

Transforming the Medical School Admissions Process: Prioritizing Team-Based Skills and Patient-Centered Values

Isaac Y. Hung¹ , Alexandra Kain² and Thomas R. Vetter³

¹School of Medicine, University of California Irvine, Irvine, CA, USA. ²Frank H. Netter MD School of Medicine, Quinnipiac University, Hamden, CT, USA. ³Department of Surgery and Perioperative Care, Dell Medical School at the University of Texas at Austin, Austin, TX, USA.

Journal of Medical Education and Curricular Development
Volume 11: 1–6
© The Author(s) 2024
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/2382120524130776



ABSTRACT: This article examines the need for reform in medical school admissions to better align with the collaborative and patient-centered nature of contemporary healthcare. Traditional admissions processes prioritize academic excellence, often neglecting essential interpersonal and team-based skills. We advocate for several strategies to address this gap. Firstly, diversifying admissions committees to include healthcare professionals such as nurses and pharmacists, as well as patients can provide insights into candidates' teamwork abilities. Secondly, incorporating group interviews and exercises can better assess applicants' interpersonal skills and collaboration potential. We also propose leveraging the "Voice of the Consumer" (VOC) concept, using patient and family feedback to guide the selection of future physicians. This aligns with the shift toward shared decision-making in patient care. The paper underscores the importance of interprofessional education in addressing communication challenges within healthcare. By integrating these reforms early in medical education, we can cultivate physicians who excel in both evidence-based and patient-centered care. This perspective calls for a holistic evaluation process in medical school admissions, prioritizing patient-centered values and effective teamwork to develop healthcare professionals capable of navigating modern healthcare complexities.

KEYWORDS: communication, teamwork, admissions, patient-centered, diversity

RECEIVED: July 10, 2024. ACCEPTED: November 23, 2024

TYPE: Perspective

FUNDING: The authors received no financial support for the research, authorship, and/or publication of this article.

DECLARATION OF CONFLICTING INTERESTS: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

CORRESPONDING AUTHOR: Thomas R. Vetter, Department of Surgery and Perioperative Care, Dell Medical School at the University of Texas at Austin, Health Discovery Building, Room 6.812, 1601 Trinity Street, Austin, TX 78712, USA.
Email: thomas.vetter@austin.utexas.edu

Imagine a scenario where a patient undergoes total hip arthroplasty, embarking on a healthcare journey that spans several months and involves interaction with a diverse array of individuals—approximately 50 or more—each pivotal in coordinating and delivering care.^{1–3} From the surgical team and anesthesiologist to laboratory technicians, administrative staff, preoperative clinic personnel, nutritional specialists, and post-operative rehabilitation therapists, the tapestry of involved professionals is expansive. However, within this intricate network of care, a crucial gap often emerges: many of these providers may be unfamiliar with one another, potentially leading to breakdowns in communication between team members and the patient.² Should communication falter, the ramifications are profound, compromising the delivery of patient-centered care and diminishing the overall quality of care provided.⁴

Evolving Healthcare: Innovating Communication and Teamwork for Patient Safety

Since the inception of the patient safety movement, the progress of the United States (US) healthcare system has been notable.⁵ In response to identified communication challenges within healthcare, a spectrum of measures has been introduced. These include adopting innovative systems such as I-PASS,⁶ implementing protocols such as Doctor-Nurse rounding,⁷ and expanding simulations focusing on closed-loop communication.⁸ Recent investigations from the US Agency for Healthcare Research and Quality (AHRQ) affirm this progress, highlighting a

significant decline in in-hospital adverse events related to patient harm in the United States.⁹ Inspired by this progress made over the past two decades in enhancing patient safety and healthcare quality, we are motivated to examine what more we can do. How can we further innovate to elevate the delivery of care and to continue our progress toward greater excellence?

