

## 2024 Health Information Organization (HIO) Survey and Civitas Member Survey

The nationwide survey of HIOs is being led by Civitas in collaboration with Dr. Julia Adler-Milstein at the University of California, San Francisco and is sponsored by the Office of the Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC). As you know, the field continues to change rapidly, and this survey will enable us to focus on new achievements and identify challenges to create a current and accurate picture of Civitas' HIO member efforts. **We request your time to complete our survey. Participation is completely voluntary and will contribute to a research study.** Thank you in advance for your time.

The survey includes questions in five broad areas:

- (1) Organizational Demographics
- (2) Public Health
- (3) Implementation/Use of Standards
- (4) Network-to-Network Connectivity and TEFCAs
- (5) Information Blocking

There is a sixth section of questions, only asked of Civitas members, that cover a range of supplemental topics.

We will not make ANY responses to questions publicly available or attribute responses to any specific organization. These data will only be presented in aggregate and will be published in a peer-reviewed journal (which we will be happy to send to you) and other publicly available publications and presentations. Please see below for more details on data access and data reporting.

### **Data Access: Who Will Have Access to Individual, Identified Survey Responses**

The Civitas leadership team and the UCSF research team that are collecting the data will have access to fully identified survey responses. In addition, Office of the Assistant Secretary for Technology Policy and Office of the National Coordinator for Health Information Technology (ASTP/ONC) that is funding the survey will be given a dataset containing identifiable survey responses in the first five sections only. ASTP/ONC may choose to share all or part of the dataset with ASTP/ONC contractors only for the purpose of conducting contracted work and abiding by the same reporting/disclosure terms as described below. The sixth section will only be made available to Civitas and the UCSF research team.

### **Data Reporting: What Data & Derivative Results Will be Reported in Journals, Data Briefs, or Public Documents**

No individual respondents or responses will ever be identified or reported. All data will be reported at an aggregate level (e.g., across all survey responses). For example, we may report that 10% of HIOs in the US have payers as participants. A subset of data may be reported at the regional level (i.e., aggregated by state or healthcare market/HRR). Civitas, UCSF, ASTP/ONC, and any ASTP/ONC contractors receiving the data will abide by these terms.

If you serve as overarching infrastructure for sub-exchanges or otherwise manage multiple distinct health information exchanges, please let us know so that we can send you another link to the survey. This will ensure that you fill out only one response per exchange. We also ask that you respond to survey questions only from the perspective of your organization. Please do not attempt to summarize multiple efforts that may be affiliated with your organization (For example, if you are a state-level HIO, please do not respond on behalf of local HIOs with whom you work.)

To thank you for your time, upon completion of the survey you will be offered a \$50 amazon.com gift certificate. If you are not eligible for our survey, you will be offered a \$10 amazon.com gift certificate.

If you have any questions, please contact the project investigator, Dr. Julia Adler-Milstein (Julia.Adler-Milstein@ucsf.edu or 415-476-9562). Questions for Civitas may be directed to Jolie Ritzo ([jritzo@civitasforhealth.org](mailto:jritzo@civitasforhealth.org) or 207-272-4725).

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0990-0379. The time required to complete this information collection is estimated to average 10 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, to review and complete the information collection. If you have comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Health & Human Services, OS/OCIO/PRA, 200 Independence Ave., S.W., Suite 336-E, Washington D.C. 20201, Attention: PRA Reports Clearance Officer

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## Screening Questions

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We would first like to ask you about the type of organization for which you are responding:

1. As of today is your organization: (select one)

- Supporting\* “live” electronic health information exchange across your network
- Building (or planning for) the infrastructure or services to support\*, or pilot testing, electronic health information exchange across your network (End of survey)
- No longer pursuing or supporting\* electronic health information exchange (End of survey)
- Never pursued or supported\* electronic health information exchange (End of survey)

2. Does electronic health information exchange take place between independent entities\*\*?

- Yes
- No (End of survey)

\* Supporting is defined as offering a technical infrastructure that enables electronic health information exchange to take place.

\*\*Independent entities are defined as institutions with different tax identification numbers; HIE between independent entities requires that **at least one** entity is independent of the other(s).

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## Organizational Demographics

1. Since March 1, 2023, have you merged or are you planning to merge with another HIE?

- No, not planning to do so
- Currently considering
- Yes, plan to merge. If public, with whom:
- Yes, recently merged. If public, with whom:

2. Which of the following general categories apply to your organization: (Select all that apply)

- Multi-state HIE
- Single, statewide HIE
- Community or local HIE
  
- Governmental, state-designated HIE
- Non-governmental, state-designated HIE
- Enterprise HIE (i.e. primarily facilitate exchange between strategically aligned organizations)
  
- Health Information Service Provider (HISP)
- Other (please list):

1. What is your legal organizational structure?

- State Government/Agency
- Private Non-Profit 501c3
- Private For-Profit
- Other (please specify):

2. \*Which state(s) or province(s) do you consider the primary ones in which you currently have, or are recruiting new, participants in your HIE? This should **\*not\*** include state(s) that you connect to via regional/national networks, such as Patient Centered Data Home or eHealth Exchange, or state(s) in which you provide technology for other HIEs that are branded under a different name.

