IDC PERSPECTIVE

Next-Generation Revenue Cycle

Mutaz Shegewi    Bagavan Sundaram

EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: Next-Generation Revenue Cycle

This IDC Perspective explores how next-generation revenue cycle solutions drive better clinical, operational, and financial integration for U.S. healthcare providers. Next-generation revenue cycle refers to technologies and capabilities that digitally transform RCM by holistically and intelligently enabling automated revenue optimization and denial prevention across the provider service continuum in alignment with value-based outcomes.

Key Takeaways

- Traditional RCM needs to be reinvented for the digital era because most happens in the back office, which overlooks opportunities for providers to proactively optimize revenue and prevent denials.
- Nontraditional RCM distributes capabilities across the service that brings the revenue cycle closer to patients and nonbilling staff, enabling better responses to value-based care and consumerism.
- Buyers need to know what to look for in the market when shopping for RCM solutions and how to drive a better end-to-end revenue cycle across the pre-service, point-of-service, and post-service stages.

Recommended Actions

- Inspire individuals and teams to change how the overall organization thinks about RCM.
- Get a complete picture of the opportunities to impact and improve the current day revenue cycle.
- Do not get stuck in the weeds of tying RCM to value-based care by all means possible.
- Work with what you have and only get what you do not have to make the next-generational leap.
- The next-generation revenue cycle is not about billing staff reduction; it's about human-machine collaboration.

Source: IDC, 2020
SITUATION OVERVIEW

Revenue cycle management (RCM) needs to be reinvented for the digital era. Much changed since RCM first emerged to streamline the back office. Sweeping macro- and microenvironmental factors continue to mandate urgent adaptation, survival, and growth across the U.S. provider landscape. Everything from razor-thin profit margins to post-merger/acquisition situations to value-based care (VBC) to high-deductible health plans (HDHPs) to digital transformation (DX) to consumerism to now a full-fledged pandemic all rock the boat. Despite progress made in RCM to manage provider billing process and control revenue, opportunities abound that cannot be missed if the cycle goes beyond the back office to optimize revenue and digitally transform billing altogether. In 2017, IDC Health Insights made some early recommendations as to how novel approaches in RCM could support better end-to-end alignment with VBC (see Leveraging Revenue Cycle Management to Support the Transition to Value-Based Care, IDC #US40529616, December 2017). In this document, the focus shifts to how nontraditional RCM capabilities in a next-generation revenue cycle drive better clinical, operational, and financial integration across the provider service continuum to improve revenue, experiences, and the future readiness of the enterprise.

IDC’S POINT OF VIEW

The revenue cycle forms a vital intersection linking patients, providers, and payers in U.S. healthcare. RCM bridges the gaps between clinical, operational, and financial functions to reduce the amount of time between providers rendering a service and getting paid for it until the balance reaches zero. According to IDC Health Insights, the RCM market currently performs at a CAGR of 6.7% and segments according to the type or level of product or service integration, scope, and specialization (see IDC Market Glance: Revenue Cycle Management, 1Q19, IDC #US44357019, February 2019).

RCM continues to be a health IT priority for U.S. healthcare providers. IDC research data reveals that, in 2019, revenue cycle and resource management ranked third (42.1%) among the top 3 areas of organizationwide IT spending in the United States (see Figure 2). An average of 58.9% of that same spend went to RCM applications, systems, and outsourcing while 44.6% went to analytics, optimization, and consulting across the vertical (see Figure 3).
FIGURE 2
Healthcare Provider Organizational Spend by Area

Q. You indicated that your overall organizationwide IT spending will increase over the period of 2018-2019. Which areas will the increased spending be allocated to?

n = 100
Source: IDC’s U.S. Healthcare Provider Technology and Services Survey, 2018

FIGURE 3
Healthcare Provider RCM Spend by Area

Q. You indicated that your overall organizationwide IT spending will increase over the period of 2018-2019. Which areas will the increased spending be allocated to?

n = 100
Source: IDC’s U.S. Healthcare Provider Technology and Services Survey, 2018
Traditional RCM: The Post-Service Conundrum

Most RCM currently occurs in the post-service stage or beyond the patient (or clinical) encounter due to the long-standing nature of U.S. healthcare reimbursement. Traditionally, providers got reimbursed on the quantity or volume of services under a fee-for-service (FFS) model. As a result, RCM mostly amounted to charge capture and claim submission, which back-office billing teams primarily worked on and accomplished. This linear, payer-facing orientation led RCM to become highly confined to the tail end of the provider service continuum (see Figure 4).

