



National HIO Survey Results


November 27, 2023





Agenda

- National HIO Survey results presentation by Julia Adler-Milstein, PhD, Professor of Medicine, Chief of the Division of Clinical Informatics & Digital Transformation, and Director of the Center for Clinical Informatics & Improvement Research (CLIIR).
- Civitas HIO Survey Supplement results presentation by David Kendrick, MD, MPH and the Civitas team.



National HIO Survey Results

Early Results from the 2023 HIO
Survey: Organizational
Demographics, TEFCA, and Public
Health Reporting

Julia Adler-Milstein, PhD
Sarah Rosenthal
Vaishali Patel, PhD

Overview of HIO Survey

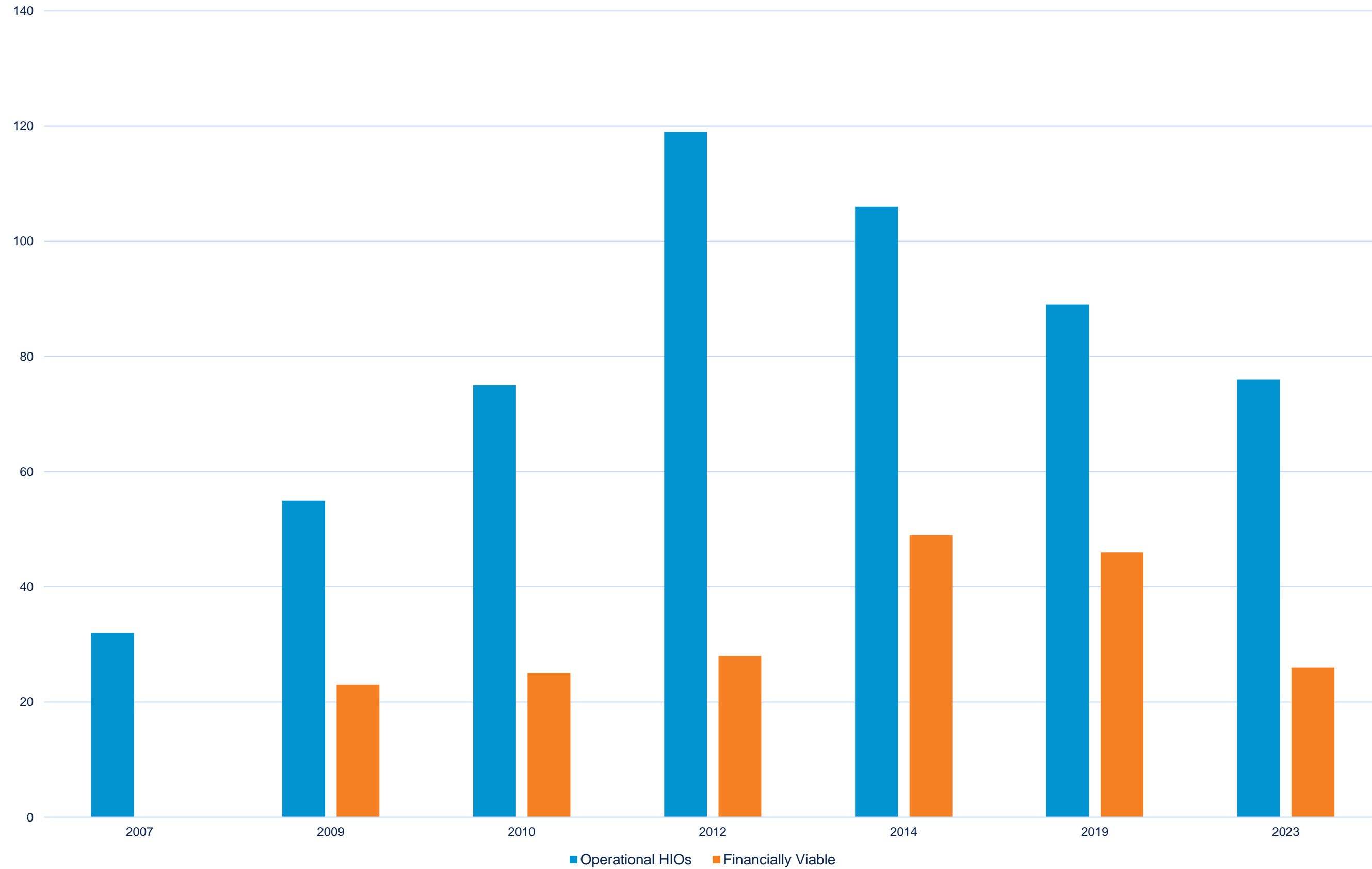
- Purpose: Conduct a census of HIOs to capture current status, progress, and challenges
- Combined Civitas annual member survey with ONC-sponsored bi-annual survey
- List of HIOs compiled over time and updated based on:
 - Members of Civitas Networks for Health
 - Other sources that capture HIOs (HIMSS, AHA)
 - State-designated HIEs
- Online survey with screening questions to verify eligibility for the survey – limited to operational HIOs
 - Started with 135 organizations → 45 ineligible (not an HIO, not operational, merged)
 - Of the 90 eligible, 76 responded (84% response rate)
- 2023 survey had a new module on public health capabilities – general and COVID-specific
- Data collection completed August 2023

Survey Sections

- Section results covered today:
 - Organizational Demographics
 - TEFCA and Network-to-Network Connectivity
 - Public Health Reporting Capabilities, Barriers, and COVID-19 Specific Capabilities
- Results to be covered in the future:
 - Implementation and Use of Standards
 - Information Blocking: EHR developers, health systems, labs

