Applying the Principles for Artificial Intelligence to Enhance Medical Education

Case Studies

Case 1:
"The Case of the MSPE Adventure"

Challenge: The Medical Student Performance Evaluation (MSPE) is a critical component of residency applications, requiring synthesis of multiple data sources, including narrative assessments. Traditionally, this process is time-consuming and labor-intensive for faculty and staff.

AI Implementation: The Fiction School of Medicine has developed an AI tool which is trained to analyze narrative assessments and generate concise summaries. The school is planning to use these AI-generated summaries as the foundation for the narrative portion of each student's MSPE. They hope that this will streamline the process and improve consistency.

1. Which of the 7 principles most directly apply to this case?

2. What should the faculty and staff consider as they plan to use AI to improve the MSPE creation process?

Acknowledgement: ChatGPT v4 and Microsoft Copilot were used to provide language and images for initial drafts of case study materials. These were validated for accuracy and further edited to better meet the needs of the workshop participants and the preferences of the facilitators.

Case 2:
"The Case of the Course Director Feedback Frenzy"

Challenge: Course directors often receive extensive feedback from students about their course in the course evaluation comments. Some of this feedback can be conflicting and, at times, emotionally charged. It can be challenging to sort through the comments to identify key themes and areas for improvement.

AI Implementation: The New Gen College of Medicine wants to encourage course directors to employ AI to analyze course evaluation comments from students and to generate summaries highlighting prevalent themes. The assessment team hopes that this will enable faculty to more easily focus on the most important and prevalent feedback. They want this intervention to lead to more effective continuous quality improvement (CQI) for the courses.

1. Which of the 7 principles most directly apply to this case?

2. What should the assessment team and course directors consider as AI is used to summarize and synthesize student evaluations of courses?

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Case 3:
"The Case of the Missing Diagnoses"

Challenge: Providing medical students with diverse clinical scenarios is essential for developing diagnostic and decision-making skills. It can be challenging to ensure that all students receive sufficient exposure to core clinical diagnoses and opportunities to actively engage in the decision-making process. In addition, the student role in patient care may be affected by clinical structures or clinical demands.

AI Implementation: The Discovery School of Medicine wants to invest resources in the development of AI-driven virtual patient simulation, interactive case-based scenarios that would adapt based on student decision making. They plan to integrate these virtual patients into their clinical curriculum to augment clinical experiences. They hope that this technology will provide students with personalized learning experiences and better exposure to core clinical cases.

1. Which of the 7 principles most directly apply to this case?

2. What should faculty consider as they plan to implement this virtual patient tool into the curriculum?

3. How would considerations be affected if the virtual patients are used for summative assessment versus formative assessment?

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