FIGURE 4
Focal Points of Traditional and Nontraditional RCM

Enter VBC, which reimburses providers on the quality of services, rather than quantity, and under pay-for-performance (P4P) models. The Centers for Medicare & Medicaid Services (CMS) Quality Payment Program (QPP) serves as a widely recognized example of a VBC framework in practice. QPP introduced a paradigm shift in provider reimbursement for about eight years now under various P4P programs that eventually combined into two tracks, the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs). Both tracks emphasize the importance for RCM to emerge, especially as CMS plans to work off more claims data over the next five years to lower the reporting burden on clinicians while centrally positioning cost measures in the MIPS value pathways to transition it to APMs in the future (see Figure 5).
VBC models, like the QPP, demonstrate that providers must not only focus on payer-facing processes in RCM but also distribute revenue cycle processes across the service to avoid missed opportunities to optimize revenue and incentives. An end-to-end revenue cycle brings it closer to patients and staff, alongside coders and billers, with a higher likelihood for better documentation, coding, engagements, experiences, data, outcomes, and reimbursement. This shifting of the revenue cycle away from traditional RCM to nontraditional RCM will prove vital for multiple reasons. For example, many patients have taken on more responsibility for payments under HDHPs, shaping a new “patient as payer” dynamic. Audits have also become more commonplace and continue to increase under VBC. In addition, care models continue to shift away from hospitals to more proximate settings such as ambulatory, home, retail, and urgent care. Provider organizational leaders needs to grasp these macro and microenvironmental shifts early and take aggressive steps to adapt their organizations to the new era, especially in terms of RCM, where it may matter and hurt the most.
Nontraditional RCM: The Emergence of Next-Generation Revenue Cycle

In 2018, IDC Health Insights introduced the "next-generation revenue cycle" as a DX use case under the digital mission of value-based health (see IDC's Worldwide Digital Transformation Use Case Taxonomy, 2018: Value-Based Health, IDC #US41808917, July 2018). Next-generation revenue cycle refers to technologies and capabilities that digitally transform RCM by holistically and intelligently enabling automated revenue optimization and denial prevention across the provider service continuum in alignment with value-based outcomes via (see Figure 6):

- Automation of intelligent authorization, billing, and reimbursement at the core
- Distribution of capabilities to streamline coding and alleviate productivity burden
- Facilitation of digital access for patients to better understand costs and act on responsibilities
- Generation of insight and intelligence to align provider performance with payer incentives
- Normalization of data and enhancement of revenue integrity across services and silos
- Identification of new opportunities for value creation between providers, payers, and patients

**FIGURE 6**

Next-Generation Revenue Cycle

Source: IDC, 2020
Next-Generation Revenue Cycle Applied

Shortcomings in traditional RCM shape the next-generational opportunity. Providers know that errors in RCM can prove to be costly if not disastrous because of the impact to the bottom line. Common pain points include claim status errors (e.g., claim status inquiry "276 transaction" and claim status response "277 transaction") that cause payment delays; workflow inefficiencies such as during denial management and appeals that lead to productivity drops and costs when manually reworking claims; and unmet expectations that can manifest during eligibility checks, prior authorizations, or because of payer rule changes. RCM errors ultimately translate into frustration for staff and patients, in addition to operational and financial risk for organizations.

