

UDC 614.2

DOI: 10.56871/MHCO.2024.46.88.008

# PATIENT-REPORTED OUTCOME MEASURES: THE IMPLEMENTATION GUIDE

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**For citation:** Zuenkova YuA. Patient-reported outcome measures: the implementation guide. Medicine and Health Care Organization. 2024;9(3):71–79. DOI: <https://doi.org/10.56871/MHCO.2024.46.88.008>

*Received: 01.08.2024**Revised: 04.09.2024**Accepted: 08.10.2024*

**ABSTRACT.** The assessment of the quality of medical care in many countries includes the assessment of patient-reported outcome measures (PROMs). The article defines and differentiates the concept, provides classification of PROM-questionnaires and guidelines for use in routine clinical practice and for research purposes. Measuring patient-reported outcomes bears a number of advantages for patients and the healthcare system. Routine use of PROMs is an important element of personalized therapy, improves patients' adherence and satisfaction. The implementation of PROMs at the national level is a base of the examination of the quality of medical care and monitors the effectiveness of clinical teams. PROMs data can be used as a base of budget allocation, planning funding programs, for the study of how spending levels relate to the health outcomes of patients by exact region and healthcare provider. The choice of PROMs should be focused on relevant disease; be the latest version of a validated questionnaire; be convenient for the patient. The main problems of PROMs implementation include: lack of understanding of the role of PROMs in improving the quality of medical care and as one of the mechanisms for improving the efficiency of the healthcare system; lack of questionnaires with validated translation; lack of working mechanisms for linking PROMs results to medical care payments; low awareness of clinicians and patients; lack of time at routine clinical processes to PROMs implementation; lack of online services and platforms.

**KEYWORDS:** value-based healthcare, patient-oriented approach, patient adherence, quality of life, shared decision making, patient-reported outcomes, personalized medicine

# ПАЦИЕНТСКИЕ ПОКАЗАТЕЛИ ИСХОДА: РУКОВОДСТВО ПО ВНЕДРЕНИЮ

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**Для цитирования:** Зуенкова Ю.А. Пациентские показатели исхода: руководство по внедрению // Медицина и организация здравоохранения. 2024. Т. 9. № 3. С. 71–79. DOI: <https://doi.org/10.56871/MHCO.2024.46.88.008>

*Поступила: 01.08.2024**Одобрена: 04.09.2024**Принята к печати: 08.10.2024*

**РЕЗЮМЕ.** Оценка качества медицинской помощи во многих странах включает оценку пациентских показателей исхода — PROMs (patient-reported outcome measures). В статье дается

определение и дифференциация понятия PROMs, классификация опросников, рекомендации по применению в рутинной клинической практике и в исследовательских целях. Оценка пациентских исходов имеет ряд преимуществ как для пациентов, так и для системы здравоохранения. Рутинное использование PROMs является важным элементом персонализированной терапии, улучшает приверженность пациентов и их удовлетворенность проводимым лечением. Внедрение PROMs на национальном уровне позволяет использовать оценку для экспертизы качества медицинской помощи, отслеживать эффективность клинических бригад. Данные PROMs можно использовать при распределении бюджета, при планировании программ финансирования, для изучения того, как уровни расходов соотносятся с результатами здоровья пациентов в каждом регионе и медицинской организации. При выборе PROMs следует обращать внимание на следующее: опросник должен быть релевантным нозологии; необходимо использовать только валидизированные опросники последних версий; отдавать предпочтение наиболее простым и удобным для пациента; использовать только тогда, когда это действительно необходимо. К основным проблемам внедрения PROMs можно отнести такие, как отсутствие понимания роли PROMs в улучшении качества медицинской помощи и как одного из механизмов повышения эффективности системы здравоохранения; недостаток опросников, имеющих валидизированный перевод; отсутствие реально работающих механизмов привязки результатов PROMs к оплате медицинской помощи; низкая осведомленность врачей и пациентов; отсутствие времени у врача для внедрения PROMs; недостаток онлайн-сервисов и платформ.

