Reducing Inappropriate High-Tech Imaging

Altarum Institute holds a 3-year Innovation Award from the Center for Medicare & Medicaid Innovation (CMMI) to reduce use of advanced, high-tech imaging such as CT and MRI. The award is part of CMMI’s strategy to fund innovative programs that drive transformation and ensure better health care, better health, and reduced costs for beneficiaries, ultimately enhancing the health care system for all Americans. Altarum was one of only 100 organizations selected from more than 3,000 applicants.

Reducing inappropriate imaging is a critical focus for cost containment initiatives. Use of advanced imaging has increased significantly in the past decade, resulting in considerable increases in national spending and patient safety risks. Imaging now accounts for 14% of Medicare Part B expenditures. Of specific concern is the well-documented finding that more than 25% of all imaging studies are not considered medically necessary and are ordered due to a lack of awareness of previous imaging studies or lack of alignment with evidence-based guidelines. For many patients, CT and MRI studies provide little benefit to diagnostic accuracy, therapeutic approaches, or patient outcomes and often introduce delays to the start of treatment.

Altarum’s Information and Technology Strategies Group develops and promotes best practices in the application of information technology to health and health care. This project fits well with the mission of using health information technology to transform health care delivery. In this project, Altarum is leading an innovative, community-based partnership with two large physician organizations in southeast Michigan.

Advanced Clinical Decision Support

A central component of this project is the development of a clinical decision support tool. This tool, named ImageSmart, accommodates the physician workflow and assists in understanding what imaging studies are indicated based on evidence-based guidelines from the American College of Radiology. ImageSmart highlights what alternate care options are available and displays other information to consider (e.g., cost, radiation exposure).

Mobile Application

To help increase adoption and use, an iPhone and iPad app have been developed. The screenshots below show the case of a 50-year-old male with lower back pain. The patient is asking for an MRI after looking up his condition on the internet. The physician enters the clinical presentations into ImageSmart to obtain professional society and local best-practice recommendations. ImageSmart instructs patient on need for conservative therapy and prescribes NSAIDs, exercise, and physical therapy. It also provides the patient with educational materials to address self-care and directs him to ImageSmart’s patient-facing website for additional information.

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Addressing Patient-Induced Demand
To address the prominent issue of patient-induced demand, Altarum is developing a comprehensive patient education program to improve patient understanding of imaging appropriateness. These educational materials will incorporate information on care guidelines as well as radiation exposure risk and procedure costs to provide a comprehensive set of information for collaborative decisionmaking.

Provider Feedback and Program Evaluation
To monitor program impact and physician behavior change, Altarum will conduct a baseline assessment on use and monitor trends over time. Physicians will receive comparative performance reports showing both their use of the system as well as their use. The program evaluation will also integrate both patient and provider satisfaction with the new tools and educational materials. Altarum will promote awareness nationwide by consolidating and disseminating approaches, outcomes, and lessons learned.

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