As the healthcare sector navigates a complex landscape, the underlying causes of medical errors, often multifaceted, persistently illuminate communication breakdowns and teamwork deficiencies as persistent challenges.¹⁰ Furthermore, emerging trends and pressures exacerbate this issue. Looking ahead, the healthcare landscape is poised to confront other challenges, including escalating costs, workforce shortages, and the disruptive influence of digital technologies.¹¹ Notably, pressures related to time constraints, documentation requirements, widespread adoption of electronic health records, and the integration of artificial intelligence into healthcare workflows add complexity to communication and teamwork dynamics. These emergent dynamics can amplify existing challenges within healthcare settings, underscoring the urgent imperative for sustained efforts to improve these critical aspects of patient care.

Improving communication and teamwork within healthcare necessitates a comprehensive approach, spanning various facets from recruitment to training and institutional culture. Efforts are being made at systemic levels to cultivate a culture conducive to effective communication within healthcare organizations.



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access page (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

Notably, there has been a growing emphasis on teamwork and communication skills training, mainly through interprofessional education in undergraduate and graduate medical education.¹² Of note, a majority of Liaison Committee on Medical Education (LCME) accredited US medical schools now incorporate interprofessional education, involving students from diverse healthcare professions.¹³ However, to further enhance these endeavors, we advocate for a broader perspective that explores new avenues for improving communication and teamwork. This includes developing and implementing interventions emphasizing communication and teamwork earlier in the educational trajectory, particularly during the medical student application and selection process.

Breaking Silos: Leveraging the Voice of the Consumer in Medical School Admissions

In the business sector, the voice of the customer concept (VOC) is widely embraced. Essentially, it underscores the importance of soliciting and incorporating end-user feedback to ensure that products meet their needs and preferences.¹⁴ Similarly, as we endeavor to foster a more patient-centered healthcare experience, patients are analogous to consumers—hence the voice of the consumer (VOC) is apropos. Applying this VOC concept to the medical school admission process, it becomes evident that involving patients, their family members, nurses, and other healthcare providers as stakeholders and participants in candidate selection is the logical next step.³ Their unique perspectives can offer vital insights into selecting candidates who align with the values and priorities of patient-centered care.

Historically, the medical field has been characterized by a culture of paternalism, in which doctors were presumed to know what is best for the patient.¹⁵ However, with the evolving concept of patient-centered care, there has been a shift toward shared decision-making, emphasizing the role of physicians as expert guides in assisting patients to make informed choices regarding their care.¹⁶ Recognizing the limitations of self-assessment, it becomes evident that input from nonphysicians is essential in identifying the qualities that define an effective physician. As Albert Einstein remarked, ‘We can’t solve problems by using the same kind of thinking we used when we created them.’¹⁷ As outlined by the Association of American Medical Colleges (AAMC),¹⁸ patients and other stakeholders have actively contributed to defining the competencies sought in physicians. Moving forward, involving these stakeholders in evaluating and implementing these criteria is imperative.^{19–21} Failure to do so would be shortsighted, as continuing to rely on the same criteria, techniques, and individuals in selecting future doctors would hinder progress rather than foster improvement.

Four Strategies for Transforming Medical School Admissions

Central to this endeavor is reevaluating the current selection process for medical students, which prioritizes the assessment

and recognition of individual excellence primarily by physicians. Admission into medical school is a rigorous and highly competitive process, demanding candidates to exhibit independent academic proficiency. However, only a fraction of applicants advance to the interview phase, where communication skills are scrutinized alongside other criteria.^{22,23} Notably, these interviews usually occur in a one-on-one format, facilitated by experienced physicians. Moreover, medical school admission committees comprise physicians, medical students, and occasionally basic scientists, with a conspicuous absence of key members from patient care teams like nurses, therapists, and pharmacists. This oversight underscores a significant gap in the evaluation process, as frontline healthcare professionals, patients, and their families possess invaluable perspectives crucial for accurately assessing communication abilities. To address this gap, we advocate for reconsidering approaches to medical school admissions, including (a) diversifying the composition of admission committees and interviewers and (b) exploring alternative methods to evaluate applicants’ interpersonal and team skills (Table 1).