**КЛЮЧЕВЫЕ СЛОВА:** ценностно-ориентированное здравоохранение, пациентоориентированность, приверженность пациента, качество жизни, совместное принятие решения о лечении, исходы, сообщаемые пациентами, персонализированная медицина

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## INTRODUCTION

Quality of medical care is a multifaceted concept that includes a set of characteristics reflecting “the timeliness of medical care, the correct choice of treatment methods, the degree of achievement of the planned result”. The definition of the quality of medical care is revised, clarified and supplemented over time [1]. At the same time, doctors and patients can evaluate the quality of medical care in different ways, including its impact on the quality of life of patients [2].

Assessment of the quality of medical care abroad includes, along with other indicators, assessment of the patient’s perspective — assessment of “patient outcome indicators” or “patient-reported outcomes” [3]. In many countries, the measurement of “patient-reported outcomes” for a number of nosologies is mandatory [3]. There are few studies devoted to the use of patient-reported outcome measures in the domestic literature. A number of publications review the most common indicators for a specific profile (the oncology) [4], or condition (e.g., in patients with stoma) [5]. Another study describes the role of patient-reported outcome measures as an element of real-world evidence (RWE) implementation [2].

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## AIM

To describe the existing practice of using patient-reported outcome measures (PROMs) and the possibilities of their implementation in Russian practice.

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## MATERIALS AND METHODS

The Russian and foreign literature devoted to the issues of organizing the implementation of patient-reported outcome measures was analyzed. The review did not include publications devoted to direct measurement of PROMs in various diseases and conditions. The main parameters and provisions were formulated based on the synthesis of information.

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### *Definition and differentiation of concepts*

Patient-reported outcome (PRO) is “an outcome of a health condition directly reported and experienced by the patient” [3]. Patient-reported outcome measures (PROMs) are a patient’s subjective assessment of his or her condition, formalized using standardized questionnaires [6], which allows physicians to reasonably adjust therapy based on the patient’s feelings. PROMs questionnaires allow physicians to assess the impact of the disease and

treatment on the patient's quality of life and psychological state. PROMs are used in studies comparing different treatment methods and help to choose the treatment method that best meets the individual needs of a particular patient, taking into account his or her perception of quality of life. Various scales can be used to measure PROMs: Likert, ordinal (rank), Crespi, Stapel, semantic differential.

PROMs should not be confused with indicators such as:

- PCOMs (patient-centered outcomes) — the use of a questionnaire covering issues and problems specific to a particular patient (questionnaire of attitude to a certain type of therapy);
- PREMs (patient-reported experience measures) — patient's experience of the treatment process and his/her stay in the medical organization, satisfaction with the quality of service provision.

Professional validated questionnaires are used to assess PROMs. PROMs are used in clinical trials to better understand the efficiency of treatment, but in routine clinical practice in Russia such questionnaires are not yet widespread.

### **History**

The need to assess the quality of life in clinical practice was first established at the national level in Sweden in 1975. The idea of assessing the results of treatment by interviewing patients was first proposed by a group of specialists from Oxford, who used this concept to assess the success of surgery [7]. Since then, interest in this topic has steadily increased.

Currently, PROMs questionnaires are widely used in clinical practice in many countries. For example, in Great Britain, since 2009, the results of PROMs have been used universally when making global decisions in the country's healthcare [8], standards for outcome assessment have been published [9], and the results of PROMs for a number of the most significant diseases are being registered. Initially, the requirement for mandatory collection of PROMs data applied only to four surgical procedures: hernia removal, hip and knee joint replacement, and varicose veins. More recently, the validity of routine PROMs measurements has been demonstrated for a wide range of chronic diseases, including diabetes, asthma, stroke, chronic obstructive pulmonary disease (COPD), and others.

