Until recently, there were literally no words to describe health care services or procedures delivered via augmented intelligence (AI)—often called “artificial intelligence”—in the Current Procedural Terminology (CPT®) code set, known the “language of medicine.”

Appendix S to the CPT code set provides uniform terminology and a taxonomy that creates a path to payment for AI-related medical services and procedures.

“The AI taxonomy was created to offer guidance to stakeholders in the CPT process to better understand how AI medical services fit into the CPT code set,” said Samantha Ashley, AMA CPT coding and regulatory manager, who was one of the presenters in an AMA webinar to detail the health care AI taxonomy’s history and future.

The health care AI taxonomy was created by a work group within the AMA Digital Medicine Payment Advisory Group (DMPAG), which then presented it to the CPT Editorial Panel. The panel, authorized by the AMA Board of Trustees to revise, update and modify CPT codes, descriptors, rules and guidelines, adopted the taxonomy at its September 2021 meeting (PDF), and the document’s guidance took effect in January.

**Unprecedented in CPT code set**

One of the work group’s first conclusions was that there were limited precedents for health care AI-specific descriptors in the CPT code set. Indeed, the only word being used to describe software as a medical service was the term “automated,” which the group determined lacked the necessary specificity needed to describe the growing diversity of services being provided in this clinical space.

“The term ‘automated’ connotes workflow efficiency obtained by utilizing a machine,” said Richard Frank, MD, PhD, a member of the CPT Editorial Panel and co-chair of the DMPAG AI work group.
“Moreover, if a task or analysis is conducted automatically, then there may have been no clinical judgement applied to the procedure or service for that patient. And, therefore, the medical necessity may be unclear.”

Dr. Frank, an AMA member who is chief medical officer for the German device-maker Siemens Healthineers, explained why this was a problem that needed fixing.

“Overcoming the limitations in the terminology in the existing CPT code set had become an urgent priority due to the rapid pace of innovation and FDA clearance of increasingly sophisticated AI products which go well beyond what was being described 20 years ago when computer-aided detection products were first described for use in the radiology section of the CPT code set,” he said.

“What is really new about AI is that there is work being done by the machine on behalf of the physician, and there was no precedent for how to describe this work in coding,” Dr. Frank added.

Interestingly, for various reasons, the taxonomy and the CPT code set don’t include a definition of “AI.”

“AI is neither sufficient nor even necessary to describe any service or procedure,” Dr. Frank said.

Learn how the AMA is advancing health care AI through ethics, evidence and equity.

3 key health care AI terms

The taxonomy, which aims to define elements of differentiation, divides AI services into these three levels.

**Assistive**—This involves the machine detecting clinically relevant data without analysis or generated conclusions. Physician interpretation is required.

**Augmentative**—This is when the machine analyzes or quantifies data in a clinically meaningful way, but still requires interpretation by a physician or other qualified health care professional (QHP).

**Autonomous**—The machine interprets data and independently generates clinically meaningful conclusions without physician involvement.

Autonomous AI, meanwhile, can be divided into three categories to distinguish between when the AI draws conclusions and:

- Offers diagnosis or management options requiring a physician or QHP to implement.
Initiates diagnosis or management, but alerts the physician or QHP of the opportunity to endorse or override.
Initiates management, and requires the physician or QHP to take action to contest.

CPT codes are targeted toward the work of physicians and other health professionals, but—within the context of health care AI—the focus is on the work performed by the machine on behalf of the physician and how that changes the way the services are performed, the AMA’s Ashley said.

Read about the four essentials to developing a successful health care AI solution.