CitiusTech

2020 CitiusTech Survey

Delivering on the Promise of Interoperability with FHIR ®

The 2020 CitiusTech Interoperability & FHIR Readiness Survey polled over 60 organizations across the healthcare landscape to derive key insights around interoperability challenges and FHIR adoption.

Survey hosted by

FierceHealthcare

FHIR: A Game Changer for Healthcare Interoperability

Interoperability has been part of the industry discourse for over a decade now. In recent times, however, new market dynamics like payer provider convergence, quality performance and consumer engagement have put the spotlight on interoperability, and the FHIR standard.

CitiusTech's 2020 'Delivering on the Promise of Interoperability with FHIR' survey hosted by Fierce Healthcare, received responses from 60+ senior IT decision makers of across health systems, payers, life sciences and medical technology companies to gauge their priorities around interoperability and FHIR.

The survey results show that FHIR is quickly gaining traction as a preferred standard across the healthcare industry. As adoption grows, identifying the right use cases, enhancing legacy workflows, data management, technology / vendor choices and finding the right set of skills are imperative to success.

Survey Indicators

68% | of large healthcare organizations surveyed (revenue greater than $1Bn) are using FHIR

52% | of respondents identified consumer engagement as a high priority use case for FHIR

57 % | would need external technology support – HIT vendors, third-party products or cloud service providers – to drive their FHIR strategy

Key Survey Insights

1   While HL7 is the dominant interoperability standard in use, FHIR has made significant progress

2   Data standardization, formats and real-time data exchange are key interoperability concerns

3   Consumer engagement and payer-provider convergence are high-priority FHIR use cases

4   Finding technology skills and getting leadership buy-in are key challenges for FHIR adoption

5   Organizations plan to invest in FHIR capabilities, but may also need to partner with HIT companies

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While HL7 is the dominant interoperability standard in use, FHIR has made significant progress
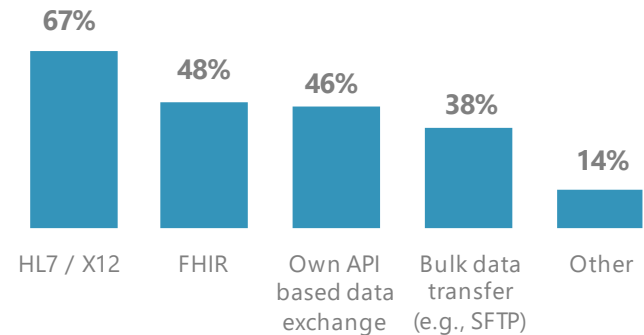
What we heard

- Organizations seem to be highly diversified in their choice of interoperability standards. However, HL7 (67%) is the predominant interoperability standard in use. We are also seeing a significant move towards FHIR adoption, with nearly half of the respondents claiming to have started adopting the standard.

- While FHIR adoption is not likely to be full-fledged within most organizations today, larger organizations (revenue greater than $1 Bn) seem to have taken a head start.
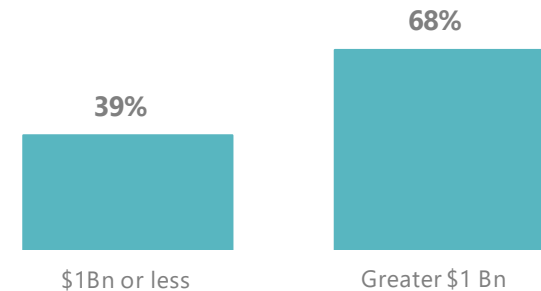
Our perspective

Most healthcare organizations continue to work with HL7, even as the industry moves quickly towards FHIR adoption. The adoption of FHIR by large health systems and leading payers may compel the broader industry to adopt a uniform standard of interoperability. This will help drive stable health information exchange and interoperability across the healthcare continuum.

Which interoperability standards does your organization use?

