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Hospital Capabilities to Enable Patient Electronic Access to Health Information, 2019

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A patient's access to their health information is required and reinforced through multiple federal policy levers. The Office of the National Coordinator for Health Information Technology (ONC) Health IT Certification Program certifies health information technology (IT) that enables patient access to their electronic medical record (1). Starting in 2014, hospitals were incentivized by the Centers for Medicare & Medicaid Services (CMS) Electronic Health Record (EHR) Incentive Program to adopt certified health IT that enabled patients to electronically view, download, and transmit their health information. In 2019, CMS required hospitals to provide their patients with the ability to access their health information via an application programming interface (API) using an app of their choice (2). This data brief presents the latest national estimates on the proportion of U.S. hospitals that enabled patient electronic access to their health information.

HIGHLIGHTS

- Seven in 10 hospitals enabled inpatients to access their health information using mobile or other software applications.
- In 2019, nearly all hospitals enabled patients to electronically view their health information using a portal.
- Three in four hospitals enabled their inpatients to view their clinical notes in their patient portal.
- Small, rural, independent, and Critical Access hospitals enabled inpatient access to health information at lower rates compared to their counterparts.

Seven in ten hospitals enabled inpatients to access their health information using an app in 2019.

FINDINGS

- The proportion of hospitals that enabled inpatients to access health information using apps increased by more than 50 percent between 2018 and 2019.
- The proportion of hospitals that enabled inpatients to view clinical notes increased by more than 30 percent between 2018 and 2019.

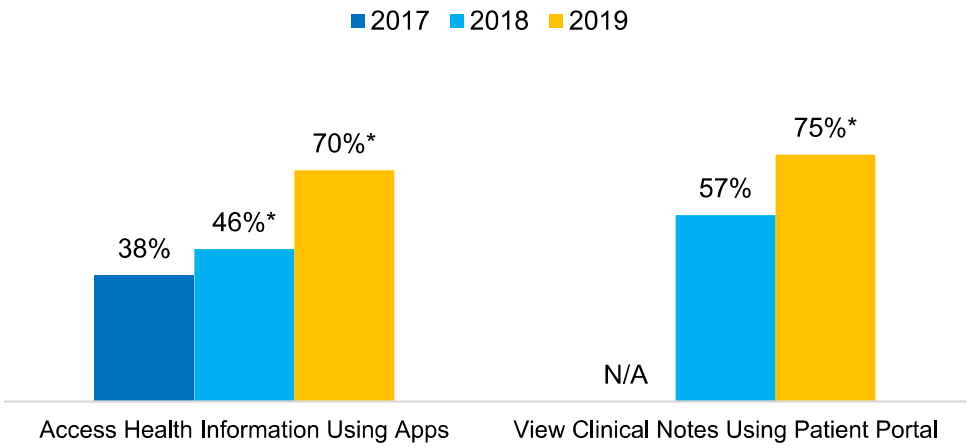

Figure 1: Percent of non-federal acute care hospitals that enabled patients who received inpatient care to access health information using applications configured to meet the application programming interfaces (API) specifications in the hospitals' EHR and view clinical notes in their portal, 2017-2019.

Source: 2017-2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents all non-federal acute care hospitals that provide inpatient care. *Significantly different from previous year ($p<0.05$). The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care.

Nearly all hospitals enabled inpatients to electronically view their health information using a portal in 2019.

FINDINGS

- About three-quarters of hospitals enabled inpatients to electronically view, download, and transmit health information using a portal in 2019. This has remained unchanged since 2016.
- More than nine in 10 hospitals reported that they enabled inpatients to download their health information, and about three-quarters of hospitals reported their inpatients could electronically transmit their health information to a third party.

