



REQUEST FOR APPLICATIONS

Millennium Conference 2025

Artificial Intelligence: Prompts, Hallucinations and the Future of Medical Education

**Co-Sponsored by
Carl J. Shapiro Institute for Education and Research
Josiah Macy Jr. Foundation**

**Babson Executive Conference Center
Babson College
Wellesley, MA
April 28-April 30, 2025**

I. Request for Applications

The Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center and the Josiah Macy Jr. Foundation, in partnership with the Association of American Medical Colleges, request applications from medical schools and affiliated teaching hospitals wishing to participate in *Millennium Conference 2025*. This conference will examine the present and future uses of artificial intelligence (AI) in medicine and the impact of this technology on medical education. The goal, ultimately, is to prepare medical educators to not only meet the challenges and maximize the potential of AI, but to harness the tool to increase efficiency of teaching and assessment and to identify those elements of a physician's responsibilities that should not be delegated to the computer while ensuring that we prepare current medical students for an uncertain future of clinical practice.

Being a doctor is not easy; one is challenged intellectually with a rapidly expanding and changing knowledge base, physically by long and sometimes unpredictable work hours, and emotionally as one faces the inevitability of patient disability and death. There is a great desire to offload aspects of our work to a technological solution that may reduce the complexity of our daily lives. Generative AI technologies such as ChatGPT can score adequately on licensing exams (1,2), solving complex cases (3), interpreting medical images, and providing answers to patient questions (4). There has also been tremendous interest to integrate AI into medical education workflows, including for screening of applicants, feedback, and learner assessment (5,6). It remains unclear, however, whether AI can truly reason analytically to solve some of the more complex medical problems in our daily lives as doctors (7). Furthermore, the prompts given to AI models have an enormous impact on the response generated; an inability to acquire an accurate and complete medical history and to perform an accurate physical exam is critical to the value of the prompts. These AI systems also demonstrate racial and gender biases embedded within the material on the internet, which is used to train the systems and reflects, unfortunately, the biases of the people responsible for generating that material (6). Finally, a number of ethical issues surrounding privacy, transparency, and accountability have been raised regarding the use of AI in medicine and medical education (8,9).

To prepare physicians to meet these and future challenges with AI, to employ it not only to save time but to utilize this tool to flourish at the top of one's license as a critically thinking humanistic clinician, medical

educators must understand the capability and limitations of the technology and craft coursework and clinical training accordingly.

To address these pressing issues for both undergraduate and graduate medical education, the focus of Millennium Conference 2025 will be to achieve consensus on the key elements of the uses of AI in medical education to prepare students and residents for an ever-changing world with this advancing technology in the years to come.

II. Background on the Millennium Conference Series

The Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center has sponsored eleven working conferences since 2000 to tackle important topics in medical education, including the continuum of clinical education, patient safety, simulation in education, critical thinking, high value care, and evolving concepts of professionalism.

The format of these conferences, which comprise a combination of plenary sessions, small inter-institutional working groups, and the development of plans by school teams, has proven particularly effective in addressing topics of national importance. These conferences have led to multiple peer-reviewed publications including consensus recommendations, multi-center collaborations, and multi-institutional research emanating from post-conference task forces: [Millennium Conference Impact Statement](#)

The conference is a unique opportunity for multi-institutional brainstorming and networking. Additionally, the format has allowed leaders within the same institution, who may not normally have an opportunity to strategize about challenges in teaching, to conduct intra-institutional, long-term planning that crosses the continuum of medical education.

Based on the success of the previous Millennium Conferences and the energizing role they have had for the participating medical schools, the Shapiro Institute is excited to host *Millennium Conference 2025* in partnership with the Josiah Macy Jr. Foundation to begin the work of focusing our educational efforts on creating doctors who have a well-grounded understanding of the uses and limitations of AI in the practice of medicine.

III. Millennium Conference 2025

Millennium Conference 2025 will involve teams from 6-8 medical schools in the generation of ideas to address important issues pertinent to the best uses of and teaching about AI in medical education.

The goals of the conference are:

1. To establish a consensus framework for teaching and curriculum development about the uses of AI in medical education to prepare doctors for a complex and rapidly changing future.
2. To delineate the applications of AI in preclerkship and clinical teaching.
3. To describe pedagogical approaches and strategies for incorporating AI in undergraduate (UME) and graduate (GME) medical education.
4. To determine methods to use AI to enhance evaluation of students and trainees.
5. To create an approach to identify biases in the models used by AI.
6. To generate approaches to faculty development that enable our teachers to support learners with advanced technology.

