Clinical Decision Support: What Should We Expect?

Kori Stewart, MHS, R.T.(R)(CT), CIIP

Every year, many Americans receive diagnostic testing, which might include medical imaging. Determining the appropriate medical imaging examination for a patient can be challenging as technology evolves. Technologists ensure that the imaging examination performed is appropriate by using professional reasoning and acting in the patient’s best interest. Performing appropriate imaging examinations is imperative to providing patient-centered care and central to technologists’ continued relevance in the healthcare system. The use of clinical decision support (CDS) systems allows clinicians to use appropriateness criteria when selecting imaging examinations and assists in providing effective use of radiology services while enhancing the quality of patient-centered care.

According to the Centers for Medicare & Medicaid Services (CMS), the use of CDS systems “increases quality of care, enhances health outcomes, helps to avoid errors and adverse events, improves efficiency, reduces costs, and boosts provider and patient satisfaction.” Use of CDS systems is becoming more widespread, and CMS will soon mandate that all ordering physicians use imaging decision support. CMS postponed its original January 2017 implementation deadline, and the mandate now is expected to begin in summer 2017.

According to the American College of Radiology (ACR), approximately 30% of imaging examinations are either ordered incorrectly or the wrong examination is ordered. Physicians will be required to order advanced imaging studies in computed tomography, magnetic resonance imaging, nuclear medicine, and positron emission tomography with CDS software that uses the ACR Appropriateness Criteria. The Appropriateness Criteria provides “evidence-based guidelines to assist referring physicians and other providers in making the most appropriate imaging or treatment decision for a specific clinical condition.” This use of CDS systems in medical imaging represents the profession’s dedication to providing safe, accurate, efficient, and timely patient-centered care and demonstrates the continued growth of informatics in radiology departments across the United States.

The medical imaging profession is pioneering the use of informatics as a means to improve patient care and is the sole specialty mandated for CDS use thus far. The Protecting Access to Medicare Act, passed in 2014, mandates the use of CDS systems and represents a significant effort in shifting health care from volume to value of clinical care. CDS systems will be integrated with ordering physicians’ computerized provider order entry systems and should be virtually invisible to the user. The most often used example of a CDS system is a drug-allergy interaction alert. However, it can include other features (see Box). CDS systems should be viewed as a computer-based intervention that enhances decision-making and uses clinical knowledge and patient information to improve the delivery of health care services.