



2023 AHA Annual Survey Information Technology Supplement

Please return to:
AHA Annual Survey
Information Technology Supplement
155 N. Wacker Drive
Suite 400
Chicago, IL 60606

HOSPITAL NAME: _____

CITY & STATE: _____

Please Note: This year we continue to include questions designed to capture interoperability and exchange, public health reporting, and advanced analytics. This information will provide important data on the state of health IT and interoperability in hospitals nationwide.

GENERAL INSTRUCTIONS: Please respond to each of the following questions as of the day the survey is completed.

Patient Engagement

1a. Does your hospital provide outpatient care to patients? *Note: Outpatient care refers to both hospital-based and satellite outpatient departments/sites.*

1. Yes (go to 1b) 2. No (go to 2)

1b. Is there more than one primary EMR/EHR system in use across your outpatient site(s)?

1. Yes 2. No

2. Are patients who receive care provided by your hospital or outpatient sites able to do the following? (Check "Yes" only if the functionality has been "turned on" and is fully implemented and available to patients. Check both (1) and (2) if the functionality is turned on in both inpatient and outpatient settings)

	(1) Yes, at some or all <u>inpatient</u> sites	(2) Yes, at some or all <u>outpatient</u> sites	(3) Not across outpatient or inpatient site(s)	(4) Do not know
a. View their health/medical information online in their portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Download health/medical information from their medical record from your portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Import their medical records from other organizations into your portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Electronically transmit (send via email or secure message) health/medical information to a third party from your portal (in a structured format such as CCD/A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. View their clinical notes (e.g., visit notes including consultation, progress, history and physical) in their portal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Access their health/medical information using applications (apps) configured to meet the application programming interfaces (API) specifications in your EHR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Access their health/medical information using applications (apps) configured to meet Fast Healthcare Interoperability Resource (FHIR) specifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Submit patient-generated data (e.g., blood glucose, weight)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Submit patient-generated data (e.g., blood glucose, weight) through apps configured to meet FHIR specifications.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Send/receive secure messages with providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Social Determinants of Health

3. Does your hospital routinely collect data on individual patients' health related social needs (often referred to as social determinants of health) such as transportation, housing, food insecurity or other?

- a. Yes, routinely b. Yes, but not routinely c. No (go to 6a)
d. Don't know (go to 6a)

4a. How are data on individual patient's health related social needs recorded at your hospital?

1. Structured electronic screening tool (including 'keying in' information from a paper form) (go to 4b)
2. Free text note (go to 5)
3. Diagnosis codes (e.g., ICD-10-CM Z codes) (go to 5)
4. Non-electronic methods (including those that are scanned into the EHR) (go to 5)

4b. If you use a screening tool, what type of screening tool?

1. Customized/home grown tool (go to 5)
2. An externally established tool (including modifications of such tools) (go to 4c)
3. Don't know (go to 5)

4c. Which externally established screening tool(s) does your hospital use? Check all that apply.

<https://sirenetwork.ucsf.edu/tools-resources/resources/screening-tools-comparison>

1. Accountable Health Communities Screening Tools
2. Upstream Risks Screening Tool and Guide
3. iHELP
4. Recommend Social and Behavioral Domains for EHRs
5. Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE)
6. Well Child Care, Evaluation, Community Resources, Advocacy Referral, Education (WE CARE)
7. WellRx
8. Health Leads Screening Toolkit
9. Other, please list: _____
10. Don't know

5. How does your hospital use data on patients' health related social needs documented at your hospital? Check all that apply

- a. For referrals to social service organizations
b. For population health analytics
c. For quality management
d. To inform community needs assessment or other equity initiatives
e. To inform clinical decision making
f. To inform discharge planning
g. Other, please list: _____

6a. From which organizations outside your hospital/health system does your hospital electronically receive data on patients' social needs? Check all that apply

1. Other Healthcare Organizations
2. Community/social service organizations
3. Other, please list: _____
4. Don't know (go to 8a)
5. Do not receive data on health-related social needs from any external sources (go to 8a)

6b. How does your hospital/health system receive data on patients' social needs from organizations outside your health system? Check all that apply

- 1. Health information exchanges
- 2. Social service or community-based referral platform (such as Unite Us or Aunt Bertha)
- 3. National networks (e.g., CommonWell, eHealth Exchange, Carequality)
- 4. Other Methods
- 5. Don't know

7. If you indicated receiving data on patients' health related social needs from external sources, how do you use these data? Check all that apply.