Opportunities abound for first runners and market leaders in the next-generation revenue cycle space. However, the challenge for vendors in this space presents in the form of its relative nascency. True and tested, end-to-end, next-generational revenue cycle solutions remain in their early days. The market needs time for deep and holistic levels of nontraditional specialization, integration, and scope to emerge in RCM. Many vendors currently go to market with next-generational revenue cycle product and service solution offerings. A few notable examples of archetypal solutions include those by 3M, Change Healthcare, Cognizant, nThrive, Optum, NTT DATA, and PwC. Optum, in particular, occupies a unique market position as part of UnitedHealth Group and with a plethora of care, pharmacy, and business solutions, in addition to its Optum360 revenue cycle business. For example, Optum partnered with Dignity Health to scale RCM services to large hospitals and health systems, while John Muir Health outsourced its RCM and nonclinical functions to Optum to focus more on care.

It would benefit technology buyers to learn more about the different RCM vendor strategies and capabilities through a next-generational lens that looks at pre-service, point-of-service, and post-service opportunities. The sections that follow — while not intended to be an exhaustive assessment or all-inclusive list of vendor strategies and capabilities — shed light on what is currently happening in the market.

Pre-Service: The Digital Front Door

RCM can no longer start at the back office, or after a patient gets seen, it is too little, too late. The resulting delay in acting on revenue optimization and denial prevention misaligns with digital era opportunities and, more importantly, expectations. Patients need to feel informed and do not want to get surprised by a bill, and they have more power than ever to choose where to go for a more transparent, digitally optimized, and overall convenient care experience. The digital front door or all touch points where providers digitally interact with customers plays a vital role not just in kick-starting revenue optimization and denial prevention but shaping the experiences for patients and staff. However, the digital front door reflects an empty void when viewed through the lens of RCM versus that of access to care. The silver lining is that more providers and vendors now acknowledge the need to tie the front end to back end in RCM because of the potential to impact consumers and revenue from the outset.

Examples of market observations on the digital front door in RCM include:

- Allscripts, after the acquisition of HealthGrid, is positioning its consumer engagement platform, FollowMyHealth, as an outcomes-aligned revenue optimization tool via improved productivity, appointment, and care gap-related functionality. In a vendor-published case study, Nicklaus Children’s Health System reported significant front-end engagement and bottom-line improvements upon using the solution, while MaineGeneral Health adopts it as a "cornerstone for its digital patient engagement strategy" with a similar long-term outlook.
Patient access platforms DocASAP and Kyruus expanded their footprints across multiple large health systems by positioning their solutions to reduce no shows and prevent referral leakage, thus optimizing revenue via provider data management, matching, and schedule integrity.

Infor, NTT DATA, Salesforce, and Welltok’s customer relationship management platforms focus on insight from customer channels and interactions that often starts with the digital front door (e.g., contact centers) to drive acquisition, retention, loyalty, and in turn, revenue optimization.

LeanTaaS iQueue, a cloud-based prescriptive and predictive analytics solution, introduces algorithms to solve complex scheduling, resource, and asset utilization problems to optimize pre and point-of-service revenue at operating rooms, clinics, and infusion centers.

Mayo Clinic and Sutter Health represent a few of the many health systems that deployed cost estimators to drive more transparency into the amounts owed for care upfront. These computational tools can also incentivize payments to be made in advance, even in full at times, especially when tied to discounts, representing a minimal investment with a significant impact on revenue optimization.

Patient financial engagement solutions emerged as of lately that build on such capabilities as propensity to pay algorithms, predictive financial modeling, consumer analytical insight, and consumer engagement optimizations with the intent of driving revenue optimization and better experiences. Examples of vendors include Change Healthcare, Cognizant, Experian Health, nThrive, OSG Diamond, Patientco, RevSpring, Simplee, TransUnion, and VisitPay.

