

Electronic health record interventions for contrast media shortage impact CT utilization

August 3 2022

CT Chest

Contrast Shortage

Due to a severe national shortage of IV iodinated contrast, the default protocol for CT scans is currently non-contrast. If your patient has a clinical scenario that you feel requires contrast, you must enter detailed clinical information in the order to facilitate a rapid clinical review by radiology. Please consider alternate imaging modalities where appropriate.

Specific clinical recommendations:

- **Oncologic:**
 - Avoid contrast for Chest CT done alone to assess for metastatic disease, unless primary is a thoracic malignancy
 - For chest/abdomen/pelvis restaging exams, consider combining non contrast CT Chest with abdominal MRI.
 - Consider Abdominal MRI for assessment of hepatic metastases, instead of CT.

- **Non-Oncologic:**
 - CT for Pulmonary embolism: utilize risk scoring methodology such as

EHR screenshot showing sidebar text displayed to referring clinicians after placing orders for body CT (neck, chest, or abdomen and pelvis), describing iohexol shortage and providing appropriate strategies for iodinated contrast media conservation. Credit: ARRS/AJR

According to an open-access article in *American Journal of Roentgenology*, electronic health record (EHR) order entry-based interventions implemented in response to the global iodinated contrast media shortage significantly reduced contrast-enhanced CT utilization within a large health system.

"The findings indicate the ability to rapidly achieve changes in ordering clinician behavior and subsequent clinical practice using system-wide EHR changes," wrote first author Daniel I. Glazer of the Center for Evidence-Based Imaging at Brigham and Women's Hospital in Boston, MA.

Glazer and colleagues' retrospective study included 78,792 patients who underwent at least one CT examination (outpatient, inpatient, or emergency department setting) from April 1–July 3, 2022. On May 10, an initial EHR intervention created a sidebar alert after any contrast-enhanced body CT orders, noting the present iohexol shortage and recommending alternate imaging modalities. A second EHR-based intervention on May 16, 2022, required referrers to enter detailed clinical information for all contrast-enhanced body CT orders, which radiologists used when protocoling examinations.

Ultimately, the mean number of patients undergoing contrast-enhanced CT per weekday during pre-intervention, first post-intervention, and second post-intervention periods was 726, 689, and 639; the mean number of contrast-enhanced CT orders was 154, 143, and 131.

Noting that their health system encompassed two large academic medical centers, seven [community hospitals](#), three specialty hospitals, and multiple affiliated ambulatory care centers—all using a single EHR (Hyperspace, Epic Systems, Verona, WI)—"the number of patients undergoing contrast-enhanced CT examinations per day decreased by 12.0%, and the [number](#) of orders for CT with [contrast](#) media decreased

by 15.2% per day," the authors of this study concluded.

More information: Daniel I. Glazer et al, Electronic Health Record Order Entry-Based Interventions in Response to a Global Iodinated Contrast Media Shortage: Impact on Contrast-Enhanced CT Utilization, *American Journal of Roentgenology* (2022). [DOI: 10.2214/AJR.22.28143](https://doi.org/10.2214/AJR.22.28143)

Provided by American Roentgen Ray Society

Citation: Electronic health record interventions for contrast media shortage impact CT utilization (2022, August 3) retrieved 23 June 2024 from <https://medicalxpress.com/news/2022-08-electronic-health-interventions-contrast-media.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.