Diversity of admissions committees

A growing body of literature highlights the importance of diversity in healthcare, encompassing factors such as ethnicity and gender, in fostering strong teamwork and promoting innovation within healthcare settings.^{24,25} While progress has been made in the racial and ethnic diversity of the leadership teams and members of medical school committees, there is a notable absence of literature discussing the necessity of diversifying admissions committees beyond the perspectives of physicians.²⁶ However, to further enhance the effectiveness of these admissions committees, it is crucial to expand the range of healthcare professionals represented. In recent years, medical education has increasingly focused on interprofessional education (IPE) to improve collaboration and communication among healthcare providers. IPE initiatives bring together students from various disciplines—such as nursing, pharmacy, and social work—to learn how to work collaboratively as part of a healthcare team.²⁷ This approach has been shown to enhance patient care, reduce medical errors, and promote a more holistic understanding of healthcare. Extending these principles further upstream into the admissions process by diversifying admissions committees is a logical next step.

Incorporating perspectives from nonphysicians, such as nurses and pharmacists, can enrich the admissions process by offering insights that physicians might otherwise overlook. With their close and continuous interaction with patients, nurses provide valuable perspectives on candidates’ interpersonal skills and their ability to deliver compassionate, patient-centered care. Similarly, pharmacists, who frequently communicate with nurses and physicians, offer crucial insights into candidates’ potential for interdisciplinary collaboration and their role in preventing miscommunication in healthcare. Including these diverse perspectives aligns with

Table 1. Strategies for enhancing stakeholder engagement and team skills in medical school admissions.

PROPOSED APPROACHES	STAGES OF EVIDENCE AND IMPLEMENTATION		
	CONCEPTUAL—NO KNOWN DATA OR EVIDENCE	EMERGING EVIDENCE—LIMITED CASE EXAMPLES	VALIDATED PRACTICE—SUPPORTED BY STUDIES
<i>(A) Involvement of key stakeholders (eg, nurses, pharmacists, patients, family members)</i>			
(1) Diversity of admissions committees	X		
(2) Diversity of admissions interviewers		X	
<i>(B) Assessing an individual applicant's ability to work as member of a team</i>			
(3) Group-based interviews		X	
(4) Exercises to evaluate team skills	X		

interprofessional education (IPE) goals, fostering teamwork and collaboration from the very beginning of medical training. Additionally, involving patients or community representatives in admissions committees can further enrich the selection process. Patients bring firsthand experience with the healthcare system and can provide valuable insight into whether prospective medical students are likely to communicate effectively and show empathy—qualities that are increasingly recognized as vital for the physician-patient relationship. Community members can also assess how well candidates might serve diverse and underserved populations: an essential skill set emphasized in IPE programs to reduce healthcare disparities.

By incorporating diverse perspectives from providers across various healthcare disciplines and community members, medical school admissions committees can tap into a rich pool of insights and experiences. This broader diversity not only enhances the decision-making process but also ensures that the selection of future physicians is informed by a comprehensive understanding of the multifaceted aspects of patient care and teamwork. Ultimately, this approach is an extension of the IPE model, moving these collaborative ideals further upstream into the admissions process, ensuring that the next generation of physicians is prepared to engage in interprofessional environments from the start of their medical education.

Diversity of admissions interviewers

Building on the principles of diversifying admissions committees, there is significant value in extending the interview process to include a more diverse array of interviewers. This diversity allows for a more comprehensive evaluation of how prospective medical students engage with different stakeholders in healthcare. For example, Temple University has pioneered the inclusion of community members in its admissions process.²⁸ These community members received interview training, and over the course of about 7 months and dedicating approximately 4 hours each week, they participated in virtual

interviews with candidates. The interviews covered essential topics such as the applicants' reasons for choosing Temple, their understanding of community, how they would engage with marginalized groups, and how they would navigate sensitive clinical interactions, like end-of-life discussions with patients' families. Additionally, community members were trained to discern whether candidates' responses were genuine or rehearsed, adding another layer of assessment that goes beyond academic qualifications.

