DIGITAL HEALTH GLOSSARY

**Adaptive algorithms**: An area of artificial intelligence, where algorithms can continue to learn and evolve over time.¹

**Advanced analytics**: A device or product that can identify, analyze, and use large complex data sets from a variety of sources to extract relevant information or patterns for medical purposes.¹

**Artificial intelligence (AI)**: A device or product that can imitate intelligent behavior or mimic human learning and reasoning.¹

**Big data**: Refers to the totality of data related to patient healthcare and well-being. It includes clinical data from clinical decision support systems, electronic health records, and sensors.²

**Blockchain**: A technology which records transactions and tracks assets for which immutability is guaranteed by a peer-to-peer network of computers and not by any centralized authority. It allows patients to assign access rules for the handling of their medical data.³

**Clinical decision support systems**: Tools that can provide clinicians, staff, patients, or other individuals with knowledge and person specific information, intelligently filtered or presented at appropriate times to enhance health and health care.⁴

**Cloud**: A shared pool of configurable resources, such as computer networks, servers, storage, applications, and services.¹

**Computational medicine**: A discipline in which mechanistic models of disease are developed, personalized using data from individual patients, and then applied to deliver improved healthcare.⁵

**Cybersecurity**: The protection of networks, devices, and data from unauthorized access or criminal use and the practice of ensuring confidentiality, integrity, and availability of information.⁶
**Devices, sensors, and wearables:** Tools that can enable continuous, longitudinal health monitoring outside of a clinic. They can be used to promote healthy behaviors and/or be used in the clinic as a medical device.\(^7,8\)

**Digital health:** A broad term describing all technologies that engage patients for health-related purposes.\(^9\)

**Digital medicine:** Digital tools that allow for high-definition, individualized, practice of medicine by gathering digital biosensor information, and processing these data using algorithms, cloud computing, and *artificial intelligence*.\(^10\)

**Digital phenotyping:** The use of *sensors* to collect objective information (eg, activity, location, speech patterns) related to disease and health outside of clinical settings.\(^11\)

**Digital therapeutics:** Software-driven tools that deliver evidence-based therapeutic interventions directly to patients.\(^12\)

**Electronic health (eHealth):** The use of information and communication technologies for health.\(^13\)

**Electronic health records:** An electronic version of a patient’s medical history that is maintained by the provider over time and may include all the key administrative clinical data relevant to that person’s care.\(^14\)

**Electromagnetic compatibility:** A device that is compatible with its electromagnetic environment and it does not emit levels of electromagnetic energy that cause electromagnetic interference in other devices in the vicinity.\(^15\)

**Gamification:** The use of game design elements in the context of positive health motivation.\(^16\)

**Health data analytics:** Analytical techniques can be applied to the vast amount of existing patient-related health data to reach a deeper understanding of outcomes, which can then help inform physicians and patients about appropriate treatment options.\(^2\)
Health information technology: Electronic systems used by healthcare professionals and patients to store, share, and analyze health-related information.\textsuperscript{17}

Information and communication technologies: Diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (eg, websites, blogs, and emails), live broadcasting technologies (eg, radio, television, and webcasting), recorded broadcasting technologies (eg, podcasts, audio and video players, and storage devices) and telephone (eg, fixed or mobile, satellite, and videoconferencing).\textsuperscript{18}

Interoperability: A device or product that can exchange and make use of information through an electronic interface with another system or device.\textsuperscript{1}

Medical Body Area Network (MBAN): Networks of devices worn on the human body that communicate with a programmer/controller device unattached to the body using a wireless communication link. MBANs are used for the purpose of measuring and recording physiological parameters and other patient information or for performing diagnostic or therapeutic functions, primarily in healthcare facilities.\textsuperscript{19}

Machine learning: An artificial intelligence technique that can be used to design and train software algorithms to learn from, and act on, data.\textsuperscript{20}

Medical device: An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part or accessory, that is\textsuperscript{21}:

- Recognized in the official National Formulary or the United States Pharmacopoeia
- Intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals
- Intended to affect the structure or any function of the human or animal, and which does not achieve its primary intended purposes through chemical action within or on the body
- Does not achieve its primary intended purposes through chemical action within or on the body of man or other animals, and which is not dependent upon being metabolized for the achievement of its primary intended purposes.
Medical Device Data System (MDDS): Hardware or software products intended to transfer, store, convert formats, or display medical device data.\textsuperscript{22}

Mobile health (mHealth): A medical and public health practice supported by mobile devices, such as smartphones, patient-monitoring devices, personal digital assistants, and other wireless devices.\textsuperscript{23}

Mobile medical app: A software application that transforms a mobile platform into a regulated medical device or is an accessory to a regulated medical device.\textsuperscript{1}

Novel digital health: A device or product that includes new, unfamiliar, or unseen digital health technology never submitted, cleared, or approved by the Food and Drug Administration.\textsuperscript{1}

Precision medicine: An emerging approach for the treatment and prevention of disease that accounts for individual variability in genes, environment, and lifestyle. It is sometimes referred to as “personalized medicine”.\textsuperscript{24,25}

Software as a medical device: Software intended for one or more medical uses that may run on different operating systems or in virtual environments.\textsuperscript{1}

Telehealth: The delivery of healthcare services, where distance is a critical factor, using technology for the communication of valid information for diagnosis, treatment, and prevention of disease and injuries, research and evaluation, and for continuing education of healthcare providers.\textsuperscript{26}

Telemedicine: The process of providing healthcare from a distance through technology, often using videoconferencing.\textsuperscript{27}

Telepsychiatry: A subset of telehealth including live or recorded videoconference sessions between psychiatrists and patients.\textsuperscript{27}

Wireless medical devices: Medical devices that utilize wireless radio frequency communication such as Wi-Fi, Bluetooth, and cellular or mobile phone to support healthcare delivery.\textsuperscript{28}
REFERENCES


27. American Psychiatric Association. What is Telepsychiatry?