PROMs questionnaires are constantly being improved to be patient-friendly and informative for clinicians. Recently, a new generation of short and easy-to-use instruments for regular monitoring of patient outcomes has been proposed. For example, the SF-36 questionnaire has been modified and shortened to 12 items [10]. These instruments are quick, efficient and easy to understand, as they allow patients to rate their health status and experience in a semi-structured way and aggregate input data accordingly, automatically tracking physical-emotional sensitivity. ICHOM (International Consortium for Health Outcomes) has made a major contribution to the development of patient outcome assessment.

With the development of information technology, the assessment of "patient-reported outcomes" began to be realized through digital means, and the concept of electronic PROM questionnaires — ePROMs — emerged. Thus, within the framework of the NIH (National Institute of Healthcare) initiative, the Roadmap for Patient-Reported Outcomes Measurement Information System (PROMIS) was developed. With the launch of PROMIS, computerized testing of the general population became possible. PROMIS uses modern advances in psychometrics such as item response theory (IRT) and computerized adaptive testing (CAT) to create highly reliable and validated measurement tools [11].

### **Types of PROMs questionnaires**

PROMs are divided into universal questionnaires, which assess general indicators of a patient's physical and psychological state, and specific questionnaires, which are designed for specific nosologies and conditions.

The most widely known universal questionnaires are the SF-36 and the EQ-5D. The SF-36 and its shortened version, the SF-12, assess physical and psychological health on 8 scales.

The EQ-5D assesses five basic indicators: mobility, self-care, ability to maintain usual daily activities, pain, and anxiety. The questionnaire is used to measure patient health status, provide evidence of cost-effectiveness, and population surveys to study population health. The main advantages of using the EQ-5D, unlike other general quality of life questionnaires, are that the final data represent a

single score of the respondent's health, and the questionnaire is universally used for both extended population surveys and specific patient populations.

The use of the EQ-5D and SF-36 as universal questionnaires has been justified for a wide range of health problems, as they are valid for a wide variety of diseases, have high reliability and good sensitivity.

However, in some diseases (e.g., cancer), the use of universal questionnaires may miss important elements of patient assessment. For such complex cases, condition-specific questionnaires are developed. PROMs specific questionnaires have been developed for patients with chronic diseases, for cancer patients, and for a number of other rare and severe diseases.

### ***The use of PROMs in the routine clinical practice***

The techniques of PROMs vary depending on the objectives. Symptom measures can focus on a range of conditions (universal PROMs) or on a specific pathology (specific PROMs), such as depression or pain. Functioning measures assess activities such as self-care, activities of daily living, and motor activities.

Questionnaires can be administered face-to-face in the clinic or remotely — via online platforms, email, or telephone.

Typically, PROMs are assessed before, during, and at the end of treatment. Each specific questionnaire contains recommendations for its use depending on the specifics of the disease or the patient's condition. Based on the results of the assessment at the beginning of therapy, the physician can decide on the choice of treatment method, and the results of the assessment measured during treatment allow to adjust therapy if necessary. PROMs assessment performed at the end of treatment is an additional indicator of treatment success.

Health-related Quality of Life (QoL) assessment tools are typically multidimensional questionnaires that assess a combination of aspects of impairment and/or disability and reflect a patient's health status. In contrast, QoL goes beyond impairment and disability to include questions about a patient's ability to meet their needs as well as their emotional response to their limitations.

When choosing one or another PROMs, attention should be paid to the following:

- the questionnaire should be relevant to the nosology (the clinical problem);
- only validated questionnaires and their validated translations should be used;
- when choosing a questionnaire, it is important to make sure that it is the latest version (questionnaires can be improved);
- if there are several current versions of the questionnaire relevant to the clinical problem, preference should be given to the one that is the simplest, shortest and most convenient for the patient;
- appropriateness of use — it is recommended to use questionnaires only when it is really necessary (when there is a complex clinical situation and when there is an objective need to include the patient in the assessment of his/her condition);
- keep in mind that every survey has its limits.

Recently, electronic versions of questionnaires — ePROMs — have been increasingly used. When using digital PROMs, the advantage should be given to cloud services and the possibility of integration with electronic medical records and medical information systems (MIS), as well as the protection of patient's personal data [12].

