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# Identity and Access Management Across Leading Health Systems

TheAcademy

# Introduction

In January and February 2020, The Health Management Academy conducted a study to evaluate emerging trends in identity and access management across LHS. To inform the research, The Academy conducted a quantitative survey and qualitative interviews with 15 senior executives across 14 unique LHS. Because this study was conducted prior to the COVID-19 outbreak, some trends cited may have accelerated or changed due to LHS' pandemic response efforts.

Still a relatively new field, cybersecurity has quickly grown in relevance and importance to Leading Health Systems (LHS). The rise in network connectivity, proliferation of new technologies, and corresponding concerns around data privacy have lead LHS to start building out their cybersecurity organizational structures and strategies. Additionally, the transition to a more remote workforce and rapid expansion of telehealth services has compounded LHS' need for a solid cybersecurity strategy. As LHS navigate this multifaceted and evolving domain, they are looking to outsource more cybersecurity functions to third-party vendors. Increasing attention on identity and access management (IAM) reflects an effort by health systems to take more control of their access provisioning and governance practices.

Key information technology (IT) and cybersecurity executives at LHS are focused on leveraging IAM solutions both to govern data access management and to drive clinician and staff efficiencies. To date, most LHS have implemented or are in the process of implementing single sign-on (SSO) and multi-factor authentication (MFA) solutions across their enterprise. A smaller number of LHS are rolling out biometric patient identification tools, such as palm scanners, while others are engaging in preliminary discussions regarding whether to invest in these technologies. The ongoing push for digitization across healthcare, coupled with continual efforts to drive efficiencies, suggest that IAM solutions will grow increasingly relevant to LHS in the years to come.



**Single Sign-on**



**Multi-factor Authentication**



**Biometric Patient Identification**

**"A lot of health systems try to tackle identity and access management and fail because they don't understand the complexity or level of investment required."**

*- Chief Information Security Officer, Leading Health System*

# Key Findings

## 1 **Nearly All Health Systems Have Single Sign-on and Multi-factor Authentication Solutions**

Health systems are generally using a few common solutions for SSO and MFA. Clinician productivity is the number one driving factor LHS to implement SSO solutions.

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## 2 **LHS Typically Use the Same Solution for Remote Access and E-Prescribing**

For multi-factor authentication, LHS report using five common solutions for remote access and three for e-prescribing. All but one health system surveyed reports using the same solution for both remote access and e-prescribing.