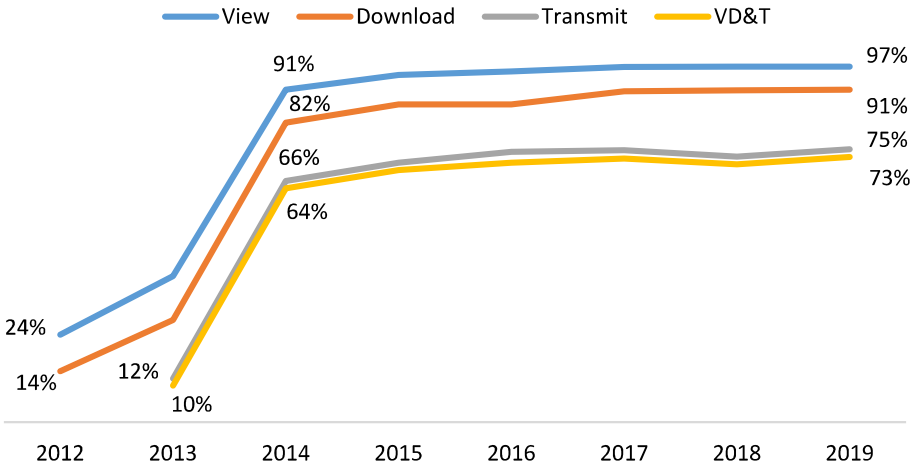

Figure 2: Percent of non-federal acute care hospitals that enabled patients who received inpatient care to view, download, and transmit their health information electronically using a portal, 2012-2019.

Source: 2012-2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents all non-federal acute care hospitals that provide inpatient care. The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care. See Appendix Table A2 for specific data points for all years.

Small, rural, independent, and Critical Access hospitals enabled inpatients to access health information using apps at lower rates compared to their counterparts.

FINDINGS

- About two in three small, rural, independent, and Critical Access hospitals enabled inpatients to access their health information using mobile or software applications.
- About three in four large, urban, and system affiliated hospitals enabled inpatients to access their health information using mobile or software applications.
- Hospitals with a 2015 Edition Certified EHR enabled inpatient electronic access to health information through an app at nearly twice the rate of hospitals without a 2015 Edition Certified EHR.
- Small, rural, independent, and Critical Access hospitals enabled inpatients to view, download, and transmit using a portal at lower rates compared to their counterparts.

	View Health Information	Download Health Information	Transmit Health Information	Access Health Information Using Apps	View Clinical Notes Using Patient Portal
Hospital Characteristics					
Small (51%)	96%*	88%*	67%*	66%*	72%*
Medium-Large (49%)	99%	94%	83%	75%	78%
CAH (29%)	95%*	89%*	62%*	62%*	74%
non-CAH (71%)	98%	92%	80%	74%	76%
Rural (40%)	97%*	89%*	66%*	68%*	73%*
Suburban-Urban (60%)	98%	92%	80%	72%	76%
Independent (34%)	94%*	88%*	61%*	61%*	73%*
System Affiliation (66%)	99%	93%	82%	75%	77%
Health IT Characteristics					
No 2015 Edition (9%)	86%*	71%*	41%*	39%*	54%*
2015 Edition (91%)	98%	93%	78%	73%	77%

Table 1: Percent of non-federal acute care hospitals that enabled patients who received inpatient care to access health information by hospital characteristics, 2019.

Source: 2019 AHA Annual Survey Information Technology Supplement.
Notes: Denominator represents all non-federal acute care hospitals that provide inpatient care. *Significantly different from corresponding category in the row below ($p<0.05$). The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care. Please refer to the Definitions section of this data brief for descriptions of each hospital characteristic.

Hospitals provided patients similar access to health information across inpatient and outpatient care settings.

FINDINGS

- ★ Among hospitals that provided outpatient care, 97 percent enabled outpatients to view their health information in a patient portal, 95 percent enabled outpatients to download their health information, and 75 percent enabled them to transmit their health information to a third party.
- ★ More than eight in 10 hospitals (82%) reported that patients in their outpatient setting can view their clinical notes.
- ★ Nearly three-quarters of hospitals (73%) reported that patients in their outpatient setting can access health information using apps.

