



# Make revenue cycle management a catalyst for integrated healthcare transformation

"The right revenue cycle management technology strategy will also improve clinical outcomes and consumer experience."



# Executive summary



Healthcare revenue cycle and technology professionals have a remarkable opportunity to be healthcare heroes, using revenue cycle management transformation as a catalyst for improving every part of the patient healthcare journey.

Meaningful revenue cycle management transformation means much more than just automating point processes for efficiency.

Revenue cycle management, clinical excellence, and consumerism all center on the patient journey, from the first appointment through the end of the inpatient stay and beyond. All three of these transformation pillars require similar technologies for data sharing, analytics, data management, AI, and integration.

What if a single data and technology approach could solve revenue cycle management challenges while also improving care outcomes and the consumer experience?

There's a path to get there: **Unify and activate all your data to create a single, comprehensive, and accurate view of the patient that looks the same to doctors, patients, billers, nurses, payers, and claims processors.** That way, everyone is working from the same live data to get bills paid swiftly and correctly, drive better community health outcomes, and create an exceptional consumer experience.

# Introduction

We can't transform revenue cycle management on an island.

Revenue cycle management improvements must align with technology-driven advances in clinical processes and value-based care, as well as digital access and experience for consumers.

We sometimes think too narrowly about the opportunities and broader transformational goals for revenue cycle management. Technology vendors, in particular, often focus on the “trees” of automation and efficiency and miss the “forest” of putting data to work to power total, integrated transformation.

Revenue cycle management is a pillar for total healthcare transformation. Let's look at revenue cycle management challenges, opportunities, and the right technology approach.

## 1 Survey: Healthcare financial leaders share revenue cycle management challenges, vision, and the cascade effect

In a 2021 Innovaccer survey, healthcare financial leaders shared their thoughts on the state and challenges of revenue cycle management. Some things were not surprising, such as the 90% of respondents said COVID-19 delayed their efforts to improve revenue cycle management processes and technology.

Respondents also cited some revenue cycle management pain points they'd like to fix with technology, including:

- Poor, unreliable scheduling systems
- Patient outreach to collect payments
- Denials prevention
- Patient access
- Performance management
- Workflow automation and manual process reduction
- Pre-bill claim scrubbing

### The Survey:

The Innovaccer research team collected online survey feedback from 49 CFOs, CIOs, CTOs, and VPs of revenue cycle and finance, covering organizations from 51 to more than 2,000 employees. More than half of the respondents represented organizations with 500 or more employees.

These pain points have huge costs. The Healthcare Financial Management Association (HFMA) reported prior authorizations cost providers [\\$528 million](#) in administrative overhead in 2019.

These top pain points mostly involve slow, manual tasks. Why are these processes slow? For one, teams spend much of their time capturing, entering, and making sense

of fragmented data coming in from every direction and from different systems.

Look at prior authorization. Half of the data sits in the EHR system; the other half is in the practice management system. People have to manually sort it all out at both ends.

