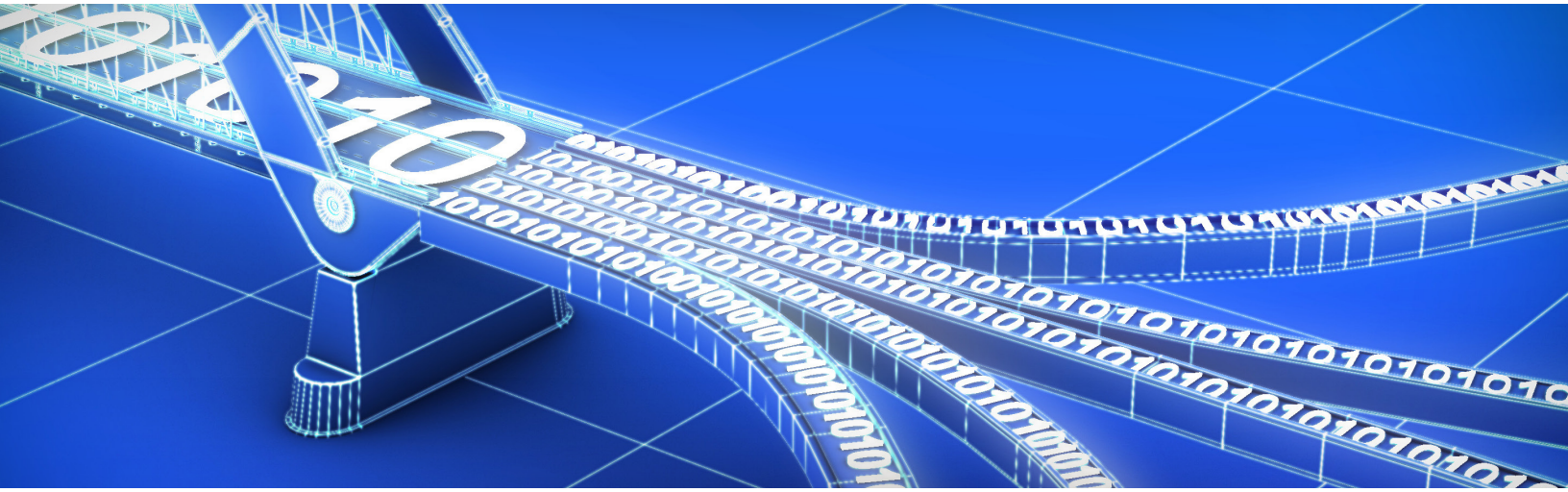
OPTUM®

ARTICLE

The data divide

See how policy and technology are bridging the gap



A fundamental challenge in health care is to determine how to access the available clinical data to deliver health care services and treatments based on all known information that will improve outcomes and reduce costs.

New developments in policy and technology show great promise for overcoming two of the biggest hurdles with data: Is the data accessible? Are the systems that house the data compatible?

Critical question: Is the data accessible?

A new rule released by the Centers for Medicare & Medicaid Services (CMS) could go a long way toward moving to an interoperable health care system.

To improve data sharing and increase patients' access to their data, CMS finalized a new rule for the implementation of application programming interfaces (APIs) based on HL7's Fast Healthcare Interoperability Resources (FHIR®) standard.

The rule will require FHIR-based APIs to be openly published. That will enable secure HIPAA-compliant partner applications to provide patients secure and immediate access to their health records by using one standard, replacing the disparate standards that exist today — something Optum strongly supports.

OptumHealth CIO Mouli Venkatesan has been involved in industry workgroups providing CMS with guidance as it moves toward adopting the FHIR standard.

While existing HL7 standards have been effective in improving data interoperability on the claims side, success has been elusive when it comes to clinical data.

The health care industry has struggled for years to achieve interoperability.

Blame insufficient and varied standards for electronically exchanging information. You can also blame differences in state privacy rules that govern data exchange and patient consent.

To improve data sharing and increase patients' access to their data, CMS finalized a new rule for the implementation of application programming interfaces (APIs) based on HL7's Fast Healthcare Interoperability Resources (FHIR®) standard.

And then there's the inability to accurately match patients across different systems. A lack of governance and trust among entities stand in the way there. So do the prohibitive costs associated with customized interfaces.

Today's ineffective health care information supply chain contributes to commonly cited problems:

- Poor coordination of care — blamed for an estimated $27.2 billion to $78.2 billion in wasted spending[i]
- Missed diagnoses and long diagnostic odysseys
- Inability to identify or prevent suboptimal or even harmful therapies
- Low-value services (e.g., duplicative labs and diagnostics)
- Provider abrasion, fatigue and burnout rates continue to increase

Venkatesan points to a doctor's notes about a patient's progress or challenges they may be facing. Those notes don't translate well into data under current systems. If they do get shared, it's often by fax between providers — which can be inconsistent and labor-intensive to get into electronic format.

