

Arhe XXI, 42/2024

UDK 179

004.021 : 616-082

DOI: <https://doi.org/10.19090/arhe.2024.42.221-234>

Originalni naučni rad

Original Scientific Article

NARINE L. WIEGEL¹

Rostov State Medical University, Faculty of Clinical
Psychology, Department of Philosophy with a course in
Bioethics and spiritual Foundations of medical Activity,
Rostov on Don, Russian Federation

EMILIANO METTINI²

Russian National Research Medical University “Pirogov”,
International Medical School, Department of Humanities,
Moscow, Russian Federation

ALGORITHMIC, UNDIFFERENTIATED AND DIFFERENTIATED THINKING IN MEDICAL PRACTICE

Abstract: This article discusses different ways of thinking used in medical practice. Authors analyze questions concerning medical decision making, and examine impact they have on quality of medical care. First kind of thinking under inquiring is algorithmic thinking. It is used by doctors when they adhere to algorithms and protocols in making decision. Algorithms can standardize diagnosis and treatment process, which can reduce risk of error and improve efficiency of medical assistance. However, algorithmic thinking can lead to standardized approaches, having as consequence ignoring of individual patient characteristics. Second kind of thinking that shall be examined is undifferentiated thinking. Undifferentiated thinking can lead to missing important diagnostic signs and inappropriate treatment based on subjective assumptions. Third kind of thinking discussed in the article is differentiated thinking. Using this kind of thinking, doctors take into account individual characteristics of each patient and apply flexible approaches to diagnosis and treatment. Differentiated thinking allows health care to be tailored to a specific situation, which

1 Author's e-mail address: 22nara@mail.ru

2 Author's e-mail address: mettini_e@rsmu.ru

may increase its effectiveness. However, differentiated thinking requires that doctors ought to have in-depth knowledge and experience, as well as the ability to analyze complex medical data. The article discusses relevance of different kinds of thinking in medical practice and encourages doctors to develop their differentiated thinking skills. It shall improve quality and efficiency of medical care by taking into account individual needs of each patient.

Keywords: algorithmic thinking, undifferentiated thinking, differentiated thinking, medical practice

Medical practice needs that doctors have both extensive medical knowledge and skills allowing to analyze information, to draw conclusions, and to make decisions. In this process, thinking plays a key role. In medical practice we can highlight some kinds of thinking having their own characteristics and influence approaches to diagnosis and treatment of patients.

Algorithmic thinking is a way of thinking using pre-established algorithms and protocols. Doctors using algorithmic thinking follow specific steps and rules when making decisions. This process can be more efficient, when there are clear and predictable disease patterns. Algorithms help to standardize diagnosis and treatment process, which enhance efficiency and reliability of medical care³. However, standardization can have some limitations. When a patient has particular physiological treats, or non-standardized symptoms, the use of algorithms alone may have as consequence missing of important information, or may lead to inappropriate treatment.

Undifferentiated thinking is characterized by the use of one-size-fits-all approaches to diagnosis and treatment⁴. Clinicians applying undifferentiated thinking tend to treat patients as a whole, not considering their individual specific treats and characteristics. Such approach can lead to misdiagnoses and inappropriate treatment based on common assumptions or stereotypes. Use of undifferentiated thinking may be applied due both to short time that doctors can take to each patient and lack of knowledge regarding specific nosology.

3 Kieseetter, J. et al., "Knowledge is not enough to solve the problems – The role of diagnostic knowledge in clinical reasoning activities", p. 2.

4 Bhise, V. et al., "Defining and Measuring Diagnostic Uncertainty in Medicine: A Systematic Review".

Differentiated thinking is a flexible and adaptive approach to diagnosing and treating patients. Doctors using differentiated thinking take into account individual characteristics of each patient, analyze complexities and non-standard situations, and apply flexible approaches⁵. Differentiated thinking allows doctors to understand better causes of disease, considering all available data, and formulate individualized diagnosis and tailor-made treatment plans. Distinctive mark of differentiated thinking is the ability to conduct additional research and make unconventional decisions in complex cases.

