API Management—Enabling Digital Health Care Transformation
The Changing Business of Health Care

$6.5 billion
The worldwide market for telehealth hardware, software and services will grow to $6.5B by 2020, a CAGR of over 24%.¹

66%
Technology investments are front and center in health care, with 66% of organizations undertaking a digital transformation project.²

$2.2 million
90% of all health care organizations suffered at least one data breach in the past 2 years, with an average cost of $2.2M per hack.³

It’s clear: the health care industry is undergoing a period of massive change. Connected applications and devices will enable remarkable patient experiences, operational efficiencies and life-saving collaboration between providers—for those organizations that are well-prepared.

¹Market Reports Hub, Telehealth Market by Component, August 13, 2015
³InformationWeek, “Healthcare Suffers Estimated $6.2 Billion in Data Breaches,” May 12, 2016
The key to this transformation is software. Today, applications hold the potential to power the patient experience, fuel operational efficiencies and enable collaboration between providers. And in response, the digitization of health care has taken off.

Payers, providers, pharmaceutical companies and medical device manufacturers now find themselves in a hyper-connected ecosystem where once well-defined boundaries have blurred. Data no longer sits in static paper records. The new normal is an environment where medical devices can instantly connect with a patient’s Electronic Health Record, transmitting physiological data in real time.
In health care, APIs are a strategic technology investment that connect electronic health data with cloud platforms, mobile apps, care partners and connected medical devices. APIs are also the first line of protection against cybersecurity threats and breaches.
How are APIs relevant in health care today? Take a look at the following imperatives to see how organizations are using them to improve the patient experience, increase provider efficiency and streamline their operational processes.
Mobile Health

Did you know?

In the next six years, the mHealth market is expected to hit a projected revenue of more than $55 billion.⁴

When it comes to mobile health care technologies, most are familiar with smartphone-based and tablet-based applications that help consumers manage their health—think dietary logs, appointment reminders and activity trackers. But when used in a provider setting, mobile technologies can transform clinical workflows by bringing critical data directly to the point of care. Additionally, payers are increasingly using mobile technologies to enhance interactions with their members.

How APIs Are Transforming Health Care

How are health care organizations leveraging mobile today?

Here are just a few examples.

Payers:
- Plan, benefit and pricing information
- Claims management
- Provider search
- Self-diagnosis
- Wellness incentives

Providers:
- Health records access
- Laboratory results and dashboards
- Location and pathfinding
- Checklists and procedures
- Post-hospital discharge

Pharma/Med Device
- Drug purchasing
- Medication regimen
- Remote health monitoring
- Mobile health apps
- Fitness integrations

Delivery Models and Medical “Things”

Did you know?
The global telehealth market is expected to grow at a CAGR of 24.2% and reach $6.5 billion by 2020, as medical providers increasingly employ remote communications and monitoring technology to reduce costs and improve the quality of care.5

The application economy and IoT are providing powerful new opportunities for health care organizations. To understand the potential, consider the impact of instrumenting assets like an MRI. An IoT-connected medical device can report when components malfunction. Diagnostic and testing can then be performed remotely. When the root cause is identified, technicians can assist hospital engineers—or dispatch a field technician when the repair necessitates onsite expertise. This immediacy can reduce device downtime, speed time to resolution and lower costs.

But this focus on maintenance and cost efficiency only scratches the surface of opportunity. Using connected devices, health care organizations can differentiate services, transform patient engagement and improve health care outcomes.

Recognizing the Possibilities

Medical “Things”
AdhereTech, manufacturer of a smart pill bottle, uses a combination of sensors and connectivity to measure real-time humidity levels and how many pills or fluid ounces of medicine remain in the bottle. Data is transmitted wirelessly to the cloud and patients are reminded to take their medication via a phone call or SMS.

Delivery Models
A patient with diabetes can manage and coordinate care with their provider—all without having to leave home. How? Using a mobile phone or tablet, the patient uploads food logs, medications, dosing and blood sugar levels for review by a nurse who responds electronically.

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New and Innovative Digital Services

Did you know?
Digital services are expected to save the U.S. healthcare system more than $305 billion annually.⁶

Electronic health records and digital innovations make it possible not only to optimize patient care, but create new opportunities. By leveraging mobile devices, security, identity and authentication properly, health care organizations can extend the reach of their core assets to new first- or third-party products and services—while meeting privacy and compliance requirements.

