



Reducing Patient Misidentification Errors Through the Use of Biometrics

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REDUCING PATIENT MISIDENTIFICATION ERRORS THROUGH THE USE OF BIOMETRICS

Patient misidentification, which can lead to medical errors, has been a growing concern over the past few years, and it has prompted The Joint Commission to issue a National Patient Safety Goal (NPSG.01.01.01) requiring hospitals to use two patient identifiers before administering care.

According to a survey released in partnership by Patient Safety & Quality Healthcare and Imprivata, nearly 99% of respondents believe patient misidentification leads to medical errors or patient harm, and 65% say they've witnessed an error, such as a medication or blood transfusion mistake, that resulted from such misidentification. Almost 70% of respondents say a patient is misidentified in their facility between one and five times a week. Finally, over 90% of respondents believe medical errors could be reduced if patients were biometrically linked to their medical record.

The survey polled over 100 patient safety, quality, and nursing professionals from hospitals, health systems, physician organizations, and ambulatory surgical centers. The majority of respondents were patient safety and quality officers (including directors and managers) working in either a hospital or healthcare system (66%).

How does biometrics work? Simply put, it links a patient's palm print to that patient's medical record. "The idea is that during any registration process, you can tie a biometric identifier to a medical record to eliminate possible misidentification errors when matching is done manually. Specifically, infrared scanning of an individual's palm vein pattern has been proven to be very accurate in identifying a specific person," says Sean Kelly, chief medical officer at Imprivata. "Rather than trying to identify a patient with a series of questions, the patient simply places their hand over the palm vein scanner and the software identifies that patient. This takes one important potential point of failure out of the equation in order to limit errors due to patient misidentification."



How patient misidentification happens

There are a host of factors that can cause patient misidentification, including communication errors due to delirium or dementia, medical disabilities such as being hard of hearing or having a coexisting psychiatric disorder, or even the confusion and anxiety that often result from a hospital stay. Patients may not understand the questions that registration staff are asking them, or they might intentionally give false information to avoid receiving a medical bill. But even setting aside all these potential snags, patient misidentification can still be caused by simple human error during the registration process.

"There are a lot of human factors involved in patient identification, and that's why misidentification is still an issue," says Mollie Drake, former senior director of corporate access management for Scripps Health. "You have to take the human element out of it, and that's why biometrics are so valuable in that regard."

Have you ever witnessed a medical error such as a medication error, blood transfusion error, or surgical error that resulted from misidentification of a patient?

- Yes 64.9%
- No 35.1%



Kelly agrees. "Oftentimes it's the registration specialist that's under pressure to get the person logged in and try to understand who that person is, and there may be language barriers or other issues. There are many human factors that make it difficult to get the correct information from somebody. Without a unique patient identifier number and without biometrics, you can't be absolutely certain that you definitely have the right person that you're registering," he says.

When you look at studies of patient error, roughly 10% of them are human errors," Kelly continues. "There are different healthcare workers performing different tasks on multiple patients, and medications that can sound and look similar. So, wires can get crossed."

Ramifications of patient misidentification

Patient safety and better outcomes depend on proper identification. Patients that have been incorrectly identified can be prescribed the wrong medication, given the wrong treatment, or even subjected to a wrong-site surgery or a procedure meant for someone else.

One of the most common issues related to patient identification is that multiple record numbers are associated with the same patient. This has both a safety and a financial impact. "The physician might not have access to your complete medical record because some of your information is in one record and some in another," Drake says. "Once the error is discovered, it is a tedious manual process to find all of the data places in the hospital and combine the information into one record." Industry experts



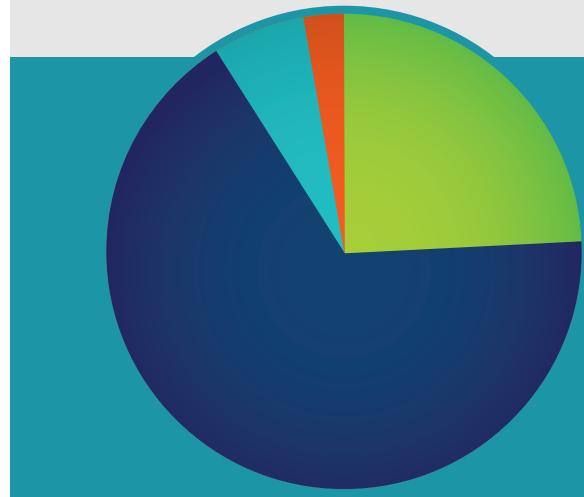
report the average estimated costs associated with duplicate health records can be as much as \$1,000 per record, plus \$95 in labor costs to correct the information (Farrington, Tennant, & Halder, 2014). In some cases, record systems won't allow error correction for patients receiving inpatient care, to prevent jeopardizing existing orders, she explains.

