

EXECUTIVE PERSPECTIVE – HEALTHCARE INTEROPERABILITY

Direct vs. FHIR Is the Wrong Question: A Hybrid Interoperability Strategy

For healthcare interoperability decision-makers.

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Why interoperability is hybrid — and how to match each exchange method to the workflow it serves.

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Executive Summary

THE CORE IDEA

The market keeps framing interoperability as a race toward one standard — but different workflows create different requirements, so Direct, FHIR, TEFCA/QHINs, and EHR-native exchange continue to coexist.

- Direct Secure Messaging is built for trusted, push-based delivery to a known recipient: referrals, transitions of care, and clinical documents.
- FHIR is built for structured, API-based access to discrete data: patient access, analytics, automation, and application integration.
- The two solve different problems. Many enterprises need both — sometimes within the same end-to-end workflow.
- A durable strategy starts with the workflow, not the standard — and measures the outcome, not just the connection.

Any discussion that suggests healthcare interoperability is moving toward a single standard misses the operational reality of modern exchange: different workflows require different interoperability models.

FHIR adoption continues to expand. TEFCA and QHINs are changing national exchange patterns. EHR-native networks are supporting a growing range of workflows. At the same time, health systems, EHR teams, and technology providers depend on trusted ways to send referrals, discharge summaries, care transition documents, and other sensitive information to known recipients.

Organizations are being asked to modernize data access, participate in national exchange frameworks, reduce dependence on fax, connect a growing ecosystem of applications, and preserve the clinical and administrative workflows that keep information moving.

The market is not moving toward a single standard. Different workflows create different interoperability requirements. That's why Direct, FHIR, TEFCA, QHINs, EHR-native exchange, and other interoperability approaches continue to coexist. The real question isn't which standard wins. It's how they work together.

A durable interoperability strategy begins by understanding the workflow: the participants, systems, trust model, direction of exchange, and what needs to happen after information arrives. From there, it aligns structured API access, trusted push-based exchange, and network-mediated exchange with the operational workflows each supports.

Direct Secure Messaging and FHIR are central to this discussion. They can overlap in some scenarios, but they solve different problems. Understanding those differences is essential to building an architecture that supports the full range of healthcare data exchange.

KEY INSIGHT

A durable interoperability strategy does not choose a winning standard. It assigns the right exchange model to each workflow.

MARKET MISCONCEPTIONS

Four Assumptions Worth Retiring

What the industry conversation gets wrong about Direct and FHIR

ASSUMPTION <i>"The more FHIR expands, the less organizations will need Direct or other exchange models."</i>	OPERATIONAL REALITY The market is not moving toward a single standard. Different workflows create different interoperability requirements — that's why Direct, FHIR, TEFCA, QHINs, and EHR-native exchange continue to coexist.
ASSUMPTION <i>"More APIs should naturally mean fewer exchange methods."</i>	OPERATIONAL REALITY New interoperability methods are usually introduced because existing ones do not solve a particular problem well enough — not to displace what already works.
ASSUMPTION <i>"Regulatory change signals a transition from Direct to FHIR."</i>	OPERATIONAL REALITY HTI-5 would adjust certification criteria while the Direct Project transport standard remains in regulation. These are meaningful policy signals for FHIR-based certification — they don't speak to workflows or suggest a transition away from Direct.
ASSUMPTION <i>"If an organization has FHIR, it no longer needs Direct."</i>	OPERATIONAL REALITY In many healthcare environments, both are needed — not because Direct replaces FHIR, but because they support different exchange patterns and operational needs.

Revisiting Where Direct and FHIR Fit

As interoperability architectures become more layered, the more important question is where Direct Secure Messaging and FHIR each belong. These differences shape product, integration, and workflow design.