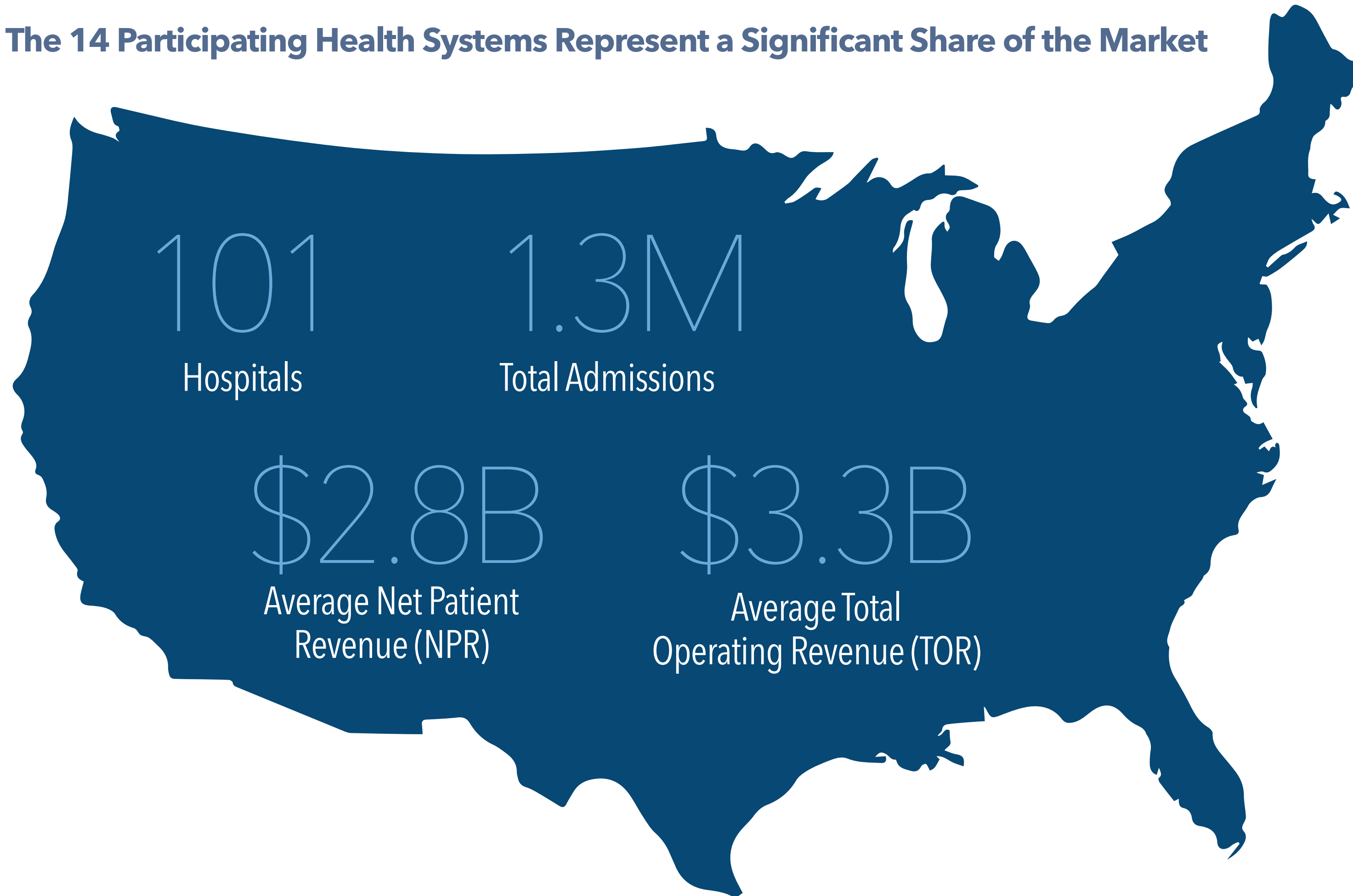
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## 3 **Approximately One-third of LHS Are Using Biometric Patient Identification Tools**

Each health system surveyed that reports using biometric patient identification solutions uses palm scanners. Among health systems not using biometric patient identification solutions, results are mixed on likelihood of implementation in the next three years.

# Perspectives Represent Significant Share of US Healthcare Market

## The 14 Participating Health Systems Represent a Significant Share of the Market



### Health System Size (TOR)



Small  
<\$2B - **21%**



Medium  
\$2-5B - **64%**



Large  
>\$5B - **14%**

### Respondent Roles

- Chief Information Officer
- Chief Medical Information Officer
- Chief of Medical / Clinical Informatics
- Chief Nursing Information Officer
- Chief Information Security Officer
- Chief Technology Officer
- Senior Director, Medical Informatics
- Director of Medical Informatics

Note: Total Operating Revenue (TOR): Defined as all revenue deriving from both health plan (if applicable) and patient care. All data and findings included in this report are reflective of survey responses from executives at Leading Health Systems. The report is a compilation of quantitative survey data and qualitative insights to provide perspectives for 14 unique health systems. For additional methodology details, see page 9 of this report. Percentages may not add to 100 in all cases due to rounding.