When introducing PROMs into routine clinical practice, it is necessary to revise the operational processes in the clinic, since filling out and analyzing questionnaires requires time-consuming work for medical personnel. In addition, it is necessary to educate the clinical team and patients, explaining to them the importance of completing questionnaires and their role in personalized therapy [13].

### ***The use of PROMs in research***

Studies involving PROMs need to be planned in advance, selecting clinical endpoints and outcomes. A well-developed study design involving PROMs allows physicians to track adverse events in real time, adjust treatment regimens, and monitor patients' condition.

Studies with PROMs should be conducted according to a strict plan (Table 1) with mandatory training of all involved specialists, as well as instructions for patients.



*The use of PROMs at the national level to assess health system performance*

The results of PROMs measurement can be used to assess the efficiency of the health care system as a whole, individual regions or specific medical organizations [14]. Based on the published information on PROMs measurement results, patients can assess which clinic demonstrates the best results of treatment of a particular disease and choose the one with higher success rates.

However, presenting PROMs data to the general public and patients in an unambiguous and understandable form is a difficult task. PROMs for individual nosologies, medical intervention (surgery) or hospital as a whole can be used as part of key performance indicators and ratings of medical organizations. Often, PROMs results are displayed as a funnel plot — a dot plot of the total PROMs results for each hospital based on the total number of surgeries performed. However, average PROMs vary more widely in hospitals that perform fewer surgeries than in those that perform more. The funnel plot shows provider performance measured in terms of EQ-5D postoperative questionnaire scores (Fig. 1).

PROMs data should serve as a benchmark and starting point for health care providers: to identify the reasons for their performance and to determine what is needed to improve quality. PROMs indicators can identify differences among patients in health-related quality of life, as well as differences in the performance of health care teams.

*Benefits of the PROMs using*

The use of patient-reported outcome estimates has a number of important advantages.

1. *Personalized treatment.* The use of PROMs questionnaires at different stages of treatment allows therapy to be tailored to the patient’s condition, personal characteristics and lifestyle. Routine use of PROMs is an important element of personalized therapy and allows achieving better clinical results [16]. Patients are not only the source of PROMs data, but also key potential users of the information they generate. Patients planning to choose a clinic and physician can refer to PROMs data provided by other patients. This will allow them to make a choice in favor of one or another specialist, clinic, as well as to evaluate and predict possible treatment outcomes.

2. *Developing patient adherence.* Assessment of the patient’s quality of life prior to treatment is the starting point of patient involvement in the decision-making process of therapy choice. Involving the patient in the process of treatment and choice of therapy improves adherence and therefore reduces healthcare costs in the long run by making the patient more responsible for his/her health.

3. *Patient satisfaction.* Focusing the patient’s attention on symptoms and initial results of treatment not only allows to adjust the therapy if necessary, but also improves the patient’s understanding of his/her disease and condition, his/her awareness of the reasons for adjusting the therapy, and therefore his/her satisfaction with the treatment process and the achieved results.

Table 1

The research plan using PROMs study

Таблица 1

План проведения исследования с включением PROMs

Этап / Stage	Описание / Description
Определение целей исследования / Research objectives	Что оцениваем? Какие опросники используем? / Research objectives? Questionary choice?
Формирование плана / Forming a plan	Кто координатор исследования? Какой дизайн исследования? Размер выборки? Статистическая мощность? Критерии включения и исключения? / Research coordinator? Research design? Sampling? Statistical power? Inclusion and exclusion criteria?
Критический анализ / Critical analysis	Трудоемкость и затраты? Практическая применимость в клинической ситуации? / Labor intensity and costs? Practical applicability in a clinical situation?
План внедрения / Implementation plan	Какой план внедрения? График внедрения? / Implementation plan? Implementation schedule?
Оценка / Evaluation	Достигнутые результаты и выводы? / Results and conclusion?