Patient Health Information Access	Inpatient Care	Outpatient Care
View, Download, and Transmit		
View Health Information	97%	97%
Download Health Information	91%	95%
Electronically Transmit (Send) Health Information	75%	75%
Access and Use of Patient Access Functions		
View Clinical Notes Using Patient Portal	75%	82%
Access Health Information Using Apps	70%	73%

Table 2: Percent of non-federal acute care hospitals that enabled patient electronic access to health information by type of care setting, 2019

Source: 2019 AHA Annual Survey Information Technology Supplement.
Notes: Denominator for inpatient care represents all non-federal acute care hospitals that provide inpatient care. Denominator for outpatient care represents the 98% of non-federal acute care hospitals that reported they provide outpatient care. The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care. See Appendix Table A3 for additional patient access to health information capabilities that hospitals enable by type of care setting.

Six in 10 hospitals that provided outpatient care enabled access to health information using apps across all outpatient sites.

FINDINGS

- ★ Nine in 10 hospitals enabled patients to view their health information across all outpatient care sites; whereas less than one in 10 hospitals enabled access across some outpatient sites.
- ★ Two-thirds of hospitals that provided outpatient care enabled patients to view clinical notes at all their practice sites; whereas about 15 percent reported implementing this functionality at only some practice sites.

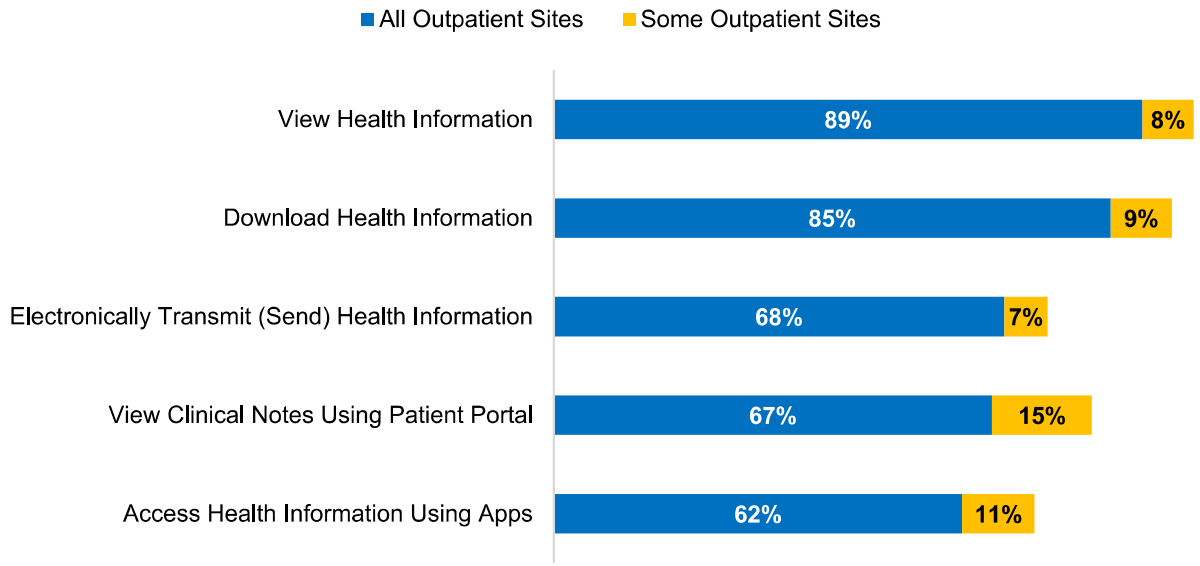

Figure 3: Percent of non-federal acute care hospitals that provided outpatient care by whether patient access to health information was implemented at all or some of their outpatient sites, 2019.

