

# GEORGIAN MEDICAL NEWS

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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии  
საქართველოს სამედიცინო სიახლენი

## GEORGIAN MEDICAL NEWS

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**GMN: Georgian Medical News** is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

**GMN: Медицинские новости Грузии** - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

**GMN: Georgian Medical News** – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

### WEBSITE

[www.geomednews.com](http://www.geomednews.com)

## К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html) В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

**При нарушении указанных правил статьи не рассматриваются.**

## REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html)  
[http://www.icmje.org/urm\\_full.pdf](http://www.icmje.org/urm_full.pdf)

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned  
Requirements are not Assigned to be Reviewed.**

## ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

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## MEDICAL PROFESSIONALISM ASSESSMENT AND SELF-EVALUATION PRACTICES AMONG GEORGIAN MEDICAL PRACTITIONERS

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### Abstract.

**Background:** Medical professionalism represents a core component of high-quality healthcare and underpins public trust in the medical profession. Despite its recognized importance, systematic assessment and self-evaluation of professionalism remain inconsistently implemented in many educational and clinical settings.

**Objective:** To explore Georgian medical practitioners' perceptions of medical professionalism, its assessment during undergraduate medical education, and self-evaluation practices in clinical work.

### Materials and Methods:

This cross-sectional study was conducted among practicing medical doctors working in various healthcare institutions across Georgia. A convenience sampling method was applied. Participation was voluntary and anonymous. A total of 120 questionnaires were distributed for Questionnaire 1, of which 99 were returned (response rate: 82.5%). For Questionnaire 2, 80 questionnaires were distributed and 62 responses were received (response rate: 77.5%).

Participants represented various specialties and levels of clinical experience. Demographic data including age, gender, specialty, and years of clinical practice were collected to ensure appropriate characterization of the study population.

Two structured questionnaires were developed by the research team based on established literature on medical professionalism. Prior to full implementation, the questionnaires were pilot-tested on a small group of physicians (n=10) to ensure clarity and relevance.

**Results:** Questionnaire 1 was completed by 99 medical doctors from 37 hospitals across Georgia. Professionalism was rated as highly important by 95% of respondents. Among participants involved in teaching (61%, n=61), 66% (n=40) reported actively assessing professionalism, whereas no formal assessment was reported among those not involved in teaching (39%, n=38) ( $p < 0.001$ ). Considerable variability was observed in the understanding of professionalism, encompassing knowledge and skills, clinical experience, communication, ethics, empathy, and continuing medical education. Questionnaire 2 was completed by 62 medical practitioners, of whom 56% reported regular self-assessment of professionalism, while 29% did not engage in self-evaluation.

**Conclusion:** Although recognition of medical professionalism is high among Georgian medical practitioners, substantial gaps remain in its systematic assessment and self-evaluation. The findings highlight the need for standardized criteria and structured implementation of professionalism assessment in medical education and clinical practice.

**Key words.** Medical professionalism, assessment, self-evaluation, medical education.

### Introduction.

Medical professionalism encompasses a set of values, behaviors, and relationships that form the foundation of trust between society and the medical profession. It includes ethical practice, effective communication, accountability, commitment to competence, and continuous professional development. International medical education frameworks emphasize professionalism as a core competency [1,2] however, translating this concept into consistent assessment practices remains challenging [3,4].

In Georgia, medical education has undergone significant reforms aligned with international standards. Nevertheless, limited empirical data exist regarding how professionalism is perceived, assessed, and self-evaluated by practicing physicians. Understanding current practices is essential for developing evidence-based strategies to strengthen professionalism education and assessment [5-8].

The present study aims to examine Georgian medical practitioners' perspectives on medical professionalism, focusing on its perceived importance, methods of assessment during undergraduate medical education, and self-evaluation practices in professional life.

### Materials and Methods.

**Study design and participants:** This cross-sectional study was conducted among practicing medical doctors working in various healthcare institutions across Georgia. A convenience sampling method was applied. Participation was voluntary and anonymous. A total of 120 questionnaires were distributed for Questionnaire 1, of which 99 were returned (response rate: 82.5%). For Questionnaire 2, 80 questionnaires were distributed and 62 responses were received (response rate: 77.5%).

Participants represented various specialties and levels of clinical experience. Demographic data including age, gender, specialty, and years of clinical practice were collected to ensure appropriate characterization of the study population.

**Research instruments:** Two structured questionnaires were developed by the research team based on established literature. Prior to full implementation, the questionnaires were pilot-tested on a small group of physicians (n=10) to ensure clarity and relevance.

Questionnaire 1 assessed perceptions of medical professionalism, its importance, and its assessment during undergraduate medical education. Questionnaire 2 focused on self-evaluation practices related to professionalism in clinical work.

Both questionnaires consisted of closed-ended questions using a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree), as well as selected multiple-choice items.

**Data collection:** Questionnaire 1 was administered between June and September 2024, while Questionnaire 2 was distributed in December 2024. Both surveys were completed anonymously.

**Data analysis:** Descriptive statistical analysis was performed using percentage distributions. Additionally, inferential statistical analysis (chi-square test) was applied to compare responses between physicians involved in medical education and those not involved. A p-value of <0.05 was considered statistically significant.

**Ethical considerations:** The study was conducted in accordance with institutional ethical standards. Participation was voluntary and anonymous, and no personal identifiers were collected.