Key Findings: Organizational Demographics

Operational and Financially Viable* HIOs: 2007-2023

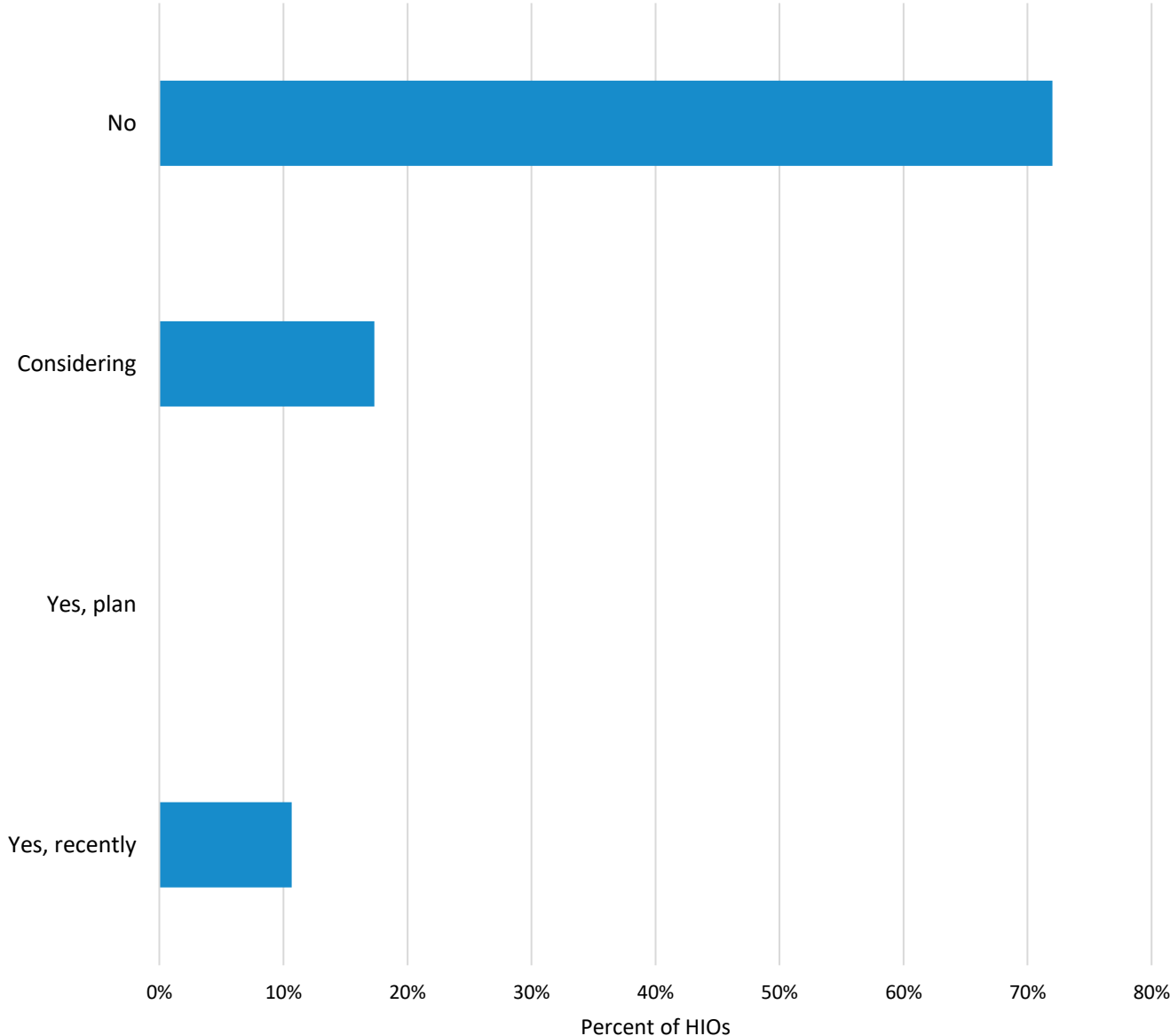


* Defined as those covering operating costs with revenue from participants

Consolidation Since January 1, 2020

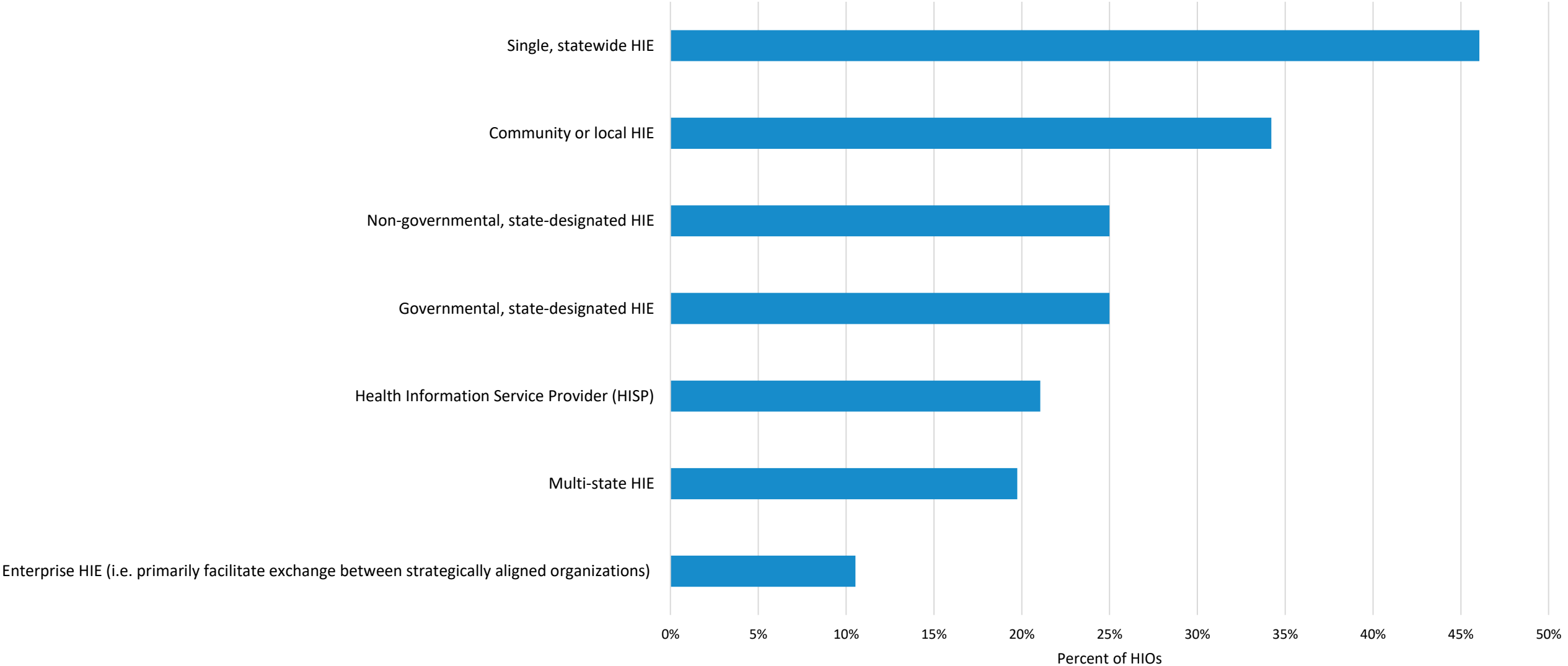
The majority of HIOs had no plans to merge with another HIO (72%).

17% reported considering merging, and 11% reported recently merging.



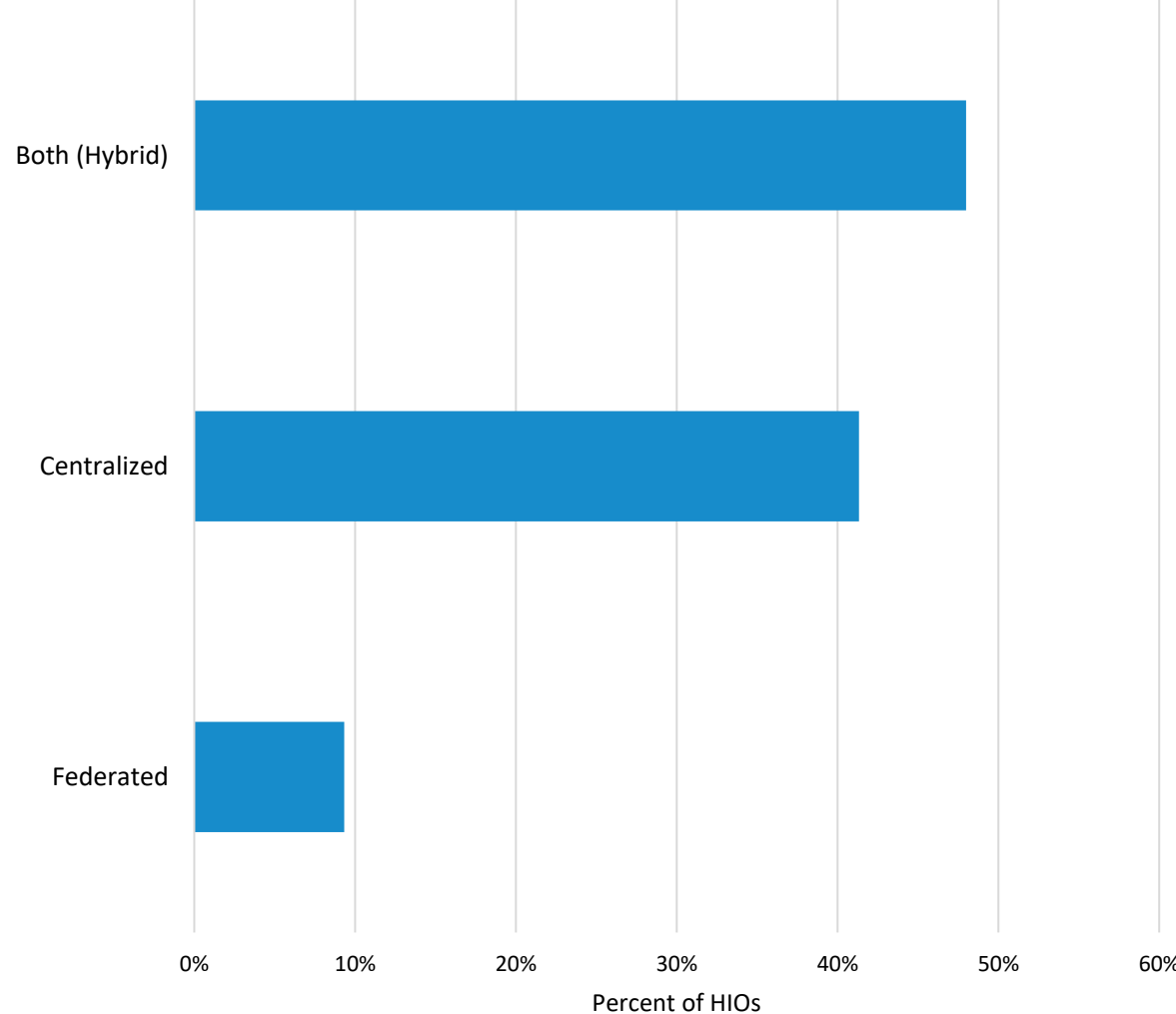
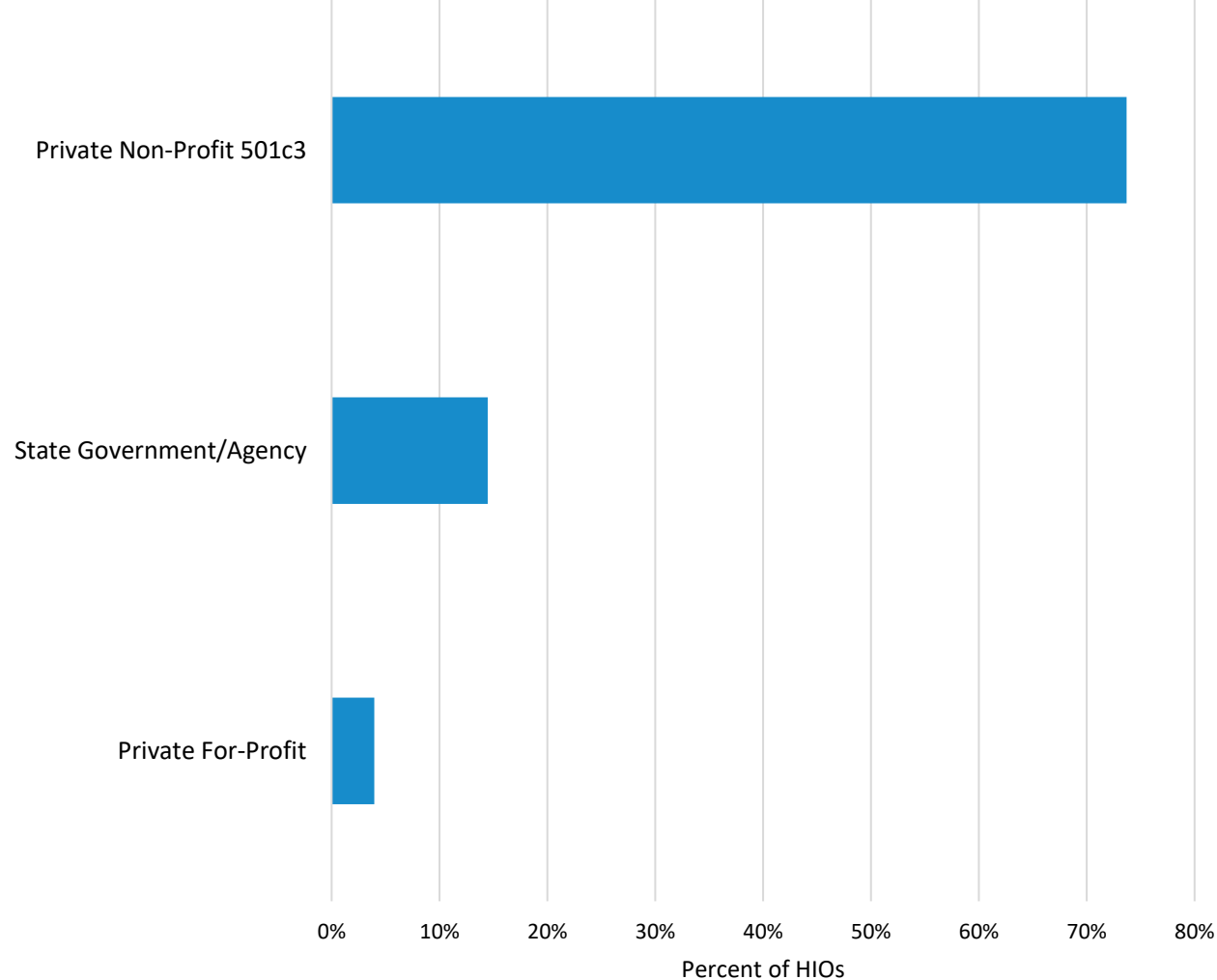
Organization Type(s)

The greatest number of reporting HIEs are **single, statewide HIEs** (46%) followed by **community/local HIEs** (34%).



