

Clinical Decision Support in Radiology - is its time now?

Clinical decision support is not a new topic in radiology. For example, the pre-authorization process has been used for years to limit overutilization of high cost imaging by assuring tests are clinically appropriate. But is it time to utilize decision support systems in active daily patient management for all imaging tests? Opponents do not want to see "cookie-cutter" medicine or decisions made based solely for financial reasons. Proponents though see an opportunity to improve quality, delivery and reporting of imaging procedures.

Thoughtful implementation of a clinical decision support system on a large scale certainly could be beneficial in health care delivery. A system that limits inappropriate or redundant tests should save money. Additional savings can likely be realized by streamlining workup of patients thereby decreasing length of hospital stay. Further, by utilizing the most appropriate imaging, patients may be exposed to fewer injections of IV contrast, less radiation and even unnecessary invasive procedures, improving overall safety and quality of our service.

A successful system needs to be interactive to be beneficial to clinicians and radiologists. It is not feasible for clinicians to refer to journal articles or lists of considerations before ordering a test. The system must interact with and give immediate feedback to the clinician in a seamless manner at the time of order entry. It must use evidence based guidelines and even highlight the results of prior, potentially relevant, imaging procedures to aid the clinician in selecting the most appropriate test or choose alternative imaging procedures that are better suited to answer a particular clinical question. For radiologists, systems will offer relevant clinical history, provided by the clinician at the time of order entry. Accurate information helps the radiologist provide interpretations that relate to the pertinent clinical concerns.

The challenge will be how to implement a clinical decision support system seamlessly with minimal impact to practice patterns. More "hard stops" and "pop-ups" are not the answer. The goal should be to educate clinicians at the time of order entry not to penalize them for selecting the wrong test. That way the health delivery system benefits as a whole. High quality evidence-based guidelines are an absolute requirement. Finally, such a system cannot just be deployed without collaboration and communication between clinicians and radiologists. The availability of active, real time consultation with radiologists will always be a key component to any system.