



eBook
**Improve Patient
Outcomes and Reduce
Medical Fraud With
Facial Recognition**



Introduction

From financial services to travel and hospitality, identity verification is integral to many aspects of our lives. However, there are few areas where it is a more critical issue than in healthcare, where accurately identifying patients can be a matter of life and death.

This eBook will examine why patient identity is so important, how biometric technology like facial recognition can be used to address the challenges, and what features to look for when choosing a solution.

Part 1: The Importance of Patient ID in Healthcare

PATIENT CARE & SAFETY

There is an obvious reason why it's so important to reliably identify patients: their outcomes and survival may depend on it. Getting medical records confused with another patient can lead to wrong treatments. In some cases, patients brought in for care might not be able to identify themselves due to confusion or incapacitation, and how they are treated depends on their medical histories. A mistaken identity in such a situation can have dire consequences.



The Emergency Care Research Institute (ECRI) named patient misidentification one of the top 10 threats to patient safety.



FRAUD PREVENTION & INVESTIGATION

Medical and insurance fraud is also a serious problem in healthcare. It affects everyone — individuals and businesses alike — and causes tens of billions of dollars in losses each year. However, financial losses caused by healthcare fraud are only part of the story. It can expose patients to false diagnoses and unnecessary treatment.



DIAGNOSIS: IDENTITY FRAUD IS A SERIOUS PROBLEM

In 2022, the U.S. Federal Trade Commission received 27,821 reports of medical identity theft

That same year, 707 known healthcare data breaches affected almost 52 million patients

According to Allstate, the economic impact of medical identity theft amounts to \$41 billion a year

DATA SECURITY COMPLIANCE

Not only do healthcare providers have a moral and financial incentive to fend off identity fraud, but they are also required to secure patient data by stringent regulations such as the Health Insurance Portability and Accountability Act (HIPAA). HIPAA adds even more complexity by requiring service providers to offer timely and patient-friendly access to health records on request.

As a result, the systems used to secure and manage such data must also be convenient enough to meet HIPAA's accessibility requirements. Failure to comply puts healthcare providers at risk of serious financial penalties, forcing them to find a delicate balance between data privacy and user convenience.



EASY HIPAA COMPLIANCE WITH BIOMETRICS

Recent and incoming changes to HIPAA further demand that healthcare providers protect personal health information (PHI) while also making it easier for patients to access it. Among other stipulations, the changes will require providers to allow access to PHI within 15 days of the patient's request.

Biometric patient ID is naturally compliant with these changes. Not only do they make timely access to accurate, non-duplicate records possible, but they are in line with the 2021 HIPAA Safe Harbor regulations, which state that organizations that implement security safeguards for protecting electronic PHI will be treated more leniently by the Office for Civil Rights when audited after a data breach.





Part 2: Biometric Patient ID Now for an Identity-Safe Future

Biometric identity verification and authentication can enhance the entire healthcare journey and make it safer, more secure and more convenient.

Some biometric identification use case examples for healthcare include:

PATIENT INTAKE

Identifying patients at the first point of contact in a healthcare setting is critically important. An error at this stage can lead to compounding mistakes beyond the reception desk and can impact patient outcomes. Using facial recognition to automatically identify the patient upon intake not only prevents manual errors, but also improves operational efficiency, reduces wait times and enhances the patient experience. Perhaps most importantly, facial recognition can identify patients even when patients cannot identify themselves due to incapacitation from illness. That lets doctors immediately provide the care that is needed.

E-PRESCRIPTIONS

Binding a patient's face to their prescription minimizes the chance of medical mix-ups between the doctor's office and the pharmacy. A biometric e-prescription is faster to fill, re-fill and renew, requiring only a quick face scan instead of a manual ID check. What's more, the e-prescription can only be accessed by the patient it belongs to, minimizing the potential for fraudulent access to restricted substances. With facial recognition, drugs and treatments are being administered quickly, accurately and safely.





