

# Improve patient safety while eliminating duplicate medical records with biometric patient identification

## Key facts

**Industry:** Healthcare

**Location:** North and South Carolina

**Employees:** 60,000

**Industry beds:** 7,500

## Challenges

- Uniquely and accurately identifying patients at registration
- Addressing patients' reluctance to share sensitive personal information with staff
- Protecting against duplicate medical records, overlays, and misidentification

## Results

- Reduced duplicate medical record rate to 0.01%, 80 times better than the national average
- 70% reduction in patient check-in times
- Improved patient safety, privacy, and satisfaction

Carolinas HealthCare System (CHS) is one of the most comprehensive public, not-for-profit systems in the nation, providing care at over 900 locations across North and South Carolina. CHS's network includes hospitals, freestanding emergency departments, outpatient surgery centers, physician practices, imaging centers, nursing homes, laboratories, and pharmacies. CHS employs 60,000 people and provides 11.5 million patient care interactions each year.

## The challenge

In 2007, CHS recognized that they had an issue with uniquely identifying patients across their health system and began searching for a solution. Providing social security numbers or other sensitive personal information at the registration desk was proving intrusive for patients. And a growing black market for stolen medical records was making it increasingly difficult for CHS to ensure that their patients were providing the correct identity and insurance information.

"We were looking to uniquely identify patients, especially in an electronic health records environment, where problems with duplication of medical records, error rates, incorrectly combining records, and finding a perfect patient match get accentuated," said Craig Richardville, Senior Vice President and Chief Information Officer at CHS, who was recently named CIO of the Year by the College of Healthcare Information Management Executives (CHIME) and the Healthcare Information and Management Systems Society (HIMSS).

## The solution

CHS began to research biometric solutions that could solve their patient identification problem. After reviewing various biometric options, CHS chose palm vein scanning, because it provides the most accurate and least intrusive identification, making it easy for patients to adopt.

"We looked at fingerprint biometrics, which was less expensive, but there were many false positives," Richardville said. "That error rate was too high, and we thought we were hitting a better rate even with manual than with fingerprint, so it did not gain us a significant advantage. When we did our pilots, people felt most comfortable with palm-vein scans."



### About Imprivata

Imprivata, the healthcare IT security company, enables healthcare securely by establishing trust between people, technology, and information to address critical compliance and security challenges while improving productivity and the patient experience.

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With hundreds of facilities under its umbrella across two states, CHS required a solution that would provide robust interoperability between diverse care settings and hospital IT systems. Patients could be visiting multiple facilities, making it crucial that their correct medical records were available at each point of registration. “As patients come in and out of our system, and other healthcare systems, getting a holistic view of an individual patient is really important for us to deliver the appropriate care,” says Richardville.

Imprivata PatientSecure was the solution that best fit all of CHS’s needs. Imprivata PatientSecure improves patient adoption and satisfaction because patients feel comfortable using their palms during registration. And, because palm veins are unique for every individual, CHS ensures accurate links between patients’ palm vein scans and their individual patient records.

### The results

CHS currently has over 1,000 Imprivata PatientSecure palm vein scanners deployed at registration desks throughout all their physical locations. CHS has also implemented Imprivata PatientSecure throughout their emergency rooms, which is helping providers identify unconscious trauma patients. In addition to improving patient safety, accurately identifying patients helps CHS reduce insurance fraud and medical identity theft, improving revenue cycle efficiency.

CHS patients have embraced Imprivata PatientSecure. “Once educated, our patients understand and have clearly adopted the palm scanner,” Richardville says. “While it is voluntary, 99% of our patients have chosen to use it for patient safety.” Since introducing Imprivata PatientSecure, CHS has achieved a 70% reduction in patient check-in times and CHS’s duplicate medical record rate has fallen from roughly 8-10 percent to .01 percent, which is about 80 times better than the national average. This significant improvement in patient safety upholds CHS’s 75-year commitment to providing South and North Carolina communities with excellent care.