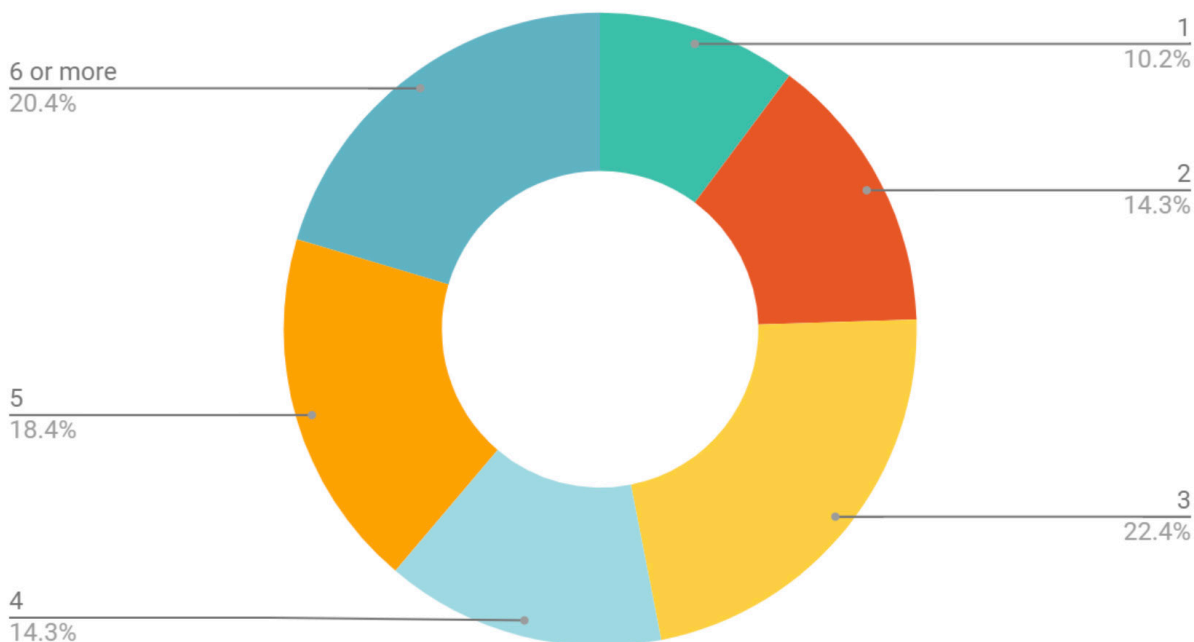
Most prior authorizations remain entirely manual. Fully electronic transactions

account for only 21% of all prior authorizations, according to the [2020 Council for Affordable Quality Healthcare \(CAQH\) Index](#). One study of academic radiation oncology practices found that some prior authorizations took as much as 95 minutes to process and had an average annual departmental cost [in excess of \\$491,000](#).

## Disconnected data causes the cascade effect, breaking down every step of revenue cycle management

Of all respondents, 76% said they have at least three revenue cycle management data sources, and more than half have between four and six.

### Percent



Half of the health systems have to wrangle more than four data sources for their revenue cycle operations



Different revenue cycle management systems from multiple vendors output varying types of data into several places and reports—clinical, coding, filing, processing, EHR, scheduling, provider credentialing, and more. Revenue cycle management teams must rationalize data from multiple systems into a unified view to streamline billing and collection cycles, manage claims, track payment trends, ensure regulatory compliance, and prevent and resolve denials efficiently.

We asked health system financial leaders to rank the impact of challenges caused by multiple revenue cycle data sources from highest to lowest. Nearly 100% of respondents cited “siloes revenue cycle data sets” as the top challenge. That goes hand-in-hand with “weak, fragmented analytics,” which followed closely behind. Without unified data, providers struggle to achieve and access clear analytics and insights on-demand.

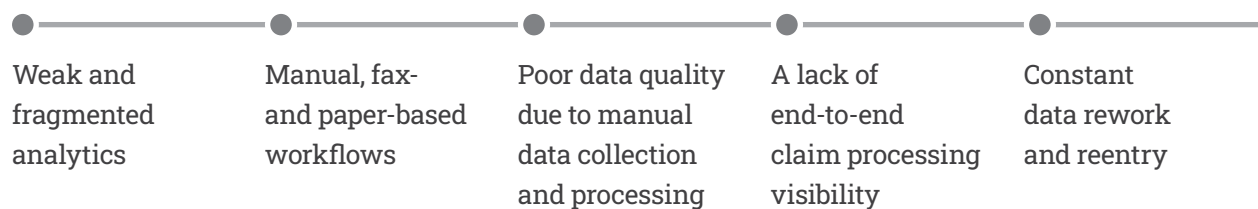


**Brian Gray,**  
Innovaccer Senior Director,  
Revenue Cycle Solutions

*One health system we're partnering with has 15 vendors, four practice management systems, and a clearinghouse. That's 19 different data sources they have to make sense of. The survey shows this is the norm, not the exception.*

This is the root of the cascade effect that ripples through all other areas of the revenue cycle.