- a. For screening at our hospital (e.g., prompt screening, prepopulate screening tool)
- b. For referrals to social service organization
- c. For population health analytics
- d. To inform community needs assessment or other equity initiatives
- e. To inform clinical decision making
- f. To Inform discharge planning
- g. Other, please list: _____

Participation in health information exchange networks

8a. Please indicate your level of participation in a state, regional, and/or local health information exchange (HIE) or health information organization (HIO). Note: This does not refer to a private, enterprise network.

- 1. HIE/HIO is operational in my area and we are participating and actively exchanging data in at least one HIE/HIO
- 2. HIE/HIO is operational in my area, but we are not participating
- 3. HIE/HIO is not operational in my area
- 4. Do not know

8b. Please indicate which state, regional and/or local HIE/HIO(s) with which your hospital participates and actively exchanges data as well as the first year your hospital actively participated in this HIE/HIO. Note: A list of known active HIEs is included in an attachment and numbered. Please either write the HIE name or its number on that list below.

8b1a. Name/reference number: _____

8b1b. First Year Your Hospital Participated: _____

8b2a. Name/reference number: _____

8b2b. First Year Your Hospital Participated: _____

8b3a. Name/reference number: _____

8b3b. First Year Your Hospital Participated: _____

9. Which of the following national health information exchange networks does your hospital currently actively participate in (i.e., operational exchange)? Check all that apply.

- a. CommonWell Health Alliance
- b. e-Health Exchange
- c. Civitas (formerly SHIEC)/Patient Centered Data Home (PCDH)
- d. Carequality (network-to-network trust/governance framework)
- e. EHR vendor-based network that enables record location and exchange within the EHR vendor's network of users (e.g., Epic's Care Everywhere)
- f. Other national health information exchange network _____
- g. Do not participate in any national health information exchange networks (either via vendor or directly)
- h. Do not know

Trusted Exchange Framework and Common Agreement

10. Are you aware of the Trusted Exchange Framework and Common Agreement (TEFCA)?

<https://www.healthit.gov/topic/interoperability/trusted-exchange-framework-and-common-agreement-tefca>

- a. Yes b. No (go to 13a)

11. If yes, are you currently participating or do you plan to participate in TEFCA exchange (such as through your HIE or other national network)?

- a. Yes, currently participating b. Yes, plan to participate c. No, not participating and do not plan to
d. Don't know

12. Do you currently electronically exchange information with sources outside your organization or hospital system for each of the purposes listed below?

	(1) Yes	(2) No	(3) N/A	(4) Don't know
a. Treatment (as defined by the HIPAA permitted purpose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Payment (as defined by the HIPAA permitted purpose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Health Care Operations (as defined by the HIPAA permitted purpose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Individual Access (e.g., patient engagement via API or other platform)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Public Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Government Benefits Determination (as defined by TEFCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Querying information from outside providers or sources

13a. Does your hospital query electronically for patients' health information (e.g., medications, outside encounters) from sources outside of your organization or hospital system? *Note: Hospitals that auto-query should respond "Yes"*

1. Yes (go to 13b) 2. No, but have the capability (go to 14) 3. No, do not have capability (go to 14) 4. Don't know (go to 14)

13b. How often are the following electronic methods used to search for (e.g., query or auto-query) and view patient health information from sources outside your organization or hospital system? *Please indicate how often each method is used across each row below.*

Electronic Methods	(a) Often	(b) Sometimes	(c) Rarely	(d) Never	(e) Do not know/NA
1. Provider portals that allow you to view records in another organizations' EHR system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Interface connection between EHR systems (e.g., HL7 interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Access to other organizations' EHR system using login credentials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Regional, state, or local health information exchange organization (HIE/HIO). <i>NOT a local proprietary, enterprise network</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. EHR vendor-based network that enables record location within the network (e.g., Care Everywhere)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. EHR connection to national networks that enable record location across EHRs in different networks (e.g., CommonWell, eHealth Exchange, Carequality).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Other electronic _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Sending patient health information

14. When a patient transitions to another care setting outside of your organization or hospital system, how often does your hospital use the following methods to **SEND** a summary of care record? Please indicate how often each method is used across each row below.