# Majority of LHS Use Same Solution for Single Sign-On

## Most Common SSO Solution Used by 85% of LHS

Across LHS surveyed, 85% report using Imprivata for SSO, 23% report using Microsoft, and 15% report using Citrix. Adoption of different SSO solutions did not meaningfully differ by health system region, size, AMC status, or EMR solution. SSO use trends across LHS surveyed are comparable to SSO use across the largest 150 health systems in the U.S.<sup>1</sup>

## SSO Is Often Deployed Widely Across the Enterprise

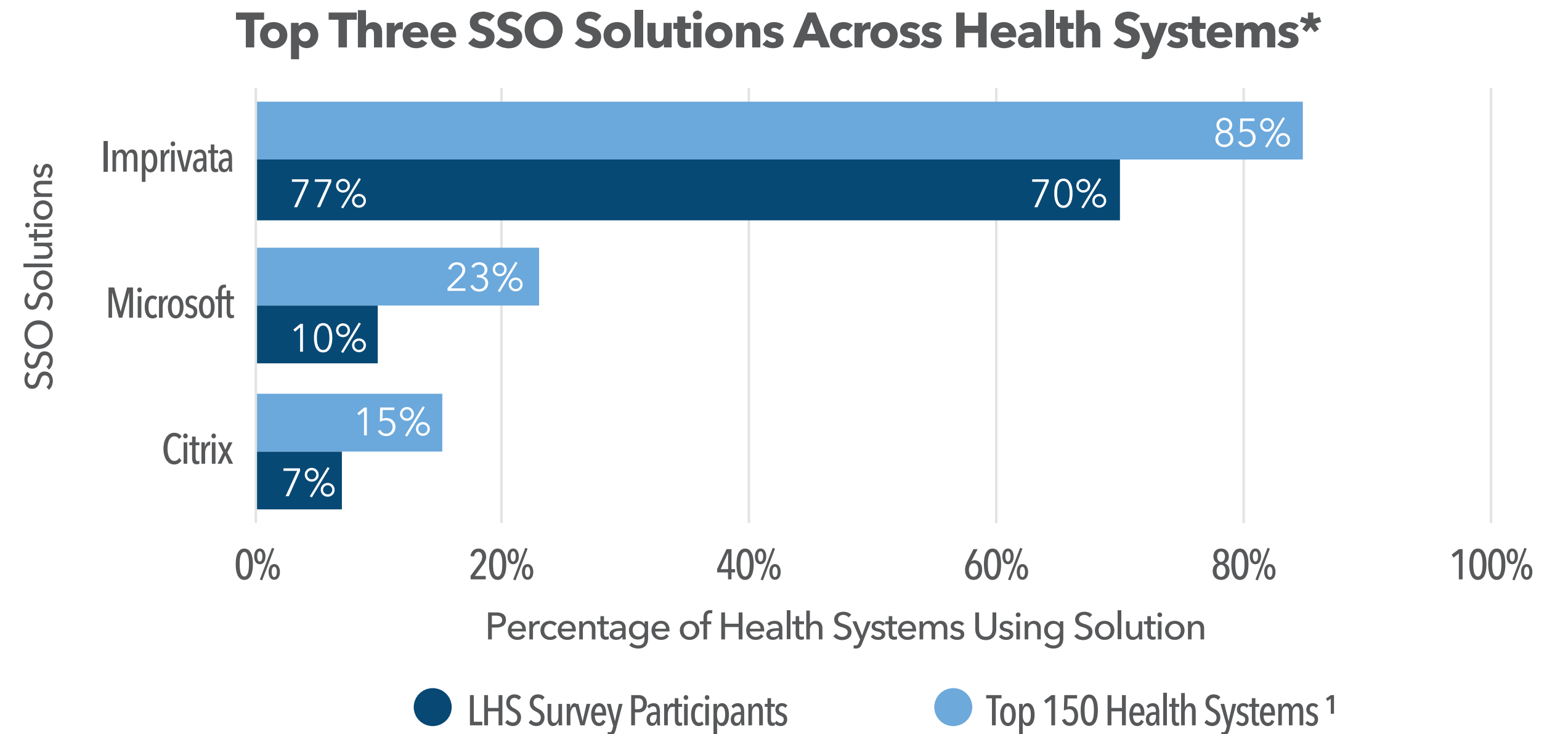
Nearly two-thirds (63%) of LHS participants report that 80-100% of their clinical organization has deployed a SSO solution. Several systems mentioned that SSO functionality is new to their organization, with adoption occurring within the last one to two years.

