Why you should think twice about the Medicare Imaging Demonstration

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Recently there has been a lot of buzz about the effectiveness of using clinical decision support (CDS) to promote appropriate ordering of advanced imaging exams—especially since RAND released the results of the Medicare Imaging Demonstration (MID) late last year. The demonstration was a CDS pilot program designed by CMS—and the results
weren’t encouraging.

But we need to understand more about the study before we jump to conclusions based on what’s been the news. Significant flaws in the design and limitations in methodology impact how we should interpret these results.

The Medicare Imaging Demonstration seemed simple enough

**Who:** Five institutions were chosen as “conveners”: National Imaging Associates, Brigham and Women’s, Henry Ford Health System, University of Wisconsin, and Maine Medical Center. Conveners were comprised of several participating organizations. A total of 4,000 providers were involved.

**What:** Participating providers used clinical decision support software for two years, for 11 specific advanced imaging procedures within three modalities, for Medicare fee-for-service beneficiaries. The first 6 months was the Baseline Phase, or data collection phase, during which providers used CDS to order exams, but the software did not provide any feedback. During the remaining 18 months, the Intervention Phase, CDS delivered real-time feedback about adherence to appropriate use criteria. Participating practices had to use CDS for at least 80% of specified orders in year 1, and 90% in year 2.

**Why:** The ultimate goal of the demonstration was to examine how exposure to evidence-based guidelines through clinical decision support impacts advanced imaging orders.

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Three significant flaws of CDS have since been resolved

**Limited, static guidelines:** The appropriate use criteria imbedded into decision support during the demonstration were taken directly from national medical specialty societies (primarily the ACR) with no option to modify criteria or add local guidelines. Ordering providers found the guidelines insufficient, too general, and at times contradictory to local best practices. Now CDS software is designed for additions and modifications so organizations can customize the guidelines to ensure they are comprehensive, useful, and relevant to providers.
**Poor software integration:** When the demonstration launched in 2011, electronic health records (EHR) did not have the capacity to fully integrate CDS software, so providers had to click out of their EHR and go through an entirely new platform to ordering advanced imaging exams. Additionally, providers wanting to change exam orders would have to start from the beginning and go through the entire process again. This onerous process caused obvious workflow inefficiencies for busy providers. Now, EHR and CDS vendors have worked together to create interoperable systems – meaning CDS is now seamlessly integrated into EHR ordering platforms.

**Unreliable appropriateness scoring:** For the demonstration, each imaging order was designated into one of four categories: appropriate, inappropriate, uncertain, and not covered by guidelines. This classification was based on how well the symptoms entered matched the AUC for the ordered exam, so any order with symptoms that did not perfectly match the criteria was designated “not covered by guidelines.” Of the 140,000+ orders placed during the two year demonstration, more than 60% fell into this unrated category. As one frustrated member involved in the demonstration explained, "We don’t see patients with CPT codes; we see patients with symptoms." This major flaw in methodology resulted in many useless interactions with CDS, frustrated providers, and meaningless data. The limited number of exam types reviewed and the overwhelming percentage of exams not even rated make it difficult to draw any broad conclusions about the effectiveness of CDS.

**So don’t believe everything you hear**

Some say that the Medicare Imaging Demonstration proves that clinical decision support fails to promote appropriate imaging utilization. All of the major flaws combined, the MID did fail to demonstrate results, but that does not mean decision support is a failure. Instead, the MID reveals the problems with old decision support software, and clinical decision support has come a long way since 2009.

**Bottom line:** let the MID act as guidance for how not to implement CDS, rather than proof CDS will not work.

For more information about the demonstration, you can access RAND’s full report to Congress. And remember, according to the Protecting Access to Medicare Act of 2014, all providers must use clinical decision support to order advanced imaging by 2017 or face financial penalties from CMS.

CDS is one the topics for our 2015 national meeting launching in June, so look out for more on this topic. Please contact me if you have any experience with CDS and would be interested in talking with our research team.
Check out our on-demand webconference to learn how to determine which exams to target first, how to redesign care pathways to improve the downstream value of imaging, and how to ensure referring physician compliance with new standards.

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