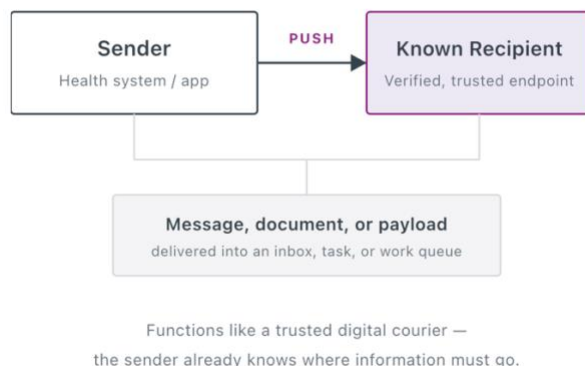
Direct Secure Messaging provides trusted, push-based exchange to a known recipient. FHIR provides structured, API access to healthcare data across systems, applications, and services.

Direct Secure Messaging	FHIR
Sends information securely to a known recipient	Makes structured healthcare data available through APIs
Supports push-based exchange	Supports query, retrieval, application integration, and data services
Carries messages, documents, and structured payloads	Organizes information into standardized, reusable resources
Operates through trusted endpoints and certificate-based exchange	Operates through API authorization, identity, and security frameworks
Critical to many referral, transition-of-care, and clinical document workflows	Well-suited to patient access, applications, analytics, and real-time data use

Direct delivers a message, document, or payload securely to a known, verified recipient. FHIR allows an authorized application or system to request information, retrieve it in a standardized format, and use it in another process.

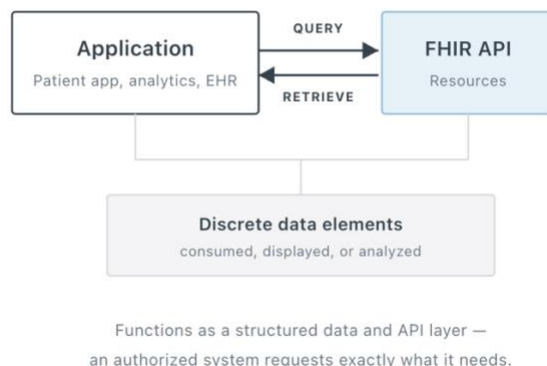
DIRECT SECURE MESSAGING

Trusted, push-based exchange



FHIR

Structured, API-based access



Neither method solves the other's problem — mature architectures rely on both.

The distinction is not merely technical. A referral packet, discharge summary, patient-facing application, analytics pipeline, and real-time clinical query do not have identical requirements. They involve different participants, different data, different trust relationships, and different actions after the exchange. Trying to force all of them through a single method can create complexity and gaps.

Direct and FHIR perform different jobs. Neither technology is trying to solve the other's problem. That's precisely why mature interoperability environments increasingly rely on both.

KEY INSIGHT

Direct is optimized for trusted delivery to a known recipient. FHIR is optimized for structured access and reuse. A mature architecture accounts for both.

Why Healthcare Interoperability Keeps Getting More Layered

One of the biggest misconceptions in healthcare interoperability is that more APIs should naturally mean fewer exchange methods. In practice, that is rarely how enterprise architectures evolve. As organizations broaden their use of FHIR APIs, they are also investing in Direct Secure Messaging, TEFCA participation, QHIN connectivity, health information exchanges, EHR-native networks, and embedded workflow tools. The answer begins with the diversity of healthcare itself.

New interoperability methods are usually introduced because existing ones do not solve a particular problem well enough. Direct itself emerged because fax, mail, and courier-based exchange were too slow, manual, and difficult to secure at scale. FHIR, TEFCA, QHINs, and other approaches follow the same pattern: each adds capabilities for problems earlier methods were not designed to solve.

A patient requesting access to structured health information has different requirements than a referral coordinator sending documentation to another provider. A national record query is different than a time-sensitive message to a known recipient. Public health reporting, analytics, care coordination, prior authorization, and provider communication each introduce their own combinations of data, participants, permissions, and workflows. Interoperability is layered because the work and needs are layered.

That does not mean the industry should accept unnecessary fragmentation. Better orchestration, common trust frameworks, reusable APIs, embedded exchange, and more consistent standards can reduce complexity for users and implementers.

