# TRANSCENDENT Speaker Series

Artificial Intelligence in Healthcare

## Getting to Know Artificial Intelligence

Artificial Intelligence (AI) is the idea that computers can be taught to simulate human intelligence and learning. It is really a combination of advanced mathematics and computer science.

Several other terms are used within the AI space, such as machine learning, deep learning, and neural networks. Many of these other terms or categories represent sub-fields of AI.

**AI**

**Machine learning**
Machines are able to improve and act beyond simple commands

**Neural networks and deep learning**
More complex technology aimed at mimicking the way the human mind works

## The Types of Artificial Intelligence

There are several broad types or categories of AI. These include, but are not limited to:

**Reactive Machines**
These machines are deterministic and predictable. You code exactly what you want them to do.

**Limited Memory**
These machines are probabilistic and "learn" from past decisions to inform future choices. ChatGPT is an example.

## Using Artificial Intelligence in Healthcare

AI can advance what we can do in healthcare settings. AI can be used to increase productivity and improve accuracy and care. Looking ahead, developers are exploring AI solutions that may fundamentally change and advance the idea of what healthcare is altogether.

How is AI used in healthcare today?
- Automate routine tasks such as data coding, note-taking, form completion and report generation
- Provide follow-up calls or emails to patients
- Act as an extra set of "eyes" (computer vision) to help ensure thorough assessment, for example, in areas like dermatology or radiology
- Support writing tasks such as writing summaries (large language models)
- And more...

⚠️ AI is not perfect. Its use can come with limitations, such as biases in data use and collection. It is important to be aware of AI's limitations and to make informed decisions about when it is (or is not) appropriate to use AI in your setting

This information is based on a talk done by Dr. Puneet Seth to the TRANSCENDENT Concussion Research Program team on the use of AI in healthcare.

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