**“We were using one solution for single sign-on, but we are in the process of switching over to a different solution.”**

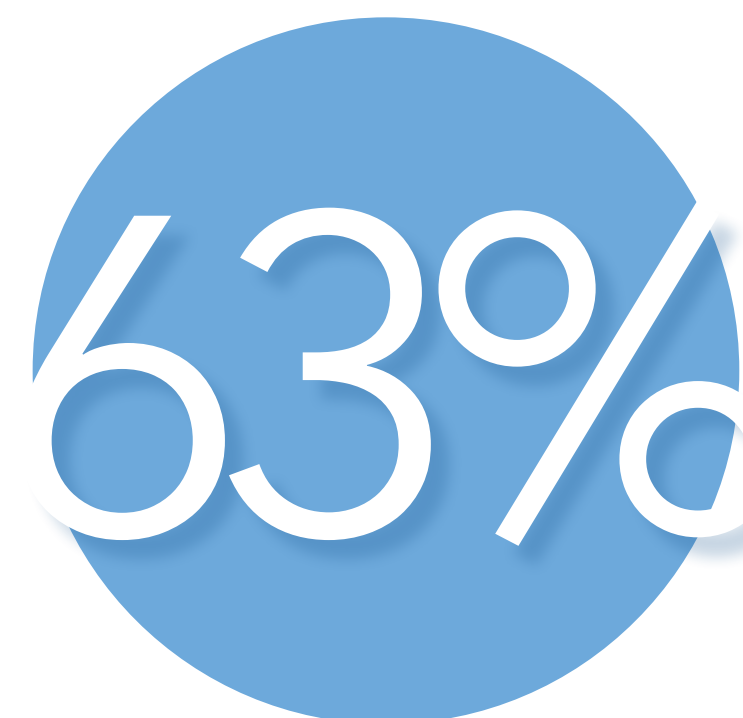
*- Director of Medical Informatics, Leading Health System*

**“We are evaluating implementation of a ‘tap and go’ feature - partially for security, but also for efficiency and end user experience.”**

*- Chief Information Security Officer, Leading Health System*



\*Percentages may exceed 100% due to multiple solutions used. Data excludes health systems that do not publicly report their SSO solutions and those that use proprietary solutions.



of LHS surveyed report that 80-100% of their enterprise has deployed a single sign-on solution.

<sup>1</sup> The Academy's Proprietary Database, 2020.

# Productivity Is Top Factor for Implementing Single Sign-On

Top Drivers of SSO Implementation	Average Ranking*
Clinician productivity	1.6
Patient safety	2.8
Prospective risk mitigation	2.9
Hospital compliance policies	3.1
Historical security breach	4.7

\*Ranking based on a scale of 1 ("most important") to 5 ("least important").

## Clinician Productivity Is Top Factor for Implementing SSO

LHS surveyed report that clinician productivity is the number one factor that led them to implement SSO, ranked 1.6 (on average) among the top five factors. This reflects a preference among both IT and clinical executives for digital solutions that promote efficiency, underscoring the broader trend of prioritizing organizational efficiency across LHS.

LHS surveyed report historical security breach is the least important factor considered in decision-making for implementing SSO (4.7). Other factors, such as patient safety (2.8), prospective risk mitigation (2.9), and hospital compliance policies (3.1), vary in ranking by health system, but generally rank as second, third, and fourth in the list of factors affecting SSO implementation.