Involving individuals from various backgrounds—both healthcare professionals and community members—as interviewers provides unique insights into a candidate's capacity for effective communication, empathy, and collaboration. Allowing traditional physician interviewers to observe these interactions further enhances the evaluation process, helping to assess a candidate's aptitude for leadership, humility, and open-mindedness—traits strongly linked to interprofessional teamwork and communication.^{29,30} By adopting this multifaceted approach, medical school admissions committees can more thoroughly evaluate candidates' readiness to meet the complexities of modern healthcare environments, where collaboration and patient-centered care are essential.

Group-based interviews

Group interviews, where multiple applicants interact in discussions or other activities and are evaluated simultaneously, could offer several advantages for medical school admissions. This format has been successfully implemented in nursing school admission, leading to improved efficiency in the interview process and the selection of high-quality applicants, as evidenced by improved retention rates.³¹ While group interviews have not been extensively studied in medical school admission, prevailing approaches typically involve multiple mini-interviews (MMIs) or traditional unstructured interviews.³² However, research examining group interviews in other fields, such as selecting teacher educators, has demonstrated its value in

uncovering communication indicators that may not be revealed through other interview formats.^{33–36} Therefore, it is imperative that group interviews be further explored and trialed in medical school admissions. For instance, conducting group interviews allows for the assessment of candidates' communication skills and their ability to collaborate effectively with peers. Despite this potential benefit, data from the AAMC 2023 Medical School Admission Requirements (MSAR) Interview Procedures demonstrate that less than 10% of US allopathic medical schools currently utilize group interviews.³⁷ This underutilization presents a significant opportunity for expansion. Shifting to a group interview format would require reevaluating the values being assessed during admissions and could lead to a more comprehensive and effective process that better captures candidates' ability to thrive in collaborative, team-based healthcare settings.

Exercises to evaluate team skills

Incorporating exercises into the medical school admission process to evaluate soft skills could address the limitations of existing interview methods. Studies examining the role of interviews in medical school admissions have highlighted the drawbacks of current approaches. Whereas traditional interviews have been found to have low reliability, limiting their validity, the multiple mini-interview (MMI) has shown promise as a reliable and unbiased method that predicts clinical and academic performance.³² However, there is a need to consider how medical trainees are prepared for future team-based care. Drawing from examples in the industry, such as the case-method interview used by business and consulting firms, where applicants are assessed on their ability to remain calm, problem-solve, and collaborate effectively, there is potential to modify medical school admissions exercises.^{38–40} These modifications could include group tasks, akin to gamified simulations, fostering collaboration and medical knowledge acquisition. As has been noted historically, individuals who perform well and demonstrate the ability to learn from these experiences through self-reflection and peer criticism are likely to possess higher baseline emotional intelligence (EQ) skills.^{41,42} By adopting exercises that test communication, problem-solving, and collaboration, medical schools can incorporate a more consistent and objective approach to assessing applicants' performance, despite variability in interviewers.

Discussion and Future Considerations

While this paper advocates for a transformation in medical school admissions to prioritize teamwork and patient-centered values, it is important to acknowledge that the absence of empirical data or case studies to demonstrate the feasibility of these proposals is a notable limitation. Without concrete programmatic examples and feasibility data that support the efficacy of these approaches, much of our discussion remains

hypothetical. This represents an opportunity for future research and pilot programs to rigorously evaluate the benefits of diversifying admissions committees and incorporating patient-centered feedback into the selection process.

Despite this limitation, we believe this is precisely the call to action that medical schools need. We hope that medical schools will engage with these ideas by designing and launching pilot programs to test the proposals discussed here. Pilot programs could provide the empirical data needed to move this conversation from theory to practice and give institutions a chance to assess whether these changes can foster a new generation of physicians who are as skilled in teamwork and patient-centered care as they are in academic excellence.