Topics and questions to be addressed include:

- To what degree should AI be permitted in a case-based pre-clerkship curriculum?
- How does the use of AI affect the teaching of the doctor-patient relationship?
- How do cultural and racial factors influence our use of AI?
- What is the impact of AI on our concepts of professionalism for a student or trainee?
- Is there a role for AI in teaching communication skills?
- Can AI offer us enhanced approaches to evaluation and assessment?
- What is the best approach to faculty development given the span of generations in our faculty?

- How do improvements in AI affect physician professional identity and professional values?

IV. Participants

Each participating school will be asked to send a team of **four to five** individuals to represent their medical school and its affiliated academic medical center(s). The team should comprise:

- A pre-clerkship or clerkship course director
- An individual with leadership responsibilities in graduate medical education (e.g., designated institutional official, dean or vice president for GME)
- A curriculum development dean/leader
- A GME program director from a large residency program

A fifth member may attend as part of the institutional team. Recommendations include:

- A senior medical student
- A content expert in educational technology
- An individual with oversight for undergraduate curriculum (e.g., pre-clinical or clinical curricular dean, chair of curriculum committee)
- A second clerkship or pre-clerkship course director
- A chief resident with significant teaching responsibilities
- Medical school diversity officer

V. Selection Criteria and Guidelines for the Letter of Interest

The letter of interest should describe briefly:

- Your institution's commitment to education technology
- The status of current efforts at your institution in fostering the use of AI in medical education
- Specific challenges faced by your institution
- Three questions you would like to see addressed at the conference
- The diversity of your team members

Selection of participants will be based on the elements above in addition to the quality of the team members (also see note below).

VI. Application Process

Your complete electronic application (**submitted as one PDF**) must include the following elements:

- Completed application cover sheet (downloadable at <https://www.shapiroinstitute.org/>)
- Letter of interest (no longer than two pages)
- Letter of support from the Dean of your medical school or Associate Dean for GME.
- Brief biographical sketches of team members (no more than 1 page for each team member)

All application materials must be submitted as **one PDF** no later than 5:00 pm Eastern Time on Friday, January 17, 2025.

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TIMELINE

- Request for Applications mailed on October 18, 2024
- Proposals due by 5:00 pm Eastern Time on January 17, 2025
- Decision letters mailed around February 21, 2025

VII. Attendance at the Conference

Conference hosts will cover lodging and all meals at the Babson Executive Conference Center. However, **there is a \$300 registration fee** for each individual attending the conference to defray administrative costs. Transportation costs and the individual registration fee are to be paid by the institutions selected to participate. The conference will begin on Monday, April 28th at 11:00 am and adjourn on Wednesday, April 30th at 5:00 pm.

Note: Participants applying for the Millennium Conference are expected to reserve the dates in their calendars until decision letters are sent. We consider team members' roles and backgrounds of foremost importance during the selection process and in the subsequent assignment of inter-school working groups. Given the invitational nature of the conference, **we reserve the right** to decline a team's participation after acceptance if an individual from that team is no longer able to attend.

References:

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3. Kanjee Z, Crowe B, Rodman A. Accuracy of a generative artificial intelligence model in a complex diagnostic challenge. JAMA. 2023;330:78-80.
4. Ayers JW, Pollak A, Dredze M, et al. Comparing physician and artificial intelligence Chatbot responses to patient questions posted to a public social media forum. JAMA Int Med. 2023;183:589-596.
5. Drum B, Lamb S, Gradick C. Values-Based Resident Selection in an Internal Medicine-Pediatrics Residency Program. J Gen Intern Med. 2023 May;38(6):1410-1416. doi: 10.1007/s11606-022-07857-y. Epub 2022 Nov 7. PMID: 36344647; PMCID: PMC10160323.
6. Schaye V, Miller L, Kudlowitz D, Chun J, Burk-Rafel J, Cocks P, Guzman B, Aphinyanaphongs Y, Marin M. Development of a Clinical Reasoning Documentation Assessment Tool for Resident and Fellow Admission Notes: a Shared Mental Model for Feedback. J Gen Intern Med. 2022 Feb;37(3):507-512. doi: 10.1007/s11606-021-06805-6. Epub 2021 May 4. PMID: 33945113; PMCID: PMC8858363.
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8. Zack T, Lehman E, Suzgun M. et al. Assessing the potential of GPT-4 to perpetuate racial and gender biases in health care: a model evaluation study. Lancet Digit Health. 2024;6(1):e12-e22.

9. Masters K. Ethical use of artificial intelligence in health professions education: AMEE Guide No. 158. *Med Teach.* 2023;45:574-584.

8. Alam F, Lim MA, Zulkipli IN. Integrating AI in medical education: Embracing ethical usage and critical understanding. *Front Med.* 2023;10:1279707.