Methods without intermediaries	(1) Often	(2) Sometimes	(3) Rarely	(4) Never	(5) Do not know/NA
a. Mail or fax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. eFax using EHR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Provider portals that allow outside organization to view records in your EHR system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interface connection between EHR systems (e.g., HL7 interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Login credentials that allow access to your EHR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Methods with intermediaries	(1) Often	(2) Sometimes	(3) Rarely	(4) Never	(5) Do not know/NA
g. HISPs that enable messaging via DIRECT protocol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Regional, state, or local health information exchange organization (HIE/HIO). <i>NOT local proprietary, enterprise network</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. EHR vendor-based network that enables exchange with vendor's other users. (e.g., Epic's Care Everywhere)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. National networks that enable exchange across different EHR vendors (e.g., CommonWell, eHealth Exchange, Carequality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Receive and Integrate patient health information

15. When a patient transitions from another care setting outside your organization or hospital system, how often does your hospital use the following methods to **RECEIVE** a summary of care record? Please indicate how often each method is used across each row below.

Methods without intermediaries	(1) Often	(2) Sometimes	(3) Rarely	(4) Never	(5) Do not know/NA
a. Mail or fax	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. eFax using EHR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Provider portals that allow you to view records in another organizations' EHR system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interface connection between EHR systems (e.g., HL7 interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Access to other organizations' EHR system using login credentials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Methods with intermediaries	(1) Often	(2) Sometimes	(3) Rarely	(4) Never	(5) Do not know/NA
g. HISPs that enable messaging via DIRECT protocol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Regional, state, or local health information exchange organization (HIE/HIO). <i>NOT local proprietary, enterprise network</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Receive and Integrate patient health information (continued)

i. EHR vendor-based network that enables exchange with vendor's other users. (e.g., Epic's Care Everywhere)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. National networks that enable exchange across <u>different</u> EHR vendors (e.g., CommonWell, eHealth Exchange, Carequality)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

16. Does your EHR integrate the information contained in summary of care records received electronically (not eFax) without the need for manual entry? *Note: This refers to the ability to add or incorporate the information into the EHR without special effort (this does NOT refer to automatically adding data without provider review). This could be done using software to convert scanned documents into indexed, discrete data that can be integrated/included in the EHR.*

- a. Yes, routinely b. Yes, but not routinely c. No d. Don't know e. NA

17. Does your EHR integrate health insurer real-time prescription benefit information?

- a. Yes, for all or almost all payers b. Yes, for a limited set of payers c. No
d. Don't know

18. When a patient transitions to or from another care setting or organization, to what extent does your hospital electronically send and/or receive (NOT eFax) a summary of care record in a structured format (e.g. CCDA) with the following providers? *Check all that apply* (across each row).

	1. Electronically Send To...			2. Electronically Receive From...			3. Do not know
	Most/All	Some	Few/None	Most/All	Some	Few/None	
a. Other Hospitals <i>outside your system</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Ambulatory Care Providers <i>outside your system</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Long-term and Post-Acute Care Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Behavioral Health Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Availability and usage of data that is exchanged

19. When treating a patient that was seen by a provider outside your organization or hospital system, do providers at your hospital routinely have necessary clinical information available electronically (not e-Fax) from outside providers or sources?

- a. Yes b. No c. Don't know

20. How frequently do providers at your hospital use patient health information received electronically (not e-Fax) from outside providers or sources when treating a patient?

- a. Often b. Sometimes c. Rarely d. Never e. Do not know

Public Health Reporting

21a. How does your hospital submit data for public health reporting related to the activities listed below? Please select **all** options used in each row. Note: this is referring to data generated through clinical processes involving patient care (production data NOT test data).

	(a) Electronic health record	(b) Health information exchange	(c) Portal submission	(d) Flat files (e.g., CSV/XML Files)	(e) Not electronically submitting data (e.g., Fax)	(f) Don't know
1. Syndromic surveillance reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Immunization registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Electronic case reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Public health registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Clinical data registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Electronic reportable laboratory result reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Antimicrobial use and resistance (AUR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Hospital capacity and utilization of medical supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21b. What are some of the challenges your hospital has experienced when trying to submit health information to public health agencies to meet CMS reporting requirements for Promoting Interoperability Program? (Please check all that apply in each column)