Care Analytics

Did you know?
More than 60% of health care IT executives stated that they will invest in advanced analytics capabilities to:
- Help track and manage population health more efficiently
- Enhance the ability to deliver preventive care

Today, the health care system is under mounting pressure to improve patient outcomes as the Affordable Care Act penalizes hospital readmissions and incentivizes preventive care.

Additionally, reduced health care inflation rates have spurred executives to streamline operations by minimizing waste and improving processes. In response, health care providers and payers are increasingly turning to analytics to help them better understand their patients and optimize services.

How are care analytics leveraged in health care today?

Consider this example
In a move to share its insights with the health care industry, Mayo Clinic has joined other health institutions in Apervita’s analytics community. According to Paul Friedman, MD Vice-chair, Cardiovascular Medicine and Director, Cardiac Electronic Implantable Device Lab at Mayo Clinic, the sharing of “our algorithms empower others to deliver patients the best health care.” He adds, “One algorithm we are sharing through the Apervita Market assists physicians by quickly and automatically identifying patients at risk for sudden cardiac arrest.”

7Deloitte Center for Health Solutions, Health Systems Analytics Survey, 2015.
Connected Communities

As the shift to electronic records accelerates, government incentive programs continue to mandate the need for payers to demonstrate data interoperability. Supporting these meaningful use requirements takes a unique set of technology solutions.

- Health Insurance Exchanges (HIXs) require the interchange of data between state and federal authorities to confirm coverage eligibility.
- Accountable Care Organizations (ACOs) and Health Information Exchanges (HIEs) allow groups of doctors, nurses, pharmacists and other health care providers to access and share a patient’s vital medical information electronically.
- Leveraging Health Level Seven, an international standard for the transfer of clinical and administrative data, and HL7® FHIR®—its API-centric next generation—can accelerate your participation in these connected communities.
Efficient Operations

Did you know?
The United States has the world’s least efficient healthcare system in terms of its cost relative to GDP.\(^8\)

To eliminate waste and increase productivity, health care organizations must improve the way they administer, manage and deliver care. Initiatives that improve the integration, security and interoperability of medical data can turn these challenges into competitive advantages.\(^9\)

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Streamline Health care Operations

- Connect providers to payers to accelerate billing
- Facilitate record sharing across hospitals, clinics and labs to reduce errors
- Aggregate data from clinical, financial and CRM systems to identify patterns and opportunities for improvement
- Protect patient privacy with secure digital records
- Improve patient care transitions with mobile and connected devices

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How the Right API Management Solution Enables Your Health Care Imperatives

As these examples show, enormous potential awaits the modern, digital health care organization. But handling medical data presents unique security, privacy, mobility and interoperability challenges.

The right API management solution helps overcome these hurdles by providing the capabilities needed to integrate diverse systems, secure private data, accelerate app development and optimize the performance of each digital initiative.

**Integration**
- Rapidly expose EHRs and other legacy systems as modern APIs
- Aggregate data quickly and easily for mobile and device consumption
- Accelerate deployment of standards such as HL7® and FHIR®

**App Development**
- Provide APIs that improve the experience for both internal and external developers
- Manage health care developers with onboarding, collaboration and testing
- Accelerate the release of apps from months to days

**Security**
- Protect sensitive data and systems with military-grade security
- Enhance the protection of patient data used in mobile applications
- Address strict compliance and regulatory standards

**Health Ecosystems**
- Analyze which apps and APIs are performing the best against business goals
- Integrate with billing systems
- Leverage new business models that require interoperability and data sharing
Introducing CA API Management

In cooperation with our industry partners, CA API Management offers proven solutions that can help health care organizations achieve interoperability, safeguard patient privacy and security, accelerate the creation of data-driven apps or services, and create connected ecosystems that span the Internet of Things.

The CA API Management product family provides the capabilities needed to build an effective health care API platform. These include API gateways designed to streamline essential security and management processes, and API creation tools that allow for point-and-click transformation of existing data sources into fast, modern REST APIs.

To get started, read the API Management Playbook for a primer on building an API platform, and then explore the CA FHIR® API Sandbox to see an example of health care interoperability in action.

Learn More

The API Management Playbook
CA FHIR® API Sandbox

Customer Success Stories

The Advisory Board Company uses CA API Management to publish more than 20 APIs between internal and external application integrations.

Amerigroup uses CA API Management to securely connect its internal application to mobile tablets.
Learn more about the advantages of CA API Management by visiting ca.com/API.