For doctors it is important to be able to combine different types of thinking depending on the situation and the patient. Algorithmic thinking can be useful for making quick decisions or when there are clear and predictable disease patterns. Undifferentiated thinking can be reliable when there is not so much time to analyze information about patient or there is scarce information about him. For best results in medical practice, though, it is important to strive for differentiated thinking in order to take into account the individual characteristics of each patient and make flexible decisions in complex cases.

ALGORITHMIC AND UNDIFFERENTIATED THINKING IN MEDICAL PRACTICE

In modern medical practice, doctors have to face a variety of tasks requiring quick and accurate decision-making. To work efficiently and improve quality of medical care, various approaches and thinking strategies had been developed. One of such approaches is algorithmic thinking. An algorithm is a sequence of instructions or actions leading to the achievement of a certain goal. In medicine, algorithmic thinking is based on the use of standardized and proven procedures that systematize doctor's work. This approach decreases the likelihood of errors, increases the predictability of outcomes, and standardizes medical practice⁶.

However, along with algorithmic thinking, doctors also rely on undifferentiated thinking. This approach lies in flexibility and creative problem solving. Using their experience, intuition, and critical analysis

5 Chavda Cook, C. E., Décarry, S., "Higher order thinking about differential diagnosis"

6 Margolis, C. Z., "Uses of clinical algorithms".

of data, doctors, can take unconventional steps and apply customized approaches, especially in complex and unusual clinical cases. Combination of algorithmic and undifferentiated thinking is optimal when applied to medical practice. Algorithms and standardized procedures help doctors to organize his or her work, build a knowledge base, and make effective use of existing experience and established standards. At the same time, undifferentiated thinking enables doctors to be flexible and creative, find non-standard solutions and adapt to changing circumstances.

Thus, the application and combination of algorithmic and undifferentiated thinking⁷ in medical practice is an important factor in providing quality and effective medical care to patients. Continuous development and training of doctors in both approaches has a high relevance and help to achieve optimal results⁸. Both approaches have their meaning and application, and their combination allows doctors to make effective decisions and achieve reliable outcomes.

Algorithmic thinking is based on use of standard procedures and sequences of steps that have been developed and tested for specific situations and practices. An algorithm is a sequence of steps or instructions designed to solve a certain task or achieve a certain goal. In medicine, algorithms are widely used to systematize and standardize patient care processes. This approach can be particularly efficient in routine and typical clinical scenarios where there are many data and experience that have been already validated. Algorithms allow clinicians to systematize their actions, decrease the likelihood of errors and providing consistency in practice. They become the basis for standardization and provide patients with uniform and quality care.

However, undifferentiated thinking also plays an important role in medical practice. This approach relies in the flexibility, intuition and creative thinking of doctors. Undifferentiated thinking can be applied in complex and non-standard situations where standard algorithms and procedures may be insufficient or inapplicable⁹. Doctors, using their experience, expertise, and analytical skills, can ask questions, seek

7 Bhise Bhise, V. et al., "Defining and Measuring Diagnostic Uncertainty in Medicine: A Systematic Review", p. 105.

8 Leeds Stuart et al., "Teaching heuristics and mnemonics to improve generation of differential diagnoses".

9 Small, et al., "SPIRALS: an Approach to Non-Linear Thinking for Medical Students in the Emergency Department".

“out-of-the-box solutions”, and make decisions based on specific patient needs and conditions.

The combination of algorithmic and undifferentiated thinking allows doctors to use the best aspects of both approaches. Algorithms and standardized procedures give structure and order to a medical decision, ensuring reliability and consistency. At the same time, undifferentiated thinking allows doctors to be flexible, innovative, and find unconventional solutions to complex situations. As a result, the effective application and combination of algorithmic and undifferentiated thinking facilitates high performance in medical practice. Doctors can use algorithms and standards as a basis for basic decisions, and apply undifferentiated thinking to individualized and innovative approaches to patient care. The role of algorithms in medicine has several aspects.