In considering the implementation of these changes, several challenges must be addressed, which we do not fully explore in this article. However, these challenges could serve as important topics for future discussions in the literature and in the practical design of programs at individual medical schools:

1. *Selection of Community Members:* Determining how to select representative community members who can offer meaningful perspectives on medical school applicants is a key challenge.
2. *Training and Preparation:* Developing standardized training for these individuals to ensure they can effectively assess candidates on teamwork and communication is essential.
3. *Evaluation and Metrics for Success:* Future studies should focus on designing metrics to evaluate the success of these programs and their impact on the quality of admitted students.
4. *Securing Buy-In from Medical School Administration:* Overcoming potential resistance from admissions committees, who may be reluctant to share decision-making with nonphysician members, will require careful negotiation.

These challenges, while significant, should not deter the pursuit of reform. Instead, they should motivate ongoing dialogue and experimentation to ensure that the future of medical education better aligns with the needs of patients and the evolving landscape of healthcare. As medical schools continue to grapple with complex issues such as workforce shortages, rising healthcare costs, and the increasing role of digital technologies, it is more important than ever to select candidates who are not only intellectually capable but also adept at working in collaborative, patient-centered environments.

Conclusion

If we want our future doctors to be patient-centric and excellent team players, we should consider new strategies in the selection process of medical students. In this commentary, we are calling to change the way we interview medical school applicants to

better evaluate candidates' ability to work as members of a team and to assure that candidates are evaluated by patients and other stakeholders. This could be achieved by (a) including other stakeholders, such as nurses, pharmacists, therapists, patients, and family members, on the admissions committees and in the interview process, and (b) assessing an individual applicant's ability to work as a member of a team to deliver excellent patient care rather than just being an impressive individual academician. We appreciate that changing the way things have "always been" and incorporating others' voices can be challenging, but if we want to change the future of healthcare, we should consider designing a medical school admissions process that considers the constructs and elements that patients and families, nurses, and other health care team members find valuable.

Acknowledgments

The authors express gratitude to Zeev N. Kain, MD, MBA for his inspiration and perspectives on this topic.

ORCID iD

Isaac Y. Hung  <https://orcid.org/0000-0001-6666-8917>

Data Availability

This article references the AAMC Medical School Admission Requirements (MSAR) Report for Applicants and Advisors on Interview Procedures, which is a PDF table including each medical school's interview format, date interview invitations are sent, what a typical interview day looks like, and if regional and/or video interviews are available (Version from November 29, 2023).

Data Sharing

AAMC Medical School Admission Requirements (MSAR) Report for Applicants and Advisors on Interview Procedures can be found on the AAMC website at https://students-residents.aamc.org/system/files/2023-03/MSAR_Interview_Procedures_03.22.23.pdf

AAMC Matriculating Student Questionnaire can be found on the AAMC website at <https://www.aamc.org/media/8831/download>

Ethical Approval

Not applicable.

Consent to Participate

Not applicable.

Consent for Publication

Not applicable.