Point of Service: The Digital Bridge

RCM no longer happens only at traditional brick-and-mortar care settings. While point of service often equates to an in-person patient encounter with front-desk check-in or hospital intake workflows, in addition to any clinical or mid-office workflows, virtual visits are now more commonplace, especially after COVID-19. However, this digital bridge between the digital front door and back office offers little wiggle room for burden or error, with it being the domain of clinicians. Over the years, provider organizations made progress in introducing clinical workflow optimization and documentation integrity solutions like CDS, CDI, CAC, and CAPD to support clinical coding, decisions, documentation, and workflows for RCM. As VBC takes hold, providers should expect to leverage more of these solutions as part of clinically integrated revenue cycle initiatives and strategies that play an essential role in aligning performance with revenue, profit, and incentives.

Examples of market observations on the digital bridge in RCM include:

- 3M’s 360 Encompass Professional System introduces a new encounter-based, single-platform “professional fee” coding solution. A key feature of this solution includes auto-suggested CPT and ICD coding driven by natural language processing (NLP) technology, in addition to real-time reporting, productivity, reconciliation, and compliance alerts. Cedars-Sinai Medical Center and The University of New Mexico expressed their approval of this single-path coding approach as a result of the benefits realized.

- Allscripts enabled integration with nThrive’s KnowledgeSource platform to further complement its RCM capabilities alongside Allscripts RCM Services (ARCS) that helps clients navigate end-to-end challenges. The American Autism & Rehabilitation Center signed a seven-year agreement with Allscripts to advance its billing to an end-to-end revenue cycle.

- Availity offers an integrated, pre to post-service RCM solution that already caters to a sizable payer-provider customer base alongside a vast provider data management network that now seamlessly integrates with Epic to focus on additional optimization and enterprise integration.
• Cerner offers an integrated RCM product and service strategy across the provider continuum that it refers to as "Clinically Driven Revenue Cycle," which caters to FFS or P4P workflows. RevWorks represents the services arm for Cerner's short- or long-term RCM projects.

• eClinicalWorks announced a collaboration with Humana, GuideWell, and Trusted Health Plan to supply advanced bidirectional interoperability via Healow Insights Integrated Services. The plan for this offering will be to further bridge gaps between patients, providers, and payers throughout the provider service continuum.

• MEDITECH's web-based EHR Expanse offers clients the ability to run integrated, systemwide revenue cycle tying in clinical and population health data to align with outcomes. MEDITECH's Patient Accounting Desktop offers single-location account management, while its Financial Status Desktop offers an interactive dashboard for insight into items like organizational health and new revenue opportunities.

• nThrive's KnowledgeSource platform offers comprehensive RCM functionality for clients looking to integrate revenue cycle clinically at the digital bridge. nThrive also goes to market with a solutions stack that ties its version of the digital bridge (mid-revenue cycle) solution to patient access at the front and patient financial solutions at the back.

• Optum360 offers a comprehensive range of RCM solutions across the provider service but of key relevance to the digital bridge are Enterprise CAC, CDI 3D, and Lynx Outpatient Charging Applications that utilize NLP and algorithms to read and understand documentation, recognize clinical facts, drive charge capture, assign codes, and identify gaps.

• PwC's SMART (Systematic Monitoring and Review Technology) supports client coding quality monitoring to increase the efficiency and effectiveness of coding and enable quality and compliance reviews. In one client case study, SMART drove an impact of $1.8 million as a result of about 17% of flagged cases reviewed needing corrections and a diagnosis-related group (DRG) revision in over half of the cases flagged.

• Purpose-built RCM solutions have become more commonplace due to their ability to collect on claims regardless of volume or value while minimizing the cost to collect. Integra Connect pioneered a value-based revenue cycle solution early on with purpose-built specialty RCM capabilities that cater to oncology, urology, and emergency services. Another example of a specialty RCM vendor is SYNERGEN Health that caters to orthopedics, audiology, urgent care, ambulance, and lab services. XIFIN also competes in the purpose-built laboratory RCM space.

Post-Service: The Digital Back Office

The traditional central business office or back office needs to emerge toward being a digital back office in line with the needs of provider organizations racing to become future healthcare enterprises. To do this, an intelligent core of RCM capabilities at the heart of the digital back office enables end-to-end cycles to work smarter, not harder. Back-office RCM currently gets done in-house or can be outsourced, sometimes in a mesh of hybrid workflows. As EHR-integrated and standalone RCM product and service vendors made progress into back-office workflows, more analytics and optimization vendors emerged over the years to enable deeper visibility into these and some degree of workflow automation.