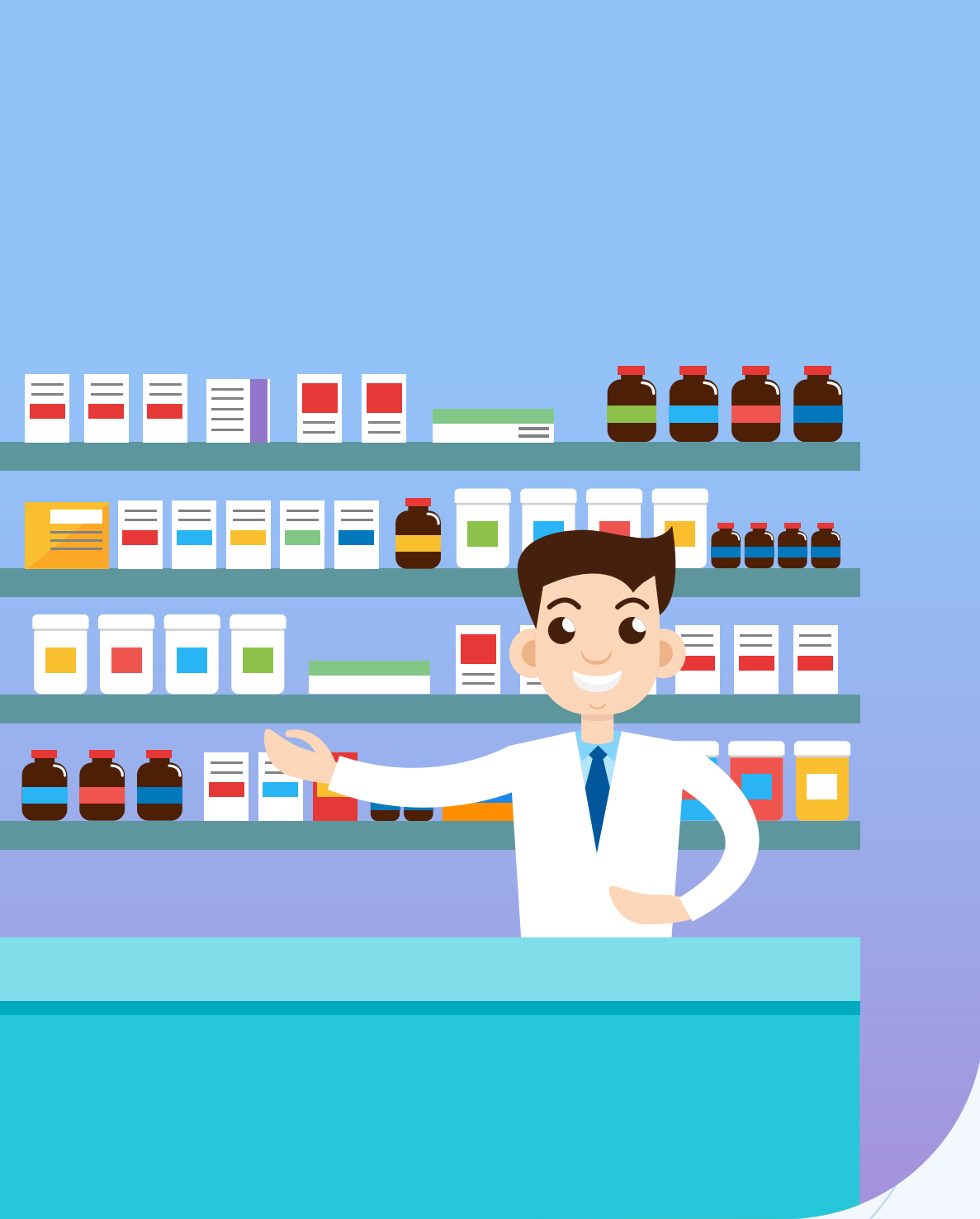
PATIENT RECORD MANAGEMENT

Duplicate records are a serious vulnerability in the healthcare sector. Multiple records for the same patient can lead to improper treatment due to inaccurate or incomplete medical histories, open vulnerabilities to fraud, and delay medical record requests and insurance reimbursement. By adding face biometrics to personal health information, a patient's medical history can be coalesced into a single file, allowing a system administrator to purge its duplicates and streamline a medical facility's operations.