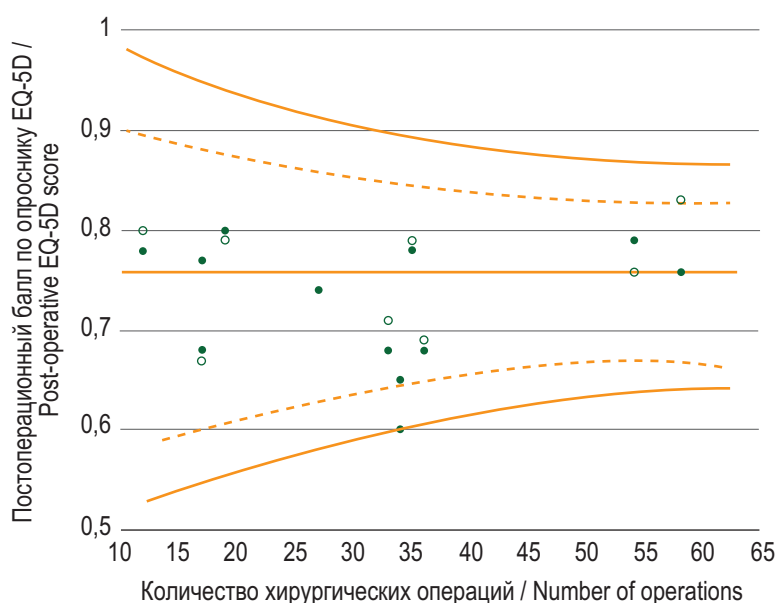


Fig. 1. Example of a funnel plot for the post-operative EQ-5D score Browne et al. [15]

Рис. 1. Пример графика воронки для отображения результатов операции с помощью шкалы опросника EQ-5D (по данным Browne et al.) [15]

#### 4. Expertise of the quality of medical care.

Implementing PROMs at the national level or as part of a disease-specific registry can help to monitor the effectiveness of clinical teams. Regular use of PROMs can also improve understanding of how a particular method works in a particular patient.

5. *Cost reduction and efficiency in utilization of the healthcare budget.* Accounting for PROM results is one of the elements of value-based healthcare. In countries where PROM monitoring has been introduced at the national level, payment for medical care is tied to the result — the “pay-for-performance” approach. Patients whose health has improved, according to the EQ-5D questionnaire, have the greatest increase in QALYs and, accordingly, the clinic receives greater reimbursement. PROMs data can be used in budget allocation, in planning financing programs, and to examine how spending levels relate to patient health outcomes in each region and health care organization.

#### Restrictions on the use of PROMs

Despite a number of advantages of using PROMs in routine clinical practice, there are a number of problems related to quality assessment and cost-effectiveness.

- It is impossible to be completely certain that a particular medical intervention has had an impact on a patient's quality of life [14]. Improvement and deterioration in quality of life may have been caused by other factors.
- The assessment of quality of life based on PROMs after medical intervention should be conducted within a strictly defined time frame so that changes in quality of life can be linked specifically to the medical intervention. For example, collecting PROMs data six months after hip surgery may not provide relevant results about the success of the surgery because it misses the point at which the patient first returned to normal life.
- Taking PROMs into account when assessing the cost-effectiveness of treatment often only considers the cost of the primary intervention (surgery), but may not take into account the costs of adjuvant therapies such as rehabilitation, pain medications, etc.
- The problem of objectively assessing PROMs is also related to the fact that we do not know what patients compare their condition to. The level of pain for the same condition may be perceived differently by different patients depending on their experience of pain.

### **Problems of PROMs implementation in Russia**

Due to the lack of a unified regulatory framework for the routine assessment of patient outcome measures, their application in Russia is still difficult. Initiatives are needed both at the national level to establish uniform standards of work and quality assessment processes, and pilot projects at the level of individual medical organizations or clinical teams.

The main problems of PROMs implementation include the following:

- lack of a clear understanding of the role of PROMs in improving the quality of care and as one of the mechanisms for improving the effectiveness of treatment (and the health care system);
- lack of validated questionnaires for a number of nosologies (especially rare ones) and/or lack of validated translation;
- lack of really working mechanisms for linking PROMs results to payment;
- low awareness of physicians and patients;
- lack of physician time to implement PROMs;
- lack of online services and platforms that would contain the necessary questionnaires and that would integrate with medical information systems.