But simplifying the experience is not the same as asserting the underlying requirements are interchangeable.

Policy and security developments reinforce the need for precision. HTI-5 remains a proposed ASTP/ONC rule. If finalized as proposed, it would remove certain Direct-related certification criteria while retaining the underlying Direct Project transport standard in regulation. That distinguishes a shift in certification policy from the transport itself.

ONC has said the transport remains widely utilized and continues to support interoperability. ONC also describes the proposal as establishing a foundation for future FHIR-based API requirements. These are meaningful policy signals that advance FHIR-based certification, but they don't speak to workflows or suggest a transition from Direct to FHIR.

FHIR underpins specific certified health IT capabilities and interoperability requirements, but it is not a standard that works in all situations or workflows.

The goal is not to eliminate exchange methods or find a single "best" standard, but rather to optimize workflows and secure data while reducing friction.

POLICY NOTE

HTI-5 proposes changes to certain Direct-related certification criteria while retaining the underlying Direct transport standard. Separately, the FY2027 CMS inpatient rule finalizes updated FHIR implementation guides for specific payer-provider workflows. Together, these developments advance FHIR-based certification and implementation without suggesting that every healthcare workflow is moving to a single exchange method.

Where Direct Secure Messaging Fits

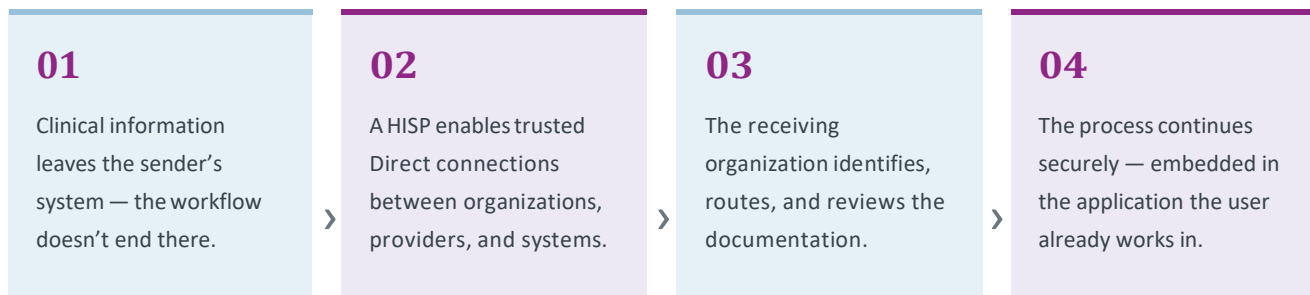
Direct Secure Messaging is purpose-built for trusted push-based exchange. It is particularly well suited when the sender knows the recipient and needs to deliver sensitive healthcare information securely, reliably, and within an established trust framework. That includes workflows such as:

- Referrals
- Transitions of care
- Discharge summaries and care documents
- Clinical document exchange
- Provider-to-provider communication
- Known-recipient document delivery
- Exchange between organizations that do not share an EHR or common API environment
- Secure delivery embedded within portals, CRMs, contact centers, and EHR-adjacent applications

The technical objective is typically to transmit a document or payload. The operational objective is usually more important: get the right information to the right organization — securely — in a form and channel that allows someone to act.

Consider a referral. The workflow does not end when clinical information leaves the sender's system. The documentation must reach the appropriate recipient, and the receiving organization must be able to identify it, route it, review it, and continue the process securely. Direct is particularly effective in this type of known-recipient workflow because trusted delivery is part of the design. It also provides reach across organizational and technology boundaries — healthcare participants do not always share the same EHR ecosystem, national network, or API

connection. Direct offers a standards-based way to exchange information without requiring a custom point-to-point integration for every messaging relationship.



WORKFLOW IMPLICATION

Exchange is not complete when information leaves the sender. It is complete when the recipient can identify it, route it, and act on it.