Source: 2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents the 98% of non-federal acute care hospitals that reported they provide outpatient care. The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care.

Hospitals that used the same EHR across their outpatient sites enabled patient access to health information at higher rates compared to hospitals whose outpatient sites used different EHRs.

FINDINGS

- Seven in 10 hospitals that provide outpatient care reported that they use the same EHR across all outpatient sites, whereas three in 10 reported they used a different EHR across practice sites.
- Hospitals that reported using the same EHR across outpatient sites enabled outpatients to view clinical notes at higher rates compared to hospitals that used a different EHR across practice sites.
- Hospitals that used the same EHR across outpatient sites enabled outpatients to access health information using apps at similar rates compared to hospitals that used a different EHR across practice sites.

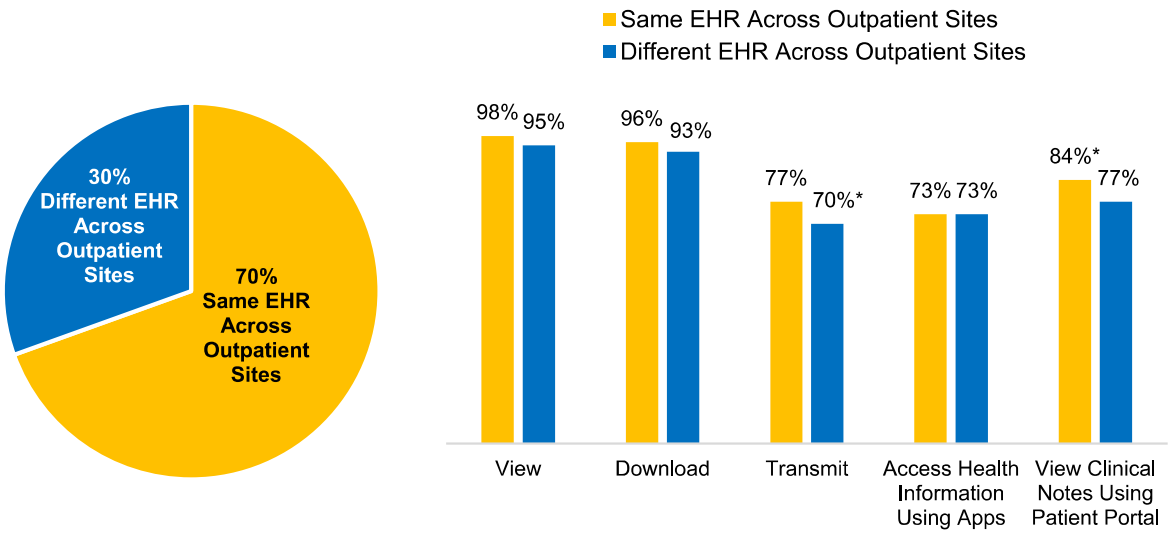

Figure 4: Percent of non-federal acute care hospitals that enabled patient electronic access to health information at their outpatient sites by whether they used the same or different EHRs across the practice sites, 2019

Source: 2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents the 98% of non-federal acute care hospitals that reported they provide outpatient care. *Significantly different from hospitals that use a different EHR across outpatient sites ($p<0.05$). The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care.

Hospitals that used the same EHR across their outpatient sites implemented patient access capabilities across all those sites at higher rates compared to hospitals whose outpatient sites used different EHRs.

FINDINGS

- ★ Nearly all hospitals that used the same EHR across outpatient sites enabled patients across all of their outpatient sites to view their health information in a portal. About three-quarters of hospitals that used different EHRs across outpatient sites reported this capability.
- ★ About three-quarters of hospitals that used the same EHR across outpatient care sites enabled patients across outpatient sites to view their clinical notes using a patient portal. Less than half of hospitals that used different EHRs across outpatient sites reported enabling this capability.

