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Policy Brief

# Recommendations for reduction of academic dishonesty in clinical rotations for general medical students: A policy brief

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**Abstract**
Academic dishonesty encompasses unethical behavior aimed at gaining an unfair academic advantage. Despite the inherent requirements of honesty and ethical conduct in medical science, academic dishonesty has been a persistent issue among medical students since the inception of medical education. Given the high prevalence of academic dishonesty among general medical students at the clinical level in Iran, it is imperative to implement measures and strategies to mitigate this problem in the future. In this policy brief, we analyzed findings from prior studies conducted at North Khorasan University of Medical Sciences (NKUMS) and conducted a comprehensive review of the global literature on academic dishonesty in medical education. Based on the available findings, we present evidence-based strategies and recommendations for reducing the incidence of academic dishonesty in the clinical education component of the general medicine curriculum.

## Introduction

Academic integrity refers to students' ethical conduct in their educational pursuits, encompassing honesty, fairness, respect, and responsibility. Conversely, academic dishonesty denotes inappropriate behavior aimed at gaining an undue academic advantage or causing harm to fellow students. The act of cheating not only undermines the individual perpetrating academic misconduct but also potentially encourages other students to engage in similar unethical practices. Many students may rationalize their behavior by invoking the common justification: "If everyone else is doing it and does not care if I do?".[1]

Medical science, by its inherent nature, necessitates honest, ethical physicians who adhere to human values and virtues.[2] Academic dishonesty among medical students can serve as a predictor of their future behavioral patterns in the professional environment and in relation to patient care. Such academic misconduct among medical students can result in various negative consequences, including a diminution in the value of honesty and fairness among students, an inaccurate assessment of learners' abilities, challenges in implementing future clinical skills, legal ramifications for the institution, and a decrease in self-confidence in subsequent professional endeavors.[3,4]

In Iran, the prevalence of academic dishonesty among medical students has been reported in various studies to range from 50% to 65%.[5,6] A study conducted at the North Khorasan University of Medical Sciences (NKUMS) revealed an academic dishonesty rate of 50%.[7] In other countries, the reported rates of academic dishonesty range from 20% to 60%.[8,9] This evidence suggests that academic dishonesty among medical students in Iran is comparatively high, indicating the need to identify and implement solutions to mitigate academic dishonesty in clinical education.

In the present investigation, we conducted a systematic examination of the extant literature in conjunction with our previous research to elucidate the diverse manifestations of academic dishonesty and the underlying factors contributing to its occurrence within clinical rotations. The purpose of this policy brief is to recommend institution-level interventions aimed at reducing academic dishonesty during clinical rotations, specifically within Iranian medical schools. The intended audience includes clinical educators, curriculum designers, and policymakers focused on enhancing integrity in medical education.

## Current situation analysis

In medical education, the clinical training course

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consists of two stages: internship and practicum. In our previous study, we investigated the educational challenges encountered by medical students during clinical rotations and elucidated the factors that contribute to academic dishonesty.

General medical students encounter academic dishonesty during clinical training due to various factors. These factors can be divided into two general subcategories: systemic challenges and student-related factors. Systemic challenges contributing to academic dishonesty among general medical students include insufficient supervision, misalignment between instructional content and assessment methods, and inconsistencies in clinical instructors' adherence to the curriculum. These obstacles hinder effective learning and create an environment in which students may resort to dishonest practices. Additionally, diminished motivation stemming from uncertainties regarding future career prospects and a lack of constructive competition exacerbates these issues, leading to decreased engagement in the educational process. Student-related factors significantly influenced academic dishonesty during clinical rotations. Key issues include insufficient training in academic integrity, inadequate continuous supervision, and fear of reprimand for errors. Other factors, such as lack of academic self-efficacy, professional burnout, extensive clinical responsibilities, peer influence, and anxiety due to stressors in the clinical environment, contribute to a heightened risk of dishonest behavior. Moreover, psychological distress and dissatisfaction with perceived inadequate attention from clinical educators further exacerbate students' likelihood of academic dishonesty.[4,6-8,10-13]

Academic dishonesty is significantly more prevalent in clinical training than in basic science and clinical introductory courses. Examples of such misconduct include falsifying attendance records, providing false reports regarding patient history-taking and examinations, making false statements about following up on patients' paraclinical test results, completing logbooks by copying from other students' records, avoiding the presentation of complex cases during morning reports, providing false information in morning reports about diagnostic and therapeutic measures for patients, substituting for other students during duty hours, utilizing unauthorized equipment and information during examinations, copying answers during examinations, obtaining information from students and accessing examination papers before taking the exam, failing to complete the disease course form, or copying other students' notes.[8,11,14,15] A study conducted at the NKUMS revealed that the most prevalent forms of academic dishonesty among medical students in clinical settings included obtaining information about forthcoming examinations from previous students or past exams, falsifying attendance records, documenting more clinical information about patients than verified, and recording physical examinations as normal despite not having performed them.[10]