REFERENCES

- Whitt N, Harvey R, McLeod G, Child S. How many health professionals does a patient see during an average hospital stay? *N Z Med J* 2007;120(1253):U2517.
- Gualandi R, Mascella C, Viglione D, Tartaglini D. Exploring the hospital patient journey: what does the patient experience? *PLoS One* 2019;14(12):e0224899. doi:10.1371/journal.pone.0224899
- Medical students selection process: time to break the silos | Psychology Today. Accessed February 13, 2024. <https://www.psychologytoday.com/us/blog/the-anxiety-medicine/201908/medical-students-selection-process-time-break-the-silos>
- Approach to improving patient safety: communication. Published online August 31, 2020. Accessed February 6, 2024. <https://psnet.ahrq.gov/perspective/approach-improving-patient-safety-communication>
- Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. National Academies Press; 2000. doi:10.17226/9728
- Shahian D. I-PASS handover system: a decade of evidence demands action. *BMJ Qual Saf* 2021;30(10):769-774. doi:10.1136/bmjqqs-2021-013314
- Henkin S, Chon TY, Christopheron ML, Halvorsen AJ, Worden LM, Ratelle JT. Improving nurse-physician teamwork through interprofessional bedside rounding. *J Multidiscip Healthc* 2016;9:201-205. doi:10.2147/JMDH.S106644
- Salik I, Ashurst JV. Closed loop communication training in medical simulation. In: *StatPearls*. StatPearls Publishing; 2024. Accessed February 8, 2024. <http://www.ncbi.nlm.nih.gov/books/NBK549899/>
- Eldridge N, Wang Y, Mettersky M, et al. Trends in adverse event rates in hospitalized patients, 2010-2019. *JAMA* 2022;328(2):173-183. doi:10.1001/jama.2022.9600
- 20 years of patient safety. AAMC. Accessed December 27, 2023. <https://www.aamc.org/news/20-years-patient-safety>
- Healthcare's next chapter: what's ahead for the US healthcare industry | McKinsey. Accessed February 8, 2024. <https://www.mckinsey.com/industries/healthcare/our-insights/healthcares-next-chapter-whats-ahead-for-the-us-healthcare-industry>
- Mayo AT, Woolley AW. Teamwork in health care: maximizing collective intelligence via inclusive collaboration and open communication. *AMA J Ethics* 2016;18(9):933-940. doi:10.1001/journalofethics.2016.18.9.stas2-1609
- Interprofessional education requirements at US medical schools. AAMC. Accessed February 8, 2024. <https://www.aamc.org/data-reports/curriculum-reports/data-interprofessional-education-requirements-us-medical-schools>
- What is the voice of the customer (VoC)? Qualtrics. Accessed February 8, 2024. <https://www.qualtrics.com/experience-management/customer/what-is-voice-of-customer/>
- De M. Towards defining paternalism in medicine. *AMA J Ethics* 2004;6(2):69-71. doi:10.1001/virtualmentor.2004.6.2.fred1-0402
- Barry MJ, Edgman-Levitin S. Shared decision making — the pinnacle of patient-centered care. *N Engl J Med* 2012;366(9):780-781. doi:10.1056/NEJMmp1109283
- Schwartz T. What it takes to think deeply about complex problems. *Harv Bus Rev* Published online May 9, 2018. Accessed November 6, 2023. <https://hbr.org/2018/05/what-it-takes-to-think-deeply-about-complex-problems>
- UME Competencies AAMC | AACOM | ACGME. Accessed November 6, 2023. <https://cloud.email.aamc.org/UME-Competencies-AAMC-AACOM-ACGME>
- Hanson MD, Pang C, Springall E, Kulasegaram K, Eva KW. Patient engagement in medical trainee selection: a scoping review. *Acad Med* 2024;99(1):98-105. doi:10.1097/ACM.00000000000005450
- Cullen M, Cadogan C, George S, et al. Key stakeholders' views, experiences and expectations of patient and public involvement in healthcare professions' education: a qualitative study. *BMC Med Educ* 2022;22(1):305. doi:10.1186/s12909-022-03373-z
- Sims SM, Lynch JW. Medical educational culture: introducing patients to applicants as part of the medical school interview: feasibility and initial impact show and tell. *Med Educ Online* 2016;21:10.3402/meo.v21.31760. doi:10.3402/meo.v21.31760
- Matriculating Student Questionnaire. AAMC. <https://www.aamc.org/media/8831/download>
- Docs A. How medical schools review applications. Students & Residents. Accessed September 25, 2024. <https://students-residents.aamc.org/applying-medical-school/how-medical-schools-review-applications>
- Lane-Fall MB. Why diversity, equity, and inclusion matter for patient safety. *ASA Monit* 2021;85(11):42. doi:10.1097/01.ASM.0000798588.38346.fc
- Lee TH, Volpp KG, Cheung VG, Dzau VJ. Diversity and inclusiveness in health care leadership: three key steps. *Catal Non-Issue Content* 2021;2(3). doi:10.1056/CAT.21.0166
- Ko M, Henderson MC, Fancher TL, London MR, Simon M, Hardeman RR. US Medical school admissions leaders' experiences with barriers to and advancements in diversity, equity, and inclusion. *JAMA Netw Open*. 2023;6(2):e2254928. doi:10.1001/jamanetworkopen.2022.54928
- Shrader S, Ohtake PJ, Bennie S, et al. Organizational structure and resources of IPE programs in the United States: a national survey. *J Interprofessional Educ Pract* 2022;26:100484. doi:10.1016/j.xjep.2021.100484