Siloed data triggers:



## The promise and limitations of process automation

Tedious, costly, and inefficient manual processes have understandably steered healthcare toward process automation technologies. Such technologies will absolutely play a part in revenue cycle management transformation. Robotic process automation (RPA) can expedite a more accurate intake and verification process, speed up claims and billing, and ensure revenue integrity.

However, providers are quickly realizing that process automation alone can't cure all revenue cycle ills. It tends to provide a single fix to one efficiency problem, but such point solutions don't fix the core data problems that disrupt workflows. Sometimes, speeding up one process in one place can disrupt others downstream with bottlenecks and poor data and analytics.

## Additional trends and what finance leaders think about the future of revenue cycle management

Healthcare finance leaders see a future led by breakthroughs in technology and diminished reimbursements. In the Q3 2021 HFMA quarterly Outlook Survey, 542 healthcare finance professionals **shared their insights** about what's to come:

- The “next big thing” in healthcare finance will be the improvements led by AI, machine learning, RPA, and other technologies. Finance leaders are particularly encouraged by the promise of AI.
- Other recent surveys **report similar high expectations** from disruptive technologies—foremost AI—to transform revenue cycle management.
- Many also foresee advances in revenue cycle management, including real-time authorizations.
- Respondents predict a squeeze on reimbursements, led by changes to payment models and increased denials.
- Healthcare must apply technology to truly measure and understand the costs of care.

**“[AI] is in clinical delivery; it's in administrative spaces, revenue cycle, all of that.”**

Survey respondent Ben Carter, Executive Vice President and COO, Trinity Health, recognizes that technology can transform all parts of the patient journey.

**“There is high awareness that data analytics and information technology capabilities need to be fully developed to truly impact the cost effectiveness of health.”**

Rick Gundling, HFMA's Senior Vice President for Healthcare Financial Practices

## 2 Why revenue cycle management transformation must be part of total provider transformation

When a payer denies a claim authorization request because of incomplete or inaccurate information, the payment cycle grinds to a halt until the provider can respond to the request.

It also impedes care and treatment because such a denial can delay an MRI or other diagnostic procedure. That means the doctor won't have the information they need when rounding. That could prevent prompt treatment and add a day or more to a patient's hospital stay.



**Claim and payment**  
Delayed



**Care plan**  
Disrupted



**Consumer experience**  
Maddeningly frustrating

This example just looks at a single point in the patient journey. As shown below, every step along the way requires consistent, accurate, and integrated data combined with reliable automated processes and analytical insights. They all tie revenue cycle management inextricably with the consumer experience and patient clinical progression.

**We don't need three transformations—we need an integrated healthcare transformation.**

Focus on enhancing the entire patient journey, not just claims and billing

All three of these healthcare transformation pillars address critical healthcare objectives:

### **Clinical**

Deliver value-based care

### **Consumerism**

Enhance patient access and digital experience

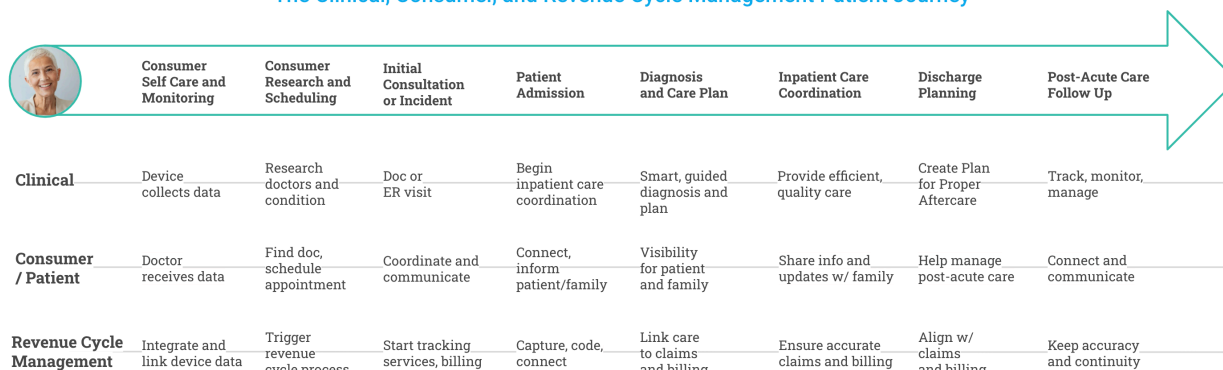
### **Revenue cycle management**

Improve financial performance

Providers cannot deliver on these objectives in isolation. Revenue cycle management, clinical transformation, and consumer experience initiatives all intend to solve different things along the patient journey, but they overlap and align at every point.

