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## Electronic medical record-based interventions reduce unnecessary testing



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Multiple electronic medical record-based interventions implemented at Boston Medical Center have reduced unnecessary diagnostic testing and increased the use of postoperative order sets, two indicators of providing high-value medical care, according to a study published in the Joint Commission Journal on Quality and Patient Safety.

High-value care is defined as delivering the best possible care while simultaneously reducing unnecessary healthcare costs. The release of the Choosing Wisely campaign in 2012, an initiative of the American Board of Internal Medicine Foundation, renewed the focus on providing high-value medical care. The campaign promotes the development of electronic medical record-based interventions that target individual recommendations.

Boston Medical Center (BMC) focused on five areas in the Choosing Wisely recommendations: the overutilisation of chest x-rays, routine daily labs, red blood cell transfusions, and urinary catheters, and underutilisation of pain and pneumonia prevention orders for patients after surgery. To do this, BMC researchers worked with the information technology team to incorporate new recommendations into the electronic medical records that would alert the provider to best practice information. The researchers examined data between July 2014 and December 2016 to look at how the interventions played out clinically.

At six months following BMC's intervention, the proportion of patients receiving pre-admission chest x-rays decreased 3.1 percent, and the proportion of labs ordered at routine times also declined 4 percent. Total lab utilisation was down with a post-implementation decrease of 1,009 orders per month.

There was no significant difference in the estimated red blood cell transfusion utilisation rate or the number of non-ICU urinary catheter days, but the proportion of postoperative patients who received appropriate pain and pneumonia prevention orders showed an absolute increase of 20 percent.

While the results of BMC's interventions show promise in improving high-value care, the study's corresponding author Nicholas Cordella, MD, says "using only an electronic medical record intervention may not be adequate to achieve optimal outcomes emphasised by Choosing Wisely."

Dr. Cordella, a fellow in quality improvement and patient safety at BMC, and co-authors suggest that future efforts aimed at increasing high-value care should consider other elements, such as clinician education, audits and feedback, and peer comparison.

"In order to move the needle on reducing unnecessary healthcare costs, we need to consider multipronged approaches in order to engage providers in ways that can truly make a difference in how we deliver exceptional, high-value care to every patient," says Dr. Cordella, also an assistant professor at Boston University School of Medicine.

Source: [Boston Medical Center](#)

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