First, algorithms help to systematize and structure medical knowledge and processes. Medical practice has a variety of indicators, symptoms, and treatment techniques, and algorithms give doctors chance to determine the sequence of actions and ensure uniformity in the provision of medical care.

Second, algorithms help to improve the quality of care. Through standardization and systematization, Doctors can use validated and optimized algorithms to make decisions based on best clinical practices.

Third, algorithms facilitate learning and sharing among medical professionals. They can be documented and used to train not skilled doctors or as a guide to advise colleagues. This helps to maintain a uniform level of knowledge and professionalism in the medical field¹⁰.

However, it should be highlighted that algorithms cannot fully replace the professional and intuitive decisions of doctors. Every patient is a physiological unique, and medical situations can be complex and non-standardized. In such cases, doctors can use their knowledge, experience and intuition to make decisions based on specific circumstances.

The use of algorithms and standardized procedures in medicine has a number of significant advantages.

1. Improving the quality and safety of patient care: Algorithms provide doctors and medical staff with clear and consistent instructions for diagnostic and treatment procedures. This is a way

10 Kiesewetter, J. et al., “Knowledge is not enough to solve the problems – The role of diagnostic knowledge in clinical reasoning activities”, p. 3.

to prevent errors and minimize risks for patients. Standardized procedures ensure uniformity in treatment and reduce the likelihood of inconsistent medical decisions.

2. Efficient use of resources: Algorithms optimize the use of medical resources, including doctors' time, equipment and drugs. Standardized procedures help to allocate these resources evenly and efficiently, minimizing unnecessary costs and improving access to care for more patients.
3. Reducing diagnosis and treatment time: Algorithms provide doctors with clear guidance on the sequence of diagnostic procedures and the optimal treatment approach. It helps to reduce time spent in finding right diagnosis and developing a treatment plan. Fast and accurate decisions based on algorithms enhance a more efficient and targeted medical care.
4. Facilitate learning and sharing: Standardized algorithms serve as basis for training medical professionals. They help not skilled doctor to manage care process and make right decisions according to established standards. In addition, algorithms can be used by doctors to share experiences, consult colleagues and discuss complex clinical situations¹¹.
5. Improving the continuum of care: Algorithms help to ensure continuity of care for patients, especially in the case of information transfer and transitions between different health care providers and specialists. Standardized procedures help to synchronize actions of different health care actors and ensure a smoother transition of the patient through the different stages of care.

While choosing to apply algorithms and standardized procedures in medicine should be based on the individual characteristics of each patient and doctors' level of education and experience. At the same time, those tools are extremely useful in facilitating and standardizing doctors' actions, improving the quality of medical care and achieving better treatment outcomes. Examples of algorithms used in various medical fields include:

11 Bordage, G., "Why did I miss the diagnosis? Some cognitive explanations and educational implications".

-
1. **Diagnosis:** Doctors can use algorithms to determine a diagnosis based on patient's symptoms and results of medical tests. For instance, in gastroenterology, algorithms are applied to diagnose gastrointestinal diseases such as peptic ulcer or ulcerative colitis. Algorithms can also help to calculate the risk of developing a specific disease using risk factors based on genetic data.
 2. **Treatment:** Algorithms are used to determine optimal treatment protocol depending on patient's diagnosis. In oncology, as well, there are algorithms recommending chemotherapy or radiation therapy protocols depending on the type and stage of cancer. Algorithms can also be used to calculate drug dosages and recommendations for drug administration.
 3. **Rehabilitation:** In rehabilitation field, algorithms can help in determining the optimal physical activity regimen and teaching the patient proper movements. For instance, after a spinal cord injury, algorithms can help in designing personalized physical rehabilitation programs, taking into account the specific characteristics of each patient.
 4. **Decision-making processes:** Doctors can use algorithms to support decision-making in complex clinical situations. Algorithms can be determinant for optimal treatment plan for patients with multiple diseases or predicting the risk of complications.

