Policy: University of Arkansas for Medical Sciences, Division of Academic Affairs Subject: Artificial Intelligence Generative Tool Use Policy
Number: 2.1.6

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PURPOSE

The policy aids in clarifying the use and misuse of artificial intelligence generative tools at UAMS.

SCOPE

This policy applies to any work-related content created through an affiliation with UAMS or on behalf of UAMS, by any paid or unpaid employees, faculty, academic visitors, and trainees (including students, residents, postdoctoral fellows, etc.). Work-related content (herein referred to as "work") is defined as writing, images, or other creative products presented for peer review, grading as an assignment, academic credit, patents and other intellectual property, presentations, publications, and/or the media. The policy includes guidance on if, how, and when artificial intelligence generative tools can be utilized and any attribution or other information that is required when it is used.

DEFINITIONS

Artificial intelligence (AI) is the ability of computer algorithms to perform tasks that typically require human intelligence. Some types of AI perform mechanical skills (punctuation, grammar, formatting, language translation, visual scanning, voice recognition software, etc.). Other types of AI are generative.

Generative AI (GAI) is a subset of AI that leverages computers to mimic the problem-solving and decision-making capabilities of the human mind. Some GAI tools synthesize data and make recommendations (e.g., Clinical Decision Tools). Some GAI tools generate entire written, audio, synthetic data, or visual works from a prompt. These GAI tools can make it

quite easy for an individual to enter a prompt (a question, a string of words, a description, an instruction) and for the tool to generate a largely clear and coherent work (essay, short story, poem, annotated bibliography, code, image, etc.) based on all of the data accessible to the GAI software.

Work is defined as UAMS-related content such as writing, images, or other creative work presented for peer review, grading as an assignment, or for public and/or scholarly dissemination through publications, presentations, and the media.

POLICY

I. **Contextual Information Regarding GAI Tools**
   a. GAI is a rapidly evolving field that has many benefits, applications, and implications for various disciplines. There are rapid advances in technology that might be used by faculty, employees, trainees, and academic visitors, among others. The use of GAI tools, including large language models (LLMs), to help write clinical notes, manuscripts, student essays, presentations, and research articles are noteworthy examples.
   b. Using AI and GAI tools is becoming an important skill for diverse health professions.
   c. UAMS considers the presentation of AI-generated work as one's own work without appropriate attribution/citation to be plagiarism and is a violation of the UAMS Basic Code of Conduct policy, the UAMS Responsible Conduct of Research policy, the UAMS Student Code of Conduct, UAMS Core Values (integrity) and each College's Policies for trainees on Academic Misconduct or Academic Integrity.
   d. Like any tool, GAI tools can be appropriately or inappropriately used in the work context and, this policy is designed to clarify the use of these tools at UAMS.

II. **Legal and Ethical Considerations Across Contexts**
   a. GAI may produce inappropriately discriminatory output. GAI can inadvertently (or intentionally) perpetuate existing biases present in the data it is trained on. There are several reasons why GAI systems can perpetuate inappropriate discrimination:
      i. **Quality of prompts**: The quality of GAI output directly correlates with the quality of input. To obtain high-quality output, master "prompt engineering" by refining prompts, and make sure prompts do not unintentionally introduce bias into the outcome.
      ii. **Bias in the training data**: GAI models have built-in biases (i.e., they are trained on limited underlying sources; they reproduce, rather than challenge, errors in the sources). If the training data contains biases, the GAI system may learn and replicate those biases in its decision-making.
      iii. **Lack of diversity in the training data**: If the training data does not include a diverse range of examples, the GAI system may not perform well on diverse inputs, which may lead to discrimination.

       iv. **Lack of critical thinking**: GAI tools lack critical thinking to evaluate and reflect on criteria; they lack abductive reasoning to make judgments with incomplete information at hand.

       v. **Lack of transparency**: Some GAI systems can be difficult to understand and interpret, making it challenging to detect and correct for biases.

       vi. **Lack of accountability**: Without proper oversight and accountability, it can be difficult to identify and address inappropriate discrimination in GAI systems.

b. It is important to keep in mind that these biases can be unconscious, unintended, and hard to detect, but they can have serious consequences if they are not identified and addressed.

c. Use good judgement to determine if/where/when to use these tools. They do not always make products easier and/or better.

d. Be aware that the texts and images produced by GAI prompts are currently not protected by
U.S. copyright law. This means that products created from the use of GAI are publicly available to anyone. Use of AI-based tools must not violate any copyright or intellectual
property laws (please refer to UAMS Distribution of Royalties from Inventions policy; U of A Board Patent and Copyright Policy; and U of A Board Copyright and Distance Learning Policy).