FHIR unlocks those notes in digital data exchange so they go with the patient, digitally, from provider to provider.

"FHIR has a much larger and richer set of data elements that need to be transacted between two entities as part of an exchange conversation, which is really helpful," said Venkatesan.

Adopting the FHIR standard benefits patients, providers and payers.

Mouli Venkatesan
Provider and Network Services Chief Information Officer, Optum

The requirement to create publicly accessible FHIR-based APIs will apply to:

- Medicare Advantage organizations
- State Medicaid and CHIP FFS programs
- Medicaid managed care plans
- CHIP managed care entities
- QHP issuers in FFEs

"I'm expecting big things in 2020 from the standards committee establishing this," Venkatesan said. "The most important thing is the implementation. That standard has got to be very, very clear."

What is clear, he says, is that adopting the FHIR standard benefits patients, providers and payers.

For patients, adopting FHIR means every medical provider they see will have real-time access to what all the other providers have observed, tested, treated and prescribed.

That will result in numerous benefits, like preventing adverse diagnoses and reducing emergency room admissions, because incorrect translation of the data will be minimized.

Health care still operates in a world of paper and faxes. Faxes and paper put unnecessary administrative drain on the overall system.

Health care still operates in a world of paper and faxes. Faxes and paper put unnecessary administrative drain on the overall system. "Because to pull the faxes, to send the faxes, to drive the coordination, to enter the information from the faxes, they've got to put processes in place and manage the workforce to support all of it."

Payers benefit from all of the above, since effective care delivered more efficiently lowers costs. A system without data exchange standards adds unnecessary administrative costs. It also opens the system to risk through inaccurate translation and misdiagnosis because of incomplete and inaccurate data.

And there is an additional broader benefit. Since Medicaid and Medicare, the two largest payers, will now require clinical patient data to conform to FHIR, then all ancillary and supporting structures and data will also have to support the FHIR standard.

Critical question: Are the data systems compatible?

It's not just the exchange of data that leads to disconnection. The systems containing the data can add a whole new level of complication.

State government agencies, for example, often house data in legacy systems such as Medicaid Management Information Systems (MMIS), built without any external connection in mind, and the data structure and standards vary greatly.

Optum has addressed this challenge by integrating a core utility in its state government solutions. The Optum Integration Layer (OIL) overcomes the data exchange challenges by acting as a data bridge between otherwise incompatible systems — unlocking broader analytics.

OIL is a supporting utility that bridges internal data to external systems — translating legacy systems and standards to components that can be deciphered by the standards-based interfaces.

Optum enterprise architect Donovan Goertzen shared an example of a problem the OIL platform can solve.

"If I have a file come in that has 100 records, but my back-end legacy system only takes one record at a time through a web service," explained Goertzen, "OIL will handle that, breaking that 100-record file into 100 web services to translate and exchange the data between the legacy system standard and the external standards-based systems."

"OIL becomes that kind of multipurpose adapter that just allows you to plug into the services you need and make the systems interoperable," added Optum Chief Technology Officer Don Johnson. "This standards-based wrapper can then be used for future integrations with other products that have also adopted modern data exchange standards."

CMS is encouraging states to break up their existing, typically monolithic information systems into smaller modules that can be more easily changed or upgraded.

Those modules still need to be able to integrate with each other and with legacy systems not yet upgraded.

"What this has fostered is the same concept as OIL," explained Goertzen. "The ability to have an integration layer that allows you to accommodate a legacy back-end system while exchanging that data with new standards-based modules. In the end, OIL helps reduce operational and maintenance costs and improves the accuracy and completeness of the data, making the whole system more efficient. Also, OIL is an evergreen component of our solutions, meaning states won't have to carry the cost of updates to OIL for future federal standards requirements either. That's another example of how FHIR will drive broader improvements across the health system."

Find out more on how Optum can help enable data interoperability in your enterprise.

Contact us at 1-800-785-6092 or innovate@optum.com.

Don Johnson

Chief Technology Officer and Vice President of Product for State Government, Optum

Don has over 20 years' experience in engineering, architecture and innovation. Most recently, he was senior distinguished engineer for the Optum Advanced Technology Collaborative. In that role, he focused on artificial intelligence, blockchain and other advanced technologies to drive change to the health care system.

Donovan Goertzen

Senior Director and Enterprise Architect, Optum

Donovan has vast experience and expertise in enterprise architecture and IT strategy. His most recent focus has been on developing an overarching architecture for Optum® Medicaid Management Services. This solution framework can be leveraged for state and federal governments as well as commercial solution offerings.

Mouli Venkatesan

Senior Vice President and Chief Information Officer of OptumHealth and UnitedHealth Group's Enterprise Clinical Technology

Mouli is responsible for technology strategy and delivery across the enterprise. He also leads the enterprise technology agenda for interoperability. In this role, he partners closely with stakeholders, external regulators and industry collaborative standards forums to advance interoperability.

optum.com

11000 Optum Circle, Eden Prairie, MN 55344