**"The interesting thing about identity and access management is that it's not purely for security. We are using it primarily for clinician efficiency."**

*- Chief Information Security Officer, Leading Health System*

**"It was important to us to reduce the number of clicks for workers who provide direct patient care."**

*- Chief Technology Officer, Leading Health System*

# LHS Use Several Solutions for Remote Access, Fewer for E-Prescribing

## More Than Half of LHS Use Same Solution for Remote Access

Among LHS surveyed, the most commonly used remote access MFA solutions include Imprivata (56%), Microsoft (22%), SecureAuth (22%), Duo (11%), and Entrust (11%).

**“We use one solution for single sign-on and e-prescribing, and another for remote access. We didn’t want to go with a second solution, but felt like it was a requirement. The second solution is considered best in class for remote access.”**

*- Director, Medical Informatics, Leading Health System*

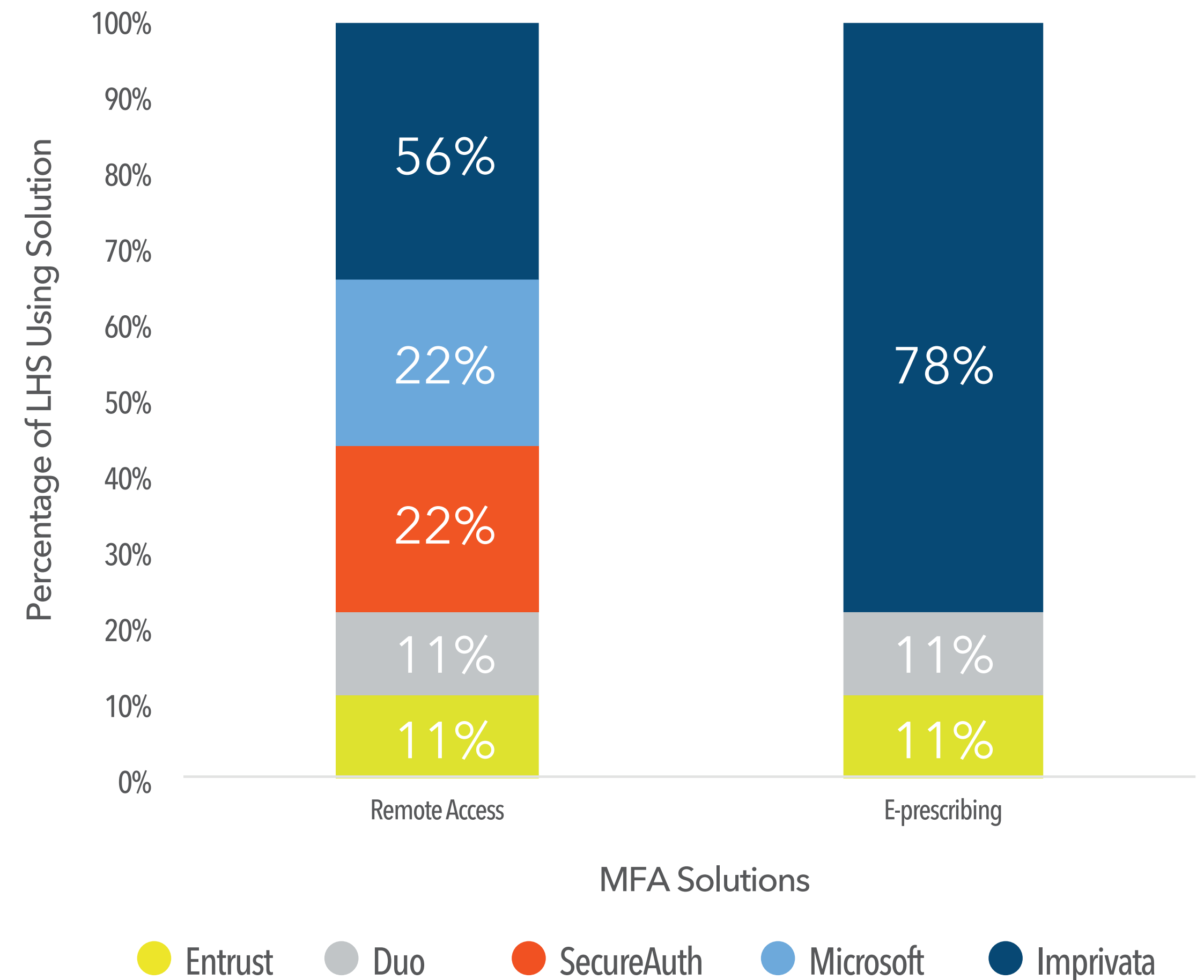
## Market for E-Prescribing Solutions Is More Concentrated