	(a) Syndromic surveillance reporting	(b) Immunization registry reporting	(c) Electronic case reporting	(d) Public health registry reporting	(e) Clinical data registry reporting	(f) Electronic reportable laboratory result reporting
1. We feel that public health agencies lack the capacity (e.g., technical, staffing) to electronically <u>receive</u> the information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. We do not have the capacity (e.g., technical, staffing) to electronically <u>send</u> the information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Technical complexity of interfaces, transmission, or submission process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Cost related to interfaces, transmission, or submission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. We use different vocabulary standards than the public health agency, making it difficult to submit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Difficulty extracting relevant information from EHR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The onboarding process for electronic reporting is too cumbersome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Did not experience any major challenge listed above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Barriers to exchange and interoperability

Which of the following issues has your hospital experienced when trying to electronically (not eFax) send, receive or find (query) patient health information to/from other organizations or hospital systems? Please check *all* that apply and indicate whether the issue is a *major* barrier (i.e., greatly reduces the value or frequency of exchange or prevents exchange with all or most organizations that you would like to exchange information with) or *minor* barrier (i.e., a persistent challenge that modestly reduces the value or frequency of exchange, but does not typically prevent exchange).

22a. Barriers related to electronically sending patient health information

	(a) Major barrier	(b) Minor barrier	(c) Not a barrier
1. Providers we would like to electronically send patient health information to do not have an EHR or other electronic system with the capability to receive the information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Providers we would like to electronically send patient health information to have an EHR; however, it lacks the technical capability to receive the information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Difficult to locate the address of the provider to send the information (e.g., lack of provider directory)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Many recipients of our electronic care summaries (e.g., CCDA) report that the information is not useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22b. Barriers related to electronically receiving patient health information

	(a) Major barrier	(b) Minor barrier	(c) Not a barrier
1. Difficult to match or identify the correct patient between systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. There are providers whom we share patients with that don't typically exchange patient data with us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There are providers who share data with us but do not provide those data in the format that we request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. There are providers who state they cannot exchange information with us due to privacy laws (e.g., HIPAA) in situations that do not seem appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22c. Other barriers related to exchanging patient health information

	(a) Major barrier	(b) Minor barrier	(c) Not a barrier
1. Experience greater challenges exchanging (e.g., sending/receiving) data across different vendor platforms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. We have to pay additional costs to send/receive data with outside organizations/hospital systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. We had to develop customized interfaces in order to exchange (e.g., send/receive) data with outside organizations/hospital systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Contractual constraints between healthcare providers and health vendors limit our ability to exchange data with providers using certain systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information Blocking Practices

Information blocking practices have been defined in rules that went into effect on October 6, 2022. The following set of questions ask about practices that may constitute information blocking based on your understanding of the rules.

23a. In what form(s) have you observed or experienced information blocking by Enterprise EHR vendor(s)?

	(a) Often/ Routinely	(b) Sometimes	(c) Never/ Rarely	(d) Don't Know
1. Price – for example: <ul style="list-style-type: none"> Using high fees to avoid granting third-parties access to data stored in the vendor's EHR system Charging unreasonable fees to export data at a provider's request (such as when switching vendors) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Contract language – for example: <ul style="list-style-type: none"> Using contract terms, warranty terms, or intellectual property rights to discourage exchange or connectivity with third-party Changing material contract terms related to health information exchange after customer has licensed and installed the vendor's technology 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Artificial technical, process, or resource barriers – for example: <ul style="list-style-type: none"> Using artificial technical barriers to avoid granting third-parties access to data stored in the vendor's EHR system 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Refusal – for example: <ul style="list-style-type: none"> Refusing to exchange information or establish connectivity with certain vendors or HIOs Refusing to export data at a provider's request (such as when switching vendors) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Other (please list): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23b. To what extent have you observed the following stakeholders engaging in information blocking behaviors?

	(a) Often/ Routinely	(b) Sometimes	(c) Never/ Rarely	(d) Not Applicable (i.e., we have not tried to get information from this source)	(e) Don't Know
1. Developers of Certified Health IT (e.g., Enterprise EHR vendors)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. National Networks (e.g., CommonWell, eHealth Exchange)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. State, regional, and/or local health information exchange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23c. In what form(s) have you observed or experienced information blocking by healthcare providers?

