



M2SYS White Paper

Eliminate Patient Fraud and
Increase Patient Identification
Accuracy with Vascular and Iris
Biometric Identification
Technology

M2SYSTM
ACCELERATED BIOMETRICS

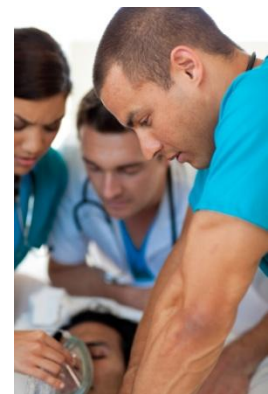
Fraud Cripples the Healthcare System

Despite radical advances in healthcare technology over the past decade, the industry continues to suffer as **billions of dollars are siphoned away**, liabilities skyrocket, medical identity theft grows and patient health is jeopardized by health care fraud. Medical identity theft dominates all forms of health care fraud and continues to be the single biggest problem within the industry as patient identification is consistently among one of the top concerns for health care

“Accurate Patient Identification has been number one on the list of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Hospital National Patient Safety Goals since 2003.”

professionals. It’s no surprise then that **accurate patient identification has been number one on the list** of the Joint Commission on Accreditation of Healthcare Organizations' (JCAHO) Hospital National Patient Safety Goals since 2003. The medical field is increasingly recognizing that patient misidentification is a common, potentially deadly and largely preventable error.

Why then, with all of the advances in technology and patient identification initiatives directed at the global healthcare industry does patient misidentification continue to be such a difficult problem to solve? Perhaps it is the difficulty of prodding the healthcare industry to adopt suggested actions that would standardize the approaches to patient identification among different facilities in a health care system. It could be that establishing clear protocols to properly identify patients throughout the course of their healthcare within a network is simply too complex, difficult to enforce and causes delays in delivering quality care. After all, in an increasingly competitive economy where providers wage a fierce battle to attract and retain patients, quality patient care is inherently a major focus of healthcare institutions to maintain loyalty.



The Call to Adopt Rigorous Standards for Patient Identification

Although the problem of accurate patient identification has existed for a long time, calls to adopt digitization of medical records and stringent patient identification standards through the use of new technologies have recently increased by authorities that provide leadership on global health matters such as the World Health Organization (WHO). In a [May 2007 “Patient Safety Solution” document](#), the WHO states:

“Throughout the health care industry, the failure to correctly identify patients continues to result in medication errors, transfusion errors, testing errors, wrong patient procedures and the discharge of infants to the wrong families.

The report goes on to say:

“The major areas where patient misidentification can occur include drug administration, phlebotomy, blood transfusions and surgical interventions...there are newer technologies which can improve patient identification...”

The push for all healthcare institutions to adopt modern Electronic Health Record (EHR) systems has further increased the need for symbiosis between patient identification technology and medical record maintenance and storage to facilitate accurate care and treatment throughout complex, multi-stage health care facility workflow processes. As more healthcare providers move towards a comprehensive EHR model, they are recognizing that combating many of the problems that are manifested by inaccurate patient identification can be rectified by adopting modern patient recognition technology as part of the overall model.

“The major areas where patient misidentification can occur include drug administration, phlebotomy, blood transfusions, and surgical interventions..there are newer technologies which can improve patient identification.” – World Health Organization



Identifying the Proper Patient Identification Technology

There are many arguments to be made about which patient identification technology is the most superior for the health care industry to adopt. Ideally, the technology should be: automated, efficient, fast, versatile, safe, user friendly, reliable, affordable, flexible, confidential, and proven. Most of these characteristics are inherent in each of the major patient identification technology systems on the market (barcoding, RFID, electronic order entry, and biometrics) but only one of these technologies can boast that it has all of them and more. That technology is vascular and iris recognition biometric technology.

Non-intrusive, contactless vascular and iris recognition biometrics scans beneath the skin and on the eye using human physiological characteristics for identification and is gaining potency as a technology that provides airtight patient identification, keeping patient information safe, creating mass efficiencies and drastically reducing medical identity fraud. It also provides a means to identify patients who lack identification, have the same name, or may be unconscious (vascular).



Vascular palm vein scanner



Finger Vein



Palm Vein



Iris recognition

Vascular and Iris Recognition Healthcare Biometrics can Help Stop Patient Fraud

Recent studies have shown that patient fraud is on the rise. According to [a study just released by The Ponemon Institute](#), approximately 1.5 million Americans are victims of medical identity theft, a number that continues to rise each year. In addition, healthcare fraud is estimated to cost between \$70 billion and \$255 billion per year which accounts for between 3% and 10% of total U.S. healthcare costs. As the health care industry continues to suffer under the heavy burden of patient fraud, healthcare biometrics is simply the only technology that eliminates the possibility of swapping or stealing healthcare ID cards or assuming the identity of another individual in order to defraud the healthcare system.

