

# Ai

## Artificial Intelligence in Medical Education and Healthcare

an interview

with

**Dr. David L. Battinelli**



DONALD AND BARBARA  
ZUCKER SCHOOL *of* MEDICINE  
AT HOFSTRA/NORTHWELL.





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**Q: Why is it important for the medical school to get on board with AI?**

Dr. Battinelli: AI is seen as the biggest disruption since the internet, with significant potential to enhance learning, improve efficiency, and provide new tools for education and healthcare. High school students, college students, other students, everybody's already using AI. Some are hesitant, but others are expressing that this is the next big thing, and they use the metaphor of "fire," mostly because of the upside and downside, right? So, there are advantages to AI, but there are also threats to AI as we learn to use it. But overall, when contained, fire provides an enormous amount of benefit. So, we need to learn as we go and understand every capability of AI because everybody's going to use it.

**Q: What are some of the pushbacks about the use of AI in medical schools?**

Dr. Battinelli: Some people will view AI as a form of cheating or inauthenticity. There are also concerns about biases in AI algorithms, which reflect the biases present in the data they are trained on. These challenges can be addressed, and we will need to learn how we can do that. But properly managed and ethically applied, AI will bring about positive changes. You're going to have people who will resist this, like the resistance to looking things up on the computer versus going to the library. I compare the advent of AI to previous technological shifts like the introduction of the internet and cell phones. In the early days of the Internet or your cell phone, people knew little about it and asked, why do I need this? What am I going to do with this? And that's the way every discovery goes. You know, I remember the old days when my father didn't know why we needed color television.

**Q: What do you say to those who are resistant to AI and concerned about the downsides?**

Dr. Battinelli: AI will be massively disruptive in terms of the speed at which information can be obtained, the variety of information, and the way it can be used. But what you really want to do is marry the new with the old, the old values with the new technology. Adopting AI is essential to stay current and leverage its capabilities for better outcomes.

**Q: Where does our medical school fall on the question of AI; are we an early adopter?**

Dr. Battinelli: Our medical school is positioned as an early adopter of AI, leveraging its governance and resources; the fact that we are tightly aligned to the Northwell Health System and we have appropriate guidance from Hofstra University. So it would be incongruent for us not to be early adopters of AI. It aligns with the institution's culture of innovation. We have always been the first adopters of new ideas and technologies, like integrating PEARLS, the structure lab, ultrasound education, and EMT training into our curriculum. It's all first adopting, and that's because we are remarkably agile, which reflects our commitment to staying ahead of the curve.



**Q: You mentioned that we need to learn more about this technology – how are we doing that?**

Dr. Battinelli: We're just beginning. Northwell has what we call a "Sandbox" that allows experimentation with various large language models (LLMs) like ChatGPT. In the Sandbox, you get to play, and the material doesn't leave your organization, but you get access to information from outside of your organization. So, these sandbox environments enable safe and controlled exploration of AI capabilities without risking data privacy. Everybody who has a Northwell credential has free access to play in the Sandbox. Hofstra University is also creating a sandbox.





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**Q: What do you see will be the benefits of AI in learning for medical students?**

Dr. Battinelli: AI offers numerous benefits, including enhanced access to information, improved critical thinking, and better collaboration. AI can help build PEARLS cases, providing realistic and diverse case studies. It can assist in grading essays with established rubrics, provide communication examples, enhance the overall educational experience, and offer immediate feedback.



**Q: How will physicians use AI?**

Dr. Battinelli: In discussions about AI, one of the examples we used at one point was to say, "Mrs. Lee is a Korean woman who's got a breast lump who needs to have a biopsy. Write her a note and make sure it's empathic and compassionate." And the AI can do a better job than the average person. Then in the same scenario, you can say to AI, "Mrs. Lee doesn't speak English. Let's put it in Korean." Two seconds later, the note is in Korean. "Oh, you know, she only graduated at the eighth grade. Put it in eighth-grade Korean." "Oh, she likes diagrams. Throw in some diagrams." It's an unbelievable tool. AI won't replace a doctor's need for compassion but can enhance their ability to express empathy and communicate effectively with patients.



**Q: How else might AI be used in healthcare?**

Dr. Battinelli: AI will also be used to enhance virtual care by enabling better-connected care, like how technology has transformed banking. AI can help manage patient data, provide real-time feedback, and improve the overall efficiency of virtual healthcare services. The banking industry's shift from in-person services to connected care is a good metaphor for how AI can revolutionize patient interaction with healthcare providers.

**Q: Will AI replace doctors and other healthcare jobs?**

Dr. Battinelli: AI is not going to replace physicians, but it will augment their capabilities. It will change the nature of certain jobs and tasks, allowing doctors to focus more on patient care and less on administrative tasks. AI will change how physicians work, like how technological advancements have always evolved job roles. I've heard people say, "AI will do the surgery for you," and make similar predictions. Maybe someday, maybe years down the road, it will, but AI was created in 1956. So, the idea that next week, suddenly, everything's going to be different is not the case. It will evolve, and we'll keep pace with it if we want to keep pace with technology to enrich medical education and patient care. But if you bury your head, you'll be left behind. I was just thinking the other day, I have a new car, it's an electric car. It's unbelievable what it can do – not just the GPS, but for instance if you want to change the volume on the radio in the car while driving, you hold your finger up and move it in a circle; you don't touch anything. It's crazy. So, AI is here to stay. Embracing AI aligns with our medical school's core values of innovation and non-complacency, and we are committed to exploring, learning, and applying AI to enhance education and healthcare.