A Health Information Service Provider, or HISP, supports that exchange by enabling trusted Direct connections between healthcare organizations, providers, applications, and systems. Direct becomes even more valuable when it is embedded into the applications and workflows people already use. In that model, the user does not have to treat secure exchange as a separate workflow. It becomes an enabling layer within an existing workflow.

Direct is strongest in referrals, transitions of care, clinical document delivery, and other low-friction push workflows where there is an identified recipient.

Where FHIR APIs Fit

FHIR, or Fast Healthcare Interoperability Resources, is designed to make healthcare data easier to structure, access, exchange, and reuse through APIs. It is typically the better fit when an application or system needs standardized access to discrete data. Common FHIR use cases include:

- Patient access
- SMART on FHIR applications
- Real-time or near-real-time queries
- Analytics and reporting, and digital health applications
- Structured system-to-system data exchange and EHR integration
- Automation using specific clinical or administrative data elements

Where Direct typically delivers a message, document, or payload, FHIR exposes structured resources. Those resources can represent patients, medications, observations, conditions, appointments, diagnostic reports, and many other healthcare data concepts. This makes FHIR valuable when the receiving application needs to process, display, analyze,

or act on individual data elements. A patient-facing application might retrieve medication data through a FHIR API. An analytics platform might consume standardized observations. A clinical application might request a specific data point from an EHR instead of ingesting an entire document.

FHIR makes those interactions more consistent and programmable; what it does not do by itself is complete the surrounding workflow. Organizations must still address authorization, identity, trust, data quality, governance, endpoint access, implementation differences, documentation requirements, exceptions, status communication, and the action that follows the exchange.

A FHIR endpoint can make information available. It does not guarantee that the information reaches the right operational queue, closes a referral, or results in action. That distinction is central to why many organizations run both structured API access and trusted message delivery side by side.

KEY INSIGHT

FHIR can make data accessible. Workflow design determines whether that data becomes action.

If You Have FHIR, Do You Still Need Direct?

It's one of the most common questions we hear. As organizations expand their use of FHIR APIs, it's natural to ask whether Direct Secure Messaging becomes less important. In many healthcare environments, the answer is still yes: both are needed — not because Direct replaces FHIR, but because they support different exchange patterns and operational needs.

The difference becomes clearer in practice

STRONG DIRECT USE CASE

A care team sending a referral package to a known provider is a strong Direct use case.

STRONG FHIR USE CASE

An analytics application requesting discrete clinical data is a strong FHIR use case.

STRONG DIRECT USE CASE

A hospital delivering a discharge summary to a known outside organization is a strong Direct use case.