- |   |   |   |   |
|---|---|---|---|
| <input type="checkbox"/> Alabama        | <input type="checkbox"/> Alaska             | <input type="checkbox"/> American Samoa | <input type="checkbox"/> Arizona        |
| <input type="checkbox"/> Arkansas       | <input type="checkbox"/> California         | <input type="checkbox"/> Colorado       | <input type="checkbox"/> Connecticut    |
| <input type="checkbox"/> Delaware       | <input type="checkbox"/> Distr. of Columbia | <input type="checkbox"/> Florida        | <input type="checkbox"/> Georgia        |
| <input type="checkbox"/> Guam           | <input type="checkbox"/> Hawaii             | <input type="checkbox"/> Idaho          | <input type="checkbox"/> Illinois       |
| <input type="checkbox"/> Indiana        | <input type="checkbox"/> Iowa               | <input type="checkbox"/> Kansas         | <input type="checkbox"/> Kentucky       |
| <input type="checkbox"/> Louisiana      | <input type="checkbox"/> Maine              | <input type="checkbox"/> Maryland       | <input type="checkbox"/> Massachusetts  |
| <input type="checkbox"/> Michigan       | <input type="checkbox"/> Minnesota          | <input type="checkbox"/> Mississippi    | <input type="checkbox"/> Missouri       |
| <input type="checkbox"/> Montana        | <input type="checkbox"/> Nebraska           | <input type="checkbox"/> Nevada         | <input type="checkbox"/> New Hampshire  |
| <input type="checkbox"/> New Jersey     | <input type="checkbox"/> New Mexico         | <input type="checkbox"/> New York       | <input type="checkbox"/> North Carolina |
| <input type="checkbox"/> North Dakota   | <input type="checkbox"/> N. Mariana Islands | <input type="checkbox"/> Ohio           | <input type="checkbox"/> Oklahoma       |
| <input type="checkbox"/> Oregon         | <input type="checkbox"/> Pennsylvania       | <input type="checkbox"/> Puerto Rico    | <input type="checkbox"/> Rhode Island   |
| <input type="checkbox"/> South Carolina | <input type="checkbox"/> South Dakota       | <input type="checkbox"/> Tennessee      | <input type="checkbox"/> Texas          |
| <input type="checkbox"/> Utah           | <input type="checkbox"/> US Virgin Islands  | <input type="checkbox"/> Vermont        | <input type="checkbox"/> Virginia       |
| <input type="checkbox"/> Washington     | <input type="checkbox"/> West Virginia      | <input type="checkbox"/> Wisconsin      | <input type="checkbox"/> Wyoming        |

3. \*For the state(s) selected in question 4, please select the specific hospital service area(s) <sup>†</sup> in which you currently have, or are recruiting new, participants in your HIE.

<sup>†</sup> Hospital Service Areas are geographic areas defined by the Dartmouth Atlas.

[Populate list of HSAs for each State reported in prior question and have check all option for HSAs in a given state]

A hospital service area look-up by zip code can be found at: [www.dartmouthatlas.org/data/search\\_zip.php](http://www.dartmouthatlas.org/data/search_zip.php)

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If you describe your service area differently or have additional comments on geographic area covered, please comment:

5a. If you have participants in other states or connections to HIEs in other states, please list those states here:

4. Please indicate which of the following options applies to your HIE data architecture model:

- Federated
- Centralized
- Both (Hybrid)
- Other (please specify)

5. Which of the following do you currently have as core infrastructure or offer as services to your participants (either directly or via a third party)? (Select all that apply)

<b>GENERAL SERVICES</b>	
Provider Directory	<input type="checkbox"/>
Patient Consent Management	<input type="checkbox"/>
Community Medical/Health Record: Aggregation of information from across the community served by the HIE	<input type="checkbox"/>
Patient Electronic Access to their Health Information (e.g., immunization history, lab results)	<input type="checkbox"/>
Record Locator Service	<input type="checkbox"/>
Query-based Exchange	<input type="checkbox"/>
Results delivery (i.e., uni-directional push)	<input type="checkbox"/>
Alerting/event notification (e.g., Admit-Discharge-Transfer)	<input type="checkbox"/>
Messaging using the Direct Protocol	<input type="checkbox"/>
Transform other document types or repositories into CCDAs (e.g., MDS, OASIS, Community Health Record)	<input type="checkbox"/>
Data normalization	<input type="checkbox"/>
Intake, assessment, and screening tools	<input type="checkbox"/>
Exchange of data on individual patients' health related social needs (often referred to as social determinants of health) such as transportation, housing, food insecurity or other	<input type="checkbox"/>
Connection to prescription drug monitoring program (PDMP) (send or receive)	<input type="checkbox"/>
Connection to Immunization Information System(s) (IIS) (send or receive)	<input type="checkbox"/>
Prescription fill status and/or medication fill history	<input type="checkbox"/>
Provide data to third party disease registries (e.g., Wellcentive, Crimson, ACOs)	<input type="checkbox"/>
Advanced care planning e.g., POLST/MOLST, power of attorney, patient personal advance care plan)	<input type="checkbox"/>
Sell de-identified data to third parties	<input type="checkbox"/>
Integrating claims data	<input type="checkbox"/>
Other (please list):	<input type="checkbox"/>

<b>Services related to VALUE-BASED PAYMENT MODELS</b>	
Activities related to quality measurement (e.g., generating, validating, reporting, etc.)	<input type="checkbox"/>
Closed-loop referrals tracking	<input type="checkbox"/>
Connection to social service referral platform(s) (e.g., FindHelp Unite Us, homegrown)	<input type="checkbox"/>

Identification of gaps in care	<input type="checkbox"/>
Care coordination platform	<input type="checkbox"/>
Registry services, including operating as a clinical data registry or qualified clinical data registry (QCDR) <sup>1</sup>	<input type="checkbox"/>
Providing data to allow analysis by networks/providers	<input type="checkbox"/>
Analytics (e.g., risk stratification, patient to provider attribution)	<input type="checkbox"/>
Other (please list):	<input type="checkbox"/>

