OHSU Statement on Artificial Intelligence

Artificial Intelligence can be defined as non-human systems that make inferences and decisions; in health care, these may draw inferences around potential diagnoses, treatments, and prognoses from diverse data sources such as imaging of cells and patient structures; patient-generated health data; textual and structured clinical data; and others.  This statement covers a specific aspect of AI - when a system is replacing part or all of the cognition normally done by a human; where the inference drawn is not easily reproduced by a human; and where the inference is intended to drive action or, in the future, automates an action such as defining a diagnosis, ordering a study, or prescribing treatments. AI can also be used to generate text, images, videos, and other elements, appearing to synthesize information to produce responses to questions, scholarly papers, or figures that appear to represent novel research or the work of a person.

# Principles

1. As an Academic Health Center, OHSU supports innovative approaches to improve the health and well-being of our patients and the broader communities. AI has the potential to discover new inferences, to improve accuracy and precision of diagnoses, and to create more efficient systems.  People working at OHSU are already helping to advance this field, and OHSU strives to be a key place where AI is developed, used, and disseminated.
2. Although promising, much of AI is not yet ready for automation, and significant work needs to be done to evaluate and improve it before it is used without significant human oversight. **We are in an exceptional period, however, where certain AI models – such as large language models or imaging analyses or integrative models – show true promise to accelerate and improve decision making or provide insight to learners and researchers.**
3. The ethics of AI require careful consideration of the relevant frameworks normally in use in health care, education, and research, including the Belmont Report, professional oaths and standards, and others.  AI performs a certain function but does not 'think' on its own, and the health system and health professionals still are responsible for any decisions made. Biases in health and health care are often present in these models, and they can harm vulnerable populations if careful thought isn't given to their development and implementation.
4. The regulation of advanced analytics and AI is still being addressed; this regulation includes many bodies, and each potential use of AI needs to be reviewed as to relevant regulations. **At this point, the FDA has clearly stated that many algorithms are under their jurisdiction and may need to be approved by them or used in ways specified by them if not formally approved.** In addition, if an inference is being made that replaces human cognition, then the professions responsible for that cognition need to approve the implementation.  For testing and treatments or use in education, diverse organizations will need to approve the use.
5. In order to be considered for use at OHSU in operations, AI needs to meet the following criteria:
   1. Proven **evidence of effectiveness and safety**, including in real-world implementations.
   2. **Compliance with or evidence of exemption from all relevant regulatory bodies.**
   3. A clear and evidence-based risk-benefit calculation.  This may include tools that are more efficient and equal to human accuracy; or those that are more effective.  Harms and costs must also be considered, such as inaccuracies from the system and time and financial costs of implementation and maintenance.
   4. Consideration of the ethics of the model, especially when vulnerable patient and learner populations are involved.
   5. Local validation and evaluation.
   6. A **feasible and sustainable** implementation plan that includes monitoring for harms as well as benefit **over time**, **which includes resources for ongoing algorithmovigilance.**
   7. A training and support plan to help all persons at OHSU, including patients, learners, and researchers, understand and use the tools effectively and safely.

# References

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