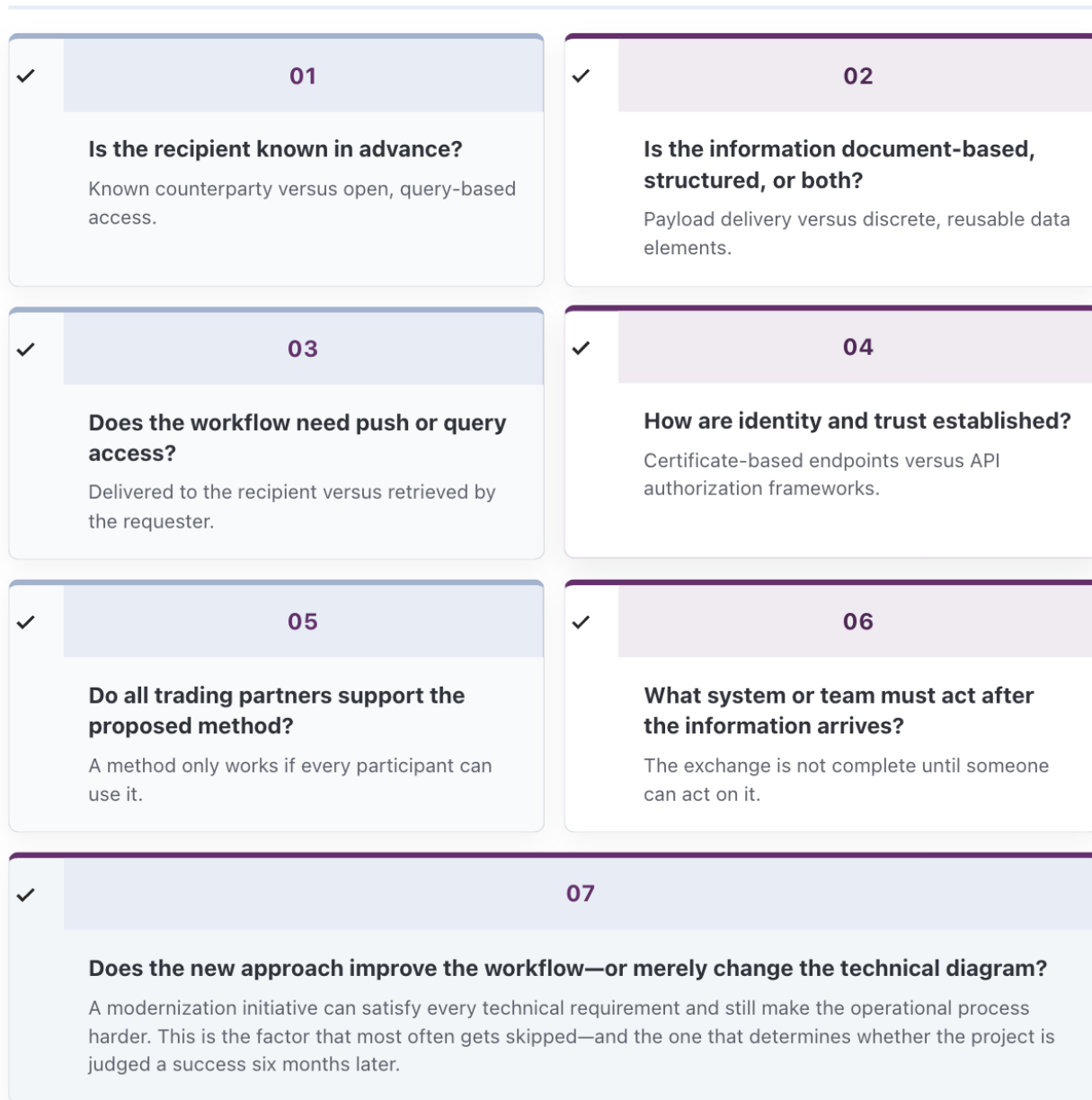
COMBINED, SAME WORKFLOW

A healthcare software provider may use FHIR to retrieve structured information and Direct to deliver documents or notifications within the same end-to-end workflow.

The better question is not whether an organization has FHIR. It's whether FHIR alone satisfies every workflow the organization needs to support. Interoperability leaders should evaluate each scenario against several factors:

WORKFLOW EVALUATION

The Seven-Factor Evaluation Framework



KEY INSIGHT

Successful interoperability strategies align technologies with workflow requirements instead of searching for a single winning standard.

Where TEFCA and QHINs Fit

TEFCA and QHINs add a broader network-mediated option to the interoperability architecture. Most interoperability leaders already understand TEFCA's goal of creating a common framework for network-to-network health information exchange. The more practical question is how that option changes the mix of existing exchange capabilities.

Like Direct and FHIR, TEFCA is not another competitor in the interoperability debate. It is another exchange model with its own strengths, constraints, and workflow fit.

TEFCA can create value when an organization needs broader network reach rather than delivery to one predetermined recipient. QHIN participation can provide a path for exchange across connected networks. That can change the routing model for some workflows. It does not make every point-to-point or API-based method unnecessary.

The Interoperability Stack is Layered, Not Linear

Six digital exchange models operate concurrently across a mature architecture, each matched to the workflow it serves best.