7a. **(If Community Medical/Health Record is checked)** Does your Community Medical/Health Record contain:

- Only health information (e.g., diagnoses, procedures, medications)
- Health AND non-health information (e.g., transportation, education, and/or housing data)

6. Does your HIE use patient data in any of the following ways related to artificial intelligence (AI): (Select all that apply)

- Provide data to third parties (e.g., companies, researchers) to be used for developing AI models
- Develop your own AI models to commercialize
- Develop your own AI models and deploy for participants (individually or collectively)
- Deploy AI models developed by third parties on behalf of participants (individually or collectively)
- Other. Please specify:

7. **If yes to options 2, 3, or 4 in question 8:** What types of models have you developed and/or deployed:

	Yes	No	Don't know
1. Non-Machine Learning Predictive Models (e.g., LACE+ Readmission model based on logistic regression)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Machine Learning Models (e.g. Readmission model leveraging random forest or neural network)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Generative AI Models/ Large Language Models (e.g., to create text summaries)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9a. **If yes to any of the above in 9:** How has your HIE used artificial intelligence models? Please check all that apply.

- Predict health trajectories or risks for inpatients (such as early detection of onset of a disease or condition like sepsis; predicting in-hospital fall risk)
- Identify high risk outpatients to inform follow-up care (e.g., readmission risk)
- Monitor health (e.g., through integration with wearables)
- Assist diagnosis or recommend treatments (e.g., identify similar patients and their outcomes)
- Generation of chart summaries
- Patient-facing health recommendations and self-care engagement
- Prediction of quality gaps
- Other operational process optimization (e.g., supply management). Please specify:
- Other clinical use cases. Please specify:
- None of the above
- Don't know

9b. **If yes to any of the above in 9:** Were any state policies (e.g., legislation, regulations) or organizational policies (e.g., participant agreements) created and/or adjusted to allow development or use of artificial intelligence models?

9c. **If yes to any of the above in 9:** What was the motivation for building capabilities related to artificial intelligence models?

9d. **If yes to any of the above in 9:** What types of participants are asking for/interested in artificial intelligence models? (e.g., health systems; independent practices)

<sup>1</sup> A Qualified Clinical Data Registry (QCDR) is a Centers for Medicare & Medicaid Services (CMS) approved vendor that is in the business of improving health care quality. These organizations may include specialty societies, regional health collaboratives, large health systems or software vendors working in collaboration with one of these medical entities. [\[CMS\]](#)

9e. **If yes to any of the above in 9:** What is your approach to governance of artificial intelligence models – assessing models for bias, assessing model drift over time, etc?

8. Do **entities participating in your HIE** cover 100% of your operating expenses?

- Yes  
 No

9. Are you confident that your HIE will be financially viable **over the next 3 years**?

- Very confident  
 Somewhat confident  
 Neither confident nor unconfident  
 Somewhat unconfident  
 Very unconfident  
 Don't know

10. Please estimate to the best of your knowledge what percent of your revenue comes from each of the following sources:

State grants (including Medicaid):  
Federal grants:  
Other grants:  
Revenue from participants:  
Other. Please specify:

11. Has your state Medicaid organization ever provided funding to support your HIE?

- Yes – initial, one-time funding only  
 Yes – ongoing funding only  
 Yes – both initial and ongoing funding  
 In the process of obtaining approval for funding  
 No  
 Other: Please explain:

12. Does your HIE formally partner with your state Medicaid organization to provide data for quality reporting?

- Yes, our HIE provides data for state quality reporting only  
 Yes, our HIE provides data for federal quality reporting only  
 Yes, our HIE provides data for state and federal quality reporting  
 We are in the process of working with state Medicaid to provide data for quality reporting  
 No  
 Other: Please explain:

13. If you have a **Master Patient Index (MPI)**, please ESTIMATE:

Total number of unique (resolved) individuals in your MPI:  Do not know

Total number of unique individuals in your MPI **with more than only demographic data**:  Do not know

14. Within the past year, please estimate **the number of acute care hospitals** (individual facilities both within health systems and independent, including VA, public, and private) that are directly connected (not via another network) to your HIE:

HOSPITALS

- Provide data  Do not know  
Receive or view data  Do not know

15. Please report whether each type of entity is involved in your HIE in the following ways:

Answer Options	Provide Data to your HIE	Receive/Query for Data from your HIE	View Only Access to Data from your HIE, via portal login	Entity Not Involved in your HIE
Behavioral Health providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-term, post-acute care facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home health agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social service agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Based Organizations (CBOs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Answer Options	Provide Test Results to your HIE	Receive/Query Data from your HIE	View Only Access to Data from your HIE	Entity Not Involved in your HIE
Hospital-based labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physician office-based labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Independent labs (NOT including commercial)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobile labs (e.g., Point of Care Labs for COVID-19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Public Health**

**HIE Support for Public Health**

Screening: Is your HIE connected to any state, tribal, local, or territorial public health agencies (PHAs)? (Connected means that the public health entity sends data to your HIE, receives/queries for data, and/or has view only access to data from your HIE.) Select all that apply.

- Yes, state
- Yes, local
- Yes, tribal
- Yes, territory
- None of the above (skip to Section E)

**SECTION A: Summary of Current Connectivity to PHAs**

1. Please report how many PHAs engage with your HIE in the following manner:

	Total number of unique PHAs connected with your HIE in any way	Number of PHAs that <u>send data</u> to your HIE	Number of PHAs that <u>receive or query for data</u> from your HIE	Number of PHAs with view only access
State-level				
Local-level				
Tribal-level				
Territorial-level				

Note: Any connections to registries or federal and national public health networks are addressed later in this survey. Please do not include them here.