	Same EHR Across Sites (70%)		Different EHR Across Sites (30%)	
Patient Engagement Functionalities	All Outpatient Sites	Some Outpatient Sites	All Outpatient Sites	Some Outpatient Sites
View Health Information	95%	3%	75%	20%
Download Health Information	91%	4%	69%	23%
Electronically Transmit (Send) Health Information	74%	3%	56%	14%
View Clinical Notes Using Patient Portal	74%	10%	48%	29%
Access Health Information Using Apps	68%	5%	47%	26%

Table 3: Percent of non-federal acute care hospitals that enabled patient electronic access to health information at their outpatient sites by whether they used the same or different EHRs across the practice sites, 2019

Source: 2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents the 98% of non-federal acute care hospitals that reported they provide outpatient care. The survey asked respondents about health information access for patients who received inpatient and outpatient care. Responses and statistics are presented separately for inpatient and outpatient care at hospitals. Please refer to the Definitions section of this data brief for more information on the terminology. See Appendix Table A1 for survey questions related to inpatient and outpatient care. See Appendix Table A4 for additional patient access to health information capabilities that hospitals enable by whether they implemented the same or different EHRs across outpatient practice sites.

Summary

Patient medical records are now digitized across nearly all hospitals in the U.S. (3). Federal programs, such as the CMS Promoting Interoperability Program (formerly known as the Medicare and Medicaid EHR Incentive Program), have helped incent hospitals to adopt certified health IT that enables patients to access their health information electronically. The 21st Century Cures Act further builds on this foundation and modernizes the methods patients can use to access their health information and the ways their health care providers can enable this electronic access (4). This data brief shows that in 2019, 70 percent of hospitals reported they enabled their inpatients to access their health information through a mobile or software application—this represents a nearly 50% increase from 2018.

In 2019, nearly all hospitals enabled patients to electronically view their health information using an online portal. About nine in 10 hospitals enabled patients to download their health information. However, hospitals' rates of enabling patients to transmit (or send) health information electronically to a third party from their portal remains lower. The proportion of hospitals that enabled patients to view, download, and transmit their health information electronically has remained largely unchanged since 2016.

Although nine in 10 hospitals possess certified EHR technology that provides them with the technical capability to transmit their health information electronically, only three-quarters of hospitals reported that they had enabled this functionality in 2019. Previous research has found that, although many hospitals and ambulatory practice groups have technology that is capable of connecting patients with their medical record online, not all providers fulfill patient requests to get an electronic copy of their record or enable patients to access their health information electronically (5-6).

Disparities also exist in the implementation of patient engagement functionalities across hospitals. Consistent with past findings, small, rural, independent and Critical Access hospitals enabled patient electronic access to health information using both portals and APIs at lower rates than other hospitals (7). This indicates that gaps in access may be due to hospital resources, technical knowledge, and other technology issues unrelated to the capabilities of certified EHRs.

Hospitals provided patients with electronic access to their health information at similar rates in both inpatient and outpatient care settings. However, hospitals differed in patient electronic access to health information in outpatient settings depending on whether or not the hospital used the same EHR across all of its outpatient sites. Thirty percent of hospitals reported using different EHRs across their outpatient sites. Only 75 percent of these hospitals reported that all their outpatient sites enabled patients to view their health information in a portal compared to 95 percent among hospitals that used the same EHR across outpatient sites. This may reflect a lack of connectivity or technological capability to enable patients to access capabilities between the different EHRs. Implementation of standards-based APIs could reduce variation in the enablement of patient access capabilities across disparate EHR systems.

In 2020, ONC published its 21st Century Cures Act Final Rule (8). This rule requires certain health IT developers to certify their health IT products to secure, standards-based APIs, which will allow patients to more easily access their health information using smartphone applications. This analysis found hospitals that used 2015 Edition certified health IT reported higher rates of patient access compared to hospitals that did not use 2015 Edition certified health IT. As the new ONC Cures Act Final Rule requirements are implemented, it will be important to continue to monitor these trends to ensure hospitals enable patients with technology and health information access to better manage their health care.