Organization Type(s)

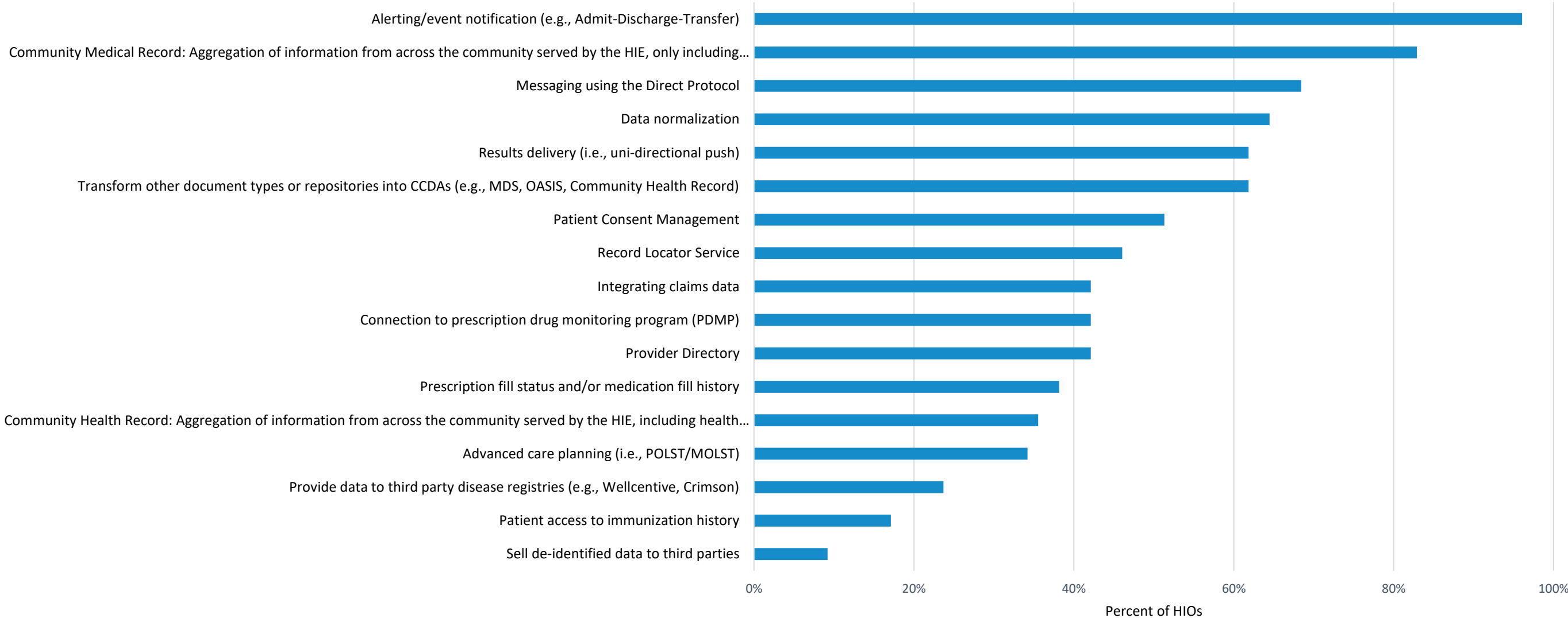
HIOs primarily operate as a **Private Non-Profit 501c3** (73%), and nearly half reported using a hybrid model (48%).



Types of Services Offered

General Services

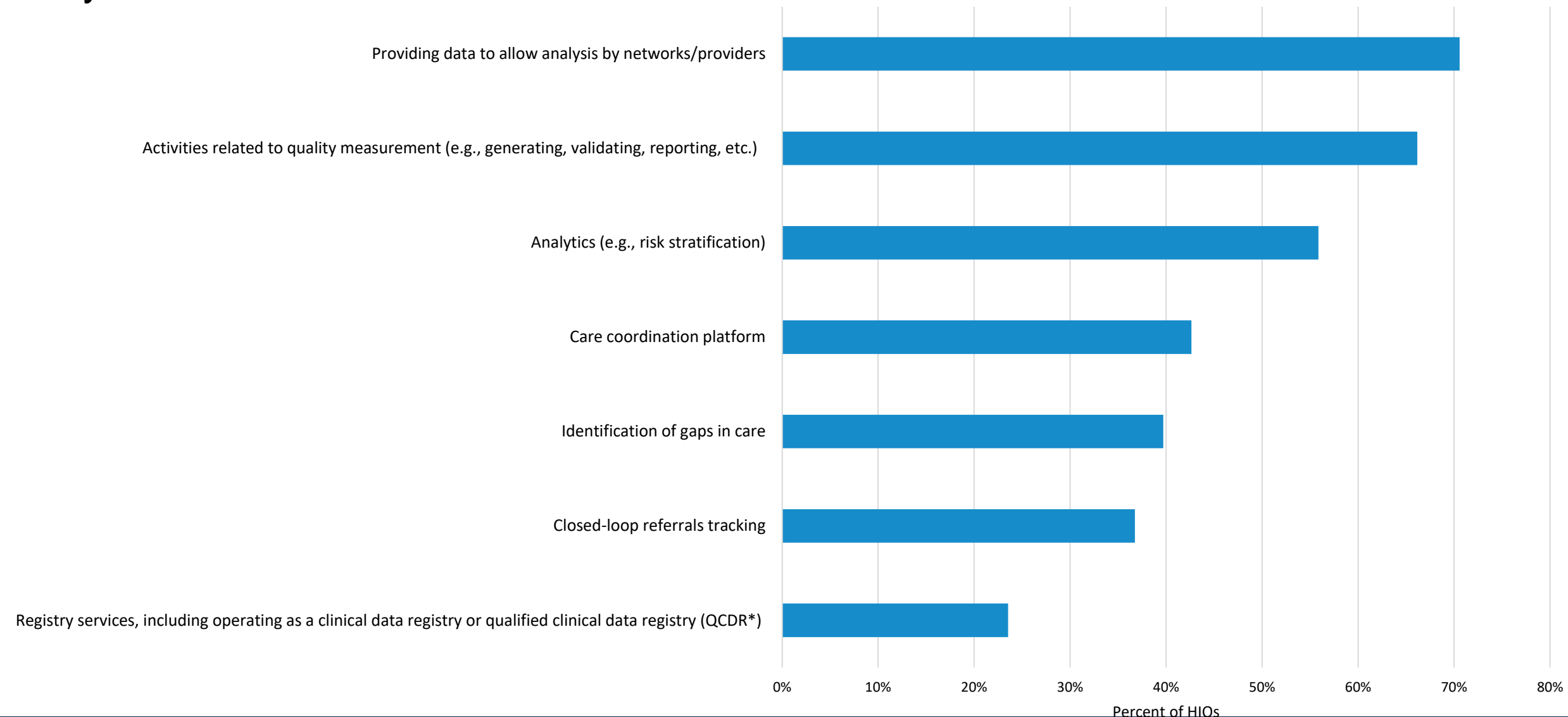
For services offered by HIOs, **ADT Notifications were offered by almost all reporting HIOs (96%)** followed by Community Medical Record (83%) and messaging using the Direct Protocol (68%).



Types of Services Offered

Value-Based Payment Models

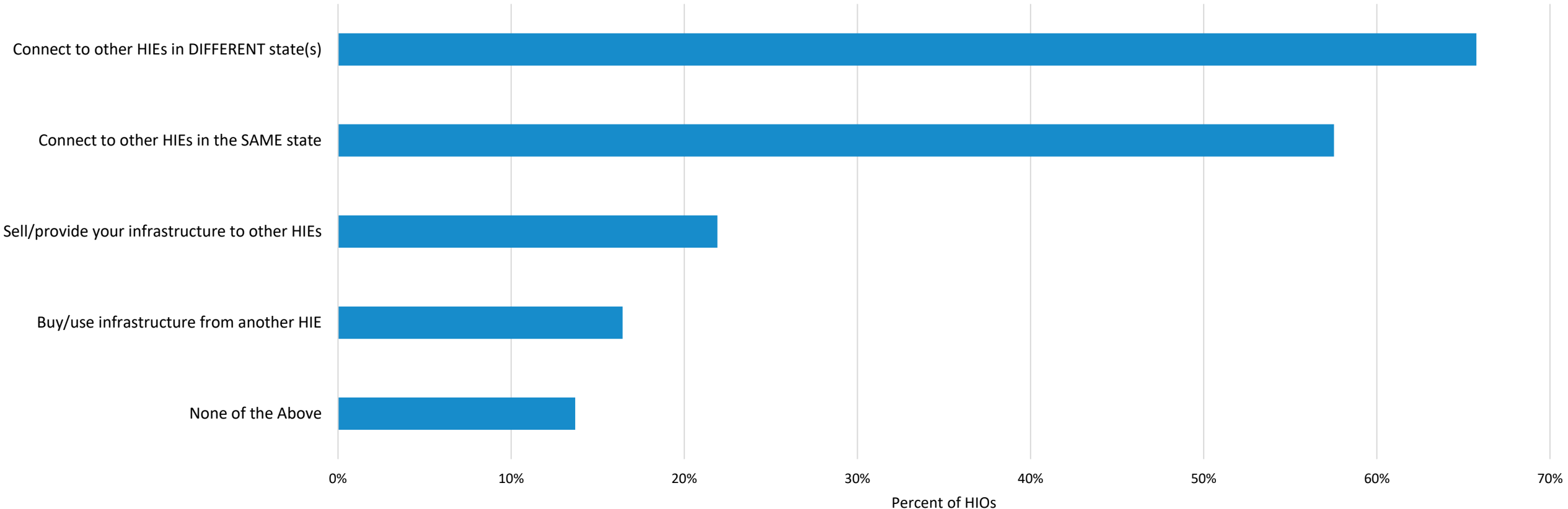
A wide array of services related to value-based payment models currently offered are used by participants in HIOs. HIOs primarily use models that allow for data analysis and quality measurement, with 71% providing data to allow analysis by networks/providers, 66% activities relating to quality measurement, and 56% providing analytics.