Emerging technologies and intelligent automation alongside more advancements in EHR and payer integration (e.g., via open APIs and FHIR) pave the way for nontraditional RCM at the back office. Interoperable data across disparate systems can disrupt and further simplify authorization, billing, and reimbursement processes to drive more revenue optimization and denial prevention. Artificial intelligence (AI), machine learning (ML), and robotic process automation (RPA) have vital roles to play in the digital back office by lowering productivity burden, especially caused by repetitive, high-volume,
error-prone tasks. AI and ML also help take much of the guesswork out of RCM by learning from large data sets while identifying anomalies and patterns to generate data-driven insight. RPA, on the other hand, more rudimentarily processes inputs and sequences into outputs based on predefined workflows and rules, in the absence of learning. In all cases, the value proposition builds on data-driven outcomes and human capacity getting unlocked to focus on more critical, value-added tasks.

Examples of market observations on the digital back office in RCM include:

- athenahealth's athenaCollector-integrated, SaaS-based approach to RCM enables real-time transactional reporting and performance analytics to identify issues and trends. The company's extensive billing rules engine and proactive approach at learning denial patterns for clients and identifying pockets of burden across institutions and facilities earned the company notable successes with the likes of The University of Vermont Medical Center and Sharp HealthCare more recently.

- Change Healthcare recently launched the blockchain-powered Intelligent Healthcare Network built on Hyperledger Fabric that focuses on claims processing and administrative improvements such as reducing eligibility checks to a few minutes and processes 50 million transactions per day.

- Cognizant's TriZetto revenue cycle solutions and advisory services earned the company notable success in applying RPA to eligibility and benefits verification process and on automating claims-related process workflows for the Texas Children's Hospital.

- Conifer Health Solutions, a part of Tenet Healthcare, has increasingly focused on predictive analytics, coupled with business and artificial intelligence in its revenue cycle offerings, which according to its senior leaders "model the behavior of health plans and whether a payer will dispute, deny, or pay a claim and in what time frame ... and that having this insight is like being able to see around corners."

- NTT DATA's end-to-end revenue cycle services contribute to the company's application modernization and BPO offerings for healthcare providers. NTT DATA forms a key strategic partner for Harvard Pilgrim Health Care with 3+ million members. NTT DATA helped Harvard Pilgrim Health Care modernize its application and services framework as well as deploy RPA toward significant costs savings, in addition to many automation and process improvements.

- PwC's Virtual Business Office leverages automation, AI, and ML to augment client back-office patient accounting systems and RCM processes with virtual service. Solutions like Resolution Queue help queue accounts via algorithms that drive better real-time insight, while the Instilling Quality solution monitors work quality and automates flagging for added support.

- Waystar's Hubble introduces an innovative approach to revenue cycle using predictive analytics, RPA, and ML to augment billing teams and automate repetitive tasks. Waystar's revenue cycle also shows a high level of end-to-end orientation that incorporates unique components like agency management and patient insights into social determinants of health.

- Accenture, Cognizant, Deloitte, EY, Halley Consulting Group, Hayes (MDAudit), Leidos, NTT DATA, PwC, and Wipro serve as examples of consulting firms with notable nontraditional RCM capabilities. Consulting firms have evolved to a large extent by introducing consumer experience strategy and design capabilities coupled to digital platform solutions for healthcare that providers can expect to form the mainstay for most advisory, SI, and professional services work in RCM consulting (see Figure 7).
Advice for the Technology Buyer

Recommended Actions

- **Inspire individuals and teams to change how the overall organization thinks about RCM.** Billing and nonbilling staff need to understand next-generational revenue cycle as a marriage between nontraditional RCM capabilities that better serves them, in addition to patients and payers. Engage with internal stakeholders from all teams about current and future needs of RCM. For example, have conversations with payers and patients on such items as new rule engines in the case of payers and new online payment methods in the case of patients. Also, have conversations with payers that look at new ways of alleviating industrywide and more commonly problematic areas like compliance, rule changes, and emerging standards.