SECURE ACCESS

With facial recognition, doctors, nurses, clinicians and other hospital staff can greatly benefit from secure, seamless physical and digital access. Single sign-on (SSO) has proved to deliver efficiencies and cost savings related to IT support. In healthcare, a biometric SSO system can empower clinicians and staff to access the full suite of IT assets easily and securely with a high level of security, while maintaining all necessary hygienic and sanitary protocols





CONTROLLED SUBSTANCE MANAGEMENT

Biometric secure access can be applied to medical safes, too — securing restricted substances and ensuring easy access when they are needed. Medical cabinets protected with facial recognition can offer insight into exactly who accessed what substances and when, maintaining irrefutable chains of custody of controlled substances. Tying access to biometric SSO offers further efficiencies, with healthcare practitioners able to easily access medications as needed.



Part 3: How to Recognize Best-of-Breed Face Biometrics

Facial recognition systems vary in quality, and different scenarios will demand different levels of sophistication from the solutions. In healthcare and patient identification, a facial recognition system will need a few essential qualities:

DEPENDABILITY

While environmental factors such as lighting conditions can affect the performance of some facial recognition systems, more sophisticated technologies — such as those using multispectral imaging — can overcome these challenges, allowing accurate matching and identification across any setting in a healthcare facility.

LIVENESS DETECTION

Identity verification systems have always faced the threat of so-called “spoofing” attacks, in which legitimate credentials are mimicked. Today, the greatest spoofing threats arise from deepfake technology and other presentation attacks that use sophisticated masks or 3D models. It is, therefore, critical to deploy a facial recognition system with sophisticated presentation attack detection (PAD) capabilities. Passive liveness detection technologies can automatically spot the signs of masks and AI-generated deepfakes, ensuring that healthcare providers are only dealing with recognized, legitimate patients.



MATCHING AT THE EDGE

While the cloud has become indispensable in most IT environments, biometric processing on the camera overcomes inherent problems of the traditional cloud, such as high latency and lack of security. Latency is significantly reduced when data doesn't need to be sent far away for processing. In the case of security, edge computing avoids sending sensitive information — such as a patient's personally identifiable information (PII) — to the cloud, meaning their data stays where it's generated and therefore, is more secure. Better yet, it can enable faster data processing, helping to manage bandwidth constraints and enhance overall matching performance.

BIAS-FREE

Some facial recognition technologies have been found to demonstrate changes in accuracy across different demographic groups, such as age, gender and race. Responsible technology providers employ extensive, ethically sourced datasets comprising billions of images that span ages and racial characteristics, collected knowingly and with consent for inclusion. This commitment to data diversity helps reduce matching bias and is ideal in a healthcare setting, allowing every patient to receive the same level of care and improving the patient experience.



PRIVACY-FIRST

Administrators should not have to adapt patient ID solutions to fit their institutions' privacy policies. The best facial recognition solutions will be built with a privacy-first approach that ensures sensitive data is protected by default, allowing healthcare providers to rest assured that they are in compliance with HIPAA and any other data privacy regulations.

EASY TO DEPLOY

Healthcare facilities are complex environments in terms of IT infrastructure and equipment, and patient ID solutions should be adaptable to their environments. The right facial recognition tools will be lightweight, modular and easy to implement in any given healthcare setting.

These requirements may appear to add up to a tall order, but biometric technologies have greatly advanced in recent years, and there are facial recognition solutions available today that not only meet these demands but do so on a cost-effective basis.



Conclusion: Immunize Against Identity Threats With Biometrics Today

Implementing biometrics for patient ID protect against fraud and patient misidentification, while balancing patient data security and convenience throughout the healthcare ecosystem.

Learn more about biometrics in healthcare and take the first steps to protecting patients by contacting HID today.

- Explore [biometrics for healthcare](#)
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2024-05-30-eat-patient-outcomes-facial-recognition-eb-en
PLT-07749

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