Generative AI-Based Course Assignment

Course: DMS-BR 778 Issues in Clinical Practice
Program: Doctor of Medical Science-Bridge Program
Target Audience: Graduate/Doctoral Students who are new graduate Physician Assistants

Student Learning Outcomes
At the completion of this assignment, the student should be able to:

1. Explore how AI can be leveraged to address problems in healthcare
2. Critically appraise AI-developed plans to address an issue in healthcare
3. Discuss the role generative AI could play in healthcare, including possible pitfalls

Introduction
Generative artificial intelligence (AI) is a rapidly evolving space with multiple applications in healthcare that we are just beginning to explore. As future healthcare leaders, it is important for you to understand how generative AI might support our work, but also to understand its limitations and weaknesses. The objective of this assignment is to help students better understand the utility and pitfalls of generative AI use to help in solving the problems and issues in healthcare today.

Assigned topics will include:

- Group 1: Issues of Healthcare Cost
- Group 2: Issues of Healthcare Technology
- Group 3: Issues of Health Equity
- Group 4: Issues of Value-Based Care Models
- Group 5: Issues of the Healthcare Workforce

Assignment Guidelines
For this assignment, you will work in your assigned scholar groups to utilize the Microsoft Bing AI application to create a plan to address an assigned issue in healthcare. You will then work together to critically analyze the Bing output/plan.

To complete this assignment, you should:

Step 1: Read the articles linked in the Supporting Materials section below.

Step 2: Develop a plan to address an assigned current issue in healthcare (SLO 1)
   a. Log into Microsoft Bing – www.bing.com (you may need to create a Microsoft account)
   b. Develop and submit a prompt to Bing that utilizes the AI platform to create a plan to address your assigned healthcare issue (this may take multiple attempts to get to what seems to be the “best” plan)
   c. Copy and paste the final Bing output into a Word document

Step 3: Critically evaluate the strengths and weaknesses of the AI-generated plan, including any inaccuracies, biases, and/or ethical considerations, in a 1,000-word manuscript with AMA style and formatting. (SLO 2)
**Step 4:** Thinking more broadly about applications to direct patient care (developing diagnoses, creating treatment plans, etc.), develop a 500-word reflection on the possible utility and pitfalls of the use of generative AI. (SLO 3)

Your final submission should include the Bing-proposed plans, your analysis of the plans, and your reflections on applications to direct patient care. Please submit your compiled document to the Canvas assignment page as one file.

### Assignment Grading Rubric

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<thead>
<tr>
<th>Criteria</th>
<th>Points</th>
<th>10 pts.</th>
<th>8 pts.</th>
<th>5 pts.</th>
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<th>Ratings</th>
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<tbody>
<tr>
<td><strong>Paper Formatting</strong></td>
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<td>All three parts are submitted as one document</td>
<td>Exemplary work meeting and surpassing expectations described in criteria</td>
<td>Acceptable work meeting expectations described in criteria</td>
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<td><strong>Prompt</strong></td>
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<td><strong>Analysis of AI-Generated Plan</strong></td>
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<td>80 pts.</td>
<td>64 pts.</td>
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<td><strong>Incorporation of the Literature</strong></td>
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<td>Reflection on Applications and Considerations for Direct Patient Care</td>
<td>50 pts. Exemplary work meeting and surpassing expectations described in criteria</td>
<td>40 pts. Acceptable work meeting expectations described in criteria</td>
<td>35 pts. Substantial deficiencies in meeting expectations described in criteria</td>
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<td>Overall Quality of Writing and Communication</td>
<td>20 pts. Exemplary work communicating thoughts, with strong support of ideas</td>
<td>8 pts. Acceptable work communicating thoughts, with moderate support of ideas</td>
<td>5 pts. Substantial deficiencies in communicating thoughts, without support of ideas</td>
<td>0 pts. Unacceptable work</td>
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**Supporting Materials**

The Potential for Artificial Intelligence in Healthcare - *Future Healthcare Journal* (SLO 1-3)
[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6616181/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6616181/)

AI in Health and Medicine – *Nature Medicine* (SLO 1-2)
[https://www.nature.com/articles/s41591-021-01614-0](https://www.nature.com/articles/s41591-021-01614-0)

The Potential Impact of Artificial Intelligence on Healthcare Spending – National Bureau of Economic Research (SLO 1 & 3)
[https://www.nber.org/papers/w30857](https://www.nber.org/papers/w30857)

Artificial Intelligence in Healthcare: Review, Ethics, Trust Challenges & Future Research Directions - *Engineering Applications of Artificial Intelligence* (SLO 1-3)

**Additional Materials**

Coursera Course – Stanford University: AI in Healthcare