1a. Please report how many registries engage with your HIE in the following manner:

	Total number connected with your HIE in any way	Number of registries that <u>send data</u> to your HIE	Number of registries that <u>receive or query for data</u> from your HIE
All Types of Registries			
Registries Affiliated with a PHA			

2. **If any tribal PHAs:** Please break down the number of PHA connections by region (as defined by the Tribal Epidemiology Center Map which can be found [here](#)):

	Total Number of Unique Tribal PHAs connected with your HIE in any way
Northwest	
California	

Rocky Mountain	
Inter-Tribal Council of Arizona, Inc.	
Navajo	
Albuquerque Area Southwest	
Great Plains	
Oklahoma Area	
Great Lakes	
United South and Eastern Tribes	
Alaska	

2b. **If any state, local, territorial:** What states/territories are the PHA entities connected to your HIO located in? Select all that apply.

- |   |   |   |   |
|---|---|---|---|
| <input type="checkbox"/> Alabama        | <input type="checkbox"/> Alaska             | <input type="checkbox"/> American Samoa | <input type="checkbox"/> Arizona        |
| <input type="checkbox"/> Arkansas       | <input type="checkbox"/> California         | <input type="checkbox"/> Colorado       | <input type="checkbox"/> Connecticut    |
| <input type="checkbox"/> Delaware       | <input type="checkbox"/> Distr. of Columbia | <input type="checkbox"/> Florida        | <input type="checkbox"/> Georgia        |
| <input type="checkbox"/> Guam           | <input type="checkbox"/> Hawaii             | <input type="checkbox"/> Idaho          | <input type="checkbox"/> Illinois       |
| <input type="checkbox"/> Indiana        | <input type="checkbox"/> Iowa               | <input type="checkbox"/> Kansas         | <input type="checkbox"/> Kentucky       |
| <input type="checkbox"/> Louisiana      | <input type="checkbox"/> Maine              | <input type="checkbox"/> Maryland       | <input type="checkbox"/> Massachusetts  |
| <input type="checkbox"/> Michigan       | <input type="checkbox"/> Minnesota          | <input type="checkbox"/> Mississippi    | <input type="checkbox"/> Missouri       |
| <input type="checkbox"/> Montana        | <input type="checkbox"/> Nebraska           | <input type="checkbox"/> Nevada         | <input type="checkbox"/> New Hampshire  |
| <input type="checkbox"/> New Jersey     | <input type="checkbox"/> New Mexico         | <input type="checkbox"/> New York       | <input type="checkbox"/> North Carolina |
| <input type="checkbox"/> North Dakota   | <input type="checkbox"/> N. Mariana Islands | <input type="checkbox"/> Ohio           | <input type="checkbox"/> Oklahoma       |
| <input type="checkbox"/> Oregon         | <input type="checkbox"/> Pennsylvania       | <input type="checkbox"/> Puerto Rico    | <input type="checkbox"/> Rhode Island   |
| <input type="checkbox"/> South Carolina | <input type="checkbox"/> South Dakota       | <input type="checkbox"/> Tennessee      | <input type="checkbox"/> Texas          |
| <input type="checkbox"/> Utah           | <input type="checkbox"/> US Virgin Islands  | <input type="checkbox"/> Vermont        | <input type="checkbox"/> Virginia       |
| <input type="checkbox"/> Washington     | <input type="checkbox"/> West Virginia      | <input type="checkbox"/> Wisconsin      | <input type="checkbox"/> Wyoming        |

**If they select more than 1 state:** Please breakdown the number of state, local, and/or territorial PHA connections by state/territory:

Please fill in with states selected above	Total Number of Unique PHAs connected with your HIO in any way

3. What is the purpose of PHA connectivity? (Select all that apply)

- To identify opportunities to enrich public health data with HIE data
- To make public health data available to your participants
- Other (Please list):

**SECTION B: Reporting Services Provided to PHAs**

4a. Which of the following reporting services do you offer to **your participating healthcare providers or PHAs**?  
 Select all that apply with regards to the stage at which you offer those services.

	In production	In testing	In planning	Not available	Don't know
Syndromic surveillance reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immunization registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic case reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic reportable laboratory result reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health registry reporting (administered by or for public health agencies for public health purposes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical data and/or specialized registry reporting (administered by or for non-public health agency entities for clinical care and monitoring health care quality and resource use)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other reporting (e.g., COVID specific, other registry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vital Record System reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4b. **If in production for public health registry reporting:** What type(s) of public health registry reporting are in production?

4c. Have you encountered PHAs that are NOT willing or able to receive the following types of reporting?

	Yes, Many	Yes, Some	Few/None	Don't know
Syndromic surveillance reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immunization registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic case reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic reportable laboratory result reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health registry reporting (administered by or for public health agencies for public health purposes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical data and/or specialized registry reporting (administered by or for non-public health agency entities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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for clinical care and monitoring health care quality and resource use)				
Other reporting (e.g., COVID specific, other registry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vital Record System reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. For each type of reporting that is in production, are any of the following provider types currently using these services (i.e., at least one organization providing data for reporting)? (Select all that apply)

	Hospitals	Office-based physicians	LTPAC settings	Urgent Care	Other
Syndromic surveillance reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immunization registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic case reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic reportable laboratory result reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public health registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical data registry reporting and/or specialized registry reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other COVID-19 related reporting (e.g., registry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vital Record System reporting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION C: Receiving Data from PHAs**