# Total Transformation Revolves Around the Patient Journey

## The Clinical, Consumer, and Revenue Cycle Management Patient Journey



## The technology innovations that will power revenue cycle management transformation (and much more)

The patient journey ties the technology advances for revenue cycle management, clinical care, and patient experience together. All require similar technologies to succeed: analytics, integration, data management, cloud, documentation, and emerging breakthroughs such as AI, machine learning, and FHIR. Most importantly, revenue cycle management

transformation can only truly flourish with a platform that unifies all data to create a single, accurate, comprehensive patient record.

Next, we'll look at the technology path to solve the challenges of revenue cycle management while helping transform the entire patient journey.

### 3 The technology path forward: unify, automate, and activate

At this point, you might be thinking, "Gee thanks, we thought we had a plan to fix CRM by automating claims and billing. Now the challenge just got much bigger."

Here's a better way to think of it: **The opportunity just got much bigger.** Think of revenue cycle management transformation as a unifying catalyst for more comprehensive, integrated transformation.

The technology foundation that will drive better revenue cycle management will also power clinical transformation and the consumer and digital experience. What's the blueprint? **Always start with the data.**





## Do it with data: A 360-degree patient view keeps patients healthier and happier and gets you paid faster

The revenue cycle management challenges that healthcare finance and IT leaders face paint a clear picture: We need technology to create a complete, accurate financial and clinical record for patients in order to reach peak performance.

New technology offers the path to addressing the cascade effect of data fragmentation. By using the health cloud technology to unify disparate systems and data, health systems can fundamentally transform revenue cycle management. The health cloud establishes a sole source of financial and operational truth that lets health systems integrate, analyze, and optimize the revenue cycle from end-to-end, at the speed of healthcare—often without having to replace existing IT investments.

This unified enterprise healthcare data model can improve operations at key points of the revenue cycle, including scheduling,

patient access, prior authorization, outreach, performance management, and denials prevention. This reimbursement innovation stabilizes revenue cycle operations, enhancing financial performance in the face of self-pay, rapid consumerization, intense competition, and eroding margins.

Most importantly, it creates a complete and accurate patient health record that can accelerate the transformation of the entire patient journey, with doctors, nurses, patients, technicians, payers, claims processors, and billers, all working from the same reliable trusted patient data.

Once the health cloud is in place, all aspects of the patient journey get better. More, higher-quality integrated data from all sources feeds cloud analytics and AI that will keep getting smarter.

### Unified Data Model

The Health Cloud brings in clean, standardized healthcare data sets from all sources, including clinical, claims, labs, and others to integrate and bring them into a **unified data model**.

Some key components:

#### Unified Patient Record

A comprehensive unified patient record built from multiple healthcare data sources (clinical, claims, labs, pharma and others) and driven by an advanced enterprise master patient index presents a whole-person view of patients. A cards-based design keeps views configurable.

#### Plug-and Play Data Integrations

There are prebuilt integrations to most health IT systems and vendors—EHRs, payers, HIEs, pharmacies, labs, and partners.

#### Extensible Data Model

An extensible data model adapts to various healthcare use cases across the patient journey.

## Which unified data model works best?

We won't keep you waiting—the data lake house model has emerged as the superior way to unify health data from multiple systems. The graphic on the right shows how the Innovaccer data lake house model works:

The data sources will be the same in any model.

Levels 1–3 in this graphic show data being parsed and smoothed as early as possible, eliminating a great deal of manual coding, queries, and data adjustments.

