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Patient Photo in EHR: Impact on Errors

Displaying patient photos in the electronic health record (EHR) banner not only enhances a physician's ability to correctly identify patients. Importantly, this may also be a simple and inexpensive way to avoid wrong-patient order entry (WPOE) errors, says a new study (Salmasian et al. 2020)

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This type of error mostly occurs in the in the emergency department (ED), where practitioners often multitask (i.e. caring for several patients at once) and face frequent interruptions, including requests to place an order for a different patient. Although WPOE errors are rare – estimated to be up to 2 per 1,000 orders – they can lead to patient harm, including death.

In this historical cohort study, researchers analysed data of patients who visited the ED of a large tertiary academic urban hospital in Boston between 1 July 2017 and 31 June 2019. Under a quality improvement initiative, the ED workflow was redesigned to include capturing of patient photographs at the time of ED registration – with patients duly informed of the snapshots' intended safety impact.

The rate of WPOE errors was determined using the wrong-patient retract-and-reorder (RAR) measure, which is a validated measure endorsed by the National Quality Forum. In all, 2,558,746 orders that were placed for 71,851 patients were included in the analysis.

Based on the results, the rate of WPOE errors was significantly lower when the patient's photograph was displayed in the EHR banner (odds ratio, 0.72; 95% CI, 0.57-0.89). When risk of error was adjusted for confounders using multivariable logistic regression, the researchers observed the effect size was essentially the same (odds ratio, 0.57; 95% CI, 0.52-0.61).

According to the researchers, obtaining patient photographs can be difficult in the ED setting due to work and time pressures. In addition, severely ill patients may find it bothersome to have their photos taken. In this study, patients who were acutely ill (ESI scores 1 and 2) were less likely to end up in the photograph group of the study, but they also have notably lower odds of wrong-patient errors. This could be attributed to the higher level of attention these patients receive from their physicians, which reduces the chances of a wrong-patient error.

"Alternatively, it is possible that the type of orders placed for critically ill patients is distinctly different from orders placed for other patients, such that practitioners are more likely to catch these errors before placing those orders for the wrong patient," the researchers point out.

In conclusion, the researchers say that displaying patient photographs in the EHR provided decision support functionality for enhancing patient identification and reducing WPOE errors while being noninterruptive with minimal risk of alert fatigue.

In previous studies, interruptive solutions such as electronic patient verification forms or alerts were employed to reduce these types of errors. Aside from being time-consuming, these interventions also can cause alert fatigue.

As shown in this new study, passively displaying patient photographs in the EHR is a good solution requiring no added practitioner time burden or risk of alert fatigue.

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