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Patient fraud is also known to have negative effects that ripple well beyond the initial crime. Consumers tend to place the bar high for healthcare providers to protect their identities and health care records and if compromised, it has negative repercussions for the image of the provider which can spread far and fast in the digital age. Since health care biometrics patient identification virtually eliminates the possibility of patient fraud, it becomes all that much more of a value added technology and a protection against not only medical identity theft but also healthcare’s reputation and image.

Phony treatments: costly form of ID theft

Last year’s economic stimulus bill includes \$2 billion to create a national system of computerized health records, but one of the risks is more medical identity theft. Impersonating patients or setting up fake clinics to bill for phony treatments can be much more damaging than other types of identity theft.



Source: Javelin Strategy & Research, 2009 data

BLOOMBERG NEWS

Medical ID Theft

How to Find Out Where You Stand

- Most patients toss out those “Explanation of Benefits” letters unopened. You should read them carefully to make sure no unauthorized treatment was performed in your name.
- Each year, ask your insurer for a “history of disclosures” from your doctor or insurer. This lists what medical information of yours was disclosed, as well as when, why, and to whom it was given, and can help spot fraud.
- Check your credit report periodically. Some victims learn of ID theft from collection notices for care they didn’t get.



What to Do If You’re A Victim

- File theft reports with both the police and your insurer.
- Contact the Federal Trade Commission, which provides helpful resources on resolving identity theft (877-438-4338 or consumer.gov/idtheft/).
- Request a copy of your medical records from your doctor or hospital. If they refuse, file a complaint with the Office of Civil Rights at Health & Human Services (800-368-1019 or hhs.gov/oc/privacyhowtofile.htm).

Vascular and Iris Recognition Biometrics Prevents Inaccurate Patient Identification and Health Care Fraud

Healthcare facilities must adopt an integrated approach to protecting patient identities and records which begins by verifying with absolutely certainty that a person is who they claim to be. There is no other identification technology that offers a higher level of security to protect healthcare providers from patient fraud other than vascular or iris recognition biometrics.

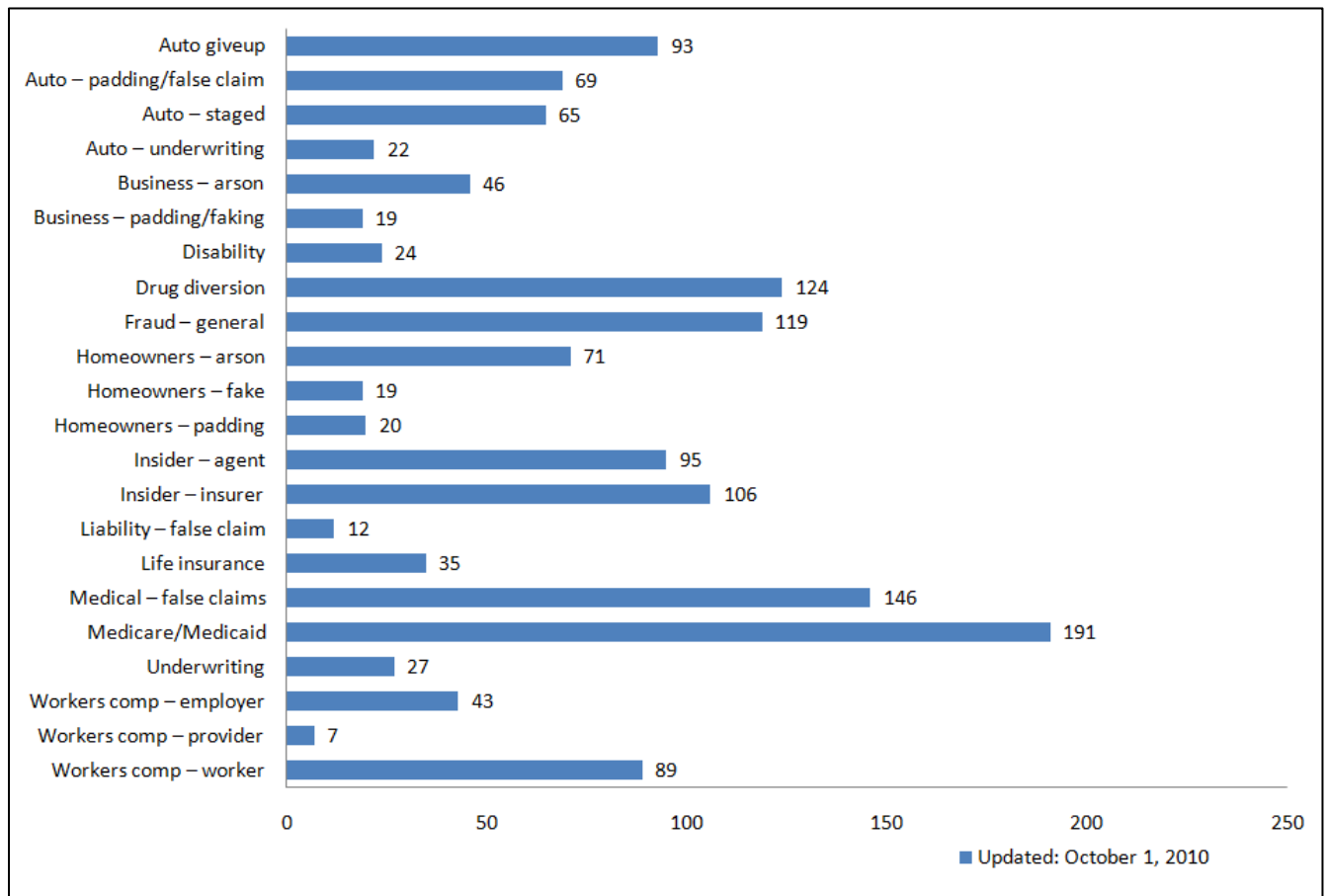
Due to the fact that healthcare biometric templates are unique to an individual, they prevent duplicate medical records by alerting healthcare officials when a person is already enrolled in the system which can substantially lower liability risk. In addition, healthcare biometrics seamlessly interfaces with existing EHR/EMR software providing fast integration so a health care facility can be up and running quickly. Healthcare biometrics also accelerates the check-in and registration process while completely eliminating language barriers. Furthermore, unconscious patients can be easily identified and doctors are ensured that the right medication is delivered to the right patient.