*Note: Please respond to the remaining questions for all PHAs, not only the primary*

6. Which of the following types of data do you **receive** from PHAs with which you have established connectivity? (Select all that apply)

- Immunization
- Reportability Responses (i.e., whether a condition is reportable in a jurisdiction)
- Laboratory orders and/or results from public health lab
- Data from public health registry (administered by or for public health agencies for public health purposes)
- Data from clinical data and/or specialized registry (administered by or for non-public health agency entities for clinical care and monitoring health care quality and resource use)
- Data related to COVID-19
- Vital records
- Other. Please list:
- Don't know
- None—do not receive data from public health entities

**SECTION D: Other Services, Barriers and Support for Public Health Exchange**

7. What other services does your HIE provide to PHA(s)? (Select all that apply)

- Analytic and Data Quality Support (beyond those reported above)
- Dashboarding and Data Visualization Assistance

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- Process Automation
- Bidirectional Data Sharing/Receiving Data from PHAs
- Use of HIE MPIs to Support Public Health Deduplication or Other Services
- Outbreak Monitoring and Alerting
- Public Health Policy Impact Monitoring
- Situational Awareness
- Other. Please list:
- None

8. Do you receive any of the following funding source(s) to support PHA connectivity? (Select all that apply)

- Fees paid by participants
- Fees paid by State or local health department(s)
- State Medicaid funding
- CDC funding (including through State or local health departments)
- Other Federal funding
- Other State funding, including from State health department
- Other. Please list:
- Do not receive any funding to specifically support public health reporting

8a. **For respondents who indicate any responses other than "Do not receive any funding to specifically support public health reporting":** Based upon your best estimate, to what extent do you think these sources of funding will be available to support PHA connectivity over the next 3 years?

- To a great extent
- Some extent
- Very little
- Not at all
- Don't know

9. To what extent have you experienced the following barriers **within the last year** to PHA connectivity?

	To a Great Extent	Somewhat	Very Little	Not at All	N/A
Patient consent model hinders data exchange with PHAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State statutes/regulations limit PHAs participation with HIE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Need for data use agreements for public health data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limited funding from PHAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limited funding from your HIE participants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHAs lacks staffing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHAs lacks technical capability to receive messages from your HIE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHAs lacks technical capability to process messages from your HIE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other technical limitations on part of PHAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PHAs have other priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low return on investment to your HIE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost to maintain infrastructure that is only used in specific circumstances (e.g., natural disaster, public health emergency)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please list):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. To what extent do you feel prepared to support PHA data needs for a future pandemic?

- To a great extent
- Somewhat
- Very little
- Not at all

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Don't Know

**SECTION E: Other Public Health Exchange Capabilities**

11. Does or could your HIE currently provide data to PHA(s) to fill data-related gaps (e.g., missing demographic information)?

- Yes
- No but could do so
- No and could not do so
- Don't know

11a. **If Yes or No but could do so:** Please indicate what types of data are or could be provided to PHAs fill data-related gaps in information. (Select all that apply)

	Currently provided	Not currently provided but could be
<b>Clinical Information</b>		<input type="checkbox"/>
Problems	<input type="checkbox"/>	<input type="checkbox"/>
Prescribed Medications	<input type="checkbox"/>	<input type="checkbox"/>
Immunizations	<input type="checkbox"/>	<input type="checkbox"/>
<b>Laboratory-Related Information</b>		
Laboratory Value(s)/Result(s)	<input type="checkbox"/>	<input type="checkbox"/>
<b>Encounter-Related Information</b>		
Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Admission and Discharge Dates and Locations	<input type="checkbox"/>	<input type="checkbox"/>
Encounters (Encounter type, diagnosis, time)	<input type="checkbox"/>	<input type="checkbox"/>
Reason for Hospitalization	<input type="checkbox"/>	<input type="checkbox"/>
Newborn Screenings		
<b>Health Equity</b>		
Home Address or other up-to-date contact information for contact tracing	<input type="checkbox"/>	<input type="checkbox"/>
Race/Ethnicity	<input type="checkbox"/>	<input type="checkbox"/>
Preferred Language	<input type="checkbox"/>	<input type="checkbox"/>
Health-related Social Needs (e.g., housing, food insecurity)	<input type="checkbox"/>	<input type="checkbox"/>
Substance Use Disorder Diagnosis (as defined in 42 CFR Part 2)	<input type="checkbox"/>	<input type="checkbox"/>
Gender Identity	<input type="checkbox"/>	<input type="checkbox"/>
Sexual Orientation	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other</b>		
Other (please list):	<input type="checkbox"/>	<input type="checkbox"/>

11b. **If yes:** How often do PHA(s) electronically receive or query these types of data from your HIE?

- Often
- Sometimes
- Rarely
- Never
- Don't know

11c. **If yes:** How are PHA(s) accessing these types of data? (Select all that apply)

- Single patient lookup through a Portal
- Batch query and response
- FHIR API query and response

- Aggregate data and/or statistics (e.g., dashboard)
- SFTP/Amazon S3 file transfer
- Other. Please list:
- Not applicable

11d. **If yes:** To what extent is access to these types of data in real-time?

- Majority in real-time
- Mix of real-time and lagged
- Majority lagged

12. What are your current capabilities to electronically receive hospital data on **bed capacity and resource utilization**?  
Electronic receipt includes standards-based approaches (e.g., SANER, HL7 feed) and does **not** include spreadsheet submission and/or manual data entry.

