The Interoperability Imperative in Healthcare Today

By David Devine

Silos of consumer health information continue to plague healthcare providers as they lack visibility into their patients' entire medical histories. This is due to an industrywide interoperability issue. While medical records are almost entirely electronic, this hasn't solved the problem of disparate data sources. Patients' medical records are spread across many providers from retail clinics and standalone urgent care centers, emergency departments, specialists and primary care physicians. On top of that, data from health apps and fitness trackers typically are not integrated into medical records.

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With all these disparate sources of data, managing the ever-growing volume of patient information in a way that provides a holistic picture of an individual is increasingly challenging. In the current environment, unifying all these inputs would require patients recalling every health device they used and every location where they've received care. Even if data is consolidated, the lack of standard data collection processes doesn't always allow for seamless data aggregation.

Interoperability Success Outside the Industry

Interoperability isn't new and it's happening in many industries. Many examples of technology from web services to cloud interoperability illustrate how technology has evolved to devise products that don't operate in silos.

In financial services, it's been possible to connect accounts across banks for years and now consumers can connect seamlessly with thirdparty platforms, like Venmo and Zelle. Today, customers don't use the services of one bank, but tap into several financial services providers (like independently operated ATMs), send money between accounts operated by different banks, and track spending through third-party apps.

At the same time, interoperability has also been central to the proliferation of sensor-based smart

home technology. For instance, smart homes can sync with computers, phones and other various devices, feeding the same information a consumer has on one to the other while also connecting with thermostats, food delivery service websites and more.

In a similar fashion, as healthcare organizations look to invest in existing technology or create new products, they must consider how that technology can integrate across organizations, platforms and devices.

Addressing the Challenge Today

The need for interoperability is becoming a necessity as artificial intelligence, big data and precision medicine play a larger role in healthcare. Population health initiatives are continuing to gain steam and consumer choice is forcing organizations to think differently about how they deliver care. While these factors each impact healthcare organizations differently, they all rely on data. A more complete picture of a patient's health could improve outcomes and help physicians better address the needs of their patients.

The federal government has recognized the importance of interoperability and proposed changing the name of the Meaningful Use policy to Promoting Interoperability to better reflect its priorities, which include creating a way to consolidate health information from disparate providers into a single source of truth.

Big technology companies have also entered the scene. Apple's latest update to the Health app will give patients access to medical records from multiple providers in one place. While this enables consumers to see their records from all of their providers who have opted in to this initiative, it's full benefit cannot be realized unless all organizations agree to participate. If this app and others could pull data from every known medical record we'd achieve interoperability, but regulatory, technology and compliance barriers still stand in the way of significant progress.

This leaves healthcare organizations in a position where they must begin taking a proactive approach and join efforts to improve interoperability of their existing systems as well.

Making Interoperability a Reality in Healthcare

On the healthcare front, the Continua Design Guidelines, published by the Personal Connected Health Alliance, offer a framework for interoperability of personal connected health devices and health systems. Healthcare systems and technology providers should follow these guidelines as they build new technologies to gain alignment across the industry. This will accelerate the process of connecting devices seamlessly and standardizing data collection.

The U.S. Department of Veterans Affairs (VA) has also taken a step toward interoperability with the VA Open API Pledge. Through a voluntary collaboration with private hospitals that agree to map their data to industry standards, they're beginning to connect data across health systems with the goal of bringing veterans' health information into the VA's larger database.

As you evaluate your organization's technology needs, assessing the potential for interoperability should be top of mind. To do so:

- Align data reporting and structures with industry standards.

- Have an API model that focuses on your internal organization, organizations you partner with as well as consumer.

- As you link APIs into digital platforms, increase consumer transparency into data consent and protection.

Identify and proactively address areas where you have challenges in sharing data outside your organization. Interoperability is not a quick fix and it requires thoughtful consideration on how to unify the existing fragmented data infrastructure. This will allow providers to leverage data to transform the healthcare industry by improving outcomes and creating a better patient experience.

Key Takeaways

For interoperability to take hold in the healthcare industry, it is necessary to:

Think differently.

Recognize that interoperability is a foundational element for the future of healthcare.

Plan differently.

Develop and select technology platforms and tools that will integrate with existing offerings and align data collection to seamlessly aggregate data.

Act differently.

Adopt best-practice frameworks and participate in initiatives and partnerships that are addressing interoperability on an industrywide scale.

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