

2. Implementation of a new indicator (input of the indicator into the software, testing, development of user documentation);

3. Maintenance of current indicator values (updating technical specifications, periodic review with the introduction of new data and methodological developments);

4. Periodic verification of the relevance of indicators and, if necessary, removal of irrelevant information [36].

As part of the AHRQ QI project, the system for including new indicators, removing irrelevant indicators, codes, new indicator models with updated estimates of adjustment parameters, etc. is annually updated and improved.

The UK National Health Service (NHS) actively uses the indicator system to monitor the implementation of clinical protocols in practice. Particular attention is paid to assessing the impact of protocols on patient treatment outcomes [37].

The Canadian Institute of Primary Health Care (CIHI) develops and disseminates national clinical guidelines and related tools for their assessment [38].

One of the key features of modern indicator systems is their focus on data. Indicators allow for quantitative assessment of various aspects of the process of developing, implementing, and evaluating protocols, such as:

-the degree of involvement of patients and other stakeholders in the development process;

-the quality of the evidence base underlying the protocol;

-clarity and precision of the wording of recommendations;

-the degree of implementation of protocols in clinical practice;

-the impact of protocols on treatment outcomes.

It is important to note that the creation and implementation of an indicator system is a complex and multi-stage process that requires the participation of a wide range of specialists, including not only specialized specialists, but also methodologists, programmers, and healthcare organizers.

Thus, international experience demonstrates the importance and effectiveness of using indicator systems to assess the quality of clinical protocols. The development and implementation of a similar system in the Republic of Kazakhstan will significantly improve the quality of medical care.

Policy option 3. Ensuring systematic monitoring of the implementation of clinical protocols.

The problem of systematic monitoring of the implementation of clinical protocols is the need for an objective assessment of the effectiveness and efficiency of the developed protocols in real clinical practice. The absence of such monitoring can lead to inefficient use of resources, delays in the implementation of innovations, and, ultimately, a decrease in the quality of medical care.

There is a significant variation in approaches to monitoring the implementation of clinical protocols in global practice. Many countries have developed their monitoring systems, but there is no single standard yet. Monitoring is often carried out at the level of individual medical organizations or regions, which complicates comparative analysis and the development of general recommendations (Table 2) [37-41].

Table 2 - Clinical Guideline Monitoring Systems

Category	Examples of countries/regions	Characteristics
Level of centralization	Brazil, Singapore	National level, strong state support
Data sources	USA, Canada	Electronic medical records, clinical registries
Tools and technologies	South Korea, Israel	Using artificial intelligence, mobile applications
Performance indicators	Australia, New Zealand	Focus on clinical outcomes, long-term results

The main problems faced by monitoring systems are:

-lack of uniform standards, and diversity of approaches makes it difficult to compare monitoring results and develop common recommendations;

-insufficient funding, limiting the scale and depth of monitoring studies;

-lack of motivation of health workers to participate in monitoring studies;

-complexity of data collection and analysis, as it is a labor-intensive and resource-intensive process.

To solve these problems, it is necessary to develop uniform standards for collecting, analyzing, and presenting data on the implementation of clinical protocols. The creation of specialized information systems will automate the collection and analysis of data, as well as ensure the availability of information for all stakeholders, and the creation of international (intercountry) collaborations for the exchange of experience and knowledge in the field of monitoring will speed up the process of implementing best practices. It is necessary to develop a system of motivation of health workers to participate in monitoring studies, to determine key indicators that allow assessing the effectiveness of the implementation of clinical protocols.

Thus, systematic monitoring of the implementation of clinical protocols is a prerequisite for improving the quality of medical care. To address the existing problems, it is necessary to develop uniform standards, create information systems, stimulate the participation of health workers, and define key performance indicators. The implementation of these measures will ensure more effective use of clinical protocols and improve patient outcomes.

Vision for the implementation of three policy options

Potential barriers to policy option 1. Despite the obvious importance of training for the successful implementation of clinical guidelines, there may be various barriers to implementing this policy:

1) Lack of funding: developing and implementing training programs requires significant financial investment, especially in purchasing licenses for educational materials, paying teachers, and organizing training events;

2) Time constraints: distracting health care workers from their immediate work to participate in training events may negatively impact the provision of medical care;

3) Resistance to change: health care workers may resist change and new ways of working, which may prevent them from participating in training programs;

4) Lack of motivation: lack of material or non-material incentives for participation in training may reduce the motivation of healthcare workers, as well as a lack of understanding of the importance of continuous professional development;

5) Lack of uniform training standards may lead to disunity in educational programs and make it difficult to evaluate their effectiveness, and the developed programs may not meet the current needs of medical practice;

6) the difficulty in developing objective criteria for assessing the effectiveness of educational programs and their impact on the quality of medical care, and assessing the effectiveness of training can take a long time, which complicates the prompt adjustment of educational programs;

7) the rapid pace of development of medical science requires constant updating of educational programs, which can be a resource-intensive process.

