

**The following content was supplied by the authors as supporting material and has not been copy-edited or verified by JBJS.**

### **Appendix 1: Artificial Intelligence Terms**

1. *Artificial Intelligence (AI)* - machines that can perform tasks that are characteristic of human intelligence
2. *Machine Learning (ML)* – is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead
3. *Deep Learning (DL)* - is a subset of machine learning in artificial intelligence (AI) that has networks capable of unsupervised learning from data that is unstructured or unlabeled.
4. *Artificial Neural Network (ANN)* - are computing systems that are inspired by, but not identical to, biological neural networks that constitute animal brains. Such systems "learn" to perform tasks by considering examples, generally without being programmed with task-specific rules
5. *Internet of Things (IoT)* – is a system of interrelated computing devices, mechanical and digital machines, objects, animals, or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction
6. *Remote patient monitoring (RPM)* - is a system of interrelated computing devices, mechanical and digital machines, objects, animals, or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction
7. *Mobile Health (mHealth)* - is an area of electronic health (eHealth) and is the provision of health services and information via mobile technologies such as mobile phones and Personal Digital Assistants (PDAs).
8. *Natural Language Processing (NLP)* - is the study of how computers understand and interpret human language with the goal of generating structured information from unstructured free text
9. *Precision Medicine* - an emerging approach for disease treatment and prevention that considers individual variability in genes, environment, and lifestyle for each person
10. *Predictive Analytics* - encompasses a variety of statistical techniques from data mining, predictive modelling, and machine learning, that analyze current and historical facts to make predictions about future or otherwise unknown events
11. *Adversarial Attacks* - inputs to an AI model that are intentionally crafted to force the model to make a mistake