## Results.

Age and gender data were not available; however, demographic analysis showed that 82 respondents held a medical license, while 17 did not. Regarding clinical experience, 17 participants had up to 5 years of experience, 16 had 5–10 years, and 49 had more than 10 years of clinical practice. In addition, 17 participants were residents. Of the 37 hospitals represented in the study, 30 (81%) were located in Tbilisi and 7 (19%) were located in the regions of Georgia. A total of 99 medical doctors from 37 hospitals completed Questionnaire 1. The majority of respondents (95%) rated medical professionalism as highly important. Only 1% considered professionalism to be of average importance.

Among respondents involved in teaching activities (61%, n=61), 66% (n=40) reported actively assessing professionalism among students, while 34% (n=21) reported that they did not assess it. Among respondents not involved in teaching activities (39%, n=38), no formal assessment of professionalism was reported. This difference was statistically significant (chi-square test,  $p < 0.001$ ).

Participants demonstrated diverse interpretations of professionalism. The most frequently cited components included theoretical and practical knowledge (36%), clinical experience (30%), communication with patients (29%), empathy (11%), ethical conduct (8%), and engagement in continuing medical education (9%).

Questionnaire 2 was completed by 62 medical practitioners. Regular self-assessment of professionalism was reported by 56% of respondents, whereas 29% indicated that they did not engage in self-evaluation, and 14% were uncertain. Self-assessment strategies primarily included participation in conferences, training programs, and professional development activities.

## Discussion.

The findings demonstrate a strong consensus among Georgian medical practitioners regarding the importance of medical professionalism. However, the results reveal significant gaps between recognition and systematic implementation of professionalism assessment and self-evaluation.

The variability in definitions of professionalism reflects the

multifaceted nature of the concept but also suggests a lack of unified criteria. Similar challenges have been reported internationally, where professionalism is acknowledged as essential yet remains difficult to assess objectively [3-5].

The limited use of structured assessment methods in undergraduate education may contribute to inconsistent professional development trajectories. Previous studies emphasize that reliable assessment of professionalism requires clearly defined criteria and multiple evaluation methods [4,6].

Furthermore, the absence of regular self-evaluation practices among a substantial proportion of practitioners highlights the need for institutional support and guidance. Reflective practice and continuous professional development are recognized as key components of professionalism [5,9,10].

Discussion of professionalism should extend beyond knowledge and technical competence to include communication, ethics, empathy, and reflective practice [1,12,13]. Establishing standardized assessment frameworks and integrating reflective self-assessment tools may enhance the consistency and effectiveness of professionalism education [11,14]. This interpretation is further supported by the statistically significant difference observed between physicians involved and those not involved in medical education.

## Conclusion.

This study indicates that while medical professionalism is highly valued among Georgian medical practitioners, systematic assessment and self-evaluation practices remain insufficiently developed. Standardized criteria, structured assessment tools, and institutional strategies are needed to ensure consistent integration of professionalism into medical education and clinical practice.

Future efforts should focus on developing national frameworks that support both formative and summative assessment of professionalism and promote reflective professional development among medical practitioners.

## REFERENCES

1. Cruess RL, Cruess SR, Steinert Y. Teaching medical professionalism: Supporting the development of a professional identity. Cambridge University Press; 2016.
2. Epstein RM, Hundert EM. Defining and assessing professional competence. *JAMA*. 2002;287:226-235.
3. Hodges BD, Ginsburg S, Cruess R, et al. Assessment of professionalism: Recommendations from the Ottawa Conference. *Med Teach*. 2011;33:354-363.
4. Wilkinson TJ, Wade WB, Knock LD. A blueprint to assess professionalism: Results of a systematic review. *Acad Med*. 2009;84:551-558.
5. Passi V, Doug M, Peile E, et al. Developing medical professionalism in future doctors: A systematic review. *Int J Med Educ*. 2010;1:19-29.
6. Arnold L. Assessing professional behavior: Yesterday, today, and tomorrow. *Acad Med*. 2002;77:502-515.
7. Ginsburg S, Regehr G, Stern D, et al. The anatomy of the professional lapse: Bridging the gap between traditional frameworks and students' perceptions. *Acad Med*. 2002;77:516-522.

8. Papadakis MA, Teherani A, Banach MA, et al. Disciplinary action by medical boards and prior behavior in medical school. *N Engl J Med.* 2005;353:2673-2682.
9. van Mook WNKA, de Grave WS, Gorter SL, et al. Intensive course on professional behavior for medical students: Results of a longitudinal study. *Med Teach.* 2010;32:e9-e15.
10. Stern DT, Papadakis M. The developing physician—Becoming a professional. *N Engl J Med.* 2006;355:1794-1799.
11. Norcini J, Anderson MB, Bollela V, et al. Criteria for good assessment: Consensus statement and recommendations from the Ottawa 2010 Conference. *Med Teach.* 2011;33:206-214.
12. GMC. Outcomes for Graduates. General Medical Council; 2018.
13. Swick HM. Toward a normative definition of medical professionalism. *Acad Med.* 2000;75:612-616.
14. Hilton SR, Slotnick HB. Proto-professionalism: How professionalisation occurs across the continuum of medical education. *Med Educ.* 2005;39:58-65.