### **CONCLUSION**

With the development of a patient-centered approach and personalized medicine, the need for the development of new specific PROMs will increase, which will require the creation of interdisciplinary working groups, multicenter and cross-country studies, and validation of translation.

Implementing the assessment of patient-reported outcome measures into routine clinical practice requires changes in clinic operational processes and the consolidation of the norm of mandatory quality of life assessment for certain nosologies. Physician and patient education is an important factor for the successful establishment of a PROMs data bank.

### **ADDITIONAL INFORMATION**

**The author** read and approved the final version before publication.

**Funding source.** This study was not supported by any external sources of funding.

### **ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ**

**Автор** прочитал и одобрил финальную версию перед публикацией.

**Источник финансирования.** Автор заявляет об отсутствии внешнего финансирования при проведении исследования.

### **REFERENCES**

1. Naygovzina N.B., Filatov V.B., Borozdina O.A., Nikolaeva N.A. Standardization in healthcare. Overcoming contradictions of legislation, practice, ideas. Moscow: GEOTAR-Media; 2015. (In Russian).
2. Mukhina S.M., Orlova E.V. Patient-reported outcomes: an overview of application directions. Real-World Data & Evidence. 2022;2(2):1–7. DOI: 10.37489/2782-3784-myrwd-12. (In Russian).
3. Pritchard A. Measuring government health services output in the UK national accounts: the new methodology and further analysis. Economic Trends. 2004;613:69–81. Available at: [www.statistics.gov.uk/articles/economic\\_trends/ET613Pritchard.pdf](http://www.statistics.gov.uk/articles/economic_trends/ET613Pritchard.pdf) (accessed: 19.09.2023).
4. Khat'kov I.E., Minaeva O.A., Domrachev S.A., Priymak M.A., Solov'ev N.O., Tyutyunnik P.S. PROM is a modern approach to assessing the quality of life of patients with oncological diseases. Terapevticheskiy arkhiv. 2022;94(1):122–128. DOI: 10.26442/00403660.2022.01.201343. (In Russian).
5. Babazada R.I., Vaganov A.A., Korol'kov A.Yu., Morozov V.P. Comparative characteristics of the scales for assessing the quality of life of stomatized patients (literature review). Russian Journal of Coloproctology. Koloproktologia. 2023;22(85):134–139. DOI: 10.33878/2073-7556-2023-22-3-134-139. EDN: UXSHXG. (In Russian).
6. Weldring T., Smith S.M. Patient-Reported Outcomes (PROs) and Patient-Reported Outcome Measures (PROMs). Health Serv Insights. 2013;6:61–8. DOI: 10.4137/HSI.S11093.
7. Dawson J., Fitzpatrick R., Murray D., Carr A. Questionnaire on the perceptions of patients about total knee replacement. J Bone Joint Surg Br. 1998;80(1):63–9. DOI: 10.1302/0301-620x.80b1.7859.
8. Damman O.C., Jani A., de Jong B.A., Becker A., Metz M.J., de Bruijne M.C., Timmermans D.R., Cornel M.C., Ubbink D.T., van der Steen M., Gray M., van El C. The use of PROMs and shared decision-making in medical encounters with patients: An opportunity to deliver value-based health care to patients. J Eval Clin Pract. 2020;26(2):524–540. DOI: 10.1111/jep.13321.