However, it should be underscored that algorithms are decision support tools, and final decision is always made by doctors, taking into account the individual and clinical context of each patient. Electronic medical systems (EMSs) play an important role in algorithmized approach in medicine. They provide centralized storage and processing of large amounts of medical data and provide access to this information to doctors, medical staff and patients. In algorithmic medicine, EHRs enable automation and standardization of diagnosis, treatment, monitoring and documentation processes. They assist doctors in making informed decisions based on medical data, algorithms and expert recommendations.

ALGORITHMIC AND DIFFERENTIATED THINKING IN MEDICAL PRACTICE

Algorithmic thinking is the ability to solve problems in a structured and systematic way by following a specific set of logical steps or algorithms. It involves breaking down a complex problem into simpler sub-tasks and sequentially performing certain actions to obtain a solution. This approach is the basis for automated processes and computer programs.

Differentiated thinking is the ability to analyze complex situations and problems by taking into account different factors and characteristics. It involves distinguishing between multiple options, evaluating positive and negative sides, and making decisions based on individual characteristics and context. Differentiated thinking allows for the variables and contingencies inherent in many real-world situations.

In medical practice, algorithmic thinking is often used to develop diagnostic and treatment protocols, determine sequences of medical actions and predict outcomes. It helps to organize and systematize information, draw conclusions based on strictly structured algorithms and procedures.

At the same time, differentiated thinking plays an important role in analyzing complex clinical situations where multiple variables, patient characteristics and clinical data need to be taken into account. This allows individualized decisions to be made, taking into account the specifics of each situation and patient.

Using a combined approach including both algorithmic and differentiated thinking can achieve more complete and accurate analysis and decision making in medical practice. Algorithmic and differentiated thinking play an important role in medical practice, as both approaches contribute to better medical problem solving and decision making.

Algorithmic thinking has its advantages in medicine. Doctors and medical professionals can use standardized algorithms to diagnose and treat various diseases. This provides them with a structured and consistent methodology for performing certain medical procedures. Implementation of algorithms provides a more accurate and efficient organization of work, which contributes to more accurate diagnoses and appropriate treatment.

However, not all medical cases are the same and diseases may manifest themselves in different way due to patient's individual character-

istic. In such cases, differentiated thinking becomes essential. This type of thinking allows medical professionals to take into account individual characteristics of each patient, as well as factors that can affect prognosis and treatment outcomes. Differential thinking offers a unique approach to problems, help medical professional in analyzing them from different perspectives and taking into account multiple variables¹².

The combination of algorithmic and differentiated thinking approaches to medical practice allows a balance between standard procedures and individual factors. Algorithms provide frameworks for systematic and consistent approaches to diagnosis and treatment, while differentiated thinking gives chance to take into account patient's unique characteristics of his/her condition. This allows doctors to make more informed decisions and provide most appropriate treatment for each individual case. However, it should be noted that algorithms are not always complete or fully applicable to all situations. Clinicians must be willing to adapt and use differentiated thinking when necessary to better understand patients and apply the most appropriate treatments.

Application of algorithms in diagnosis and treatment plays an essential role in modern medicine. Algorithms allow systematizing the process of symptom assessment, data collection, laboratory and instrumental investigations, diagnosis and selection of optimal treatment. In diagnosis, doctors can use algorithms to systematically evaluate symptoms and clinical signs to narrow down the diagnostic domain and establish a presumptive diagnosis. Algorithms help doctors to consider and analyze a wide range of information, such as medical history, physical examination findings, laboratory and instrumental data. They can also help to rule out rare or unlikely diagnoses and focus on more likely options.

In treatment, algorithms provide doctors with structured guidelines and protocols for choosing the best approach to therapy. For instance, there are algorithms for treating various diseases based on evidence-based medicine and best clinical practices, which improves quality of care and reduces risk of errors¹³.

