HealthManagement
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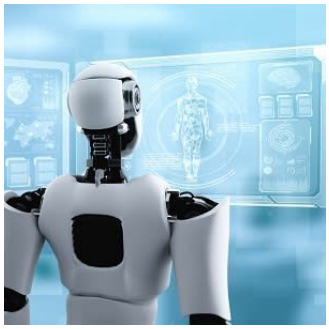
New Project Uses AI and Machine Learning to Improve Surgical Care



The Advocate Aurora Research Institute is using KelaHealth's Surgical Intelligence Platform to combine the capabilities of artificial intelligence (AI) and machine learning (ML) to transform surgical care.

The project aims to determine how much variation exists in surgical and patient outcomes, helping researchers to understand the types of surgical care that would help improve patient outcomes.

Using the Surgical Intelligence Platform involves researchers feeding EHR data and robotics information into the machine-learning software, allowing it to create risk-prediction models using historical data from surgeries. Following this, researchers will be able to analyse the patient-specific predictive insights to evaluate which surgical methods can provide the better outcome for each patient.

Debra O'Connor, DO, Vice President of Quality and Clinical Effectiveness for Advocate and Aurora and co-principal investigator for the research project, said, "Until recently, surgeons throughout history have relied on their education, experience and intuition to make care decisions and select surgical techniques".

"But now, our surgeons have an extra advantage at their disposal – vast amounts of data from the electronic health record and other surgical data sources that can be used to reduce any unwelcome variation between surgical approaches, departments, hospitals and even individual surgeons".

Once the platform has created a baseline using this data, researchers can continue to use this prediction model to make changes in surgical approaches when necessary. By personalising care to the needs of each patient, researchers are ultimately advancing health equity and reducing unnecessary variation.

As 50% of Medicare spending covers surgery, it is to the advantage of health systems to be translating data into predictive insights and effective interventions. Hospitals can then operate smarter, decreasing their costs and improving the quality of surgical care.

Source: **Advocate Aurora Research Institute**

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