All companies ($B)

HL7 / X12	FHIR	Own API based data exchange	Bulk data transfer (e.g., SFTP)	Other
67%	48%	46%	38%	14%

FHIR adoption –by size ($B)

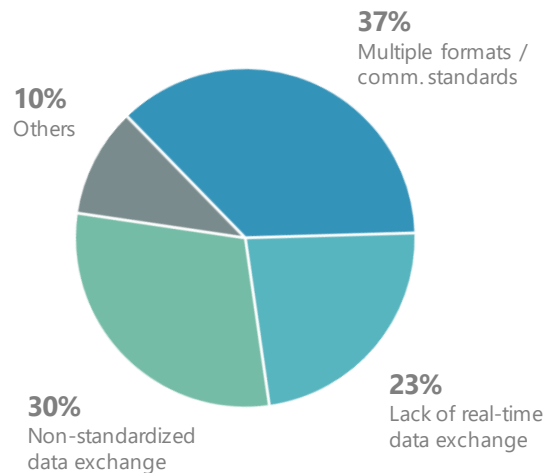| $1Bn or less	Greater $1 Bn
39%	68%

Data standardization, formats and real-time data exchange are key interoperability concerns

What is your biggest interoperability challenge?

All companies

37%
Multiple formats /
comm. standards

10%
Others

30%
Non-standardized
data exchange

23%
Lack of real-time
data exchange

What we heard

- Interoperability challenges mentioned by respondents primarily fell under three categories:
  - Multiple formats and communication standards (37%)
  - Lack of data standardization (30%)
  - Limitations around real-time data exchange (23%)

- Respondents also highlighted many other challenges around people, process, consent & privacy regulations, data integrity, data formats, data storage and automation.

Our perspective

With interoperability standards evolving rapidly over the last 4-5 years, healthcare organizations are still trying to address legacy data management issues. The journey to FHIR adoption would need organizations to address existing data standardization, integration and accessibility challenges with much greater focus.

3

Consumer engagement and payer-provider convergence are high-priority FHIR use cases
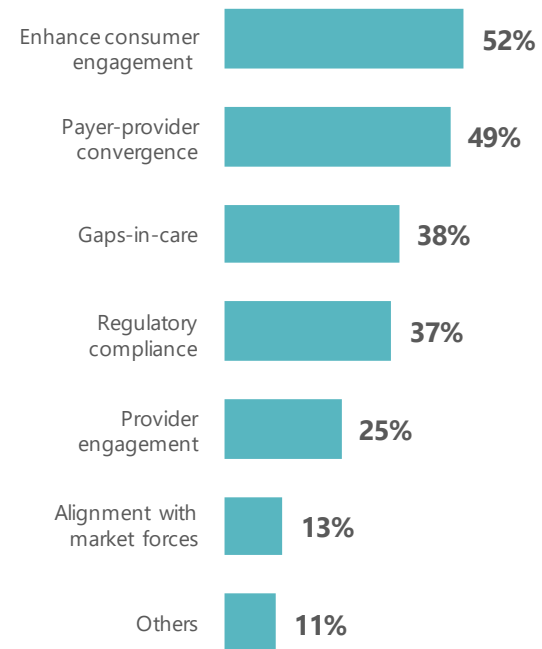
What we heard

- In terms of use-cases, enhancing consumer engagement (52%) and improving payer-provider convergence (49%) were stated as high-priority by a significant number of respondents.

- Other use cases like gaps-in-care (38%) and regulatory compliance (37%) were also important to a slightly smaller set of respondents. Provider engagement (25%) was an important FHIR use case for payer organizations.

Our perspective

The flexibility of data exchange using industry-standard APIs and seamless access to 'resources' from multiple channels makes FHIR a strong enabler of engagement and collaboration-based use cases. As more healthcare organizations adopt FHIR, they will be better placed to achieve seamless data exchange across enterprise applications and consumer devices, paving the way for enhanced consumer engagement and payer-provider collaboration.

What are your priority FHIR use cases?