The majority (78%) of LHS surveyed report using Imprivata for e-prescribing, followed by Duo (11%) and Entrust (11%). While one system reports using MFA for controlled substances only, another stated that they use this feature for non-controlled prescriptions as well. One system that does not use MFA for e-prescribing indicated that they are very unlikely to implement a solution in the next three years. Use of MFA across LHS surveyed does not seem to vary by region, size, AMC status, or EMR solution. All but one health system surveyed reports using the same solution for both remote access and e-prescribing.

**“Our state requires re-authentication at the time of medication ordering for all medications, not just controlled substances.”**

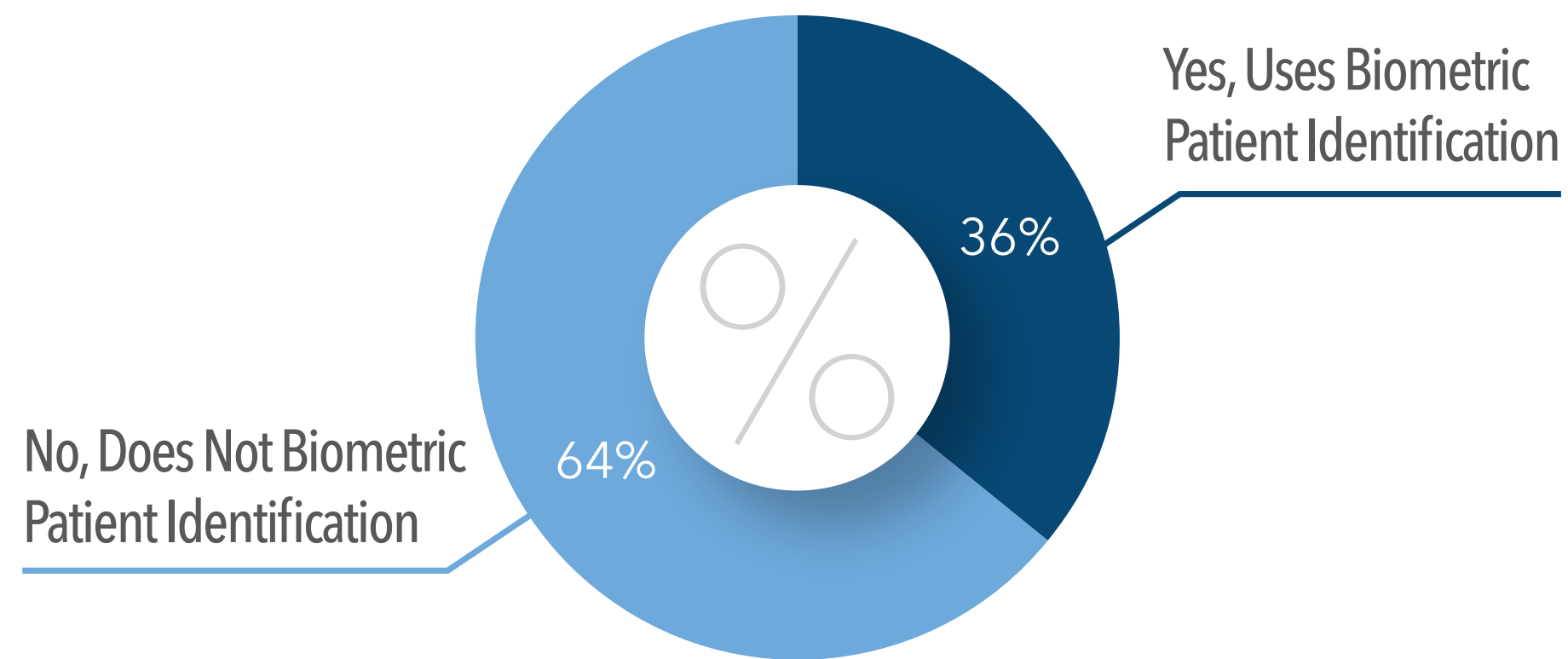
*- Chief Medical Information Officer, Leading Health System*