Potential barriers to policy option 2. Development and implementation of a system of indicators for the process of development, implementation, and evaluation of clinical protocols are aimed at improving the quality and effectiveness of the use of clinical protocols in medical practice. The importance of such a system is beyond doubt, but its implementation is associated with several difficulties:

1) lack of a common understanding of indicators: not all healthcare professionals and organizations may have the same understanding of which indicators should be used and how to interpret them. This may lead to different interpretations and a decrease in the effectiveness of the system;

2) difficulty in developing indicators (creating valid and reliable indicators requires deep knowledge in the field of evidence-based medicine, statistics, and research methodology);

3) lack of data: to assess the effectiveness of clinical protocols, high-quality and complete data are needed, which may be absent in medical institutions;

4) resource constraints: The development and implementation of a system of indicators requires significant financial and time costs.

5) resistance to change: some healthcare professionals may resist the introduction of new systems and procedures, which may slow down the process;

6) lack of integration with existing information systems: the new indicator system should be compatible with existing data collection and processing systems;

7) lack of motivation: lack of clear incentives for health workers may reduce their interest in participating in the data collection and analysis process.

Potential barriers to policy option 3. Policy option 3 aims to address an important issue in the healthcare sector – ensuring systematic monitoring of the implementation of clinical protocols. However, like any large-scale initiative, it may face many obstacles:

1) lack of uniform standards: different countries use different methodologies and tools for monitoring, which complicates comparative analysis and exchange of experience, which leads to the fact that data collected in different places cannot be easily compared and aggregated; any internationally recognized monitoring tools must be adapted to local conditions;

2) lack of resources: financial (to develop and maintain the monitoring system) and personnel (attracting qualified specialists to develop, implement and analyze the system);

3) resistance to change: health care organizations often resist the introduction of new methods of work, and healthcare workers often do not perceive the connection between monitoring and improving the quality of their work;

4) technical difficulties: the new monitoring system must be compatible with existing information systems in the health care organization, high-quality and complete data for analysis may not always be available.

Potential opportunities for implementing Policy Option 1. Considering the unique features of the healthcare system of Kazakhstan: geographic dispersion, diversity of medical resources (from midwifery stations to research centers), digitalization of medical services, qualified medical personnel, existing legal acts governing the activities of the healthcare sector, and methodological structured support in the healthcare system represented by the NRCHD of the Ministry of Health of the Republic of Kazakhstan, potential opportunities for implementing policy 1 are:

• development of a national platform for continuous medical education on EBM and CP (for access to educational materials, webinars, simulation training);

• personalization of training taking into account the specialization, experience, and needs of each healthcare worker (taking into account the industry qualifications framework) and integration with existing e-health systems (Resource Management System) to track progress and certification;

• within the framework of the creation of regional and national competence centers for conducting educational events (seminars, master classes, internships) on EBM, implementation and monitoring of CP;

• attracting key freelance employees of the Ministry of Health of the RK and experts from foreign countries;

• developing a motivation system for participation in educational programs (financial, professional, flexible training formats);

• developing a unified educational program for EBM and CP and introducing a system of effectiveness of educational programs (developing a system of indicators for assessing effectiveness, monitoring, and analyzing learning results);

• introducing new educational technologies into the educational process;

• enhancing the role of professional communities;

• organizing conferences, symposia, and other events for the exchange of experience.

Potential opportunities for implementing Policy Option 2. For the successful implementation of policy option 2, it is necessary to take into account the specifics of the national healthcare system and existing challenges. For successful implementation of the indicator system for monitoring clinical protocols, a comprehensive approach is needed:

• development of a national concept (definition of goals and objectives of the indicator system, definition of key indicators and data sources for monitoring indicators, creation of mechanisms for collecting, analyzing, and presenting data, creation of methodological materials and guidelines);

• selection and adaptation of existing internationally approved tools for assessing the quality of clinical protocols (AGREE II, etc.);

• creation of an information system (development of software for collecting, storing, and analyzing data on clinical protocols and their effectiveness) and its integration with existing information systems;

• personnel training (conducting training for healthcare workers, protocol developers, and analysts on the use of the indicator system);

• ensuring continuous support and development of the indicator monitoring system.