- Actively electronically receiving production data
- In the process of testing and validating electronic receipt of data
- In planning phase to support this reporting
- Not planning to support this reporting
- Don't know

**Implementation and Use of Standards**

1. To what extent does your HIE electronically **receive** data from your participants using the following methods listed below? (Select one option across a row)

*Please consider the methods used by participant to provide the data to your HIE. Do not include conversions you may do after receipt. With regards to conformance to standards, if the receipt of the data is in partial conformance, please consider that as conformant.*

	Routinely/ from most participants	Sometimes/ From some participants	Rarely/ From few participants	Never	Don't know
HL7 v2 messages for event notification (ADT messages)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HL7 v2 messages (e.g., Scheduling, Orders, Labs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FHIR (any version)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. To what extent does your HIE electronically **send or make available for query** data to your participants using the following methods?

	Routinely/ To most participants	Sometimes/ To some participants	Rarely/ To few participants	Never	Don't know
Care summaries in a structured format (e.g., CDA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HL7 v2 messages (any type)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FHIR (any version)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Which types of **clinical and other health-related information** are made available by your HIE (as part of a clinical document or as a structured data element)? See [U.S. Core Data for Interoperability](#) (USCDI) for further information. (Select all that apply)

	Included in your HIE
Data Provenance	<input type="checkbox"/>
Health Insurance Information (e.g., coverage status, coverage type, member/subscriber/group/payer identifiers)	<input type="checkbox"/>
<b>Clinical Information</b>	
Problems	<input type="checkbox"/>
Prescribed Medications	<input type="checkbox"/>
Filled Medications	<input type="checkbox"/>
Medication Allergies	<input type="checkbox"/>
Non-Medication Allergies & Intolerances	<input type="checkbox"/>
Functional Status	<input type="checkbox"/>
Cognitive Status	<input type="checkbox"/>
Vital Signs	<input type="checkbox"/>
Pregnancy Status	<input type="checkbox"/>
Immunizations	<input type="checkbox"/>
Family Health History	<input type="checkbox"/>
Health Concerns	<input type="checkbox"/>
Clinical Notes	<input type="checkbox"/>
<b>Imaging/Pathology</b>	
Diagnostic Imaging Order	<input type="checkbox"/>

Radiology Report (narrative)	<input type="checkbox"/>
Pathology Report (narrative)	<input type="checkbox"/>
<b>Laboratory-Related Information</b>	
Laboratory Test(s) Ordered	<input type="checkbox"/>
Laboratory Value(s)/Result(s)	<input type="checkbox"/>
Laboratory Reports (narrative)	<input type="checkbox"/>
<b>Team-Based Care</b>	
Care Plan Field(s), including Goals and Preferences	<input type="checkbox"/>
Care Team Member(s) (Provider ID, Provider Name)	<input type="checkbox"/>
Assessment and Plan of Treatment	<input type="checkbox"/>
<b>Encounter-Related Information</b>	
Procedures	<input type="checkbox"/>
Admission and Discharge Dates and Locations	<input type="checkbox"/>
Encounters (Encounter type, diagnosis, time)	<input type="checkbox"/>
Discharge Disposition	<input type="checkbox"/>
Referrals	<input type="checkbox"/>
Discharge Instructions	<input type="checkbox"/>
Reason for Hospitalization	<input type="checkbox"/>
<b>Health Equity</b>	
Home Address	<input type="checkbox"/>
Race/Ethnicity	<input type="checkbox"/>
Preferred Language	<input type="checkbox"/>
Health-related Social Needs (e.g., housing, food insecurity)	<input type="checkbox"/>
Substance Use Disorder (as defined in 42 CFR Part 2)	<input type="checkbox"/>
Gender Identity	<input type="checkbox"/>
Sexual Orientation	<input type="checkbox"/>
<b>Other</b>	
Other (please list):	<input type="checkbox"/>

3a. If selected "Health-related Social Needs" in question 3: Which of the following health-related social needs domains does your organization make available to participants? (Select all that apply)

- Housing / Homelessness
- Food Security
- Transportation
- Financial
- Utility Assistance
- Interpersonal Violence
- Employment
- Long Term Services and Supports
- Health Education
- Other. Please specify:

3b. If selected "Health related Social Needs" in question 3: How are health-related social needs data encoded? (Select all that apply)

- ICD-10 Z codes
- LOINC
- SNOMED
- Health-related social needs data are not encoded
- Encoded using other. Please specify:

4. Do you receive care summary documents from your participants?

- Yes
- No
- Don't know

4a. **If Yes:** To what extent does your HIE electronically receive care summaries in structured versus unstructured format from your participants:

	Routinely/ most participants	Sometimes/ some participants	Rarely/ few participants	Never	Don't know
Care summaries in a <b>structured format</b> (e.g., CDA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Care summaries in an <b>unstructured format</b> (e.g., PDF)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4b. **If care summaries in a structured format “routinely” or “sometimes” is checked above:** Do you parse C-CDAs (i.e., extract and make available discrete data elements):

- Yes
- No
- Don't know

5. Does your HIE map from non-standard laboratory test/result codes to LOINC® codes?

- Yes
- No (Skip to next section)
- Don't know (Skip to next section)

5a. Within the past year, based upon the volume of test results received (qualitative and quantitative), to what extent did your HIE have to map those results from non-standard codes to LOINC codes?