Direct Secure Messaging Trusted, push-based delivery to a known recipient	PUSH
FHIR APIs Structured, standardized access to discrete healthcare data	QUERY
TEFCA / QHINs Broader, network-mediated exchange across connected networks	NETWORK
EHR-Native Networks Exchange within connected vendor ecosystems	ECOSYSTEM
HIEs and Regional Networks Regional, community, or use-case-specific exchange	REGIONAL
Workflow Platforms Coordinate the operational work around exchanged information	ORCHESTRATION

Organizations may use several of these capabilities within the same enterprise, and sometimes within the same end-to-end process. Fax remains part of the operational reality in some care transitions, but it functions as a legacy fallback rather than a preferred modern exchange model.

Network-based exchange and EHR-native interoperability can handle some retrieval-oriented and network-mediated exchange. Direct is the better fit for discrete, known-recipient push workflows such as referrals, transitions of care,

and clinical document delivery. Most enterprises will operate several of these models at once, matching each to the workflows it serves best.

KEY INSIGHT

The architecture challenge is not choosing one path for everything — or connecting every path. It is matching each exchange model to the workflow it serves best without adding operational burden.

What “FHIR over Direct” Tells Us

FHIR over Direct is a useful example of the market moving beyond “either/or” thinking. At a high level, it uses Direct Secure Messaging as the trusted transport mechanism for FHIR-based content — resources, bundles, payloads, or references. FHIR contributes a structured data model; Direct contributes secure push delivery and an established trust framework.

The value is not that one standard absorbs the other. It is that the combination can address a workflow neither method necessarily solves as efficiently on its own — useful when an organization wants to exchange structured content but cannot assume every participant shares a common API connection, network relationship, or implementation environment.

It also highlights an important reality: interoperability problems are not limited to data representation. Organizations must also determine:

- Who is sending the information?
- Who is authorized to receive it?
- Is the endpoint trusted?
- Can the recipient process the payload?
- Will the information enter the correct workflow?
- Can the exchange scale across many organizations?

FHIR over Direct is not the answer for every use case. It is one example of how structured data and trusted delivery can be combined within a hybrid architecture — DirectTrust publicly uses the term and describes it as a way to send FHIR content securely through Direct messaging.

The larger lesson is more important than the specific implementation pattern.

KEY INSIGHT

FHIR over Direct demonstrates a larger principle: structured data and trusted delivery can be combined when a workflow requires both.

When Should Healthcare Organizations Use Direct vs. FHIR?

The best interoperability decisions start with the workflow.

Workflow Need	Likely Fit
Send a message or document securely to a known recipient	Direct Secure Messaging
Retrieve structured healthcare data through an API	FHIR
Support patient-facing applications	FHIR, often SMART on FHIR
Deliver referral documentation to another provider or organization	Direct, or Direct embedded within a referral workflow
Exchange clinical information during a transition of care	Direct, EHR-native exchange, or network exchange, depending on the participants and workflow
Participate in broader national exchange	TEFCA/QHIN, where the exchange purpose and participants fit
Support analytics or automation using discrete data	FHIR
Deliver clinical documentation into an inbox or work queue	Direct
Combine structured content with trusted push delivery	Direct and FHIR, including FHIR over Direct
Modernize data access while preserving operational workflows	Hybrid interoperability strategy

This analysis should happen at the workflow level, not only at the enterprise architecture level. An organization may reach different answers for patient access, referral management, clinical document exchange, public health reporting, and analytics. That is not inconsistency; it is recognizing the strengths and importance of different, complementary solutions.

Building a Hybrid Interoperability Strategy

A hybrid interoperability strategy is not simply a collection of standards and connections. It is a deliberate model for assigning each exchange method to the workflows it supports best, while reducing the complexity exposed to users.

01**Start with the workflow**

Map the people, systems, data, trust requirements, and actions involved before selecting the exchange method. A patient access workflow should not be designed like a referral workflow. The business and clinical requirements should drive the technical choice.

02**Use Direct for trusted push-based exchange**

Direct is often the strongest option when sensitive information must reach a known recipient and enter a message, document, task, or work-queue process — referrals, transitions of care, clinical communication, and exchange across organizations that do not share the same technology ecosystem.