	(a) Often/ Routinely	(b) Sometimes	(c) Never/ Rarely	(d) Don't Know
1. Artificial technical, process, or resource barriers – for example: <ul style="list-style-type: none"> Requiring a written authorization when neither state nor federal law requires it Requiring a patient to repeatedly opt in to exchange for treatment, payment, and operations (TPO) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Refusal – for example: <ul style="list-style-type: none"> Refusing to exchange information with competing providers, hospitals, or health systems 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Strategic affiliations – for example: <ul style="list-style-type: none"> Promoting alternative, proprietary approaches to information exchange Exchanging only within referral network or with preferred referral partners 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Other (please list): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Information Blocking Practices (continued)

23d. To what extent have you observed healthcare providers engaging in information blocking behaviors?

1. Often/Routinely 2. Sometimes 3. Never/Rarely (go to 23f)
 4. We have not tried to get information from this source (go to 23f) 5. Don't know (go to 23f)

23e. To what extent have you observed the following types of healthcare providers engaging in information blocking behaviors, as described in the question above?

	(a) Often/ Routinely	(b) Sometimes	(c) Never/ Rarely	(d) Not Applicable (i.e., We have not tried to get information from this source)	(e) Don't Know
1. Health Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Independent Hospitals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Independent physician or physician groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Other (please list):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

23f. If you have experienced practices that you believed constituted information blocking in the past year, how often did you report the information blocking to ONC/HHS using the Report Information Blocking Portal?
<https://www.healthit.gov/report-info-blocking>

1. Often/Routinely 2. Sometimes 3. Never/Rarely
 4. Did not experience information blocking within the past year 5. Don't know

Advanced Analytics

24. Please indicate whether you have used electronic clinical data from the EHR or other electronic system in your hospital to: (Please check all that apply)

- a. Create an approach for clinicians to query the data
- b. Assess adherence to clinical practice guidelines
- c. Identify care gaps for specific patient populations
- d. Support a continuous quality improvement process
- e. Monitor patient safety (e.g., adverse drug events)
- f. Identify high risk patients for follow-up care using algorithm or other tools
- g. None of the above

25. Does your hospital use any machine learning or other predictive models that display output or recommendations (e.g., risk scores or clinical decision support) in your EHR or an App embedded in or launched by your EHR?

- a. Machine Learning
- b. Other Non-Machine Learning Predictive Models (e.g., APACHE IV)
- c. Neither (Go to 29)
- d. Don't know (Go to 29)

Advanced Analytics (continued)

26. To which of the following uses has your hospital applied machine learning or other predictive models?

(Please check all that apply)

- a. Predicting health trajectories or risks for inpatients (such as early detection of onset of a disease or condition like sepsis; predicting in-hospital fall risk)
- b. Identify high risk outpatients to inform follow-up care (e.g., readmission risk)
- c. Monitor health (e.g., through integration with wearables)
- d. Recommend treatments (e.g., identify similar patients and their outcomes)
- e. Simplify or automate billing procedures
- f. Facilitate scheduling (e.g., predicting no-shows or block utilization).
- g. Other operational process optimization (e.g., supply management) _____
- h. Other clinical use cases _____
- i. None of the above
- j. Don't know

27. Who developed the machine learning or other predictive models used at your hospital? (Select all that apply)

- a. Our EHR Developer
- b. A third-party developer
- c. Self-developed
- d. Public domain
- e. Don't know

28. What share of your machine learning or other predictive models have been evaluated using data from your hospital or health system for:

	(1) All models	(2) Most models	(3) Some models	(4) Few models	(5) None	(6) Don't know
a. Model Accuracy (e.g., sensitivity or specificity)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Model Bias (e.g., false positive parity across patients from different races, conditions, or other factors)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EHR System and IT Vendors

29. Does your hospital use an EHR system that has been certified? *Certified refers to meeting federal requirements per the Office of the National Coordinator for Health Information Technology (ONC). Certified EHRs are necessary to meet the objectives of Meaningful Use; however, certified EHRs can be used by all hospitals regardless of whether they participate in that program. If unsure, see if your system meets the requirements here: <https://chpl.healthit.gov/#/search>*

- 1. Yes
- 2. No
- 3. Don't know

30. Which vendor below provides your primary inpatient EMR/EHR system? (Please check only one) *“Primary” is defined as the system that is used for the largest number of patients or the system in which you have made the single largest investment. Please answer based on vendor name rather than product.*

- a. Allscripts
- b. Altera Digital Health
- c. Athenahealth
- d. Cerner
- e. CPSI/Evident
- f. Epic
- g. MEDHOST
- h. Meditech
- i. Other (please specify): _____
- j. Would prefer not to disclose EHR vendor