9. Basch E., Torda P., Adams K. Standards for patient-reported outcome-based performance measures. *JAMA*. 2013;310(2):139–40. DOI: 10.1001/jama.2013.6855.
10. Novik A.A., Ionova T.I. Quality of life research in clinical medicine. *Bulletin of Pirogov National Medical & Surgical Center*. 2006;1:91–99. (In Russian).
11. Stover A.M., McLeod L.D., Langer M.M., Chen W.H., Reeve B.B. State of the psychometric methods: patient-reported outcome measure development and refinement using item response theory. *J Patient Rep Outcomes*. 2019;3(1):50. DOI: 10.1186/s41687-019-0130-5.
12. Generalova O., Roy M., Hall E., Shah S.A., Cunanan K., Fardeen T., Velazquez B., Chu G., Bruzzzone B., Cabot A., Fisher G.A., Srinivas S., Fan A.C., Haraldsdottir S., Wakelee H.A., Neal J.W., Padda S.K., Johnson T., Heestand G.M., Hsieh R.W., Ramchandran K. Implementation of a cloud-based electronic patient-reported outcome (ePRO) platform in patients with advanced cancer. *J Patient Rep Outcomes*. 2021;15(1):91. DOI: 10.1186/s41687-021-00358-2.
13. Burge P., Devlin N., Appleby J., Gallo F., Nason E., Ling T. Understanding Patients' Choices at the Point of Referral. Technical report TR359-DOH.; Cambridge: RAND Europe. 2006. Available at: [www.rand.org/pubs/technical\\_reports/TR359/](http://www.rand.org/pubs/technical_reports/TR359/) (accessed: 10.09.2023).
14. Dawson D., Gravelle H., O'Mahony M., Street A., Weale M., Castelli A., Jacobs R., Kind P., Loveridge P., Martin S., Stevens P., Stokes L. Developing New Approaches to Measuring NHS Outputs and Activity. Centre for Health Economics Research Paper 6. York: University of York. 2005. Available at: [www.york.ac.uk/inst/che/pdf/rp6.pdf](http://www.york.ac.uk/inst/che/pdf/rp6.pdf). (accessed: 10.09.2023).
15. Browne J., Jamieson L., Lewsey J., van der Meulen J., Black N., Cairns J., Lamping D., Smith S., Copley L., Horrocks J. Patient Reported Outcome Measures (PROMs) in Elective Surgery. Report to the Department of Health. London: Health Services Research Unit, London School of Hygiene & Tropical Medicine and Clinical Effectiveness Unit, Royal College of Surgeons of England. 2007. Available at: [www.lshtm.ac.uk/hsru/research/PROMs-Report-12-Dec-07.pdf](http://www.lshtm.ac.uk/hsru/research/PROMs-Report-12-Dec-07.pdf) (accessed: 10.09.2023).
16. Marshall S., Haywood K., Fitzpatrick R. Impact of patient-reported outcome measures on routine clinical practice: a structured review. *Journal of Evaluation in Clinical Practice*. 2006;12(5):559–68.
3. Pritchard A. Measuring government health services output in the UK national accounts: the new methodology and further analysis. *Economic Trends*. 2004;613:69–81. Available at: [www.statistics.gov.uk/articles/economic\\_trends/ET613Pritchard.pdf](http://www.statistics.gov.uk/articles/economic_trends/ET613Pritchard.pdf) (accessed: 19.09.2023).
4. Хатьков И.Е., Минаева О.А., Домрачев С.А., Приймак М.А., Соловьев Н.О., Тютюнник П.С. PROM — современный подход к оценке качества жизни пациентов с онкологическими заболеваниями. *Терапевтический архив*. 2022;94(1):122–128. DOI: 10.26442/00403660.2022.01.201343.
5. Бабазада Р.И., Ваганов А.А., Корольков А.Ю., Морозов В.П. Сравнительная характеристика шкал оценки качества жизни стомированных пациентов (обзор литературы). *Колопроктология*. 2023;22(85):134–139. DOI: 10.33878/2073-7556-2023-22-3-134-139. EDN: UXSHXG.
6. Weldring T., Smith S.M. Patient-Reported Outcomes (PROs) and Patient-Reported Outcome Measures (PROMs). *Health Serv Insights*. 2013;6:61–8. DOI: 10.4137/HSI.S11093.
7. Dawson J., Fitzpatrick R., Murray D., Carr A. Questionnaire on the perceptions of patients about total knee replacement. *J Bone Joint Surg Br*. 1998;80(1):63–9. DOI: 10.1302/0301-620x.80b1.7859.
8. Damman O.C., Jani A., de Jong B.A., Becker A., Metz M.J., de Bruijne M.C., Timmermans D.R., Cornel M.C., Ubbink D.T., van der Steen M., Gray M., van El C. The use of PROMs and shared decision-making in medical encounters with patients: An opportunity to deliver value-based health care to patients. *J Eval Clin Pract*. 2020;26(2):524–540. DOI: 10.1111/jep.13321.
9. Basch E., Torda P., Adams K. Standards for patient-reported outcome-based performance measures. *JAMA*. 2013;310(2):139–40. DOI: 10.1001/jama.2013.6855.
10. Новик А.А., Ионова Т.И. Исследование качества жизни в клинической медицине. *Вестник Национального медико-хирургического Центра им. Н.И. Пирогова*. 2006;1:91–99.
11. Stover A.M., McLeod L.D., Langer M.M., Chen W.H., Reeve B.B. State of the psychometric methods: patient-reported outcome measure development and refinement using item response theory. *J Patient Rep Outcomes*. 2019;3(1):50. DOI: 10.1186/s41687-019-0130-5.
12. Generalova O., Roy M., Hall E., Shah S.A., Cunanan K., Fardeen T., Velazquez B., Chu G., Bruzzzone B., Cabot A., Fisher G.A., Srinivas S., Fan A.C., Haraldsdottir S., Wakelee H.A., Neal J.W., Padda S.K., Johnson T., Heestand G.M., Hsieh R.W., Ramchandran K. Implementation of a cloud-based electronic patient-reported outcome (ePRO) platform in patients with advanced cancer.

