

KLAS report finds Imprivata  
PatientSecure produces  
strong value from tangible  
outcomes

In a report issued in December 2019, KLAS found that “As a result of the high value Imprivata provides, all interviewed clients report [Imprivata] PatientSecure is part of their long-term plans, and most would buy it again.”<sup>1</sup>

Among the high-value outcomes cited by Imprivata PatientSecure® customers were patient safety, increased security, reduced risk of fraud, and reduced registration time. Further, customers interviewed reported that patient safety increased as a result of assurance that the right patient record is used, there is a system in place preventing the creation of duplicate records, and unconscious or incoherent patients can be easily identified, and therefore treated.

### What is Imprivata PatientSecure?

Imprivata is the trusted digital identity company for healthcare. Imprivata PatientSecure uses biometric technology as an authenticator to positively identify patients when they present for care. Positive patient identification ensures that the right record is used for both medical treatment and revenue cycle transactions. Simply put, when patients are misidentified, healthcare organizations lose revenue.

Accurate patient identification relies upon the use of an authenticator, something the patient has, knows, or is. It maintains the trust anchor of patient identity established in a three-step patient enrollment process:

- **Step 1:** Conduct robust identity proofing, to confirm that the patient is who they claim to be. Typically conducted in person, forms of identification, such as a driver’s license or insurance card, are checked to confirm demographic data elements and any applicable unique identifiers like Medicare ID, VA ID, insurance ID number, and SSN. These validated attributes establish a foundational trust anchor for all subsequent healthcare transactions.
- **Step 2:** Immediately search on the attributes established in Step 1 to determine what historical records may exist across the provider organization’s care continuum. Capture the associated medical record numbers (MRNs) as additional attributes of the trust anchor.
- **Step 3:** Bind the patient’s validated attributes determined in Steps 1 and 2 to a biometric authenticator.



Biometric enrollment creates a 1:1 link to MRNs from multiple clinical systems



Securely and accurately identifies patients at any point of care directly from the registration screen



Retrieves the correct record from appropriate clinical systems

### The benefits of deploying Imprivata PatientSecure

With the adoption of Imprivata PatientSecure, patient access staff and the patients they check in are the first to benefit. When a previously enrolled patient returns for care, there is no need to repeat aloud or type in personally identifiable information (PII), such as current address or phone number, or protected health information (PHI), such as the reason for their visit. Patients simply scan a palm, are immediately recognized, and then connected to the right record. Many Imprivata PatientSecure customers have further automated this process, using kiosks, to streamline check in and improve patient experience.

Clinical benefits result from the use of biometrics in procedural areas, particularly where irreversible interventions are performed, such as radiation oncology or the OR. Enterprise-level clinical benefits result from the improved interoperability enabled by positive patient identity. Health information technology is considered to be interoperable when "... without special effort on the part of the user ... [it] allows for complete access, exchange, and use of all electronically accessible health information for authorized use under applicable State or Federal law."<sup>2</sup> Driven by value-based care, sharing of information from outside of a provider's network is increasing. 74% of hospitals and health systems share clinical or summary-of-care records with hospitals outside their system, up from only 30% in 2012.<sup>3</sup> Anecdotally, customers have told Imprivata that more of the information about their patients comes from outside their organization than from within. And while sharing of information has grown, match rates can be as low as 10-30%.<sup>4,5</sup>

Low match rates indicate the larger problem: lack of interoperability. In fact, improving interoperability is a theme that has bipartisan government support – largely due to the need to reduce the \$1.3T spend annually by Medicare and Medicaid.<sup>6</sup> For years, CMS has worked to make their vision a reality: "an ecosystem where "providers who deliver care across the continuum can access health information about their patients, regardless of where the patient received care."<sup>7</sup> Indicating the commitment to improving interoperability, CMS has renamed Meaningful Use to Promoting Interoperability, and made a 3% increase in Medicare payments in 2020 contingent to a large extent on achieving new Promoting Interoperability metrics.<sup>8,9</sup>

**"We are able to catch the patients that say they were never seen here and locate them to know that they were here. We also eliminate duplicate medical record numbers, and that is the main thing. The system helps with revenue to keep everything in one account. If someone has a duplicate account without insurance information, the system uses the account with insurance, so that helps. The system helps with patient security to make sure we have the right patient."<sup>19</sup>**

— Director of IT  
*Emphasis added*

“We train people on a process to look for fraud. If identical twins came in, and if one had insurance and the other didn’t, that would prevent the hospital from proceeding with registration based on suspicion of fraudulent intent. **No one’s palm pattern can be duplicated**; it is unique to the individual in terms of proximity, placement, and vein pattern. **We would know immediately if someone were trying to commit fraud.** The system gives us a warning when the palm doesn’t belong to the patient.”<sup>20</sup>

— Business Office Manager  
*Emphasis added*

Imprivata believes strong biometric authenticators are especially well-suited for use in healthcare because the best biometrics can connect patient to record with certainty while preserving patient privacy: palm vein biometric technology can positively identify a patient with only a one in 10 million chance of a false positive. Biometric authenticators are also preferred by patients.<sup>10</sup> Further, the use of biometric authenticators provides the positive patient identification that is the foundation of interoperability.