Use cases by priority – All companies

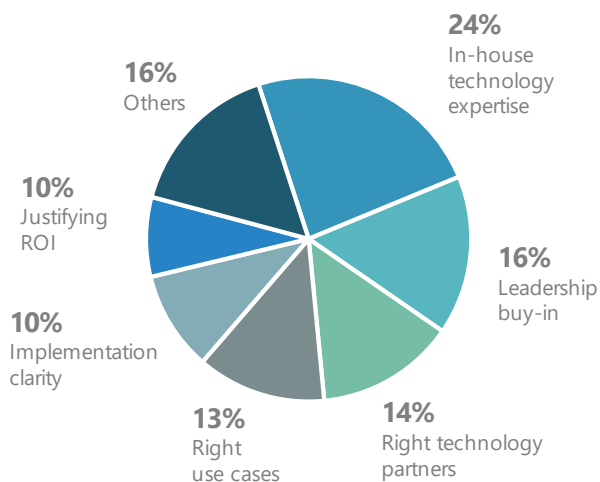| Use case	Percentage
Enhance consumer engagement	52%
Payer-provider convergence	49%
Gaps-in-care	38%
Regulatory compliance	37%
Provider engagement	25%
Alignment with market forces	13%
Others	11%

Finding technology skills and getting leadership buy-in are key challenges for FHIR adoption

What is your biggest challenge in adopting FHIR?

Challenges around FHIR adoption

24%
In-house technology expertise

16%
Others

10%
Justifying ROI

10%
Implementation clarity

13%
Right use cases

14%
Right technology partners

16%
Leadership buy-in

What we heard

- Respondents identified multiple challenges around shifting to an FHIR-based interoperability platform. Availability of in-house skills (24%) and leadership buy-in (16%) remained key issues.

- Finding the right technology partners for FHIR implementation (14%), followed by identifying important FHIR uses cases (13%) are impeding organizations from achieving complete FHIR adoption.

Our perspective

Organizations recognize that there will be issues around skill availability and leadership buy-in, especially around sharing patient data. However, given the potential of FHIR in driving advanced analytics, improving patient outcomes and lowering the cost of care, the long-term benefits far outweigh the concerns.

Organizations plan to invest in FHIR capabilities, but may also need to partner with HIT companies

What we heard

- Over a third of respondents (37%) believe that they will be able to build capabilities in-house to meet their FHIR implementation needs.

- 36% of respondents believed that they would need to either partner with HIT service companies (22%) or leverage third-party products (14%). Also, 21% of respondents felt that cloud service providers would be required in FHIR implementations.
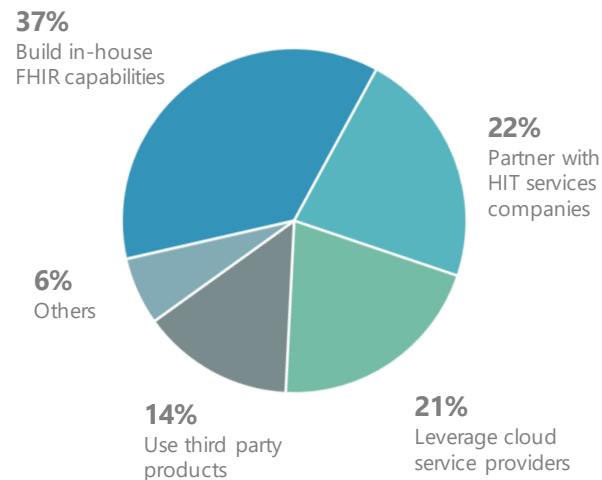
Our perspective

With the interoperability landscape evolving quickly, building and scaling specialized FHIR certified teams would involve significant time and resources in identifying, training, retaining and upskilling.

While organizations are likely to have a core team of FHIR experts in-house, partnering with third-party service providers and product companies may be a more practical approach for scalability and faster go-to-market.

How do you plan to achieve your FHIR business needs?

All companies

37%
Build in-house
FHIR capabilities

22%
Partner with
HIT services
companies

6%
Others

14%
Use third party
products

21%
Leverage cloud
service providers

"The Payer community has rapidly become engrossed in FHIR as the primary pathway toward achieving the promise of value-based care. The contributions of the Da Vinci, Argonaut and Carin Accelerator programs working with the HL7 FHIR Community has greatly expanded the capabilities of FHIR not only to support Payers, but also to facilitate research, public health, and other critical use cases, driving the world closer toward interoperability."

Wayne Kubick
Chief Technology Officer
HL7 International

Conclusion: Delivering on the Promise of Interoperability with FHIR

The findings of the 2020 CitiusTech Interoperability & FHIR Readiness Survey, in association with Fierce Healthcare, show that there is a strong industry-wide push towards the adoption of FHIR.