Potential for the implementation of Policy 3. The analysis of the potential for the implementation of Policy 3 demonstrates a significant overlap of the necessary measures with those proposed for the implementation of Policy 2 (development of a national monitoring concept, software for collecting, storing, and analyzing data, integrating the system with existing information systems, ensuring compatibility with international standards and using adapted international standards, training personnel), which indicates a complementary effect that can be achieved through the joint implementation of these policies. The key aspects of the successful implementation of Policy 3 are active participation of all stakeholders (MO, health departments, health education organizations, professional associations), regular assessment of the effectiveness of the monitoring system and making appropriate adjustments, effective communication between all participants in the process, the use of modern technologies (artificial intelligence, machine learning).

Conclusions

The analysis of the proposed policies for the implementation of the CP – training of specialists, development of a system of indicators, and creation of a monitoring system allow us to conclude that they are closely interconnected and have a synergistic effect when implemented together.

Quality, systematic, logical training of all participants in the CP system, from developers to implementers, helps to increase the motivation of health workers to use protocols and participate in monitoring their effectiveness, providing the necessary knowledge and skills base for the development, implementation, and evaluation of the CP.

The indicators, in turn, allow us to evaluate the effectiveness of training and implementation of the CP, help to identify strengths and weaknesses in the implementation of protocols, and adjust educational programs.

Monitoring the implementation of the CP provides feedback for improving both the protocols themselves and educational programs. Monitoring data allows us to identify areas that require additional training or clarification of protocols.

The advantage of the joint implementation of these three policies is an improvement in the quality of medical care since an integrated approach allows for more effective implementation of the CP and improves patient treatment outcomes; optimization of resource use (optimization of training costs, protocol development and implementation), increasing the transparency and accountability of the MO, stimulating scientific research and development of new protocols.

To implement a unified strategy, it is necessary to create a unified information system that will allow collecting, storing, and analyzing data on the implementation of the CP, and training all participants in the process. To achieve maximum effect, it is necessary to ensure close interaction of all stakeholders: government agencies, medical organizations, and educational organizations in the field of healthcare, scientific organizations, and professional communities. This will create an effective system for managing the quality of medical care in Kazakhstan, which will improve the quality of medical care, optimize the use of resources, and increase patient satisfaction.

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Медициналық ұйымдарда клиникалық хаттамаларды енгізу тиімділігін зерттеу: Қорытындылар және тәжірибелік ұсыныстар

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Түйіндеме/Түйінді ойлар

Мақала Қазақстандық денсаулық сақтау тәжірибесіне клиникалық хаттамаларды (КХ) енгізу мәселелерін талдауға және оларды шешу бойынша тәжірибелік ұсыныстар әзірлеуге арналған. Зерттеу негізінде медицина қызметкерлері арасында хабардарлықтың жоқтығы, мотивацияның жоқтығы және ресурстардың шектелуі сияқты негізгі кедергілер анықталды. Авторлар КХ-ларды енгізу тиімділігін арттыру бойынша шаралар кешенін ұсынады, оның ішінде индикаторларды әзірлеу және енгізу, үздіксіз медициналық білім беруді ұйымдастыру және практикалық денсаулық сақтауда КХ-ларды енгізудің жүйелі мониторингі. Ұсынылған ұсыныстар денсаулық сақтау саласындағы мемлекеттік саясатты әзірлеу және медициналық ұйымдардың практикалық қызметін жақсарту үшін пайдаланылуы мүмкін.

Мәселе неде?

Қазақстан Республикасында КХ-лар диагностикалық және емдеу процестерін стандарттауға бағытталған дәлелді медицина негізіндегі ұсынымдардың жүйеленген жиынтығы болып табылады. Оларды қолдану медициналық көмектің сапасы мен қауіпсіздігін арттыру қажеттілігінен туындайды. Халықаралық стандарттарға сәйкес КХ-ны жүйелі түрде жаңарту асқынулар мен өлім қаупін азайтуға, медициналық ресурстарды пайдалануды оңтайландыруға және науқастардың қанағаттануын арттыруға көмектеседі.

КХ-лар медициналық көмекті стандарттау, оның сапасы мен қауіпсіздігін арттырудың маңызды құралы болып табылатынына қарамастан, оларды Қазақстанда енгізу бірқатар кедергілерге тап болады: медицина қызметкерлерінің КХ жөнінде хабардар болмауы, бірыңғай бақылау жүйесінің болмауы, ресурстардың жеткіліксіздігі, КХ-ның өзекті еместігі және хаттамалардың жеткіліксіз болуы, клиникалық хаттамаларды қолдатын медицина қызметкерлерін ынталандыру жүйесінің болмауы, ұйымдастырушылық кедергілер.