However, it should be noted that algorithms do not replace medical experience and expert opinion of doctors. Use of algorithms should

12 Мудрак, Д. А., "Место герменевтики в практической деятельности врача".

13 Сандул, Я. В., "Герменевтика в медицине: некоторые актуальные проблемы понимания".

be combined with individualized approaches to each patient and consideration of his/her unique characteristics. Doctors should assess the context and circumstances of each case, taking into account various factors such as age, gender, comorbidities and patient priorities.

In general, the application of algorithms in medicine is a valuable tool helping to improve diagnosis and treatment. However, they serve only as a guide and recommendation, as far as final decision is always made by doctor on the basis of his/her experience and considerations.

The benefits of algorithmic thinking:

1. **Structured:** Algorithmic thinking allows for systematic and organized thinking and problem solving. Thoughts and actions become more organized and coherent, which helps to better understand processes and makes them easier to perform¹⁴.
2. **Efficiency:** Use of algorithms can achieve more efficient and optimal results. Algorithms can be developed considering best practices, experience and proven methods. They help to eliminate randomness and allow for more efficient actions¹⁵.
3. **Improving accuracy:** Algorithms can produce more accurate results in tasks that require high accuracy and error minimization. A strict sequence of steps and a systematic approach can avoid errors and risks.

CONCLUSIONS

In conclusion, there are different types of thinking in medical practice – algorithmic, undifferentiated and differentiated. Each of these types of thinking has its own characteristics and affects the quality of medical care.

Algorithmic thinking is based on the use of established algorithms and protocols in decision making. This makes possible a standardization of diagnosis and treatment process, which can be useful, especially in cases where there are clear and predictable disease patterns. However, following algorithms alone can lead to standardization and ignoring individual patient characteristics.

14 Margolis, C. Z., "Uses of clinical algorithms".

15 Ibidem.

Undifferentiated thinking, on the other hand, is manifested by applying one-size-fits-all approaches to the diagnosis and treatment of all patients. This can lead to missing important medical signs and inappropriate treatment based on subjective assumptions. Undifferentiated thinking is often associated with inattention to the individual characteristics of each patient.

The most flexible and adaptive type of thinking in medical practice is differentiated thinking. Doctors having this way of thinking take into account individual characteristics of each patient and apply flexible approaches to diagnosis and treatment. It allows adapting medical care to a specific situation and increases its effectiveness. However, differentiated thinking requires deep knowledge, experience and the ability to analyze complex medical cases.

Differentiated thinking, which also plays a significant role in virtual medicine, involves the ability to consider and analyze a situation from different perspectives and to take multiple factors into account when making decisions. Virtual environments that operate on principles of differentiated thinking may include simulations of complex cases that require medical workers to consider numerous variables and dynamically adapt their strategies. This is especially important in training medical professionals, where modeling realistic scenarios with multiple potential developments helps future doctors and nurses develop critical thinking and complex decision-making skills.

It is important for doctors in medical practice to be able to combine different types of thinking and apply them according to specific circumstances. This will help to achieve the best results in diagnosing and treating patients, taking into account their individual characteristics and disease patterns. Overall, all three types of thinking—algorithmic, undifferentiated, and differentiated—find their applications in medical theory and practice within virtual spaces. Their combined use helps create comprehensive and adaptive systems that can effectively aid in education, diagnosis, and treatment, improving the overall quality of medical services and the preparation of medical personnel.