- **Get a complete picture of the opportunities to impact and improve the current day revenue cycle.** Gaining insight and any level of heightened awareness into current day gaps would benefit future conversations and decision-making processes but requires longitudinal analysis into RCM trends, outliers, and KPIs (e.g., charges, adjustments, denial rates, rejections, collection rates, discharged not final billed [DNFB], and days in AR [DAR]). Reporting and analytics need to be done on a daily, weekly, and monthly basis by in-house, outsourced, or hybrid teams, but more importantly, well ahead of any tactical discussions or decisions made toward a next-generational revenue cycle leap.
Do not get stuck in the weeds of tying RCM to VBC by all means possible. While there may be some level of confusion about correlating VBC with RCM, any delays in learning and acting on this come at the risk of falling behind the competition. Look to vendors, experts, and the likes of CMS and other payers for guidance. Vendors, especially, play a vital role in educating on and enabling a next-generation revenue cycle. However, vendors also vary in terms of their ability to deliver on strategies, which will be where internal expertise shines. Trust the voice of in-house RCM staff and onboard organizational leaders, champions, and experts early in any vendor-related discussions and whiteboard sessions on a next-generational revenue cycle strategy and related technology implementations.

Work with what you have and only get what you do not have to make the next-generational leap. Assess current strengths of legacy systems and capabilities before considering new investments or a rip-and-replace approach, which may be necessary in some cases, to realize a next-generation revenue cycle. Also, look under the hood when selecting vendors and rely heavily on references and demonstrable successes since the bottom line is at stake. Should a short-term next-generation revenue cycle strategy prove demanding or unfeasible, consider a more longer-term one that aims to augment the existing revenue cycle with nontraditional RCM capabilities in a series of smaller yet impactful stages. Hybrid models that can tie internal expertise with third-party service providers (e.g., consulting and outsourcing) alongside introducing emerging capabilities, like AI and RPA, that catalyzes revenue optimization is a start.

Next-generation revenue cycle is not about billing staff reduction but human-machine collaboration. Set clear expectations around how roles and responsibilities across the board should change under a next-generational strategy, especially if much of RCM gets outsourced or upon the introduction of emerging technologies like AI. The general idea should be that technology complements, amplifies, and augments human talent across the service rather than replaces it. Where most traditional aspects of RCM were straightforward and pinned down to an absolute science, the future of RCM entails more distribution and exploration of human-machine collaboration, paving the way for resistance when mishandled and success when championed.

LEARN MORE

Related Research

- HIMSS19: A Brave New World (IDC #US44913119, March 2019)
- *Leveraging Revenue Cycle Management to Support the Transition to Value-Based Care* (IDC #US40529616, December 2017)
Synopsis

This IDC Perspective explores how nontraditional RCM capabilities in a next-generation revenue cycle drive better clinical, operational, and financial integration across the provider service continuum.

"Many providers do not have a clear idea of what next-generation revenue cycle solutions should entail and what impact these can deliver to their organizations," says Mutaz Shegewi, research director, IDC Health Insights. "Barriers between consumers and providers have lowered. Lines between providers and payers have blurred, especially now, with more patients as the payers under high-deductible health plans. All this makes the RCM market ripe for disruption, and the collective innovation will translate into a next-generational technology leap."
About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-community.com
www.idc.com

Copyright Notice

This IDC research document was published as part of an IDC continuous intelligence service, providing written research, analyst interactions, telebriefings, and conferences. Visit www.idc.com to learn more about IDC subscription and consulting services. To view a list of IDC offices worldwide, visit www.idc.com/offices. Please contact the IDC Hotline at 800.343.4952, ext. 7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC service or for information on additional copies or web rights.

Copyright 2020 IDC. Reproduction is forbidden unless authorized. All rights reserved.