Саясат нұсқалары

1-ші нұсқа. КХ-ларды әзірлеу, енгізу және бағалау процесін сәтті жүзеге асыру үшін әртүрлі салалардағы мамандарды кешенді оқытуды қамтамасыз ету.

2-ші нұсқа. КХ-ларды әзірлеу, енгізу және бағалау үдерісі үшін көрсеткіштер жүйесін әзірлеу және енгізу.

3-ші нұсқа. КХ-лардың орындалуын жүйелі бақылауды қамтамасыз ету.

Саясат нұсқаларын іске асыру туралы көзқарас

Барлық 3 саясат нұсқасы бір-бірімен тығыз байланысты және бірін-бірі толықтырады. Мамандарды даярлау КХ-ларды әзірлеу және енгізу үшін кадрлық ресурстарды құруға мүмкіндік береді. Көрсеткіштер жүйесі жүргізіліп жатқан іс-шаралардың тиімділігін объективті бағалауды қамтамасыз етеді. Ал жүйелі мониторинг туындайтын мәселелерді жылдам анықтауға және жоюға мүмкіндік береді. Бұл келесі нәтижелерге қол жеткізуге көмектеседі: медициналық көмектің сапасын арттыру, ресурстарды пайдалануды оңтайландыру, медицина қызметкерлерінің беделін арттыру, науқастардың қанағаттануын арттыру, халықаралық ынтымақтастықты нығайту.

Түйін сөздер: *клиникалық хаттамалар, клиникалық нұсқаулар, көрсеткіштер, стандарттау, дәлелді медицина, ұсынымдарды енгізу, мониторинг.*

Изучение эффективности внедрения клинических протоколов в медицинских организациях: Выводы и практические рекомендации

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Резюме/Ключевые положения

Статья посвящена анализу проблем внедрения клинических протоколов (КП) в практику казахстанского здравоохранения и разработке практических рекомендаций для их решения. На основе проведенного исследования выявлены ключевые барьеры, такие как недостаточная осведомленность медицинских работников, отсутствие мотивации и ресурсные ограничения. Авторы предлагают комплекс мер для повышения эффективности внедрения КП, включая разработку и внедрение индикаторов, организацию непрерывного медицинского образования и системный мониторинг внедрения КП в практическом здравоохранении. Предложенные рекомендации могут быть использованы для разработки государственной политики в области здравоохранения и совершенствования практической деятельности медицинских организаций.

В чем заключается проблема?

КП в Республике Казахстан представляют собой систематизированные наборы рекомендаций, основанных на доказательной медицине, направленные на стандартизацию диагностических и лечебных процессов. Их применение обусловлено необходимостью повышения качества и безопасности медицинской помощи. Регулярное обновление КП в соответствии с международными стандартами способствует снижению риска осложнений и летальных исходов, оптимизации использования медицинских ресурсов и повышению удовлетворенности пациентов.

Несмотря на то, что КП являются важным инструментом для стандартизации медицинской помощи, повышения ее качества и безопасности, их внедрение в Казахстане сталкивается с рядом препятствий: недостаточная осведомленность медицинских работников, отсутствие единой системы мониторинга, недостаточное ресурсное обеспечение, неактуальность и недостаточная доступность КП, отсутствие системы мотивации для медицинских работников, стимулирующей использование КП и организационные барьеры.

Варианты политики

Вариант 1. Обеспечение всестороннего обучения специалистов различных профилей для успешной реализации процесса разработки, внедрения и оценки КП.

Вариант 2. Разработка и внедрение системы индикаторов процесса разработки, внедрения и оценки КП.

Вариант 3. Обеспечение проведения систематического мониторинга внедрения КП.

Видение по реализации сценариев/вариантов политики

Все 3 варианта политики тесно взаимосвязаны и дополняют друг друга. Обучение специалистов позволит создать кадровый потенциал для разработки и внедрения КП. Система индикаторов обеспечит объективную оценку эффективности проводимых мероприятий. А систематический мониторинг позволит оперативно выявлять и устранять возникающие проблемы. Это поможет достичь следующих результатов: повышение качества медицинской помощи, оптимизация использования ресурсов, повышение престижа медицинских работников, повышение удовлетворенности пациентов, укрепление международного сотрудничества.

Ключевые слова: *клинические протоколы, клинические руководства, индикаторы, стандартизация, доказательная медицина, внедрение рекомендаций, мониторинг.*