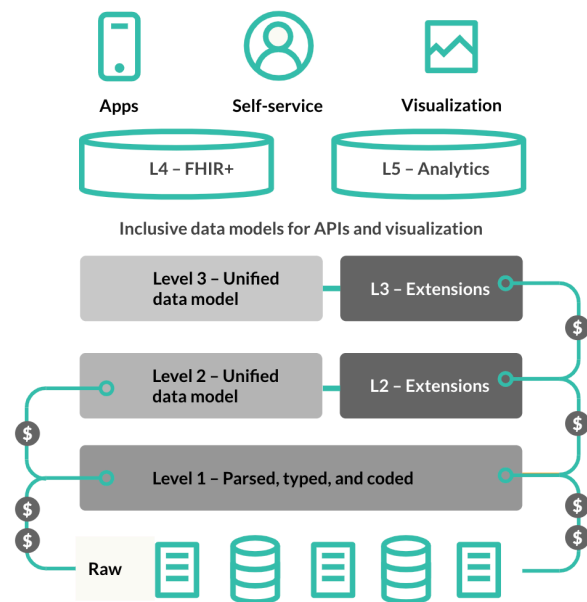
Levels 4 and 5 add fast FHIR integration and analytics for sharing and making sense of ready, reconciled data.

Patients, doctors, payers, claims processors, and everyone involved in the revenue cycle management and patient journey have the data and power to advance the best care, experience, and revenue cycle.

The unified health cloud data model available today corrects the cascade effect, sorting out seas of data to make it advance your revenue cycle management and broader transformation efforts.

### Innovaccer's Lakehouse: 2015–present

Early-binding hydrates complete model from one integration effort



## Tackling the toughest challenges in revenue cycle management, clinical care, and patient experience with intelligence, automation, and data activation

After you have solved the data problem, what's next? For revenue cycle management, there's a three-step formula:

### Unify data across fragmented systems

The health cloud integrates data from disparate vendor systems to streamline analytics and reporting

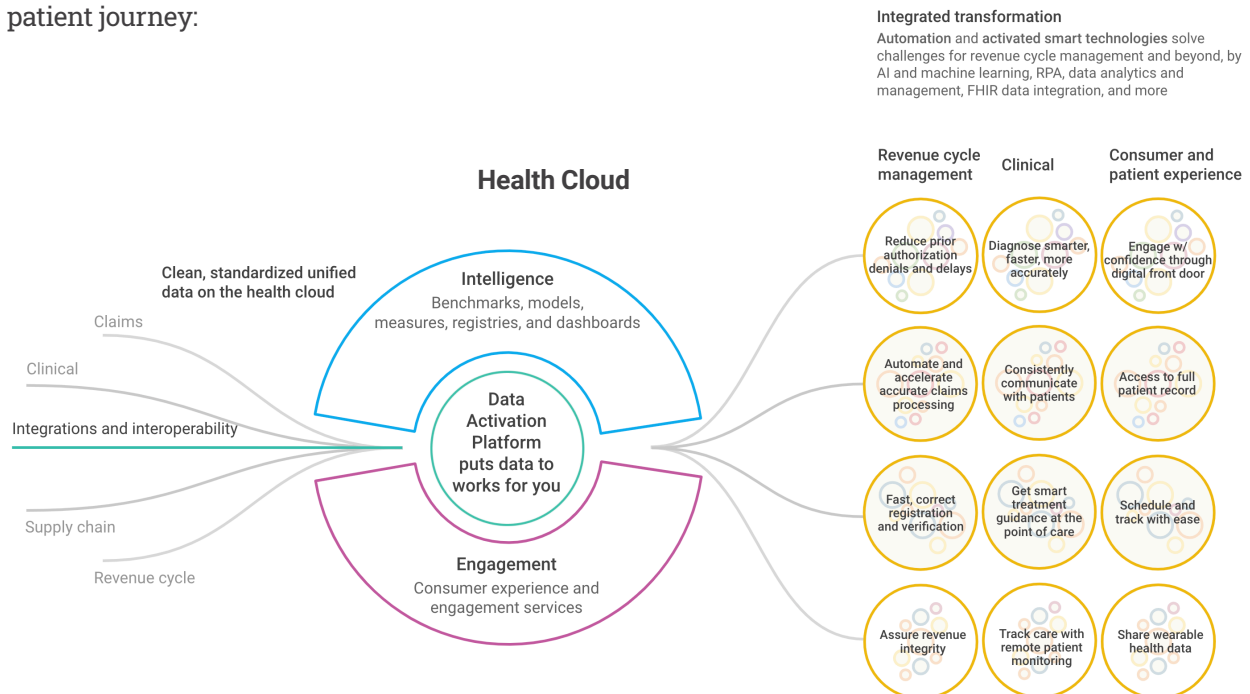
### Automate revenue cycle operations using smart workflow

Automate key aspects of your revenue cycle with RPA bots to increase accuracy and reduce FTE requirements

### Activate AI-powered processes and analytics

Enhance revenue using smart follow-up and claim prioritization engines

Here's a look at how the Innovaccer Health Cloud consumes your high-quality data and makes that data work for you instead of against you, to transform revenue cycle management and the full patient journey:



## The right solutions for your specific revenue cycle management challenges

Healthcare leaders must approach improving financial performance as part of the integrated transformation, but you still have specific revenue cycle management challenges to solve. Here's how you can handle them:

### RPA makes revenue cycle faster

RPA promises to automate tedious manual processes across many healthcare functions. For claims management and billing, RPA can automate tasks such as eligibility verification, pretreatment authorization and

referral, intake indexing, entry change, error correction, claim status check, and much more. This will eliminate human errors, accelerate slow processes, increase data confidentiality, and improve document compliance.

### Prior authorization frustration and denials

Prior authorization and denials cost providers an estimated [\\$23–\\$31 billion](#) a year, according to Health Affairs. Technology built on the health cloud can turn prior authorization troubles into treasures:

Accelerate and centralize authorization intake and make it accurate.

Automate workflows to reduce administrative burden and costs.

Clearly see turnaround times and denial trends.

### Predict and avoid denials

The right mix of AI, data sharing, analytics, and automation lets providers:

Analyze denials and make pre-bill edits (fix codes and industry rules) to prevent avoidable denials

Give coders and billers the policy rationale to avoid future denials

Anticipate missed charges with predictive analytics

Understand denials and act quickly

### Smart hub to prioritize denials

Use the right technology to rate and prioritize denials so your teams stay focused on the right claims at the right time. For example, analytics can establish a priority score for

denials by applying algorithms that consider scores for claim balance, denial codes, total touches, timely filing and appeals, and overdue status.

## 4 Next steps for hospital financial leaders

Where to start? We recommend (and are ready to help with) these steps to assess your needs and start considering a technology path for revenue cycle management and integrated transformation:



### Assess your current revenue cycle state:

What are your priority revenue cycle management pain points and opportunities? What are past lessons learned that will improve transformation efforts? Which areas need automation?



### Map your data landscape:

What are your key revenue cycle management data systems? What do other systems do? What should they connect with? What shared data would improve revenue cycle management processes and the patient journey?



### Map your patient journey:

Map and find the intersections and opportunities across revenue cycle management, clinical care, and consumer and patient experiences to create an integrated transformation technology roadmap.



### Find the right partner:

Don't go it alone. Find the right technology partner to sort through your revenue cycle management challenges and make the complex things simpler. Ideally, this partner will be able to take on the technology stack and let your team focus on transformation. As the graphic below shows, this expedites transformation at a much lower cost. Look for a partner to work with you to provide:



## Find the right partner cont'd

AI, machine learning, and analytics to turn mountains of health data from all corners into knowledge and action for better clinical, financial, and patient-centric decisions and processes

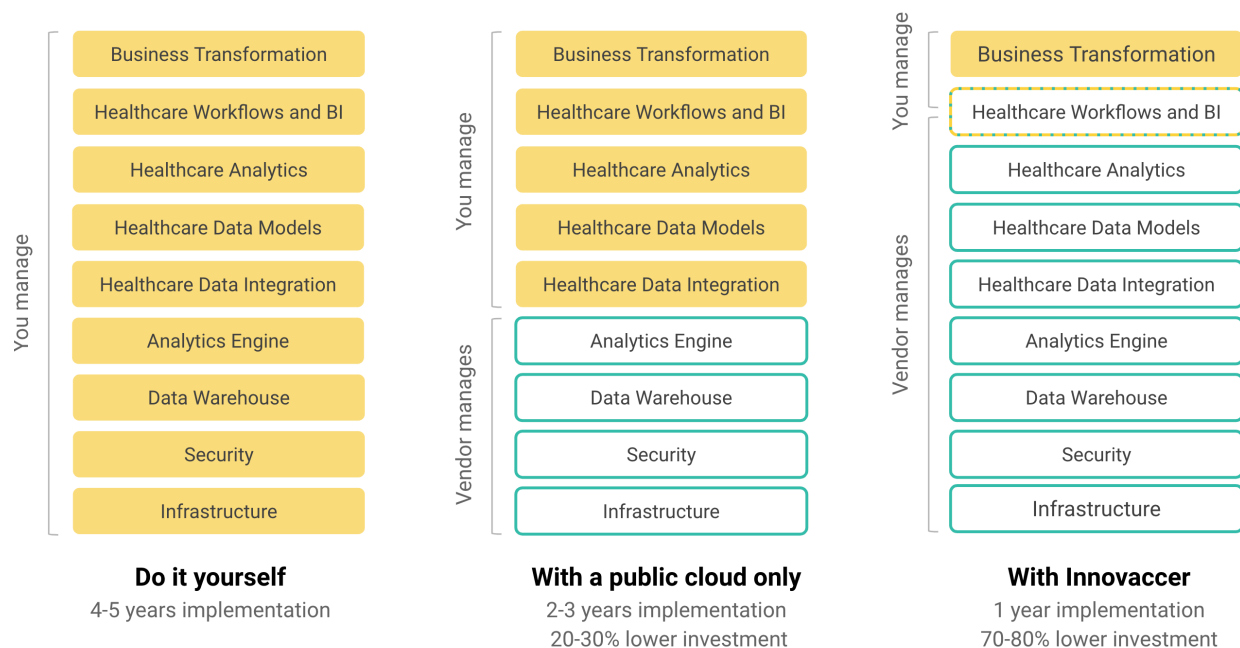
Expert healthcare technology guidance to help you establish and deliver on the smartest strategies for revenue cycle management and integrated transformation

Integration technologies to accelerate data sharing, including advanced FHIR-powered APIs and platforms for fast integration with hundreds of healthcare technology vendors

A Health Cloud with a unified data model that makes a single, complete patient record a reality for patients, providers, and payers

Data management, security, and infrastructure

## Find the right partner to accelerate the transformation



Contact [Innovaccer](#) today to discuss how you can confidently move forward on the technology path for revenue cycle management and integrated transformation to breakthrough financial, clinical, and customer experience performance.



Innovaccer Inc., the Health Cloud company, is a leading San Francisco-based healthcare technology company committed to accelerating innovation in healthcare. The Innovaccer® Health Cloud empowers healthcare organizations to integrate data from any source—electronic health records, clinical, claims, labs, pharmacy, genomics, social determinants of health, devices, government sources, and more—to create a 360-degree view of the patient that enables whole-person care. The company's portfolio of Innovation Accelerators empowers technology teams and digital innovators to rapidly develop scalable, modern applications that improve clinical, financial, and operational outcomes. More than 200,000 providers, as well as payers and life sciences organizations, have used the Innovaccer Health Cloud to unify more than 39 million patient records and generate more than \$600 million in savings across 1,000 care settings. Innovaccer is the #1 rated Data and Analytics Platform by KLAS, and the #1 rated population health technology platform by Black Book.

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For more information, please visit [innovaccer.com](https://innovaccer.com)