III. Citation of Work Utilizing GAI

a. Faculty, employees, trainees, and academic visitors must fully disclose how and where they used GAI technology in their work.

b. Individuals must explain what GAI program was used, what queries or instructions were given, how potential harms were avoided, how the reliability of the GAI program was evaluated, and how individuals performed quality checks to ensure that the information was correct.

c. UAMS considers the presentation of GAI writing or other creative work as the original work of the presenter without appropriate attribution to be plagiarism and is considered a violation of the UAMS Basic Code of Conduct, UAMS Student Code of Conduct, UAMS Responsible Conduct of Research policy, UAMS Core Values (integrity), and each College's Policies on Academic Misconduct or Academic Integrity.

       i. Consult the formatting style guide for specific instructions when citing or acknowledging the use of a GAI tool in any work or assignment. (e.g., American Medical Association style guide, American Psychological Association style handbook, etc.).

       ii. Depending on the journal or other dissemination outlet, it may be appropriate to include a paragraph in the Methods or at the end of any work or assignment where a GAI tool was used that explains what the GAI was used for, how the reliability of the results generated were evaluated, and what prompts were given. Consult the specific author

guidelines or other instructions for the journal or other dissemination outlet.

d. Faculty, employees, trainees, and academic visitors do not have to disclose the use of GAI to help them with EPIC-approved tools, dictation software, language translation, spelling/grammar/punctuation, formatting, alphabetizing items, and formatting of citations (e.g., converting an APA citation to an AMA citation).

e. Failure to cite GAI and appropriately describe its use in work or assignments is in violation of the UAMS Student Code of Conduct and the College's Academic Misconduct or
Academic Integrity policies because the information derived from these tools is based on previously published materials and is not the product of an individual's unaided mind.

f. GAI work must be checked for accuracy and bias if it is to be utilized in a written document, presented to an audience, used in an assignment, or in any other work. The written document or other scholarly work must be authored by a human, although GAI information may be incorporated and cited. As such, that document is considered be cognitive work of the faculty, employee, student, or academic visitor.

IV. The Use of GAI in the Education/Teaching Contexts

a. Use of GAI by students to satisfy course requirements must be authorized by the course faculty, trainer, or education supervisor.

b. GAI tools can be useful assistive devices for learning. Trainees should use GAI tools wisely and intelligently, aiming to deepen understanding of subject matter and to support learning. Unless otherwise directed or specified by an instructor or mentor, helpful ways to use GAI include analysis, rephrasing, essentializing, synthesizing, and/or gathering information about the typical understanding of a topic to assist with learning. However, it must be the trainee who guides, verifies, and crafts the final answers on class assignments.

c. Violating this policy or the instructor's directions about the use of GAI in their course or on an assignment might be considered a violation of the College's Academic Misconduct Policy and/or Academic Integrity Policy and could include disciplinary action up to and including dismissal.

d. Instructors may have additional requirements regarding citation or acknowledgement of the use of GAI in assignments.

V. The Use of GAI in Clinical Contexts

a. AI has enhanced computerized clinical decision support (CDS) tools. AI-CDS tools were created to alleviate the burden of data overload, enhance clinicians' decision- making capabilities, and standardize care delivery processes. These tools can offer diagnostic, treatment, and/or prognostic recommendations.

b. AI-CDS tools cannot be used to automatically interpret clinical results, integrate findings, or conceptualize cases. No GAI tool is a substitute for clinical judgement of healthcare providers and most AI-CDS tools make recommendations to clinicians for their consideration. All clinicians must evaluate the accuracy and appropriateness of recommendations made by AI-

       CDS tools.

c. A few AI-CDS tools have been automated for use without clinical judgement (i.e., visual scanning detection software). This should only occur when the literature regarding the use of that AI-CDS tool suggests that it is safe to do so and approval for its use in this manner is given by the Director of the institute on Digital Health and Innovation. There are also GAI tools that serve more mechanical function that can be utilized (i.e., dictation software, language translation, spelling/grammar/punctuation, formatting, alphabetizing items, formatting of citations, electronic health record tools, etc.). Seek information the Director of the Institute on Digital Health and Innovation if there are any questions about the use of a specific AI-CDS tool.

d. When writing and entering queries into any GAI model outside of an electronic health record, never include personal health information (PHI). Clinicians must disclose whether patient consent was obtained before the use GAI technology (if applicable).

V.   **Future Policymaking**

a. GAI is a rapidly evolving field. This policy will be updated as needed, but at minimum annually.

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REFERENCES

UAMS Administrative Policy 4.4.01 Basic Code of Conduct

UAMS Administrative Policy 2.2.14 Student Code of Conduct

UAMS Core Values. Retrieved: https://web.uams.edu/about/vision-mission-core-values/

UAMS Administrative Policy 16.1.04 Responsible Conduct of Research

Academic Misconduct and/or Academic Integrity Policies for each college

UAMS Administrative Policy 16.1.05 Distribution of Royalties from Inventions

University of Arkansas Board Policy 210.1 – Patent and Copyright Policy

University of Arkansas Board Policy 210.2 – Copyright and Distance Learning Policy