Definitions

Non-federal acute care hospital: Hospitals that meet the following criteria: acute care general medical and surgical, children's general, and cancer hospitals owned by private/not-for-profit, investor-owned/for-profit, or state/local government and located within the 50 states and District of Columbia.

Small hospital: Non-federal acute care hospitals of bed sizes of 100 or less.

Rural hospital: Hospitals located in a non-metropolitan statistical area.

Critical Access Hospital: Hospitals with less than 25 beds and at least 35 miles away from another general or critical access hospital.

System affiliated hospital: A system is defined as either a multi-hospital or a diversified single hospital system. A multi-hospital system is two or more hospitals owned, leased, sponsored, or contract managed by a central organization. Single, freestanding hospitals may be categorized as a system by bringing into membership three or more, and at least 25 percent, of their owned or leased non-hospital pre-acute or post-acute health care organizations.

Inpatient: A patient who is admitted to a hospital to undergo treatment. The survey asks about "patients who receive inpatient care provided by your hospital". Inpatients refer to patients who receive inpatient care from respondent hospital. Please refer to Appendix Table A1 to review the applicable questions.

Outpatient: A patient who receives treatment and is not admitted to a hospital. The survey asks about "patients who receive outpatient care provided by your hospital". Outpatients refer to patients who receive outpatient care from respondent hospital. Please refer to Appendix Table A1 to review the applicable questions.

Outpatient sites: Sites or locations within a hospital's campus or care facility that provide outpatient treatment. These sites may include emergency rooms, laboratories, and imaging rooms.

2015 Edition Certified Electronic Health Record (EHR): An EHR that meets certification criteria requirements established by the U.S. Department of Health and Human Services. These criteria establish the required capabilities, standards, and implementation specifications that health information technology needs to meet in order to become certified under the ONC Health IT Certification Program. Certified health IT products can be used for participation in CMS quality reporting programs and State Promoting Interoperability Programs.

Data Source and Methods

Data are from the American Hospital Association (AHA) Information Technology (IT) Supplement to the AHA Annual Survey. Since 2008, ONC has partnered with the AHA to measure the adoption and use of health IT in U.S. hospitals. ONC funded the 2019 AHA IT Supplement to track hospital adoption and use of EHRs and the exchange of clinical data.

The chief executive officer of each U.S. hospital was invited to participate in the survey regardless of AHA membership status. The person most knowledgeable about the hospital's health IT (typically the chief information officer) was requested to provide the information via a mail survey or secure online site. Non-respondents received follow-up mailings and phone calls to encourage response.

The survey was fielded from the beginning of January 2020 to the end of June 2020. The response rate for non-federal acute care hospitals was 59 percent. A logistic regression model was used to predict the propensity of survey response as a function of hospital characteristics, including size, ownership, teaching status, system membership, and availability of a cardiac intensive care unit, urban status, and region. Hospital-level weights were derived by the inverse of the predicted propensity.

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Appendix Table A1: Survey questions assessing hospital capabilities to enable patient electronic access to health information