Key Findings: TEFCA and Network-to-Network Connectivity

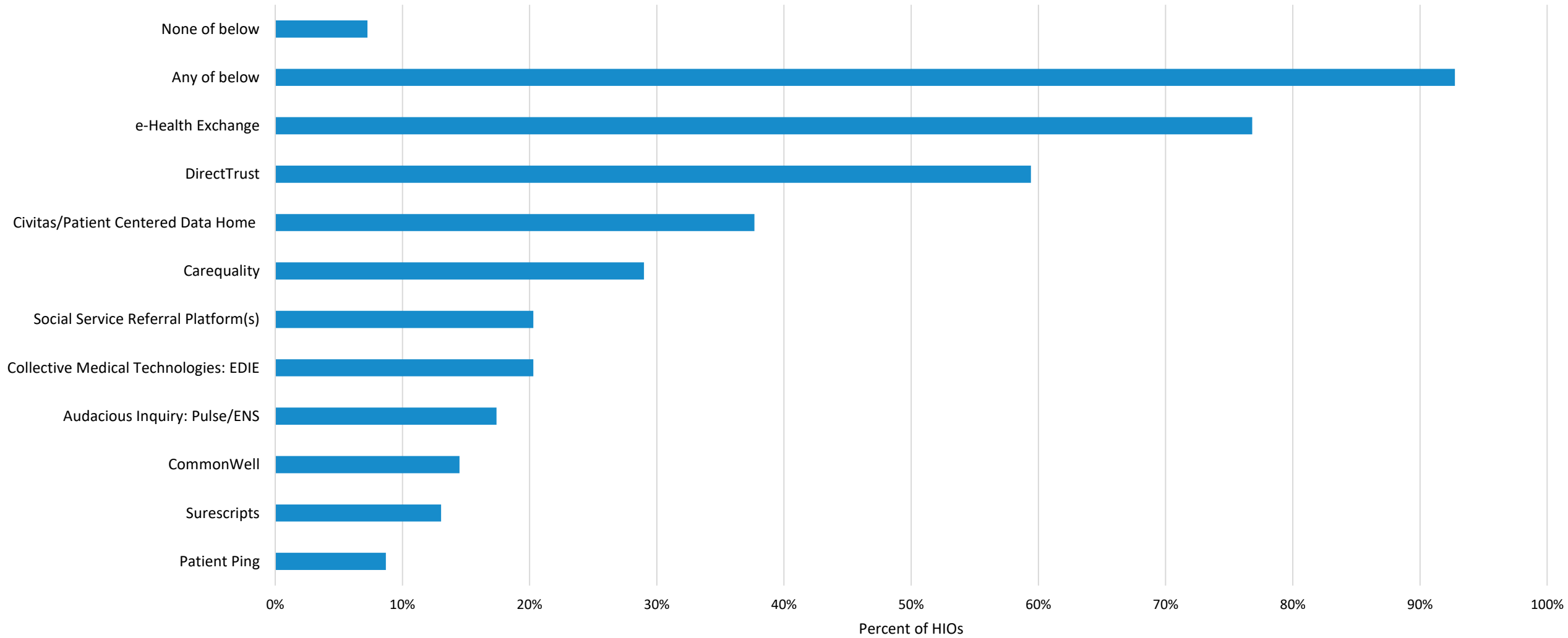
Connectivity Approach

HIOs **employed several approaches to connectivity**. More than half said they connected with other HIEs in different states (66%) and the same was true for connections within the same state (58%).



National Network Connectivity

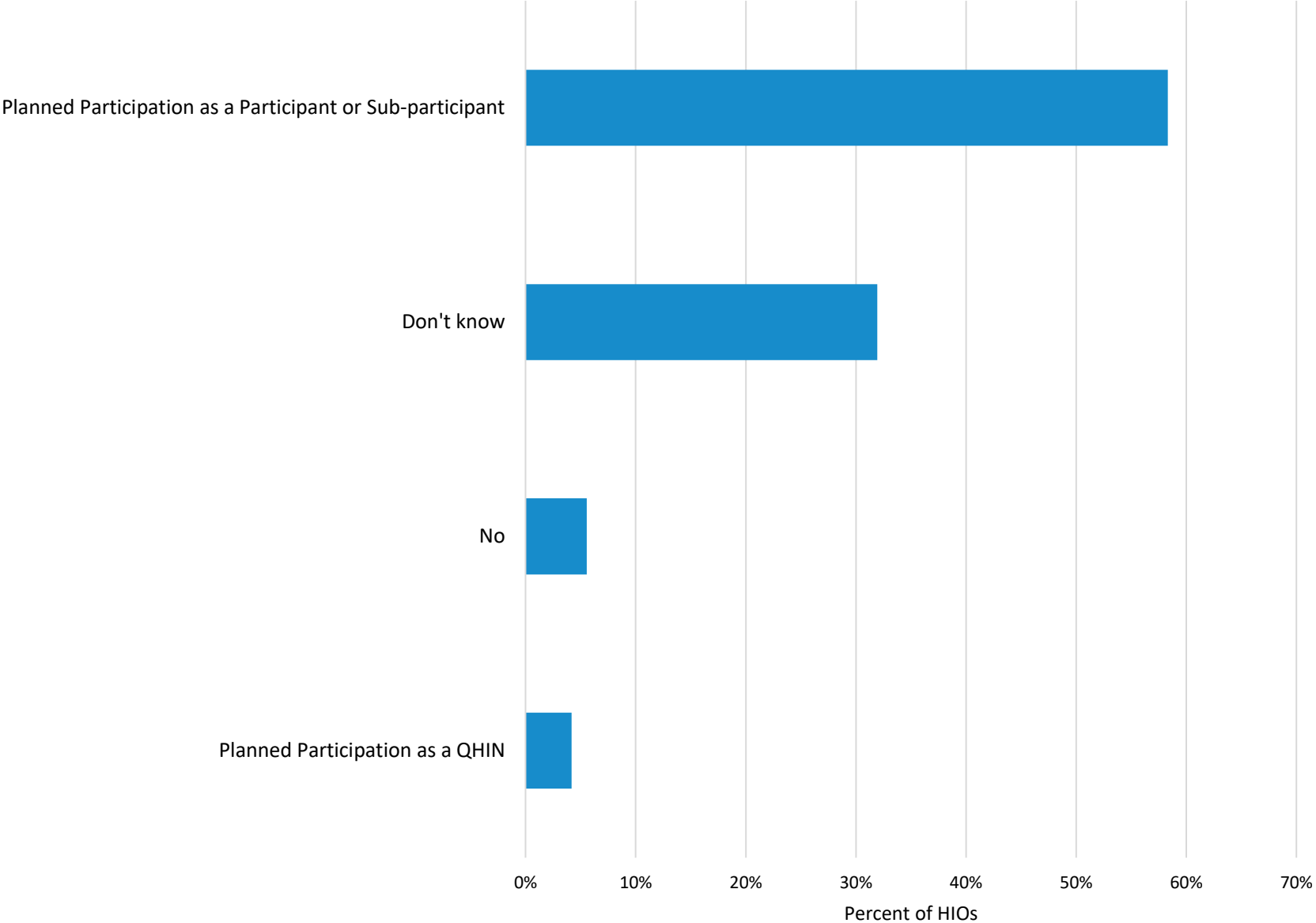
93% connected to at least 1 national network to exchange data. The most common national network connections are e-Health Exchange (77%) and DirectTrust (59%). The median number of network connections was 3.



TEFCA Participation

When asked about potential participation in TEFCA, **the majority (58%) said that they plan to participate in some capacity.**

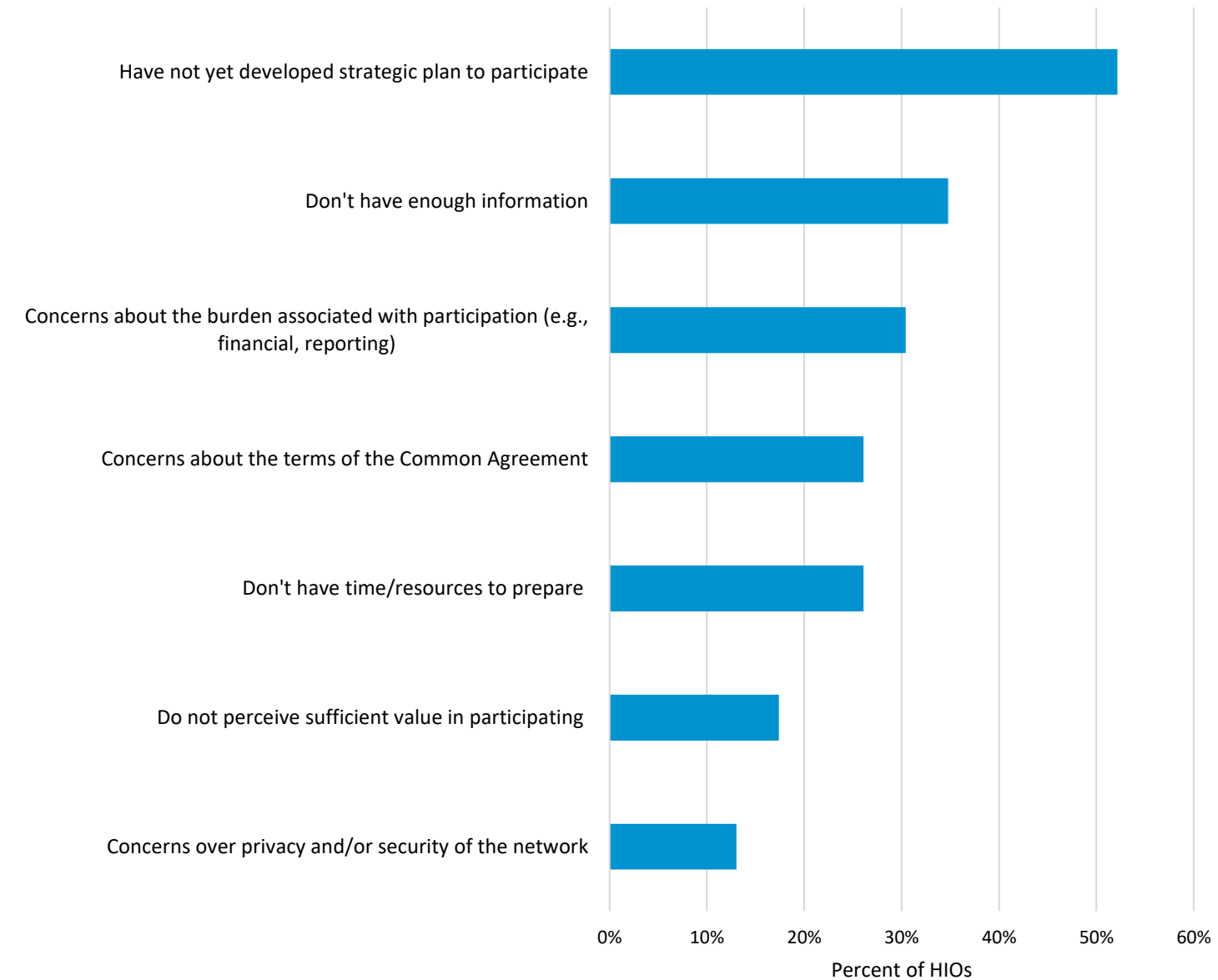
An additional 4% reported they would plan to participate as a QHIN.



Reasons for lack of planned TEFCA participation

When an HIO responded “don’t know” to the TEFCA participation question, they were asked why.

