

The Influence of Predictive Text Clinical Decision Support on Imaging Order Entry



According to a new study, imaging clinical decision support (CDS) aims to assist healthcare providers in making informed choices regarding imaging studies. The study is dedicated to breaking down the effects of CDS on decision-making processes and workflow management within the high-pressure environment of the Emergency Department (ED).

CDS alerts triggered by low scores on appropriate use criteria (AUC) had a minimal effect on the time spent entering imaging orders. However, their influence on the selection of imaging studies was relatively minor.

Recognising the limitations of free-text inputs that cannot be effectively scored by Clinical Decision Support (CDS), Artificial Intelligence Predictive Text (AIPT) module assisted in the selection of structured indications when free-text indications are entered.

To evaluate the impact of this implementation, researchers with Washington University analysed 17,355 imaging orders logged at their ED over a six-month period.

During the study period, the Clinical Decision Support (CDS) system generated alerts for 3% of all imaging orders. These alerts recommended other imaging examinations with higher appropriateness scores. Healthcare providers followed these recommendations by choosing an alternative study in only 3% of the instances, corresponding to 18 out of the 522 alerted scenarios. Following the implementation of AIPT, the percentage of unscored studies significantly reduced from 81% to 45%.

Overall, CDS alerts triggered by low Appropriate Use Criteria (AUC) scores led to a slight increase in the time required for entering imaging orders.

Artificial Intelligence Predictive Text (AIPT) module increased the number of scored studies, indicating its potential to enhance the effectiveness of CDS.

The implementation of CDS allows for the collection of data related to imaging studies that receive low AUC scores. This data can provide insights into patterns, trends, and areas where improvements might be necessary in the selection and ordering of imaging studies.

The authors stated, "Future AI tools could analyze CDS-derived and EMR data on a population-level to not only reduce inappropriate imaging utilization but also make suggestions on optimal screening imaging studies for specific patient cohorts".

Source: [Journal of the American College of Radiology](#)

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