At the same time, healthcare organizations have multiple concerns around navigating away from their existing processes and standards towards a new FHIR-driven ecosystem. Many of these concerns have to do with transforming legacy workflows, managing their data environment and finding the right skills to implement an FHIR-driven interoperability strategy.

As organizations adopt FHIR, they will look to address primary use cases around consumer engagement and payer-provider convergence. As these initiatives grow within organizations, organizations are looking at growing their interoperability teams. At the same time, they will need to seek specialized technology partners, out-of-the-box solutions and cloud services to accelerate implementation and lower operational costs.

With more than 500 HL7 and FHIR certified professionals, CitiusTech helps healthcare organization design and implement their FHIR strategy using a structured implementation roadmap and focused offerings:

CitiusTech FHIR Maturity Model
- Assess enterprise readiness for FHIR
- Identification & prioritization of transaction workflows
- System enhancement and enablement for FHIR implementation

FHIR Interop Services
- Interface development and management for seamless integration with external data sources
- Reusable FHIR libraries and data model mapping with FHIR resources
- Pre-defined mapping, transformation and reconciliation to OMOP, UDMH and industry standard data models

CitiusTech Data Management Proficiency

The CitiusTech Data Management Proficiency designs and supports architectures, policies, practices and roadmaps, to address the information needs of a healthcare enterprise.

CitiusTech Data Management Highlights

- Strong consulting capabilities to address lifecycle needs – data capture, quality, management, transmission and streaming analytics

- Industry standard data adapters (HL7, FHIR, CCD, QRDA, etc.), utilities, best practice and KPIs

- A comprehensive suite of managed services, including certified teams, technology expertise and best-in-class frameworks / methodologies

500+	70+	4000+
FHIR / HL7 certified professionals	Integration projects executed	interfaces developed

Recent Work

Standards-based API Development
Leveraged FHIR based on RESTful protocols to design and develop an API that enabled seamless data exchange across standard formats, for a leading provider of medical diagnostics products

EPIC Integration Using FHIR
Developed APIs to fetch real-time data via EPIC Web Services to foresee patient outcomes in the trauma unit and improve the quality of trauma care, for a leading healthcare analytics company

Streaming Data for Enterprise Systems
Developed an extensible FHIR to CDA converter for EHR and practice management systems, to enable real-time access to patient data

CitiusTech: Accelerating Innovation in Healthcare

With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence, across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), AI/ML (predictive analytics, AI modeling & operationalization) and digital engagement (mobile, IoT).

CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, healthcare technology platforms, proficiencies and accelerators. With cutting-edge technology expertise, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

To know more about CitiusTech, visit
www.citiustech.com

4,000+
healthcare technology professionals worldwide

800+
data management professionals

500+
HL7 & FHIR certified professionals

300+
data science & consulting professionals

CitiusTech Key Contacts

Swanand P.
Sr. Vice President
Data Management
CitiusTech

Swanand has over 20 years of experience in information technology, regulatory reporting requirements, healthcare standards and frameworks including HL7.

At CitiusTech, Swanand leads the Data Management proficiency and has played a role of Senior Architect in the development of BI-Clinical – CitiusTech's healthcare analytics platform.

Prior to CitiusTech, Swanand worked for leading IT companies, including EPIC corporation. He holds a degree in Information Technology.

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Abhay Singhal
Sr. Vice President
Provider Market
CitiusTech

Abhay has over 20 years of experience in healthcare professional services, population health, ACO, emerging technologies (Big Data, Cloud, Mobile Enablement), integration (EMR, PMS, Claims, Labs, Orders, etc.), revenue cycle, analytics, supply chain, enterprise architecture.

At CitiusTech, Abhay heads Account Management, Sales and Partner Channels for the Provider market.

Prior to CitiusTech, Abhay has worked with several Healthcare Professional Services, Population Health and Accountable Care Organizations in leadership roles.

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Shyam Manoj
Vice President
Health Plans
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Shyam has over 20 years of professional experience in US Healthcare industry across payers, providers, pharma / life sciences and healthcare information technology companies.

At CitiusTech, Shyam heads Account Management, Consulting, Sales and Partner Channels for Health Plans market.

Prior to CitiusTech, Shyam worked for a decade with Infosys Technologies Ltd. He holds a Bachelors degree in Biomedical Engineering.

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