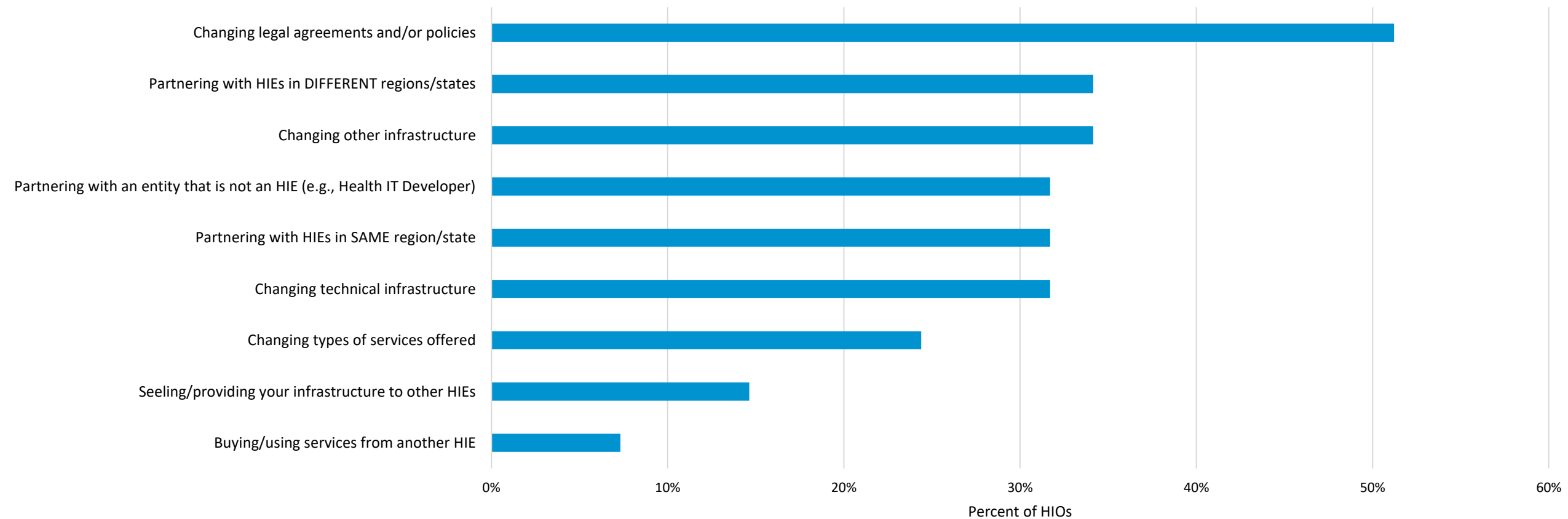
More than half of cited that they have not yet developed a strategic plan to participate (52%), with a variety of other reasons for a lack of participation also cited.



Planned changes in response to TEFCA

When an HIO responded “yes” to the TEFCA participation question, they were asked if TEFCA would lead to any operational changes.

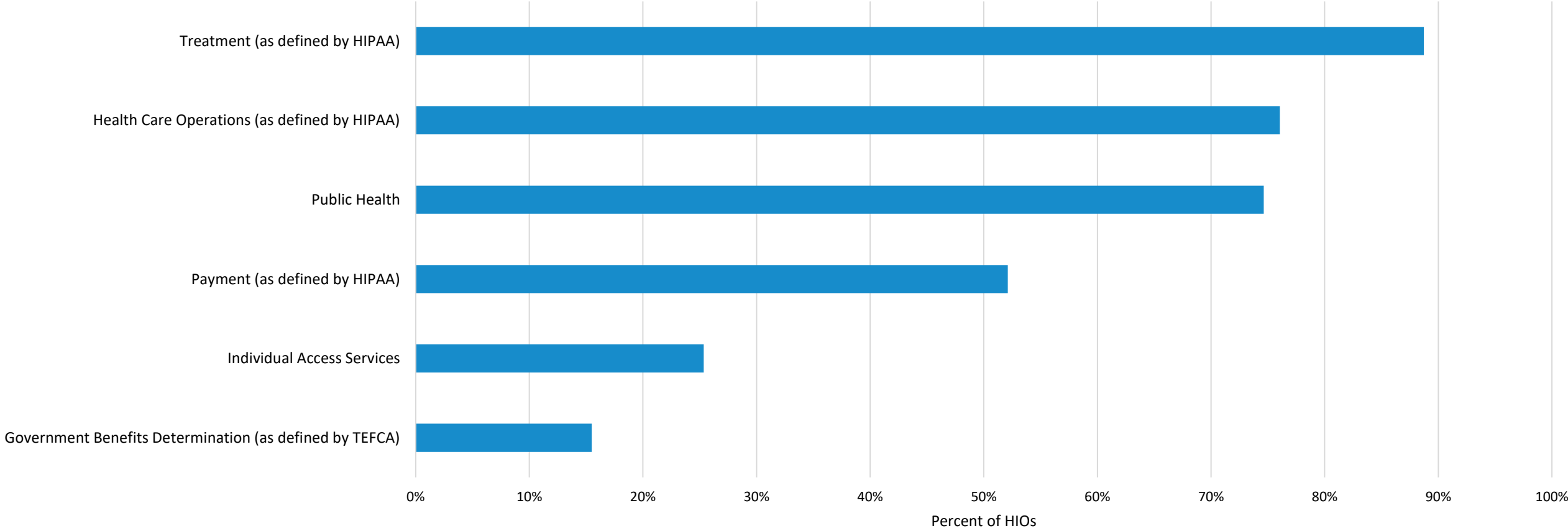
More than half reported that they would have to change legal agreements and or policies (51%).



Exchange Purposes Participants Can Make Requests for Information

“For which of the following exchange purposes (which are included in TEFCA), are your participants currently able to **make a Request for Information?**”

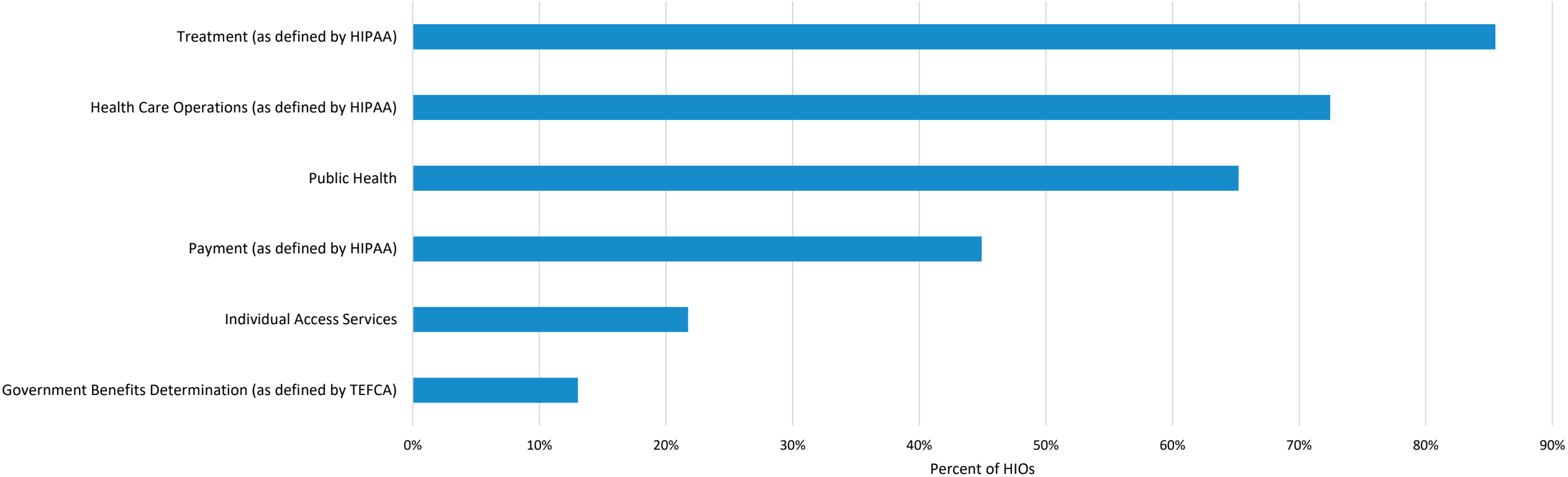
Treatment (89%), Health Care Operations (76%), Public Health (75%), and Payment (52%) are the top current exchange purposes.



Exchange Purposes And Respond to Requests for Information

“For which of the following exchange purposes, are your participants currently able to **respond with adequate data** to a Request for Information?”

Similar results to the previous question: Treatment (86%), Health Care Operations (72%), Public Health (65%), and Payment (45%).