## Strategies and recommendations for reducing the level of academic dishonesty

1. Conducting informational sessions and workshops[4-6,8,13]: To address academic dishonesty during clinical rotations, educational administrators should implement regular informational sessions outlining disciplinary regulations. These sessions must highlight the serious nature of academic integrity and the clinical faculty's firm stance against misconduct. Furthermore, stress management workshops led by the university counseling office should be introduced to help students identify stressors in clinical settings and develop effective coping strategies to enhance resilience and overall well-being.
2. Enhanced monitoring of student attendance and performance in clinical settings[7,13,14]: Students' presence in hospitals should be recorded using automated attendance tracking systems. Furthermore, during clinical rotations, student attendance and performance should be closely and continuously monitored by clinical professors and clinical education specialists. In wards where residents are present, the responsibility for monitoring should be delegated to on-duty residents. In wards without a resident presence, the active participation of on-duty students should be verified through unannounced visits by education specialists or resident physicians at the hospital.
3. Systematic, precise, and consistent planning of clinical education[7,10,11,16]: Education administrators should endeavor to structure the clinical rotations of students' training and internship programs in a manner that maintains the quality of patient care while providing adequate opportunities for students to study and practice clinical skills and for clinical professors to facilitate professional development. The Education Department should prioritize the regular implementation of these programs, and the schedules should be communicated to students and professors in a transparent and timely manner. Regular training sessions for educators should be established, feedback mechanisms for students and faculty should be implemented, and rotation schedules should be updated promptly through digital platforms.
4. Attracting continuous and regular participation of clinical professors in clinical education[4,10, 13,16,17]: The significant therapeutic workload faced by clinical professors hinders their ability to consistently deliver clinical education aligned with curriculum objectives, resulting in suboptimal student learning experiences and increased dissatisfaction, which can foster academic dishonesty. To mitigate this issue, educational administrators need to emphasize

the equal importance of education and treatment. Recommendations include reducing clinical professors' workloads by delegating therapeutic responsibilities to additional physicians, providing necessary support and resources, continuously assessing and offering feedback on educational performance, and promoting open communication and collaboration between students and faculty. Regular workload assessments should be implemented, mentorship programs for clinical professors should be established, and feedback loops for continuous improvement in educational practices should be created.

5. Avoid unnecessary specialized clinical training[7,11,18]: Medical schools should align their training programs with the actual needs of the healthcare sector and societal expectations for general medical graduates. Orientation programs should be established to prevent excessive specialization among clinical professors. These programs will encourage a balanced curriculum that integrates both theoretical and practical training, emphasizing essential clinical skills while minimizing the overemphasis on theoretical content. This approach aims to create realistic expectations and enhance students' competency in diagnostic and therapeutic procedures.
6. Fair, transparent, consistent, and aligned assessment with educational goals[4,7,11]: Medical student assessments in clinical settings must align with educational objectives and be communicated clearly. Formative assessments should provide constructive feedback to enhance performance throughout the rotation. A variety of assessment methods should be utilized for summative evaluations, with feedback delivered compassionately to prevent negative emotional impact. To reduce the risk of academic dishonesty, a question bank developed collaboratively by clinical faculty is recommended, allowing for the random selection of questions for each course.
7. Mitigating burnout through emotional and psychological support[3,7,10,11,13,19]: To reduce burnout among medical students, it is essential to maintain reasonable working hours and shift limits. Clinical faculty should recognize students' contributions to patient care, provide support during challenging interactions, and foster a positive learning environment. Encouraging students to view challenges as opportunities for growth can enhance their resilience and professional development.
8. Create a peer support network[4,7,9,10,12]: It is recommended that clinical professors endeavor to establish a foundation for the development of peer relationships through active learning strategies such as group discussions, problem-solving activities, and mentoring programs. Peer networks provide a basis for sharing experiences and facilitating emotional and academic support. Clinical professors can also acknowledge and incentivize students to exhibit effective supportive behaviors. This approach can foster a positive reinforcement system that encourages sustained support and collaboration among students. Structured mentoring programs should be established by pairing students with peers based on shared interests, scheduling regular check-ins, and providing training on effective communication and support techniques.

## Conclusion

In conclusion, addressing academic dishonesty in clinical medical education requires a multipronged approach. The findings from the NKUMS, corroborated by the existing literature, highlight the complex interplay of individual, educational, and systemic factors contributing to this issue. Implementing the proposed strategies, including enhanced academic integrity training, structured clinical experiences, fair assessment practices, workload management for faculty, and fostering peer support networks, offers a comprehensive framework for intervention. These interventions aim to create a learning environment that prioritizes ethical conduct, supports student well-being, and promotes the development of competent and trustworthy medical professionals. This policy brief offers the first policy recommendations specifically tailored to the Iranian clinical education context, filling a crucial gap in the existing literature. Furthermore, we urge medical schools and educational policymakers to prioritize faculty training in recognizing and addressing academic dishonesty and to adopt the proposed strategies to cultivate a culture of integrity within clinical rotations. Future research should focus on evaluating the effectiveness of these interventions and adapting them to the evolving medical education landscape.

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### Authors' Contribution

**Conceptualization:** Mohammadreza Safdari.
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### Competing interests

The authors declare no conflict of interest.

## Ethical Approval

No ethical approval was required for this conceptual study. The authors developed the recommendations outlined in this policy brief based on a literature review and institutional data analysis. This study did not involve human subjects or the collection of primary data.

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