BIBLIOGRAPHY

- Амбалов, Ю. М., “Алгоритм проведения дифференциальной диагностики//Успехи современного естествознания” – № 8. –2003. – С 34.
- Bhise, V. et al., “Defining and Measuring Diagnostic Uncertainty in Medicine: A Systematic Review”, *Journal of General of Internal Medicine* 33 (2). September 2017. DOI: 10.1007/s11606-017-4164-z
- Bordage, G., “Why did I miss the diagnosis? Some cognitive explanations and educational implications”, *Acad Med*;74(10 Suppl):S138-43. October 1999. DOI: 10.1097/00001888-199910000-00065.
- Bose, P., “Large language models enhance differential diagnosis, paving the way for AI-assisted medical decision-making”. [electronic resource] URL: <https://www.news-medical.net/news/20231207/Large-language-models-enhance-differential-diagnosis-paving-the-way-for-AI-assisted-medical-decision-making.aspx>
- Bramsted, K. A., “The Use of Visual Arts as a Window to Diagnosing Medical Pathologies”, *The AMA Journal of Ethic* 18(8):843-854. August 2016. DOI: 10.1001/journalofethics.2016.18.8.imh11-1608
- Chavda, V. P., *Tailor-made Medicine: A step towards future of Diagnostics and Therapeutics*.
- Chavda Cook, C. E., Décarry, S., “Higher order thinking about differential diagnosis”, *Brazilian Journal of Physical Therapy* 24(1). January 2019. DOI: 0.1016/j.bjpt.2019.01.010
- Corazza, G. R., Lenti, M. V., Howdle, P., “Diagnostic reasoning in internal medicine: a practical reappraisal”, *Internal and Emergency Medicine* 16(2), December 2020, • DOI: 10.1007/s11739-020-02580-0
- Croskerry, P., “Perspectives on Diagnostic Failure and Patient Safety”, *Healthcare Quarterly* 15 Spec. No(sp) 50-6. • DOI: 10.12927/hcq.2012.22841
- Дессау, М. И., Лioзнов, Д.А., Николаенко, С. Л., Беляева, Т. В. Стигматизация, качество жизни, приверженность диспансерному наблюдению и лечению больных ВИЧ-инфекцией // *Инфекционные болезни: Новости. Мнения. Обучение*. –2017. –№4 (21). – С. 76-81.
- Drake, R. E., Green, A. I., “A call for creativity in dual diagnosis research”, *Journal of Dual Diagnosis* 11(2). March 2015. DOI: 10.1080/15504263.2015.1027125
- Eva, K. W., “What every teacher needs to know about clinical reasoning”, *Med Educ*. 2005;39(1):98–106. Epub 2004/ 12/23. PubMed PMID: 15612906.
- Graber, M. L., Rencic, J, Rusz D. et al. “Improving diagnosis by improving education: a policy brief on education in healthcare professions”, *Diagnosis (Berl)*. 2018;5(3):107-118. Epub 2018/ 08/27. PubMed PMID: 30145580.

-
- Hannawa, Annegret F., Frankel, Richard M. (2018-07-20). “‘It Matters What I Think, Not What You Say’”: Scientific Evidence for a Medical Error Disclosure Competence (MEDC) Model”. *Journal of Patient Safety*. 17 (8): e1130–e1137
- Kiesewetter, J. et al., “Knowledge is not enough to solve the problems – The role of diagnostic knowledge in clinical reasoning activities”, *BMC Medical Education* (2016) 16:303. 2016. Pp. 1-98. DOI 10.1186/s12909-016-0821-z
- Leeds Stuart et al., “Teaching heuristics and mnemonics to improve generation of differential diagnoses”, *Medical Education Online*, 25:1 (2020) 1742967, DOI: 10.1080/10872981.2020.1742967
- Margolis, C. Z., “Uses of clinical algorithms”, *JAMA The Journal of American Medical Association*. 249(5):627-32. March 1983 • doi:10.1001/jama.1983.03330290049028
- Maude, J., “Differential diagnosis: the key to reducing diagnosis error, measuring diagnosis and a mechanism to reduce healthcare cost”, *Diagnosis* 1(1), January 2014. Pp. 107–109. DOI: 10.1515/dx-2013-0009.
- Mccarron, T. et al., “Understanding patient engagement in health system decision-making: A co-designed scoping review”, *Systematic Reviews* 8(1), April 2019. DOI:10.1186/s13643-019-0994-8
- Мудрак, Д. А., “Место герменевтики в практической деятельности врача” // БМИК. –2013. –№2. – С.397-398.
- Small, et al., “SPIRALS: an Approach to Non-Linear Thinking for Medical Students in the Emergency Department”, *Cureus* 12(8): e9727 (2020). DOI 10.7759/cureus.9727
- Stuyt, P., de Vries Robbé P., Van Der Meer J., “Why don’t medical textbooks teach? The lack of logic in the differential diagnosis”, *Neth J Med*. 2003;61(11):383–387.
- Сандул, Я. В., “Герменевтика в медицине: некоторые актуальные проблемы понимания” // Вестник УГМУ. – 2018. – № 4. – С. 58-61.
- Patel, V. L., “Medical Reasoning and thinking”, November 2012 DOI: 10.1093/oxfordhb/9780199734689.013.0037
- Qian Zhao et al., “Uncertainty of Clinical Thinking and Patient Safety”, *International Journal of Clinical Medicine* 11(08):474-481, January 2020. DOI:10.4236/ijcm.2020.118040
- Van den Brink N. et al., “Role of intuitive knowledge in the diagnostic reasoning of hospital specialists: a focus group study”, *BMJ Open* 2019;9:e022724. doi:10.1136/bmjopen-2018-022724
- Xu Jie, “Algorithmic fairness in computational medicine”, *Ebiomedicine* 84(3):104250, October 2022. DOI: 10.1016/j.ebiom.2022.104250.