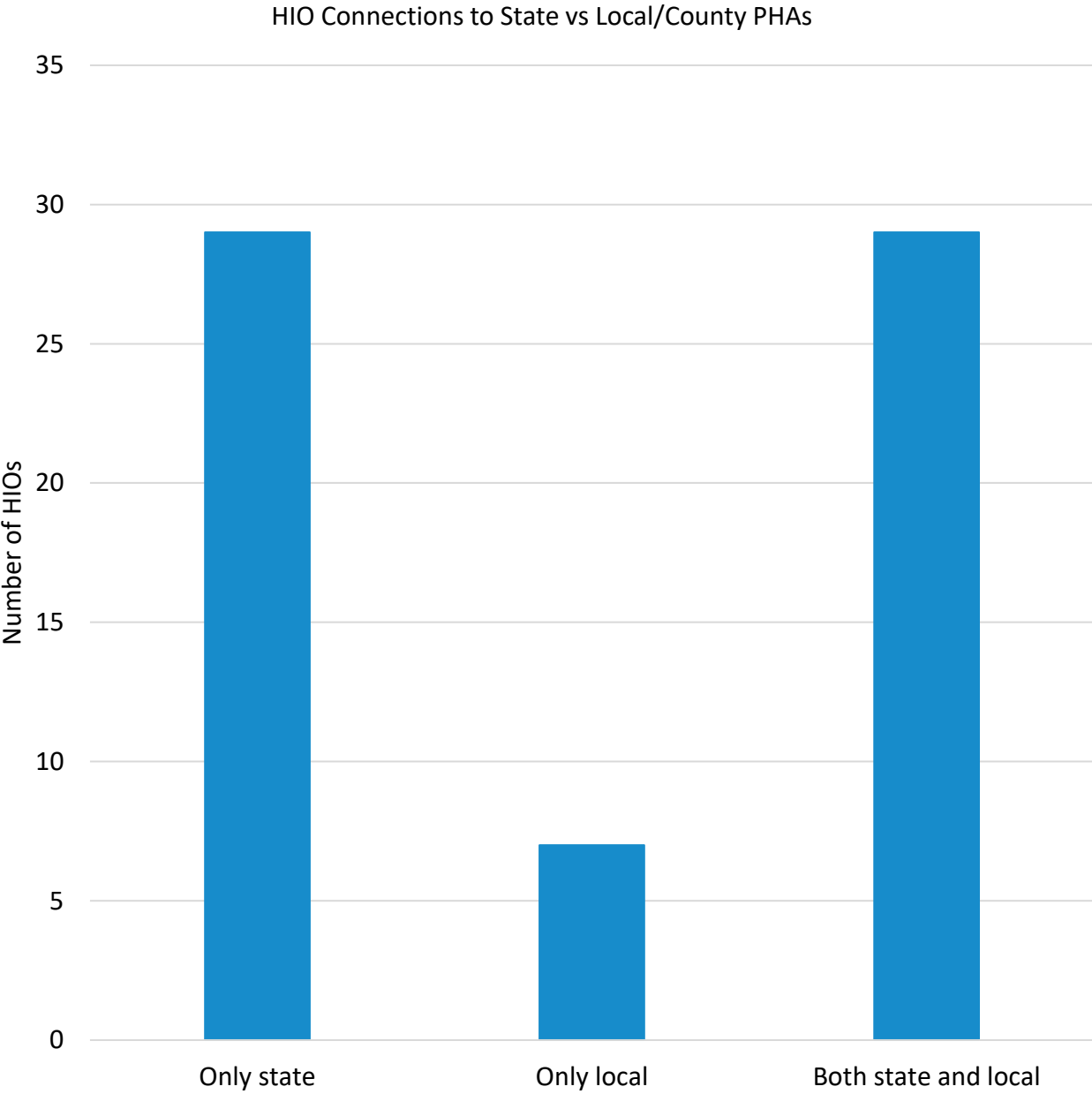


Key Findings: Public Health Reporting Capabilities & Barriers

Overview of HIE-PHA Connectivity

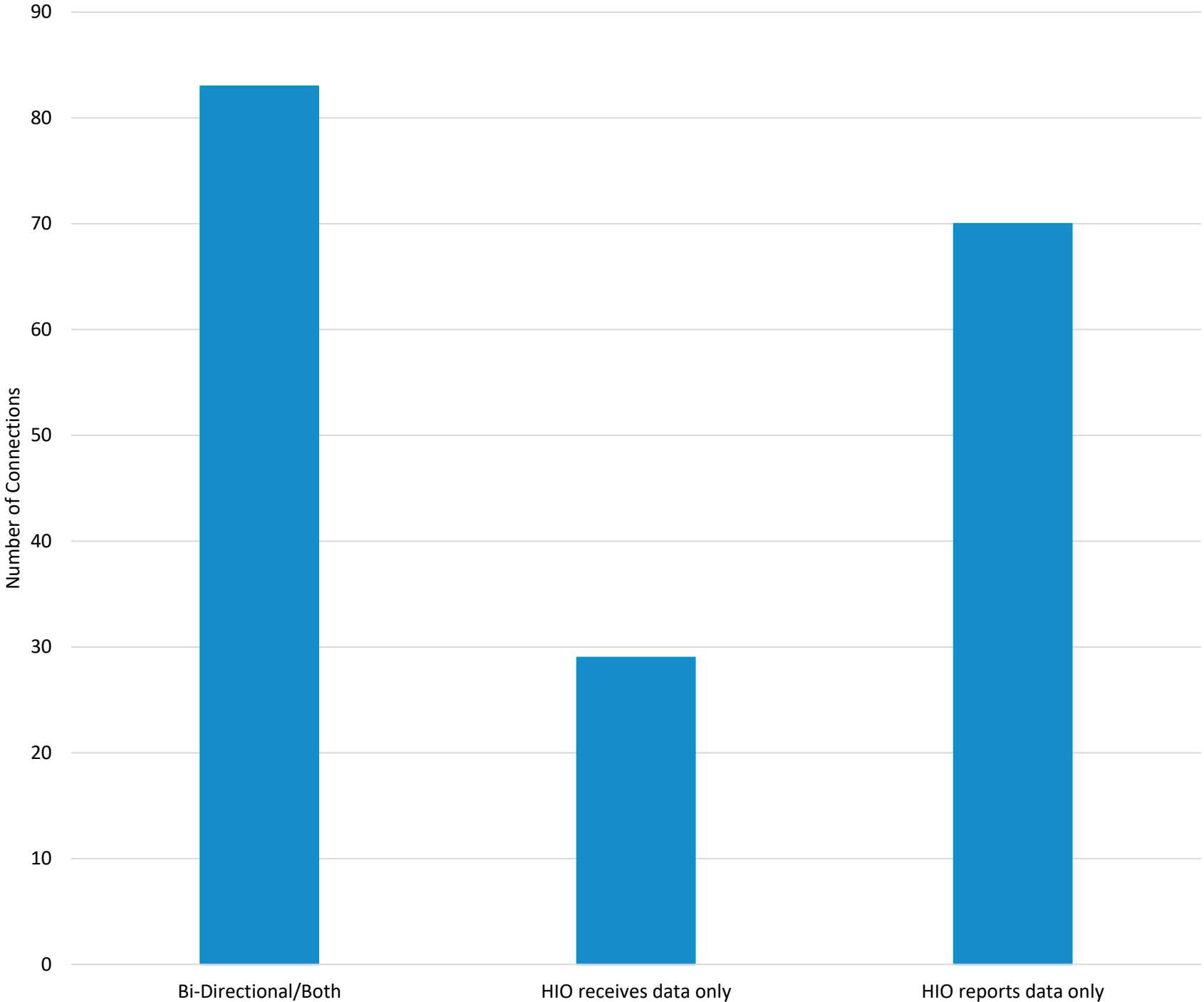
- **65 HIOs (86%) provide data to one or more public health agencies (PHAs).**
 - Collectively, these 65 HIOs operate in **45 states** plus the District of Columbia.

- **On average, these HIOs connected to three different PHAs**
 - resulting in 192 total HIO-PHA connections

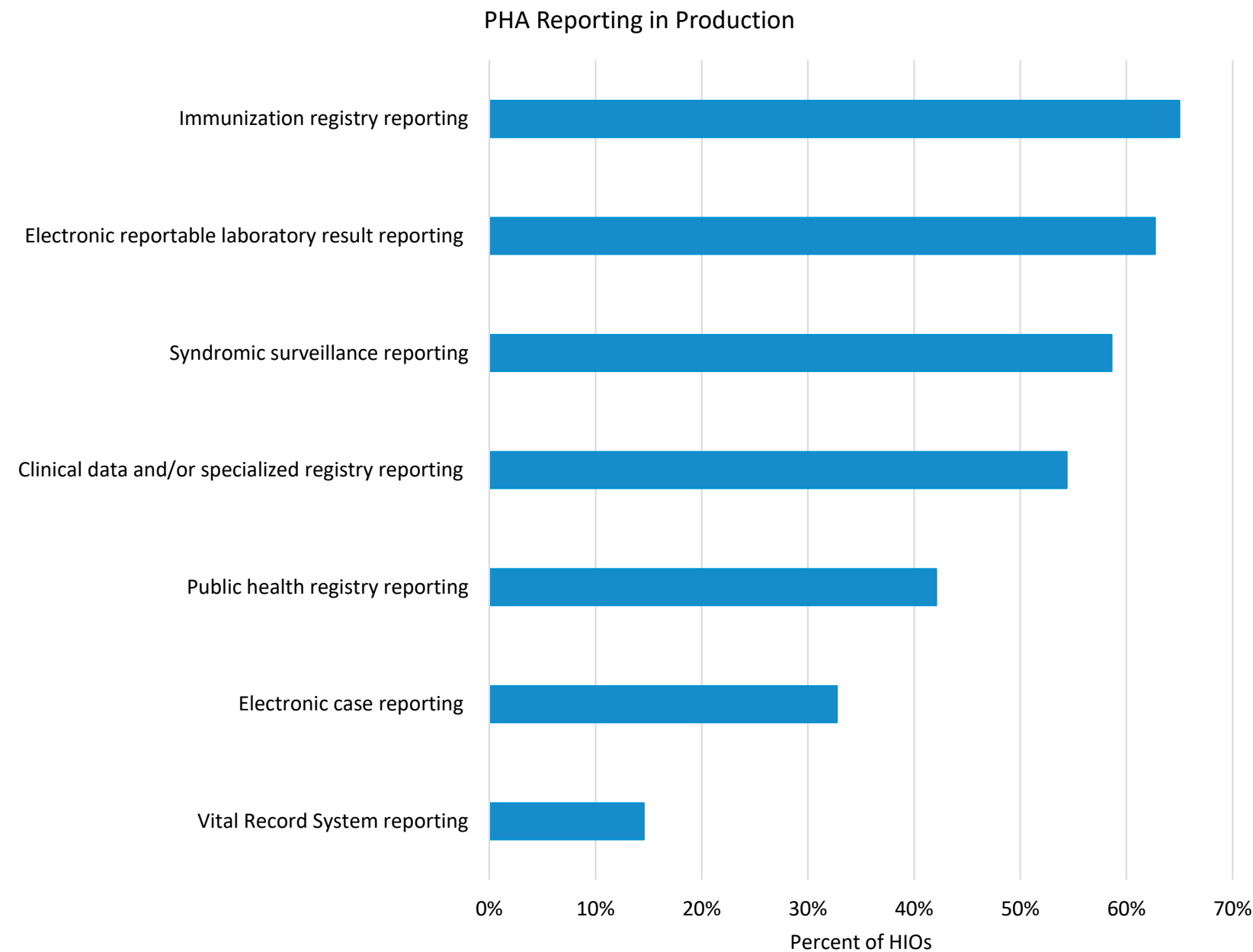


Approach to HIO-PHA Engagement

Of the 192 total connections between HIOs and PHAs, **46% had bi-directional exchange** (i.e., both the HIO and PHA provided and received data).