28. Opinion | Should consumers decide the fate of medical school applicants? July 24, 2022. Accessed September 22, 2024. <https://www.medpagetoday.com/opinion/second-opinions/99866>
29. How can you identify team players using competency based interviewing? Accessed February 13, 2024. <https://www.linkedin.com/advice/0/how-can-you-identify-team-players-using-competency-based-mqzbc>
30. Greiflich PE, Kilcullen M, Paquette S, et al. Team FIRST framework: identifying core teamwork competencies critical to interprofessional healthcare curricula. *J Clin Transl Sci* 2023;7(1):e106. doi:10.1017/cts.2023.27
31. Descent K. Using group interviews to innovate the selection process for new graduate nurses. *Nurs Manag (Harrow)* 2022;53(10):20-27. doi:10.1097/01.NUMA.0000874492.78882.3f
32. Lin JC, Lokhande A, Margo CE, Greenberg PB. Best practices for interviewing applicants for medical school admissions: a systematic review. *Perspect Med Educ* 2022;11(5):239-246. doi:10.1007/s40037-022-00726-8
33. Liao SC, Hsiue TR, Lin CH, Huang AM. Multiple mini-interviews combined with group interviews in medical student selection. *Med Educ* 2014;48(11):1104-1104. doi:10.1111/medu.12562
34. Ogunyemi D, Alexander C, Tangchitnob E, Kim DS. Mini surgical simulation, role play, and group and behavioral interviews in resident selection. *J Grad Med Educ* 2016;8(3):410-416. doi:10.4300/JGME-D-15-00203.1
35. Are group interviews effective? The pros and cons of this recruitment practice. - Hireserve. March 30, 2022. Accessed February 13, 2024. <https://hireserve.com/are-group-interviews-effective-the-pros-and-cons-of-this-recruitment-practice/>
36. House SL, Sturgeon L, Garrett-Wright D, Blackburn D. BSN Admission group interviews: perceptions of students, faculty, and community nurses. *Nurs Educ Perspect* 2015;36(1):58-59. doi:10.5480/11-666.1
37. Types of interviews. Students & Residents. Accessed November 6, 2023. <https://students-residents.aamc.org/medical-school-interviews/publication-chapters/types-interviews>
38. Case interview preparation. BCG. Accessed February 13, 2024. <https://careers.bcg.com/case-interview-preparation>
39. Getting ready for your interviews | McKinsey & Company. Accessed February 13, 2024. <https://www.mckinsey.com/careers/interviewing/getting-ready-for-your-interviews>
40. Interviewing. Bain. Accessed February 13, 2024. <https://www.bain.com/careers/hiring-process/interviewing/>
41. Katz S, Vinker S. New non-cognitive procedures for medical applicant selection: a qualitative analysis in one school. *BMC Med Educ* 2014;14(1):237. doi:10.1186/1472-6920-14-237
42. Streiffeler L, Altmaier EM, Kuperman S, Patrick LE. Development of a medical school admissions interview phase 2: predictive validity of cognitive and non-cognitive attributes. *Med Educ Online* 2005;10(1):4379. doi:10.3402/meo.v10i.4379