03**Use FHIR for structured data access and reuse**

FHIR is often the appropriate choice when an application or system needs standardized access to discrete healthcare data — patient applications, analytics, automation, digital health tools, clinical decision support, and modern EHR integration.

04**Use TEFCA and QHINs where network-mediated exchange fits**

National exchange can create value where broader reach is needed and the participants, exchange purpose, permissions, and operational process align with the network model. Evaluate TEFCA participation alongside existing capabilities rather than as a standalone replacement decision.

05**Treat trust and identity as architecture requirements**

Healthcare interoperability is not simply the movement of information. It requires confidence in the sender, recipient, permissions, endpoint, and exchange path. Build identity, authorization, certificate trust, auditability, and policy alignment into the architecture from the beginning.

06**Embed exchange into the applications people already use**

The best interoperability capability is often the one users do not need to think about. Secure exchange can operate inside portals, EHR-adjacent systems, referral platforms, CRMs, and contact centers, so the technical rail becomes part of the workflow rather than another destination to manage.

07**Measure the outcome, not only the connection**

Technical connectivity is the starting point. Useful measures include referral completion time, manual routing effort, rework and exception rates, speed of care transition documentation, dependence on fax, patient access performance, support burden, and adoption by clinical and operational teams.

For healthcare technology providers and implementers, this is particularly important. Customers do not need more independent tools. They need exchange capabilities that work within the experiences they already use. The purpose of interoperability is not simply to make information movable; it is to make that information useful.

KEY INSIGHT

The strongest interoperability capability is the one that fits the workflow, operates inside the user experience, and improves the outcome.

The Bottom Line

Healthcare interoperability is not a single-rail problem. It is a layered set of capabilities for making sensitive information accessible, deliverable, trusted, and useful across different clinical, administrative, and technical workflows.

FHIR enables structured API access, modern applications, analytics, and reusable data services. Direct Secure Messaging provides trusted push-based exchange for referrals, transitions of care, clinical documents, and known-recipient workflows. TECCA, QHINs, EHR networks, HIEs, and workflow platforms add further reach and capability.

No interoperability rail wins everywhere.

Healthcare organizations often need Direct for trusted push-based workflows and FHIR for structured API access, sometimes within the very same end-to-end process. A hybrid interoperability strategy gives healthcare organizations and technology providers a practical way to use each method where it performs best, so exchanged information is safe, timely, and valuable.

The future of interoperability is not one method replacing the rest. It is an architecture that makes the right method available for the right workflow, while reducing friction for the people and systems that depend on it.

Sources & Further Reading

ONC: Finalized Health IT Standards in the FY2027 CMS IPPS Final Rule
ASTP/ONC: HTI-5 Proposed Rule Chart
ASTP/ONC: Direct Project Transport Standard and Certification Guidance
DirectTrust: FHIR Over Direct: Accelerating the Pace Toward Trusted, Scalable Interoperability
DataMotion: Direct Secure Messaging and HISP Services
DataMotion: The Definitive Guide to Data Exchange: Managing Structured and Unstructured Data

Acronyms Used in This Paper

FHIR: Fast Healthcare Interoperability Resources
HISP: Health Information Service Provider
TECCA: Trusted Exchange Framework and Common Agreement
QHIN: Qualified Health Information Network
HIE: Health Information Exchange
ASTP/ONC: Assistant Secretary for Technology Policy / Office of the National Coordinator for Health Information Technology

APPLY THE FRAMEWORK

Build secure exchange around the workflow, not a single standard.

The strongest interoperability strategies begin with the operational need: who is exchanging information, what must move, how is trust established, which systems and partners are involved, and what must happen after the information arrives. DataMotion helps healthcare organizations securely support and connect the exchange methods those workflows require across Direct Secure Messaging, APIs, EHR environments, fax, and other channels.

DataMotion brings the technology, integrations, and practical interoperability experience to make secure exchange work within the systems and workflows healthcare organizations already depend on.

To discuss a specific interoperability workflow or architecture, call us or visit datamotion.com/contact-us.

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