- All or most
- Some
- Few
- None
- Don't know

5b. Have you experienced any of the following issues related to mapping to LOINC? (Select all that apply)

- We do not have sufficient expertise to map to LOINC within our organization
- We find LOINC and LOINC tools too difficult to use
- We do not have the resources (personnel/time) to map to and/or maintain mappings to LOINC
- Other issue. Please specify:
- No, we have not experienced any issues mapping to LOINC
- Don't know

**Network-to-Network Connectivity and TEFCFA**

1. Does your HIE: (Select all that apply)

Sell/provide your infrastructure to other HIEs	<input type="checkbox"/>
Buy/use infrastructure from another HIE	<input type="checkbox"/>
Connect to other HIEs in the SAME state	<input type="checkbox"/>
Connect to other HIEs in a DIFFERENT state(s)	<input type="checkbox"/>
None of the above	<input type="checkbox"/>

2. Is your HIE currently using the following national networks / frameworks to exchange data? Note: TEFCFA questions come next.

	Live Data Exchange (send or receive)	Implementing	Not Using	Other (please specify):
<b>General Purpose Networks:</b>				
CommonWell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DirectTrust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Patient Centered Data Home (Governance Council supported by Civitas)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e-Health Exchange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Carequality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Specific Purpose Networks:</b>				
Surescripts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Patient Ping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audacious Inquiry: Pulse/ENS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Point Click Care: EDie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>National Public Health Networks:</b>				
Association of Public Health Laboratories Informatics Messaging Services (APHL AIMS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IZ Gateway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (please list):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2a. **If not using any general-purpose networks in prior question:** Please select reason(s) for not using any of the general purpose networks: (Select all that apply)

- Do not see the value in what they provide (i.e., services not useful or data limited)
- Perceive them as competitors
- Participation costs too high
- Not a priority
- Other. Please list:

3. Is your HIE participating in the Trusted Exchange Framework and Common Agreement (TEFCFA)?

- Yes
- No, but we plan to participate as a QHIN
- No, but we plan to participate as a participant or sub-participant
- No, and we do not plan to participate
- No, and we don't know if we will participate

3a. **If any no:** Why are you not currently participating, or not planning to participate, in TEFCFA? (Select all that apply)

- Didn't/Don't have enough information

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- Didn't/Don't have time/resources to prepare
- Had/Have concerns about the terms of the Common Agreement (please briefly describe):
- Had/Have concerns over privacy and/or security of the network
  - Risk of inappropriate use of the data
- Concerns about the burden associated with participation (e.g., financial, reporting, technical/infrastructure) (please briefly describe):
- Did/Do not perceive sufficient value in participating (please briefly describe why):
  - Lessens competitive advantage
- Did/Do not support the technical requirements, including standards, required to participate in TEFCA or within a QHIN.
- Were/Are waiting to see if and how requirements for exchange and participation change (e.g., requirements related to FHIR based transactions) (please briefly describe):
- Had/Have concerns about the volume of queries we would receive through TEFCA.
- Had/have not yet developed a strategic plan to participate
- Other (please list):

3b. If Yes or No, but we plan to participate as a participant or sub-participant: Which TEFCA QHIN(s) or Candidate QHIN(s) are you participating or planning to participate in? Check all that apply.

Epic Nexus	<input type="checkbox"/>
eHealth Exchange	<input type="checkbox"/>
Health Gorilla	<input type="checkbox"/>
KONZA	<input type="checkbox"/>
MedAllies	<input type="checkbox"/>
CommonWell Health Alliance	<input type="checkbox"/>
Kno2	<input type="checkbox"/>
Other (please list):	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>

3c. If Yes or No, but we plan to participate as a QHIN/participant or sub-participant: What changes has your HIE made, or is your HIE planning to make, to its operations in order to participate in TEFCA:

	Yes	No	Don't know	Not Applicable
Changing types of services offered	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Selling/providing your services to other HIEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buying/using services from another HIE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changing technical infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changing legal agreements and/or policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changing other infrastructure (e.g., creating new training, supporting or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

making process redesigns (e.g., new workflows))				
New Partnerships with other HIEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Partnerships with an entity that is not an HIE (e.g., health IT developer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please list):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3d. If Yes, how would you rate the benefit of participating in TEFCA to your HIE and members:

- Substantial
- Moderate
- Minimal/Not at all (please explain):
- Don't know

3e. If Yes or No, but we plan to participate as a participant or sub-participant, how satisfied are you with your HIE's QHIN?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied (please explain):
- Very dissatisfied (please explain):
- N/A (e.g., we are the QHIN)

3f. If any response to Q3, how satisfied are you with the TEFCA Recognized Coordinating Entity's response to issues identified by your HIE or your HIE's QHIN?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied (please explain):
- Very dissatisfied (please explain):
- My HIE or my HIE's QHIN has not, to my knowledge, reported issues to the RCE.

3g. If Yes, what proportion of your members participate in TEFCA through your HIE?

- All/Most
- Some
- Few (Please explain):
- None (please explain):
- Don't know

## Information Blocking

Information blocking practices have been defined in rules that went into effect on April 5, 2021. The following set of questions ask about practices that may constitute information blocking based on your understanding of the rules. Please respond based on your experience since the rules went into effect (April 5, 2021).

1. To what extent are you familiar with the information blocking rules, applicable actors, exceptions, and enforcement timeline?

- Very Familiar
- Moderately Familiar
- Somewhat Familiar
- Not Familiar

1a. To what extent are you familiar with ASTP/ONC's process for reporting violations of the information blocking rules?

- Very Familiar
- Moderately Familiar
- Somewhat Familiar
- Not Familiar

2. How often have you encountered **each of the following form(s)** of information blocking by **EHR vendors** (and other Developer(s) of Certified Health IT)?