Another identification error, selecting the wrong patient at the point of registration, is one of the hardest mistakes to detect. Drake describes the following scenario: "Maria Lopez presents at the hospital; she provides her name and birthdate, and the registrar selects the wrong patient with the same name. Next thing the registrar knows is that she has commingled two records, and it's very difficult to go back in and piece those apart—which one was for Maria Lopez A and which one was for Maria Lopez B? Out of frustration, they discard the entire chart and start a new one. That's very dangerous, and you don't usually find out about that until [the other patient] gets a bill and questions why they received a bill when they haven't been in the hospital for years," she says.

"If someone is worried they have the wrong person, oftentimes they'll make a completely new chart rather than risk contaminating two charts as one and the next time, the same thing happens," Kelly says. "There could be four or five charts out there for one person. The crucial piece of information—that the patient has an allergy to penicillin—may be in the last chart, but not

Based on your experience, how many times a week do you believe a patient to be misidentified in your facility?

Never	24.3%
1-5 times	66.7%
5-10 times	6.3%
10-20 times	0.0%
More than 20 times	2.7%



this one. The implications of that error are that someone looking at the patient's chart might not realize that the patient has a life-threatening allergy to penicillin and order it thinking they're looking at the whole record. This places the patient in danger."

Biometrics removes this error potential and allows the entire patient record to be tied to a single identifier, giving patients and staff the "whole truth and nothing but the truth."



Improving patient identification with biometrics

Nearly 91% of survey respondents agree that medical errors could be reduced if more healthcare facilities were to adopt biometrics. So, what steps can facilities adopting this technology take to further improve patient identification?

"The key point is that you want the biometrics process across the whole healthcare system," Kelly says—not just at registration. "It takes a little bit of work to tie it together the first time you hook the patient's biometrics to their record and set up that system, but you get the benefit every authentication after that, especially if they present confused and acutely ill to the ER, for example. Then providers have instant access to the complete and accurate medical record, which can be literally life-saving."

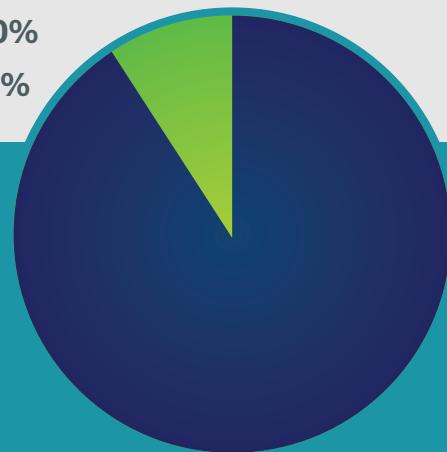
"The biggest factor of using biometrics for identification is taking the question and answer out of it and not giving anybody the opportunity to either give you false information or for the registrar to misinterpret the information. You can tell me you're one person, but as soon as you put your palm on the scanner, your real name will show."

—Mollie Drake,
Director of Corporate Access Management for Scripps Health

Drake says her facility tried several methods to improve patient identification, including having patients show their ID, using several identifiers, training and retraining staff, and trying to hold everyone accountable. None of those methods worked, and the facility still had a daily error rate of 9%–10%, or approximately 30 errors a day. "Without biometrics, I honestly don't know how you could improve that process," she says.

Do you believe that medical errors could be reduced if patients were biometrically identified at registration and automatically linked to their correct medical record?

- | | |
|--|--------------|
| ■ Yes | 91.0% |
| ■ No | 9.0% |



"By implementing biometrics throughout the care continuum, [hospitals have] increased patient satisfaction and increased patient safety and revenue generation as well," Kelly says. "Some hospitals have even started to integrate it into their highest-risk treatment centers, such as oncology suites for radiation treatments. That way, they reauthenticate right when patients need it most, to confirm that they are giving exactly the correct treatment to exactly the correct patient."

Biometrics represents a substantial improvement in patient safety and care, he concludes. While its benefits are most immediately obvious for registration and billing, the technology can also guarantee patient safety and streamline workflow throughout the hospital.

Reference

1. Farrington, N., Tennant, R., & Halder, R. (2014, February). Patient safety and risk to rising healthcare costs. Panel presented at HIMSS Conference, Orlando, FL.



About the Speakers

Sean Kelly

Dr. Sean Kelly is the Chief Medical Officer at Imprivata where he heads the company's Clinical Workflow Productivity team and advises on the clinical practice of healthcare IT security. In addition to serving as Imprivata CMO, Dr. Kelly practices medicine and teaches at Beth Israel Deaconess Medical Center, a level one trauma center and academic teaching hospital in Boston, MA. Dr. Kelly is also an Assistant Clinical Professor of Emergency Medicine at Harvard Medical School. He is board certified in Emergency Medicine and is a Fellow in the American College of Emergency Physicians.



Mollie Drake

Mollie Drake has been in healthcare for over 25 years. Her career spans many positions, all of which focusing on the front-end processes of admissions and registration, and leading to her role as Senior Director of Corporate Access Management for Scripps Health in San Diego. In that role, she was responsible for streamlining many functions, implementing a 3-tiered career path and raising awareness throughout the organization for how critical registration is to patient safety. Ms. Drake is a graduate of San Diego State University, where she obtained her MBA in Healthcare Administration in 1999. She recently retired and lives with her husband of 30 years in San Diego.



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