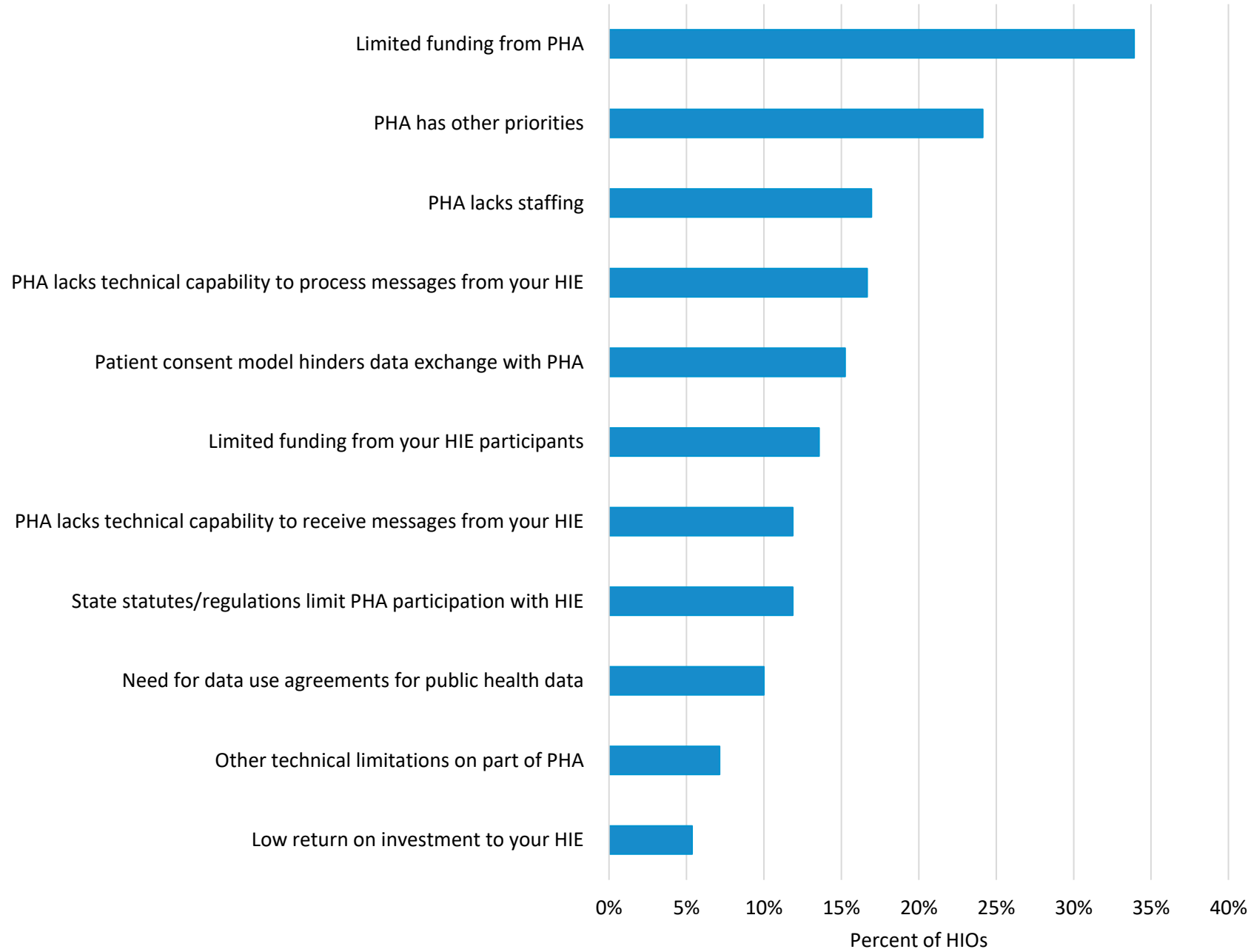


Public Health Data Reporting



Reporting data to immunization registries was the most prevalent type of PH reporting supported by HIOs (65% of HIOs) followed by lab reporting (63%) and syndromic surveillance reporting (59%).

Barriers to Public Health Reporting

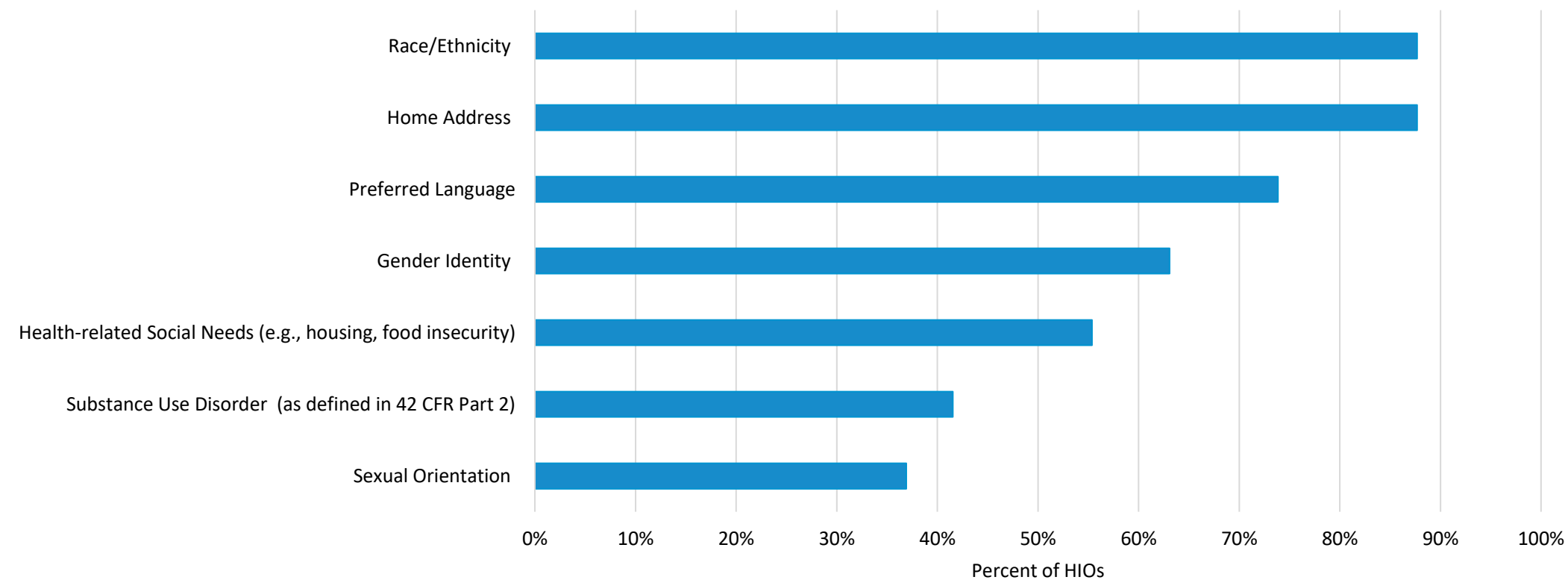


The top “major” barriers impeding HIO-PHA connectivity included PHA’s **limited funding** (cited by 34% of HIOs), PHA’s **focus on other priorities** (24%), PHA’s **lack of staffing** (17%), and **limited technical capabilities** (17%).

Key Findings: COVID-19 Specific Capabilities

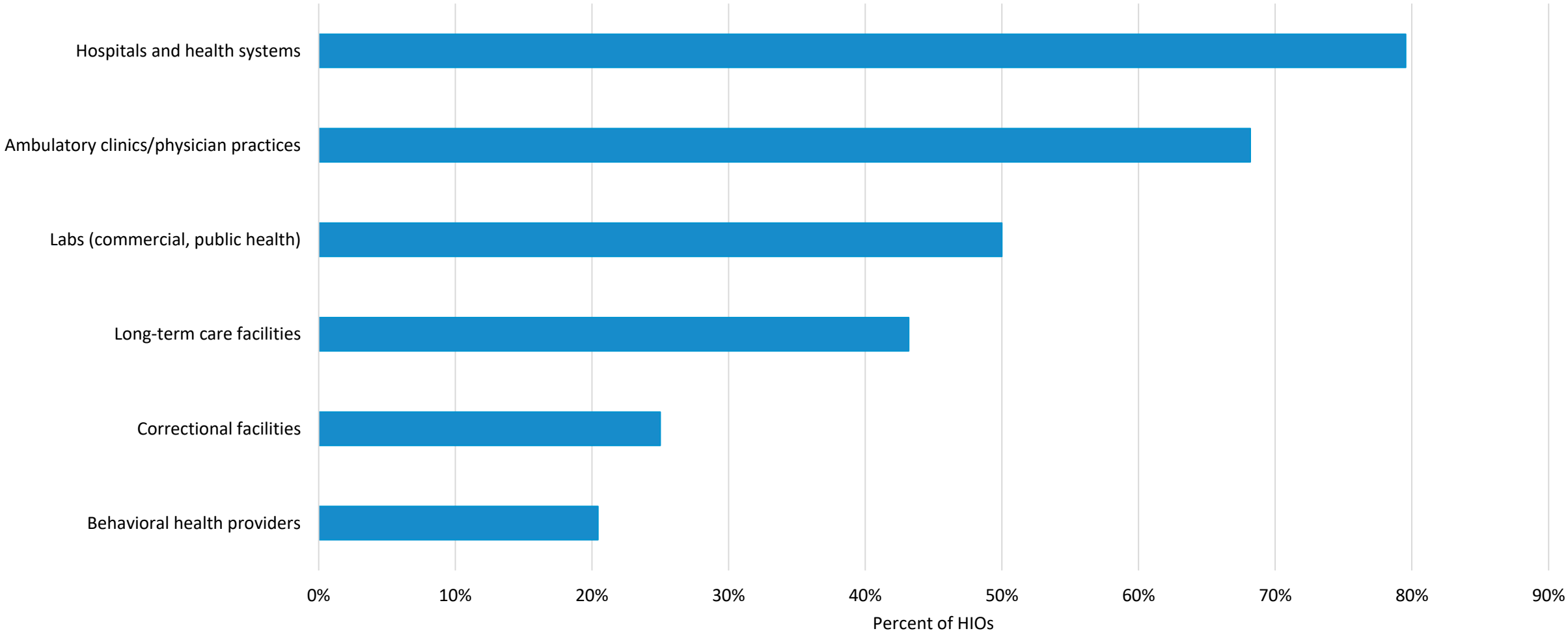
Public Health Data Completeness

- **61% of HIOs provide data to fill gaps in COVID-19 related data** while an additional 31% could do so.
- The majority of HIOs with PHA connectivity capture data that can be used to **help monitor health equity**, including home address (88%), race/ethnicity (88%), preferred language (74%), gender identity (63%), and health-related social needs (55%).



Expanded Participation since February 2020

Since the pandemic, **69% of HIOs connected to PHAs expanded provider participation**, particularly among hospitals and health systems (80%) and ambulatory care practices (68%).