	Rarely /Never	Sometimes	Often/ Routinely	Don't Know
<p align="center"><b>PRICE</b></p> <p align="center">Examples:</p> <p>using high fees to avoid granting third-parties access to data stored in the developer's EHR system</p> <p>charging unreasonable fees to export data at a provider's request (such as when switching developers)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p align="center"><b>CONTRACT LANGUAGE</b></p> <p align="center">Examples:</p> <p>using contract terms, warranty terms, or intellectual property rights to discourage exchange or connectivity with third-party</p> <p>changing material contract terms related to health information exchange after customer has licensed and installed the vendor's technology</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p align="center"><b>ARTIFICIAL TECHNICAL, PROCESS, OR RESOURCE BARRIERS</b></p> <p align="center">Examples:</p> <p>using artificial technical barriers to avoid granting third-parties access to data stored in the vendor's EHR system</p> <p>using artificial reasons to limit the types of information that can be sent/shared or received</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p align="center"><b>REFUSAL</b></p> <p align="center">Examples:</p> <p>refusing to exchange information or establish connectivity with certain vendors or HIOs</p> <p>refusing to export data at a provider's request (such as when switching vendors)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p align="center"><b>OTHER</b> (please list):</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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3. What proportion of **EHR vendors** have you encountered engaging in information blocking?

- All/Most
- Some
- Few
- None (skip to 6)
- Don't know or N/A (Don't interact with developers) (skip to 6)

3a. Among **EHR Vendors** that engage in information blocking, how often do they do it?

- Routinely
- Sometimes
- Rarely
- Don't know

4. When you have experienced practices that you believed constituted information blocking by **EHR vendors** in the past year, how often did you report the information blocking to ASTP/ONC/HHS?

- Always
- Most of the time
- Sometimes
- Rarely
- Never

4a. **If Rarely or Never:** Why have you not reported information blocking by **EHR vendors** when you have experienced it?

5. To what extent does information blocking by **EHR vendors** make it more difficult for you to provide HIE services to your participants?

- Greatly
- Moderately
- Minimally/Not at all
- Don't know

6. In what form(s) have you experienced information blocking by **hospitals and health systems**?

	Rarely /Never	Sometimes	Often/ Routinely	Don't Know
<p><b>ARTIFICIAL TECHNICAL, PROCESS, OR RESOURCE BARRIERS</b></p> <p>Examples:</p> <p>requiring a written authorization when neither state nor federal law requires it</p> <p>requiring a patient to repeatedly opt in to exchange for TPO</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>REFUSAL</b></p> <p>Examples:</p> <p>refusing to exchange information with competing providers, hospitals, or health systems</p> <p>refusing to share data with other entities, such as payers or independent labs</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>CLOSED NETWORK EXCHANGE</b></p> <p>Examples:</p> <p>promoting alternative, proprietary approaches to HIE</p> <p>exchanging only within referral network or with preferred referral partners</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>OTHER</b> (please list):</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. What proportion of **hospitals and health systems** have you encountered engaging in information blocking?

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- All/Most
- Some
- Few
- None (skip to 10)
- Don't know or N/A (skip to 10)

7a. Among **hospitals and health systems** that engage in information blocking, how often do they do it?

- Routinely
- Sometimes
- Rarely
- Don't know

8. When you have experienced practices that you believed constituted information blocking by **hospitals and health systems** in the past year, how often did you report the information blocking to ASTP/ONC/HHS?

- Always
- Most of the time
- Sometimes
- Rarely
- Never

8a. If **Rarely or Never**: Why have you not reported information blocking by **hospitals and health systems** when you have experienced it?

9. To what extent does information blocking by **hospitals and health systems** lead to missing patient health information?

- Greatly
- Moderately
- Minimally/Not at all
- Don't know

10. Among other types of entities, to what extent have you observed information blocking behaviors?

	Rarely/ Never	Sometimes	Often/ Routinely	Don't Know
<b>Commercial Payers</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Laboratories</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Commercial Pharmacies</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Public Health Agencies Healthcare Providers other than Hospitals and Health Systems (e.g., independent practices)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>National Networks (e.g. CommonWell, eHealth Exchange)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>State, Regional, and/or Local Health Information Exchanges</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other (please list):</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. If **Laboratories selected in Q10 above**: What types of laboratories have sought to limit or refused to provide access, exchange, or use of electronic health information? (Select all that apply)

- Hospital-based labs
- Commercial labs
- Independent labs (not including commercial)
- Physician office-based labs
- Mobile labs (e.g., Point of Care Labs for COVID-19)
- Public health labs
- Other. Please list:

13. Which of the following reasons have laboratories used as the basis for limiting or refusing to provide electronic health information to your HIE? (Select all that apply)
- Role of CLIA or other federal regulations in restricting them from sending additional data
  - Fees associated with HIE participation
  - Labs don't derive value as a data contributor only
  - Concerns with HIE's ability to do patient matching
  - Concerns with producing duplicate data
  - Exchanging data with HIEs is not considered related to treatment, payment, or operations and thus would require patient consent
  - Labs reporting obligation ends with returning result to ordering provider
  - Public health agencies (including emergency rules) do not mandate reporting to HIE
  - Labs need consent from each individual provider, resulting in your HIE having to execute multiple disclosure forms (e.g., for each participating health care provider)
  - Technological reasons/use of specific standards (convenient reason or wide spectrum of what labs are able to do)
  - Other. Please list:

14. To what extent have you been able to overcome these difficulties to access data from laboratories?
- Not at all
  - To a small extent
  - Somewhat
  - To a great extent
  - Fully

## Additional Information

1. Initiative or Organization Name:

2. We appreciate your participation. Would you like to receive a copy of our results that will enable you to compare your effort to others in the nation?

Yes

No

3. If you would like to receive a \$50 amazon.com gift certificate, please complete the following fields:

Name:

Email: