MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY STATE UNIVERSITY
ACADEMIC AND RESEARCH MEDICAL INSTITUTE

Eastern Ukrainian Medical Journal

2, M. Sumtsova st., Sumy 40007, Ukraine eumj.med.sumdu.edu.ua
e-mail: eumj@med.sumdu.edu.ua ISSN: 2663-5909 (print)/2664-4231 (online)

DOI: https://doi.org/10.21272/eumj.2023;11(2):171-177

ABSTRACT

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IMPROVEMENT OF THE MEDICAL CARE QUALITY MANAGEMENT MODEL BASED ON THE INTERNAL AUDIT MECHANISM IN THE HEALTHCARE FACILITY

Introduction. Internal audit aims to improve the processes and outcomes of medical services by systematically reviewing the components of medical care in terms of certain criteria and implementing changes where the service does not reach the expected level. Severization of requirements for HCF service quality and increasing competition in HCFs require the elaboration and implementation of dynamic continuous internal mechanisms, which will contribute to healthcare quality improvement, professional development of medical personnel, and the increased satisfaction of medical service consumers.

Objective: Elaboration of a medical and social internal audit mechanism in order to improve medical care quality at the level of a healthcare facility.

Materials and Methods. We used system analysis, meta-analysis, descriptive modeling, medical and sociological survey, statistical analysis, and logical generalization in the study. Data collection methods were: a survey and copying of data from the primary accounting and reporting documents.

Results. The study involved 226 patients with chronic noncommunicable diseases who were followed up at Sumy HCFs. The correspondence between the actual data in the outpatient medical records with the protocol's quality indicators was assessed. Internal audit of the subjects' satisfaction with medical services showed that they were sufficiently aware of the disease course, complication prevention, and the risks of non-compliance – 97% of patients confirmed that they received detailed information from their physician; however, they did not comply with the doctor's recommendations or complied poorly.

Conclusions. We registered subjects' poor compliance and unsatisfactory attitude towards the follow-up procedure. The development and implementation of the medical and social mechanism of internal audit contributed to the practical adoption of a management decision to ensure the continuous improvement of medical care quality for patients with chronic noncommunicable

diseases, namely additional behavioral approaches to increase the level of patients' compliance with the doctor's recommendations and their active involvement in follow-up control.

Keywords: medical care quality management system, quality of medical care, internal audit, quality control, healthcare facility.

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УДОСКОНАЛЕННЯ МОДЕЛІ УПРАВЛІННЯ ЯКОСТІ МЕДИЧНОЇ ДОПОМОГИ НА ОСНОВІ МЕХАНІЗМУ ВНУТРІШНЬОГО АУДИТУ В ЗАКЛАДІ ОХОРОНИ ЗДОРОВ'Я

Вступ. Внутрішній аудит спрямований на поліпшення процесів і результатів допомоги населенню через систематичний перегляд складових медичної допомоги в порівнянні з певними критеріями й впровадження змін там, де допомога або її результати не досягають очікуваного рівня. Зростання вимог до якості обслуговування у закладах охорони здоров'я та посилення їх конкуренції потребують розробки й впровадження механізмів динамічного безперервного внутрішнього аудиту, який буде сприяти покращенню якості медичної допомоги, професійному розвитку медичного персоналу та зростанню задоволеності споживачів медичних послуг.

Мета: розробка медико-соціального механізму внутрішнього аудиту для покращення якості медичної допомоги на рівні закладу охорони здоров'я.

Матеріали та методи. У дослідженні використали системний аналіз, мета-аналіз, описове моделювання, медико-соціологічне опитування, статистичний, логічне узагальнення. Проведене опитування та викопіювання даних з первинної обліково-звітної документації пацієнтів з хронічними неінфекційними захворюваннями.

Результати. Проаналізовані дані амбулаторних карт 226 отримувачів медичних послуг, які перебувають під динамічним спостереженням в закладах охорони здоров'я м. Суми. Проведена оцінка відповідності фактичних записів амбулаторних карт протокольним індикаторам якості медичної допомоги. Внутрішній аудит задоволеності отримувачів медичних послуг показав, що вони достатньо обізнані з перебігом свого захворювання, заходами щодо профілактики ускладнень та ризиками недотримання рекомендацій лікуючого лікаря, проте не дотримуються їх або неналежно виконують.

Висновки. Встановлене незадовільне відношення досліджуваної групи отримувачів медичних послуг до контролю стану свого здоров'я та низький рівень їх активного залучення до дотримання рекомендацій лікуючого лікаря. Застосування медико-соціального механізму внутрішнього аудиту посприяло практичній можливості прийняття та реалізації управлінського рішення для забезпечення

безперервного покращення якості медичної допомоги пацієнтам з хронічними неінфекційними захворюваннями, а саме додаткових поведінкових підходів для підвищення рівня вмотивованості пацієнтів до дотримання рекомендацій лікаря та активного їх залучення до контролю стану свого здоров'я.

Ключові слова: система управління якістю медичної допомоги, якість медичної допомоги, внутрішній аудит, контроль якості, заклад охорони здоров'я.

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How to cite / Як цитувати статтю: Loboda A, Demikhova N, Smiianova O, Yasenok V. Improvement of the medical care quality management model based on the internal audit mechanism in the healthcare facility. *East Ukr Med J*. 2023;11(2):171-177

DOI: https://doi.org/10.21272/eumj.2023;11(2):171-177

INTRODUCTION / ВСТУП

Improvement of the health care facility (HCF) functioning and provision of high-level medical care quality (MCQ) can be achieved through changes in the quality management system (QMS). In the conditions of the bureaucratic QMS, with its main tool being the examination of the medical care quality, the control mechanism is aimed at identifying violations and defects in the medical and diagnostic process and applying administrative measures. Implementing a system of continuous quality improvement involves creating new partnership relations between medical service providers and patients, as well as between HCF administration and employees. It also requires a favorable environment in the team, which would encourage creativity and openness and promote analysis of mistakes and failures without fear and accusations [1, 2, 3].

The modern approach to ensuring MCQ in HCF is based on improving the management of medical care (MC) provision, in particular, standardization of the treatment process and the implementation of the internal audit (IA) mechanism [4, 5].

According to the international standards, ISO 9004:2009 "Managing for the sustained success of an organization – A quality management approach," and ISO 9001:2015 "Quality management systems – Requirements," audit is a systematic, independent, and documented process of obtaining audit certificates (inspection) and objectively evaluating them in order to establish the degree of fulfillment of the agreed audit criteria [5, 6, 9].

The National Healthcare System (NHS) declared clinical audit (CA) a necessary condition for quality improvement. CA aims to improve the processes and outcomes of medical services by systematically reviewing the components of medical care in terms of certain criteria and implementing changes where the service does not reach the expected level. CA should be considered as a component of IA, because the goal, tasks, and functions of the latter are all-encompassing and involve not only clinical, but also any other aspects of HCF activities that can impact MCQ. Thus, in close connection with the CA, which is mainly aimed at ensurance of patient management accurateness, a management IA should also be conducted, i.e., an audit of compliance with organizational technologies; the rational use of resources; the effectiveness of quality control system functioning at the level of line managers; the effectiveness of quality self-control; compliance and performance of non-clinical activities [7, 8, 10].

Severization of requirements for HCF service quality and increasing competition in HCFs require elaborating and implementing dynamic continuous IA mechanisms, which will contribute to MCQ improvement, professional development of medical personnel, and increased satisfaction of medical service consumers.

Study Objective. Elaboration of a medical and social internal audit mechanism in order to improve medical care quality at the level of a healthcare facility.

Materials and Methods. We used system analysis, bibliosemantic analysis, meta-analysis, descriptive modeling, medical and sociological survey, statistical analysis, and logical generalization in the study.

The study was conducted in July–October 2020, involving 226 patients (34% male and 66% female) with chronic noncommunicable diseases (cardiovascular, diabetes, chronic obstructive pulmonary disease) who were followed up (case follow-up) at Sumy HCFs. By age, the studied group was distributed as follows: 18–34 years – 7.2% of subjects, 35–59 years – 30% of subjects, ≥ 60 years – 62.8% of subjects.

Data collection methods used in the study were represented by a survey using a closed questionnaire developed for medical and sociological research and copying data from the primary accounting and reporting form No. 025/o. The questionnaires were reviewed and approved by the Academic Council of the Academic and Research Medical Institute of Sumy State University. Google Forms and Microsoft Excel 2010 for Windows were used for processing and statistical analysis of the obtained data.

Results. The IA-based medical and social model of MCQ management provides for cyclical assessment and continuous quality improvement. The basic elements of the model are a conditional-constant component (regulatory and procedural component, creation of a favorable environment in HCF, and a motivational component) and a conditional-variable component (IA cycle) (Fig. 1).

An important element of the IA mechanism implementation is the formation of feedback channels between providers and consumers of medical services. This feedback shows a consumer's reaction to the provided medical service, representing "what was good and what needs to be changed." That is, IA allows the inclusion of patients and medical professionals in the decision-making process in the MCQ management system. The formation of feedback channels determines the medical and social orientation of the IA-based MCQ management model.

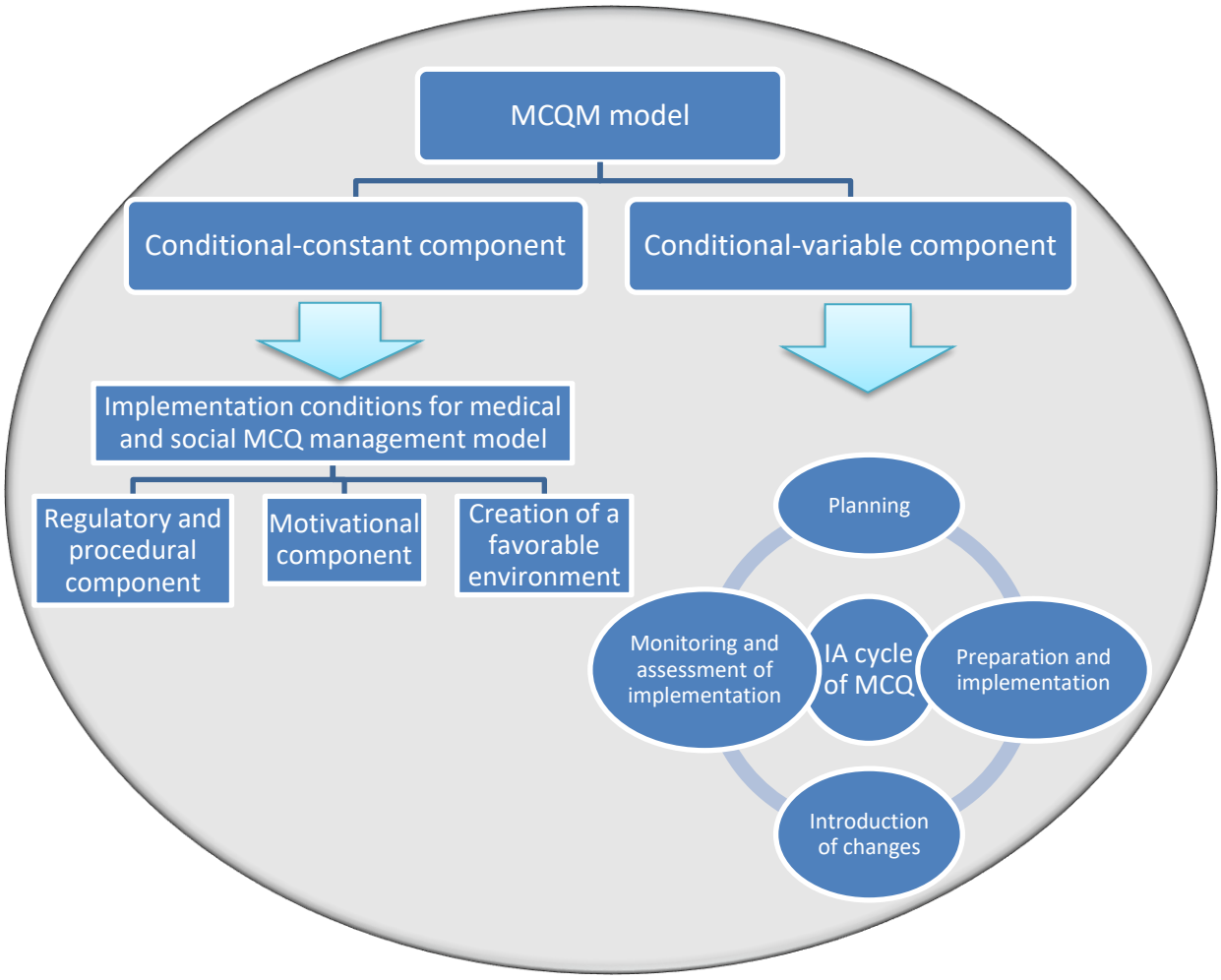

Figure 1 – IA-based medical and social model of MCQ management

IA, as a permanent component of the MCQ management system at HCF, consists of various types of audits that are carried out within the framework of determined tasks and in accordance with certain criteria. We used the following verification criteria in the study: medical documentation audit – the quality of documentation maintenance, meaningful and chronological filling out (MCQ indicators defined in clinical protocols for MC provision); organizational and methodical audit – organizational and methodical support for HCF activities, compliance with operational discipline; clinical audit – patient pathways that ensure coordination and streamlining of MC provision.

The patients' health indicators were audited according to medical documentation and the medical and sociological survey. The analysis of the primary accounting and reporting medical documentation made it possible to evaluate the MCQ based on actual follow-up data.