## Multi-factor Authentication Solutions Across LHS



# One-third of LHS Use Biometric Patient Identification Solutions

## Use of Biometric Patient Identification Solutions Across LHS



## Biometric Identification Utilization Mostly Limited to Palm Scanners

While 64% of LHS surveyed report that they do not use biometric patient identification, the remaining 36% indicate that they use palm scanners. LHS using palm scanners report that dispersion across their system is limited to a few locations, with several estimating that between 40-59% of total patient visits use palm scanners. No LHS report using fingerprint scanners or facial recognition, though one reported considering fingerprint technology for behavioral health and controlled substances in the ED and decided against it in the near term.

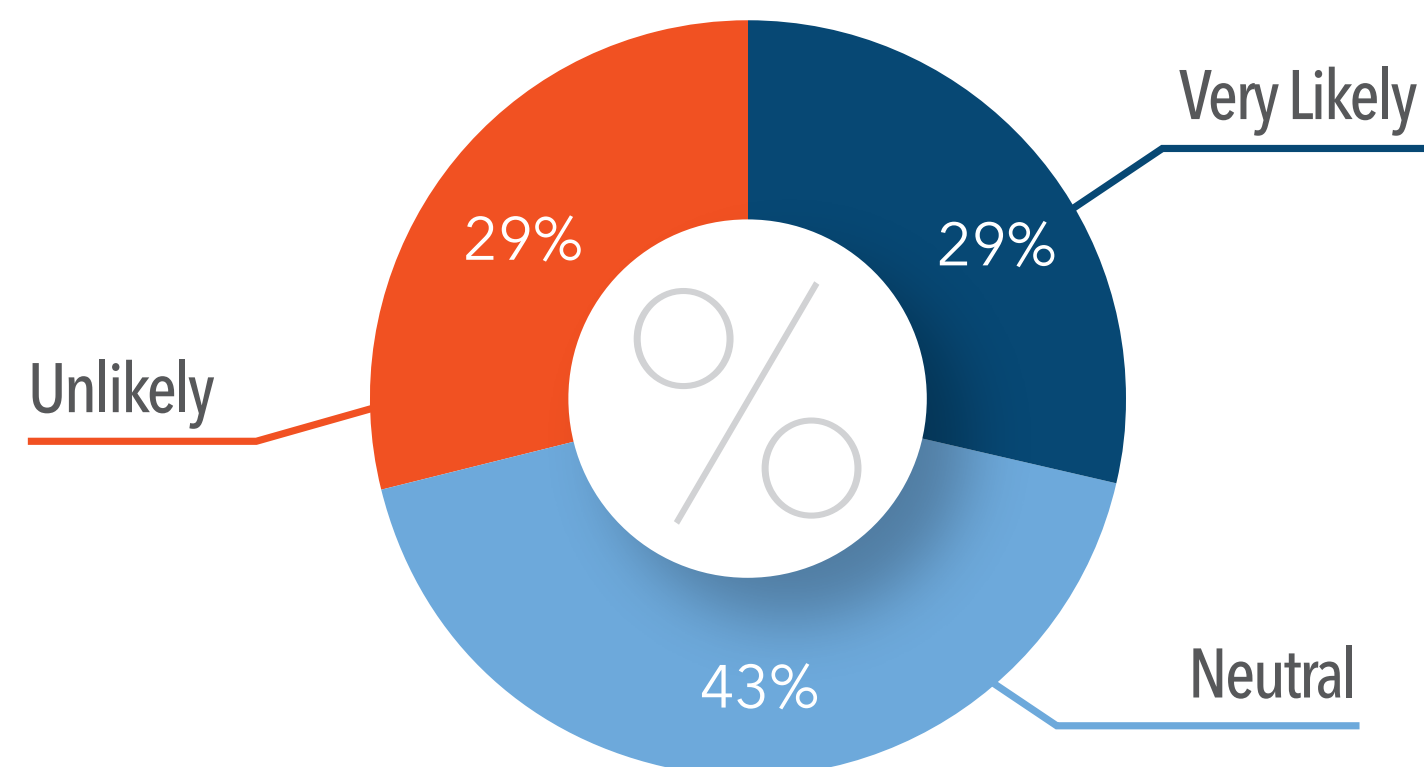
**“We use palm recognition at some of our ambulatory offices. My experience with it as a patient is that it is only 50-60% accurate at identifying me. I don’t think it’s the perfect solution, but it is still useful and I don’t see us getting rid of it.”**