“...biometric templates are unique to an individual and they prevent duplicate medical records by alerting healthcare officials when a person is already enrolled in the system which can substantially lower liability risk.”

Fingerprint technology is currently the most widely used biometric modality within the industry today but is limited by individual skin integrity and may not pose as a “one-size-fits-all” solution for some industries. Healthcare facilities tend to have a diverse clientele and like most industries, operate within an environment that mandates technological speed and flexibility which may pose as less than ideal for fingerprint recognition technology. Vascular recognition biometric technology is different because it uses near infrared light to create a “vein map” beneath the finger or palm and therefore does not rely on fingerprint integrity to perform highly accurate and secure biometric recognition. Vascular biometrics demonstrates a high tolerance for skin surface problems such as dryness, roughness, moisture or scarring and is better suited for a healthcare environment where end users with these conditions may be more highly concentrated. Iris recognition uses multi wavelength infrared light illumination to capture images of the iris and can be used in all environments.

Using vascular and iris recognition biometrics as the modality of identification to eliminate patient fraud, boost patient safety and lower hospital liability is conceivably the appropriate deployment model for the healthcare industry. It requires no contact with the sensor which improves hygienic concerns and scanner durability plus vascular and iris recognition devices are easy to clean and keep sanitary without compromising the performance of the sensor, a key attribute for the healthcare industry. In addition, vein and iris patterns exist inside of the body which means that it is practically impossible to recreate a patient's biometric template since the sensor of vascular and iris biometric readers needs hand/eye blood flow to register an image.

Healthcare fraud continues to be the top category for arrests and convictions each year, as seen in this chart from the [Coalition Against Insurance Fraud](#):



***2010 totals for arrests and convictions of fraud related cases – Source: Coalition Against Insurance Fraud**

The Time Is Now To Act

The current dangers that inaccurate patient identification poses are real and can pose a serious threat to a patient's health, the financial integrity of a healthcare facility and the industry. Adopting a vascular or iris recognition biometrics can prevent inaccurate patient identification, eliminate patient fraud, lower liability and most importantly, improve the quality of patient care.

References and Copyright

This white paper was written, designed, and assembled by M2SYS Technology. Information contained in this whitepaper is the copyright of M2SYS Technology. This white paper is our opinion of vascular biometrics for patient identification backed by the following resources. Please keep in mind that some graphs use applied statistics from these resources. If you would like to calculate your exact potential savings please email: sales@m2sys.com to learn more about how vascular biometrics can help to eliminate patient fraud and establish accurate patient identification. Please feel free to contact M2SYS if you have any questions.

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