## ЛИТЕРАТУРА

1. Найговзина Н.Б., Филатов В.Б., Бороздина О.А., Николаева Н.А. Стандартизация в здравоохранении. Преодоление противоречий законодательства, практики, идей. М.: ГЭОТАР-Медиа; 2015.
2. Мухина С.М., Орлова Е.В. Исходы, сообщаемые пациентами: обзор направлений применения. Реаль-



- J Patient Rep Outcomes. 2021;15(1):91. DOI: 10.1186/s41687-021-00358-2.
13. Burge P., Devlin N., Appleby J., Gallo F., Nason E., Ling T. Understanding Patients' Choices at the Point of Referral. Technical report TR359-DOH.; Cambridge: RAND Europe. 2006. Available at: [www.rand.org/pubs/technical\\_reports/TR359/](http://www.rand.org/pubs/technical_reports/TR359/) (accessed: 10.09.2023).
  14. Dawson D., Gravelle H., O'Mahony M., Street A., Weale M., Castelli A., Jacobs R., Kind P., Loveridge P., Martin S., Stevens P., Stokes L. Developing New Approaches to Measuring NHS Outputs and Activity. Centre for Health Economics Research Paper 6. York: University of York. 2005. Available at: [www.york.ac.uk/inst/che/pdf/rp6.pdf](http://www.york.ac.uk/inst/che/pdf/rp6.pdf). (accessed: 10.09.2023).
  15. Browne J., Jamieson L., Lewsey J., van der Meulen J., Black N., Cairns J., Lamping D., Smith S., Copley L., Horrocks J. Patient Reported Outcome Measures (PROMs) in Elective Surgery. Report to the Department of Health. London: Health Services Research Unit, London School of Hygiene & Tropical Medicine and Clinical Effectiveness Unit, Royal College of Surgeons of England. 2007. Available at: [www.lshtm.ac.uk/hsru/research/PROMs-Report-12-Dec-07.pdf](http://www.lshtm.ac.uk/hsru/research/PROMs-Report-12-Dec-07.pdf) (accessed: 10.09.2023).
  16. Marshall S., Haywood K., Fitzpatrick R. Impact of patient-reported outcome measures on routine clinical practice: a structured review. *Journal of Evaluation in Clinical Practice*. 2006;12(5):559–68.