We implemented the IA-based organizational and methodical approach to MCQ management in patients with chronic non-communicable diseases which involved the following stages: 1) creation of the organizational and legal basis of the MCQ management based on HCF standardization (clinical protocols, orders, methodological recommendations, patient pathways, internal technological standards, questionnaires, etc.); 2) creation of an environment in the health care facility that would be favorable for continuous MCQ improvement (management leadership; staff training and clarification of the goals and principles of continuous MCQ improvement; formation of multidisciplinary groups involving (by the order of the chief physician) employees of various HCF departments and medical service consumers; formation of a motivational component); 3) conducting various types of IA by a multidisciplinary team: planning, preparation and implementation, introduction of changes, monitoring and assessment of implementation results.

The data obtained during the IA of the primary accounting and reporting documentation showed that 12% of outpatient medical records had no or insufficient follow-up information on the state of subjects over the year. Only 39% of outpatient medical records contained notes on lifestyle modification recommendations and the influence of modified risk factors for chronic non-communicable diseases; 19% of outpatient medical records lacked records of existing risk factors; and 45% of outpatient medical records had insufficient information on target organ damage. It was also established that 82% of patients had information about concomitant diseases in their records, and 75% had data on specialist consultations. Despite the fact that all family doctors should have followed unified clinical protocols, the recommended follow-up monitoring of patients was not ensured, as only 53% of patients visited their family doctor twice a year; only 61% of medical records had data on cholesterol level; 76% of patients' medical records had entries related to glycemia, 45% – to creatinine level, 80% – to electrocardiography, and 46% – to cardiovascular ultrasound results. Information on the stratification of complications risks was absent in 47% of outpatient medical records.

The IA of the subjects' satisfaction with medical services showed that they were sufficiently aware of the disease course, complication prevention and the risks of non-compliance – 97% of patients confirmed that they received detailed information from their physician. However, 65% of patients reported not complying or partially complying with the doctor's recommendations. They indicated the following reasons for non-compliance: "I miss taking medication and blood pressure measuring because I can never remember doing that," "There is always not enough time to take care of my health properly," "I don't see a need for it, and I don't want it."

Discussion.

Therefore, the conditions for the improvement of the modern MCQ management system need to be adopted at the state level; however, a part of IA-implementation tasks require to be elabotated at the regional level and HCF level according to the existing legislative framework [2]. To do this, it is necessary to train medical personnel and managers in MCQ management based on the principles of standardization and IA; to implement a system of economic motivation based on current legislation; to create structures responsible for the continuous MCQ improvement process (IA) at HCF level and structural division level; to create an appropriate favorable working environment; HCFs need to develop a comprehensive program for MCQ improvement ensuring the participation of medical workers and medical service consumers in CA.

CONCLUSIONS / ВИСНОВКИ

1. If implemented properly, internal audit in the health care quality management system enables health care providers to continuously improve the quality of health care for the population.
2. The proposed medical and social mechanism of the internal audit of the medical care quality in HCF is a dynamic process and includes the following components: a structural and organizational component, an informational and methodological component, and a motivational component.
3. The study revealed satisfactory coverage with specialist consultations, laboratory and instrumental examinations, and informing the patients about the risks of complications and preventive measures.
4. We registered subjects' poor compliance and unsatisfactory attitude towards the follow-up procedure.
5. The development and implementation of the medical and social mechanism of internal audit contributed to the practical adoption of a management decision to ensure the continuous improvement of medical care quality for patients with chronic noncommunicable diseases, namely additional behavioral approaches to increase the level of patients' compliance with the doctor's recommendations and their active involvement in follow-up control.

PROSPECTS FOR FUTURE RESEARCH / ПЕРСПЕКТИВИ ПОДАЛЬШИХ ДОСЛІДЖЕНЬ

Development and implementation of behavioral mechanisms in MCQ management system at HCF level become relevant for the active involvement of medical service consumers in the dynamic disease management and increasing their responsible attitude towards their health.

CONFLICT OF INTEREST / КОНФЛІКТ ІНТЕРЕСІВ

The authors declare no conflict of interest.

FUNDING / ДЖЕРЕЛА ФІНАНСУВАННЯ

None.

AUTHOR CONTRIBUTIONS / ВКЛАД АВТОРІВ

All authors substantively contributed to the drafting of the initial and revised versions of this paper. They take full responsibility for the integrity of all aspects of the work.

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Received 08.05.2023
Accepted 21.05.2023

Одержано 08.05.2023
Затверджено до друку 21.05.2023

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