### KLAS findings

#### Scores

Of the nine customers interviewed, on a 100 point scale, seven rated Imprivata PatientSecure 90 or greater, and two customers rated it 80 or fewer, for an overall score of 87.6. Across all revenue cycle products, the industry average is 82.6.<sup>11</sup>

On yes / no indicators, Imprivata PatientSecure ranked above the revenue cycle product average in all four categories surveyed, but was significantly higher in the “Part of Long-Term Plans” category.<sup>12</sup>



Recreation of Figure 5, KLAS Revenue Cycle Unicorns Report

#### Functionality gaps cited

Imprivata is proud to partner closely with customers to ensure the best utilization of products, including Imprivata PatientSecure. Feedback is valued and is regularly considered in plans for product improvements. Imprivata hopes to be a valued strategic partner to customers, and part of that commitment is being transparent about our areas for improvement.

“ The reporting is lacking for things like duplicate medical records. The system does interface with our EMR, so Imprivata does give us reports of who uses the system. But we really want to see duplicate medical records. — Director of Business Office<sup>13</sup> ”

Imprivata PatientSecure prevents the creation of duplicate records but does not track the status of historical duplicate records or the creation of new ones. However, Imprivata partners with Verato, a top ranked<sup>14</sup> enterprise master patient index (EMPI) that uses their proprietary referential matching technology to achieve high-accuracy patient record matching at a low total cost of ownership. The partnership enables Imprivata PatientSecure to offer Verato’s Diagnose service, which quantitatively determines the duplicate record status of an enterprise, by location. In addition, Verato and PatientSecure are currently developing a joint solution that integrates Steps 2 and 3 of the enrollment process, significantly improving the speed and accuracy of the record search, and reducing the burden experienced by patient access personnel. The value of combining referential matching with biometric authentication in a “proactive, positive patient identity strategy” was recently confirmed by Gartner.<sup>15</sup>

“ [A] few expected that scanning a patient’s palm would trigger the system to find that patient on the schedule and check him or her in, but they later discovered this is not the case; rather, the registrar must manually identify the patient’s appointment, and the palm-scanning system then identifies the patient’s record of care. Typically, whether such a connection is set up depends on who the outside scheduling vendor is.<sup>16</sup> ”

As cited by KLAS, this does depend on who scheduling vendor is. However, if an API-based integration is not immediately available, Imprivata can do custom screen-based integrations. Imprivata has done the latter for a preeminent health system in the Midwest to accomplish workflow similar to what is described in this passage, and it is working well.

“ A few customers also report that for the system to effectively identify patients, the database must first be populated, and this can take months of scanning patients’ palm veins and inputting the data for later identification.<sup>17</sup> ”

In order for Imprivata PatientSecure to be effective, the three-step enrollment process described above must be performed for every patient. What is initially being traded off is performing a robust three-step enrollment process one time, in order to significantly speed the process and improve record matching when the patient subsequently returns. Note that today, without Imprivata PatientSecure, steps one and two are done for every patient visit.

“On the front end, the system does speed up our registration time. When our patients enroll, we need their driver’s license numbers, insurance cards, and so on. But **after we do that once and get them registered, we no longer have to ask them for their Social Security numbers because the palm vein scan can pull up the patients’ information** once they are registered. The scan looks at 32,000 points in a patient’s vein, so it is even more secure than a fingerprint scan. The patients really like that.”<sup>21</sup>

— Patient Access Supervisor  
*Emphasis added*

**“We absolutely love Imprivata. Our duplicate medical record rate is much lower than the national average, and we have a great staff, but we also attribute a lot of that success to Imprivata PatientSecure. To use the software, patients give their date of birth and put a palm up, and we can tell who they are. This has helped identify unconscious patients in the ER. If a patient is already registered in the system, without a date of birth we can say that someone is a 30-year-old male and the software will go within 10 years of that and find a male with that palm print.”<sup>22</sup>**

— Director of Business Office  
*Emphasis added*

However, the problem of accumulating enrollments quickly is a legitimate concern. It is well documented in the field of identity management, and can be addressed by federation. Federation is a process that enables sharing of the trust anchor (the output of Step 1).