Question Text	Response Options
Are patients who receive inpatient care provided by your hospital able to do the following: (Check "Yes" only if the functionality has been "turned on" and is fully implemented and available to patients.)	Yes | No| Do not know • View their health/medical information online in your portal • Download health/medical information from their medical record from your portal • Import their medical records from other organizations into your portal • Electronically transmit (send) health/medical information to a third party from your portal • Request an amendment to change/update their medical record • Designate family member or caregiver to access health/medical information on behalf of the patient (e.g., proxy access) • View their inpatient clinical notes (e.g. discharge summary) in their portal • Access their health/medical information using applications (apps) configured to meet the application programming interfaces (API) specifications in your EHR • Pay bills online
Does your hospital provide outpatient care to patients?	• Yes • No
Is there more than one primary EMR/EHR system in use across your outpatient site(s)?	• Yes • No
To what extent are patients who receive outpatient care provided by your hospital able to do the following: (Check "Yes" only if the functionality has been "turned on" and is fully implemented and available to patients.)	Yes, at <u>all</u> outpatient site(s) | Yes, across <u>some</u> outpatient site(s) | No, across <u>none</u> of the outpatient site(s)| Do not know • View their health/medical information online in your portal • Download health/medical information from their medical record from your portal • Import their medical records from other organizations into your portal • Electronically transmit (send) health/medical information to a third party from your portal • Request an amendment to change/update their medical record • Designate family member or caregiver to access health/medical information on behalf of the patient (e.g., proxy access) • View their outpatient clinical notes (e.g. visit notes including consultation, progress, history, and physical) in their portal • Access their health/medical information using applications (apps) configured to meet the application programming interfaces (API) specifications in your EHR • Pay bills online • Request refills for prescriptions online • Schedule appointments online

Appendix Table A2: Percent of non-federal acute care hospitals that enabled patients to view, download, and transmit health information in their portal, 2012-2019.

Year	View	Download	Transmit	VD&T
2012	24%	14%	-	-
2013	40%*	28%*	12%	10%
2014	91%*	82%*	66%*	64%*
2015	95%*	87%*	71%*	69%*
2016	96%	87%	74%*	71%*
2017	97%	91%*	74%	72%
2018	97%	91%	73%	71%
2019	97%	91%	75%*	73%*

Source: 2012-2019 AHA Annual Survey Information Technology Supplement.
Note: *Statistically significantly different from prior year ($p < 0.05$).

Appendix Table A3: Percent of non-federal acute care hospitals that enabled patient electronic access to health information by type of setting, 2019

Patient Health Information Access	Inpatient Care	Outpatient Care
Updating or Adding Information to Health Record		
Import Medical Records from Other Organizations	46%	53%
Change/Update Medical Record	71%	73%
Submit Patient Generated Data (e.g., Blood Glucose)	NA	63%
Access and Use of Patient Access Functions		
Designate Family Member or Caregiver Access for Patient Portal	89%	90%
Send/Receive Secure Messages with Providers within Patient Portal	NA	88%
Convenience Functions		
Pay Bills Online	86%	87%
Request Refills for Prescriptions	NA	73%
Schedule Appointments	NA	73%

Source: 2019 AHA Annual Survey Information Technology Supplement.
Notes: Denominator for inpatient care represents all non-federal acute care hospitals that provide inpatient care. Denominator for outpatient care represents the 98% of non-federal acute care hospitals that reported they provide outpatient care.

Appendix Table A4: Percent of non-federal acute care hospitals that enabled patient electronic access to health information at all or some of their outpatient sites and by whether they implemented the same EHR across all outpatient sites, 2019

	Same EHR Across Sites (70%)		Different EHR Across Sites (30%)	
Electronic Patient Health Information Access	All Outpatient Sites	Some Outpatient Sites	All Outpatient Sites	Some Outpatient Sites
Updating or Adding Information to Health Record				
Import Medical Records from Other Organizations	49%	5%	32%	19%
Change/Update Medical Record	73%	3%	47%	18%
Submit Patient Generated Data (e.g., Blood Glucose)	60%	7%	30%	23%
Access and Use of Patient Access Functions				
Designate Family Member or Caregiver Access	90%	3%	62%	21%
Send/Receive Secure Messages with Providers	87%	4%	54%	29%
Convenience Functions				
Pay Bills Online	87%	3%	63%	17%
Request Refills for Prescriptions	71%	4%	48%	21%
Schedule Appointments	63%	15%	34%	25%

Source: 2019 AHA Annual Survey Information Technology Supplement.
Note: Denominator represents the 98% of non-federal acute care hospitals that reported they provide outpatient care.