

Inclusion of patient headshots in electronic health records decreases order errors

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Each year, health care practitioners at Brigham and Women's Hospital place over a million orders through the electronic health records (EHR) system. Even though studies indicate that practitioners place more than 99.9 percent of orders for the correct patients, researchers at the Brigham analyzed that remaining 0.1 percent to determine and address the root causes of wrong-patient order errors. In an effort to improve patient safety, the Brigham required headshots for participating patients to be displayed in their EHR as part of a quality improvement program in the Emergency Department. Analysis of the millions of orders placed for participating patients over a two-year span showed the rate of wrong patient order entry to be 35 percent lower for patients whose photos were included in their EHR. Results are published in *JAMA Network Open*.

"There's one specific solution to mitigating wrong-patient errors that turned out to be really effective: displaying patient's photos in their electronic chart. As a provider, these are patients that you know personally—you've cared for them and you're going to quickly recognize that face," said Hojjat Salmasian, MD, MPH, Ph.D., of the Department of Quality and Safety at the Brigham.

Salmasian had previously collaborated on a project in which pop-up alerts were used to reduce wrong-patient errors. Unlike interruptive pop-up alerts, including patient photos in EHRs enables uninterrupted navigation and utilizes the natural human affinity for facial recognition. Promising results from smaller-scale studies looking at the

implementation of patient photos to decrease wrong patient order entry (WPOE) inspired Salmasian and his colleagues to pursue this larger-scale test at the Brigham.

The researchers focused on the Emergency Department, where providers often multitask and, consequently, have a higher rate of errors. In a retrospective cohort of patients admitted between July 2017 and June 2019, photos taken of willing patient participants and corresponding orders placed were analyzed for [error](#). Of 2.5 million total orders placed across 71,851 unique patients, there was a decrease in errors of 35 percent. Salmasian emphasized the sheer volume of orders this 35 percent amasses to when considering the millions of orders placed per year at the Brigham, saying without this photo implementation an estimated 2 in every 1,000 orders may be placed incorrectly in the ED.

This improvement in error risk was slightly more detectable in white patients, a finding that illuminates implicit bias, treatment inequities, and the patient care impact of having a predominantly white patient population. The Brigham and Mass General Brigham have plans to include photos of all participating patients in their [electronic health records](#). Despite the barrier COVID-19 has caused, with masks being required of all patients, hospitals locally and across the country plan to integrate this photo feature as soon as they are able. As requests to include a headshot in one's electronic health record increase, patients will begin to realize their actions—even as small as uploading a headshot to a healthcare portal—can have a huge impact on their [health outcomes](#).

"It's important for all of us to realize that there are things that we can do as patients that directly impact the appropriateness and safety of care that we receive," said Salmasian. "If more patients engage in the care they receive, our health care system improves in both safety and quality."

More information: Hojjat Salmasian et al, Association of Display of Patient Photographs in the Electronic Health Record With Wrong-Patient Order Entry Errors, *JAMA Network Open* (2020). [DOI: 10.1001/jamanetworkopen.2020.19652](https://doi.org/10.1001/jamanetworkopen.2020.19652)

Provided by Brigham and Women's Hospital

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