Trust anchors established via a high-quality identity proofing process are shared among subscribing organizations who agree to do so, which speeds the enrollment process.<sup>18</sup> Currently, a pilot is being conducted with unaffiliated Imprivata PatientSecure customers in a metro area, to test the value of an arrangement that would allow patients enrolled in one hospital to be recognized in another. It is important to note that, optimally, federated solutions should include:

1. High quality identity proofing, so that the subscribers can trust that the patient is who they claim to be, and
2. Security measures to protect the repository of trust anchors

Regarding the first point, Imprivata supports NIST 800-63-3, which defines the three-step process discussed above, which addresses point one. Regarding point two, Imprivata PatientSecure biometric enrollments are digitized and encrypted, so that even if a hacker managed to access the repository, it would be extraordinarily difficult to extract any patient data.

## References

1. "Revenue Cycle Unicorns 2019, Performance Report", KLAS, December 2019, page 6
2. 21st Century Cures Act; December 13, 2016; Section 4003; page 1165
3. American Hospital Association, Annual Survey IT Supplement, Brief #2, March 2018
4. "Patient Identification and Matching Final Report"; prepared for the ONC; Genevieve Morris, Director, Audacious Inquiry; February 7, 2014
5. "A Framework for Cross-Organizational Patient Identity Management", The Sequoia Project, November 10, 2015; page 9
6. Alex M. Azar II, Secretary of Health and Human Services, "Value-Based Transformation of America's Healthcare System", speech at America's Health Insurance Plans National Health Policy Conference; March 8, 2018
7. Abstract, "Interoperability and Patient Access CMS-9115-F RIN: 0938-AT79", reginfo.gov
8. 2019 Scoring Method Fact Sheet, CMS
9. Hospital Inpatient Prospective Payment Systems for Acute Care Hospitals and the Long-Term Care Hospital Prospective Payment System and Policy Changes and Fiscal Year 2020 Rates Final Rule, CMS 1716F RIN 0938-AT73, 16 August 2019
10. In June 2017 and January 2018, The Pew Charitable Trusts worked with Public Opinion Strategies and Hart Research Associates to conduct 11 focus groups with 95 participants in five cities, and reported that "biometrics were the most frequent first - or second - choice solution, not only among the different types of unique identifiers, but all proposals. Focus group participants preferred this option because it would help unconscious patients, not need to be remembered by the patient, and be more accurate and secure than other approaches."
11. "Revenue Cycle Unicorns 2019, Performance Report", KLAS, December 2019, Figure 1, pages 6 & 7
12. Ibid. page 8
13. "Revenue Cycle Unicorns 2019, Performance Report", KLAS, December 2019, page 6
14. Verato was ranked #1 among all EMPI solutions in "Patient Matching & Enterprise Master Patient Index Solutions", Black Book 2019 Survey, polling period Q1 2019 to Q2 2019
15. "Identity Biometrics and Next-Generation EMPIs Combine to Address Duplicate Medical Records and HIE Challenges", ID G00450078, 10 September 2019
16. "Revenue Cycle Unicorns 2019, Performance Report", KLAS, December 2019, page 6
17. Ibid. page 6 "NIST Special Publication 800-63C, Digital Identity Guidelines, Federation and Assertions", page 2
18. "Revenue Cycle Unicorns 2019, Performance Report", KLAS, December 2019, page 3
19. Ibid. page 8
20. Ibid. page 8
21. Ibid. page 8
22. Ibid. page 8



### About Imprivata

Imprivata, the digital identity company for healthcare, provides identity, authentication, and access management solutions that are purpose-built to solve healthcare's unique workflow, security, and compliance challenges.

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### About the KLAS Revenue Cycle Unicorns Report

The healthcare revenue cycle is a notoriously treacherous, high-stakes journey, and provider organizations who don't have the right tools in hand are likely to get held up fighting high costs and lost revenue. While KLAS has done extensive research in the past on revenue cycle solutions, this report focuses on the solutions that take a more unique approach to tackling revenue cycle issues—in other words, revenue cycle “unicorns.” These solutions often don't fit into KLAS' traditional revenue cycle market segment, lack direct competitors, or are potentially disruptive to existing ways of doing business. As a result of their unique nature, the solutions rated in this report are not compared side by side but rather examined individually through the lens of customer experience.

### About KLAS

KLAS data and reports represent the combined opinions of actual people from healthcare organizations regarding how their vendors, products, and / or services perform against their organization's objectives and expectations. KLAS findings are a unique compilation of candid opinions and are real measurements representing the feedback of interviewed individuals. The findings presented are not meant to be conclusive data for an entire client base. Significant variables—including a respondent's role within their organization as well as the organization's type (rural, teaching, specialty, etc.), size, objectives, depth/breadth of software use, software version, and system infrastructure/network—impact participants' opinions and preclude an exact apples-to-apples vendor/product comparison or a finely tuned statistical analysis.