*- Director, Medical Informatics, Leading Health System*

**“We are piloting palm readers at one of our locations and looking at rolling them out across our clinics more broadly. In my opinion, we introduced the technology too early. We’ve had trouble incorporating it into the workflow.”**

*- Chief Nursing Information Officer, Leading Health System*

## Likelihood of Implementing Biometric Patient Identification Solutions in Next 3 Years Across LHS



## Few Systems Plan to Implement Biometric Identification in Near Future

Among LHS participants not using biometric patient identification solutions, only 29% report that they are very likely to implement a solution in the next three years. Others were neutral (43%) or unlikely (29%) to implement biometric patient identification solutions in the next three years. One health system shared that lack of bandwidth and competing priorities are the primary reasons they are unlikely to implement in the near future.



# Methodology

In January and February 2020, The Academy gathered qualitative and quantitative insights from executives across the LHS market regarding trends in IAM. The study respondents represented 14 unique health systems across a range of executive roles including: Chief Information Officer, Chief Medical Information Officer, Chief of Medical / Clinical Informatics, Chief Nursing Information Officer, Chief Information Security Officer, Chief Technology Officer, Senior Director, Medical Informatics, and Director of Medical Informatics. The 14 health systems have an average Total Operating Revenue (TOR) of \$3.3 billion and own or operate 101 hospitals.

The sample of LHS participants is representative of the largest 100 health systems in the U.S. The largest health systems were classified as those with the highest TOR, as validated by 2017 health system financial statements and The Academy's 2020 proprietary database. In this study, LHS participants were compared to the largest 150 health systems in the U.S., as validated by The Academy's 2020 proprietary database.

## Academy Project Team

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Disclaimer: The information and opinions in this report were prepared by The Academy. The information herein is believed to be reliable and has been obtained from public and proprietary sources believed to be reliable. All survey data and responses are collected in good faith from sources with established expertise and are believed to be reliable. Opinions, estimates, and projections in this report constitute the current judgment of the authors as of the date of this report. They do not necessarily reflect the opinions of The Academy and are subject to change without notice. Any products referenced within this report have not been independently evaluated. The Academy does not recommend or endorse any of the products identified by survey respondents. All registered names or brands referenced in this document remain the property of their respective owners and are included for identification purposes only. This report is provided for informational purposes only. Any reproduction by any person for any purpose without The Academy's written consent is prohibited.

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# The Academy

The Health Management Academy (The Academy) brings together health system leaders and innovators to collectively address the industry's biggest challenges and opportunities. By assisting member executives to cultivate their peer networks, understand key trends, develop next-generation leaders, and partner to self-disrupt, they are better positioned to transform healthcare.



100 Health Systems

500+ C-suite Executives

2,000+ Health System Leaders

66%

Inpatient  
Admissions

62%

Outpatient  
Visits

67%

Total  
Physicians

62%

Total Operating  
Revenue