NARINE L. VIGEL

Rostovski državni medicinski univerzitet, Fakultet za kliničku psihologiju,
Odsek za filozofiju s kursom iz bioetike i duhovnih osnova medicinske
aktivnosti, Rostov na Donu, Ruska Federacija

EMILIJANO METINI

Ruski nacionalni istraživački medicinski univerzitet „Pirogov“,
Međunarodna medicinska škola, Odsek za humanističke nauke,
Moskva, Ruska Federacija

ALGORITAMSKO, NEDIFERENCIRANO I DIFERENCIRANO MIŠLJENJE U MEDICINSKOJ PRAKSI

Sažetak: Ovaj članak razmatra različite načine mišljenja u medicinskoj praksi. Autori analiziraju pitanja u vezi s donošenjem odluka u medicini i istražuju uticaj koja imaju na medicinsku negu. Prva vrsta mišljenja koja se ispituje jeste algoritamsko mišljenje. Lekari ga koriste kada se pri donošenju odluka drže algoritama i protokola. Algoritmi mogu da standardizuju proces dijagnostike i lečenja, što smanjuje rizik od greške i poboljšava efikasnost medicinske pomoći. Algoritamsko mišljenje, međutim, može dovesti do standardizovanog pristupa, što može dovesti do zanemarivanja individualnih karakteristika pacijenta. Druga vrsta mišljenja koja se razmatra jeste nediferencirano mišljenje. Nediferencirano mišljenje može dovesti do previda važnih dijagnostičkih znakova i neprikladnog lečenja zasnovanog na subjektivnim pretpostavkama. Treća vrsta mišljenja o kojoj se raspravlja u članku jeste diferencirano mišljenje. Koristeći tu vrstu mišljenja, lekari u obzir uzimaju individualne karakteristike svakog pacijenta i primenjuju fleksibilan pristup u dijagnostici i lečenju. Diferencirano mišljenje omogućava zdravstvenoj zaštiti da se prilagodi specifičnoj situaciji, što može povećati njenu delotvornost. Međutim, diferencirano mišljenje zahteva od lekara da poseduju temeljno znanje i iskustvo, kao i sposobnost da analiziraju složene medicinske podatke. Članak raspravlja važnost različitih načina mišljenja u medicinskoj praksi i podstiče lekare da razviju sposobnosti diferenciranog mišljenja. To će poboljšati kvalitet i efikasnost medicinske nege uzimanjem u obzir individualnih potreba svakog pacijenta.

Ključne reči: algoritamsko mišljenje, nediferencirano mišljenje, diferencirano mišljenje, medicinska praksa

Primljeno: 10.3.2024.

Prihvaćeno: 15.7.2024.