Summary of Major Trends

- **HIOs are consolidating, providing a wide range of services, and likely diversifying revenue streams**
- **HIOs are very engaged in national network connectivity (>90%) and also in TEFCA (>50%)**
- **HIOs are well positioned to support public health infrastructure modernization efforts, particularly related to public health reporting and health equity.**

Financial Viability → Revenue Diversity

Mean Percent of Total Revenue

	Overall	Offer Analytics Services		Master Patient Index Size		Send data consistent with USCDI v1 (Routinely, Sometimes, or Rarely)		Sell/Provide your infrastructure to other HIEs	
		Yes	No	Above Median	Below Median	Yes	No	Yes	No
HITECH 90/10 funds (directly or indirectly)	5.78%	10.03%	1.46%	6.67%	4.94%	7.88%	2.46%	9.20%	4.68%
Other Medicaid match funding (MMIS, MES)	19.99%	25.19%	16.15%	23.49%	16.67%	15.45%	24.85%	14.10%	21.89%
Participating Organizations	42.86%	41.42%	48.19%	46.87%	39.04%	46.38%	39.54%	44.20%	42.43%
Federal Grants and Programs	4.25%	3.66%	4.84%	1.76%	6.62%	5.66%	2.08%	3.20%	4.59%
State Grants and Programs	13.24%	6.21%	18.04%	13.09%	13.40%	13.81%	11.23%	19.90%	11.10%
Other Sources	11.55%	13.61%	5.87%	8.31%	14.62%	7.15%	19.85%	9.50%	12.21%

UCSF

University of California
San Francisco



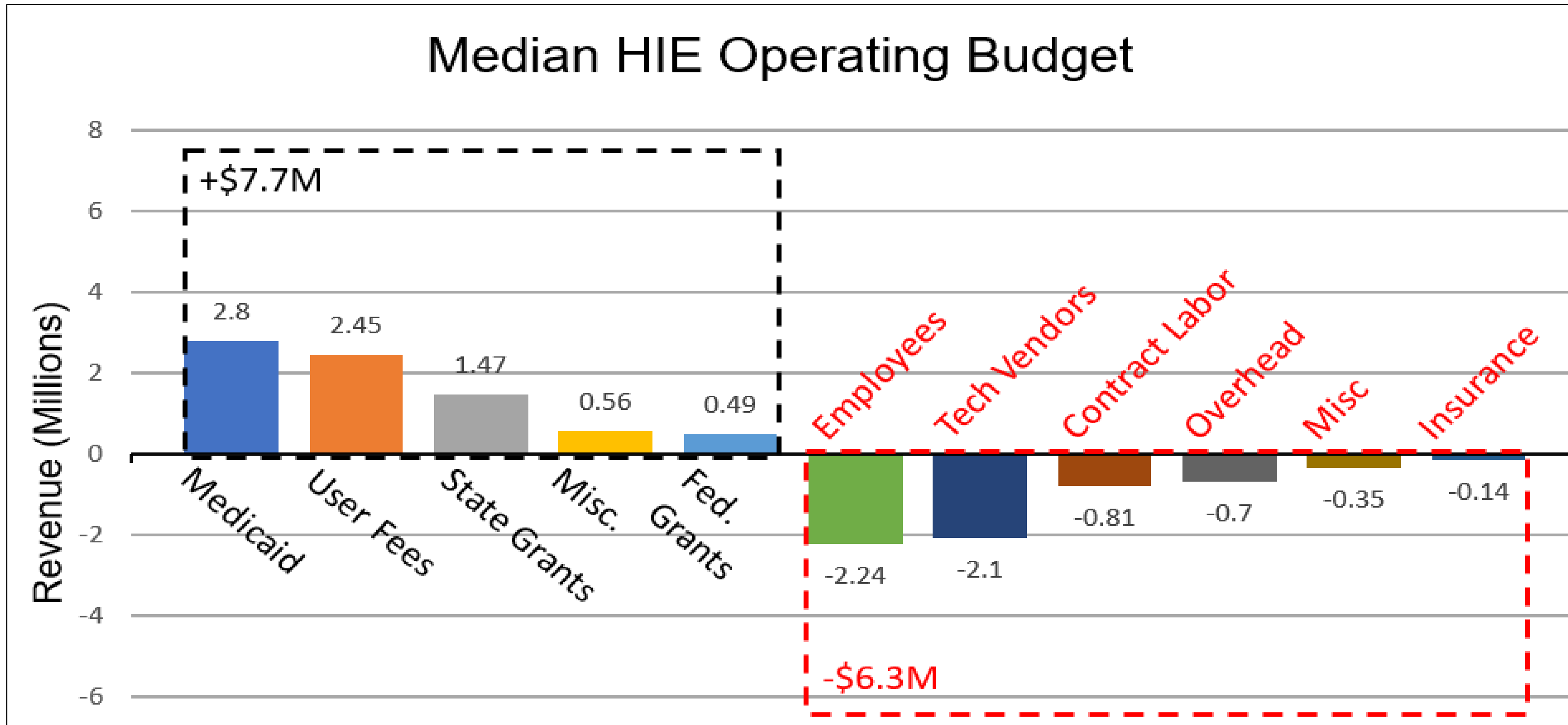
Civitas Supplement Results

Civitas Supplement – Connected To...

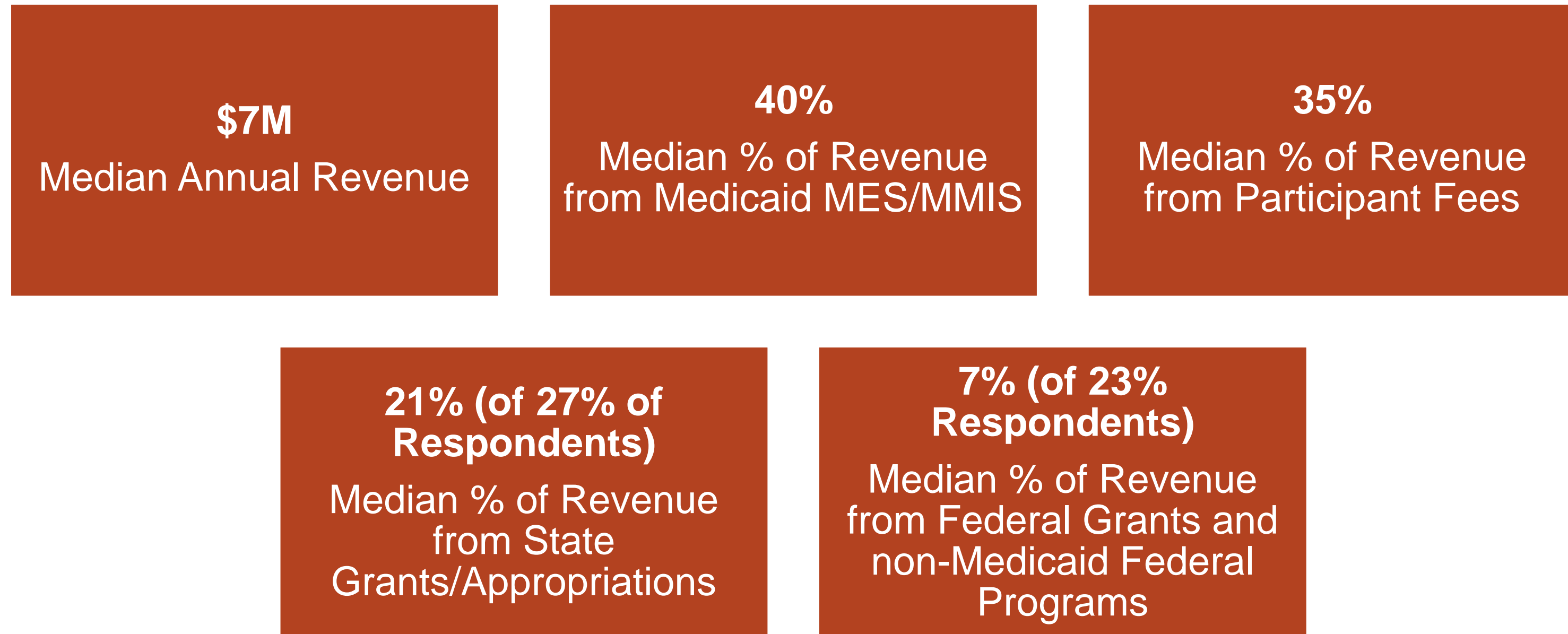
Percentage of Respondents with Bi-Directional Connectivity to...

An independent physician practice or group practice 92%	A state Medicaid agency 64%
A hospital/health system-owned physician practice 92%	An independent radiology or imaging center 57%
A private hospital (nonprofit or investor-owned) 89%	A local government health agency 56%
A CHC or FQHC 89%	A VA hospital 54%
An LTC provider (SNF, nursing home) 79%	A pharmacy 51%
An outpatient behavioral health provider 79%	Another federal agency (SSA, DOD, USDA) 33%
A public hospital (local government owned) 77%	A social service agency 30%
A private/commercial payer 77%	A tribal government or entity 23%
A private psychiatric, rehab, or LT acute care hospital 75%	A life insurance company 20%
A state public health agency 70%	FEMA or a state/local disaster relief agency 5%
An EMS service 64%	

Civitas Supplement – Operating Budgets



Civitas Supplement – Revenue Sources



Civitas Supplement – FTEs and Expenses

25 FTEs/32%
Median FTEs and
Employee Expenses

\$6.5M
Median Total Expenses

30%
Median Technology
Vendor Expenses

11.5%
Median Contract Labor
Expenses

10%
Median
Overhead/Administrative
Expenses

2%
Median Insurance
Expenses (?)

Civitas Supplement – Financial Health

- Among the 37 respondents who reported both annual revenue and expenses, **22 had an operating surplus (59%), 13 had an operating loss (35%), and two broke even (5%)**
- The largest annual operating surplus in absolute terms among these 37 respondents was \$4 million
- The largest annual operating margin in relative terms among these respondents was 77%, followed by 39%, 27%, 25%, and 24% (other margins were significantly lower)
- The largest annual operating loss in absolute terms among these respondents was \$1.1 million

Civitas Supplement – Most Common Technical Vendors



Civitas Supplement – Technical Standards

Percentage of Respondents using the following standards to query health information externally:

C-CDA Document Exchange **94%**

IHE XCA (Cross-Community Access) **77%**

HL-7 2.x ADT Message Exchange **77%**

IHE XDS (Cross-Enterprise Document Sharing) **73%**

NwHIN Specifications for Document Query and Retrieval **33%**

HL7 FHIR DSTU2 for Data Element Query **27%**

HL7 FHIR DSTU2 for Document Query **27%**

FHIR v. 4.0 for Document Query **21%**

IHE MDH (Mobile Access to Health Documents) **8%**

FHIR v. 4.0 for Data Element Query **4%**

Civitas Supplement - Other

- The total number of unique individual patients that each respondent reported having in their system ranged from 400,000 to 35 million (**median of approximately 4.4 million unique individual patients among all respondents**)
- **50% of respondents are considering or planning to participate in the Civitas Patient-Centered Data Home (PCDH) network; 30% are currently participating, and 20% are not actively considering participation**

Thank You!

SCAN

