Next Gen RCM

A review of new, innovative solutions leveraging enriched data, actionable insights, and artificial intelligence that solve some of the most pressing revenue cycle management challenges faced by providers in today's rapidly evolving healthcare environment.

TripleTree is a healthcare merchant bank focused on mergers and acquisitions, growth capital, strategic advisory and principal investing services. Since 1997, the firm has advised and invested in some of the most innovative, high-growth businesses in healthcare.

We are continuously engaged with decision makers including best-in-class companies balancing competitive realities with shareholder objectives, global companies seeking growth platforms, and financial sponsors assessing innovative investments and first-mover opportunities.

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"The RCM environment has seen tremendous innovation among technology- and data-centric businesses with disruptive solution offerings and highly attractive organic growth profiles."

INTRODUCTION

In 2006 TripleTree published its seminal *Industry Perspective* focused on revenue cycle management (RCM). The report identified the high level of fragmentation and riddled landscape of niche vendors serving various discrete, functional areas across the broader RCM continuum spanning both provider and payer workflows. The TripleTree RCM *Industry Perspective* accurately predicted an acceleration of M&A activity throughout the RCM environment in terms of size, scope, and velocity of deals coming to market. Following on the same theme, TripleTree later published two *Industry Perspectives* on Healthcare Compliance and Clinical Intelligence which cast a brighter light on the accelerating regulatory oversight dynamics and tighter linkage to the clinical documentation and care being delivered. These themes have been increasingly prevalent across the entire RCM continuum and are continuing to manifest themselves as challenges and opportunities for all healthcare constituencies.

As we take stock in how far the industry has come, we remain highly convicted that today's RCM landscape will continue to evolve and present profound opportunities for innovative companies positioned to deliver long-term, sustainable ROI amid a new era of payer-provider complexity and collaboration, shifting payment models, and increasingly stringent regulatory requirements.

In this *Industry Perspective* we provide a contemporary update to our past RCM research by highlighting the innovative companies that are reinvigorating the sector and reshaping the competitive landscape. A number of market dynamics will contribute to the success and opportunity set of these next generation of RCM companies:

- Sky-rocketing **patient pay** dynamics

- Increasing levels of consumerism and transparency at the point of **patient access**

- **Payer-provider alignment challenges** and "friction" that result in healthcare waste and impediments to high quality patient care experiences (e.g., registration / financial clearance functions, authorizations, denial and appeals processes, etc.)

- **High dollar, specialized RCM opportunities** found in underpayments, complex government programs, and workers' compensation and motor vehicle accident claims

- Changing dynamics and **increased complexity managing healthcare payments**

- Overarching market demand for **enhanced connectivity**, **data-driven insights**, and **automation** spanning the entire RCM continuum

The RCM environment has seen tremendous innovation among technology- and data-centric businesses with disruptive solution offerings and highly attractive organic growth profiles. While reimbursement optimization and cost containment are pervasive themes, the opportunity capitalized on by these vendors extends into provider-specific workflows and process inefficiencies created by certain payer types and/or demographic shifts. In addition, we see strong demand for advanced analytics and sophisticated artificial intelligence-enhanced functionality as well as an ever-present shift toward greater levels of provider collaboration, patient engagement, and value-based care enablement.

PATIENT ACCESS & PATIENT PAY DYNAMICS

Patient Access encompasses a range of workflows and information silos that exist at that front-end of the revenue cycle (see Figure 1). This area of the RCM continuum is typically the patient's first interaction with the healthcare organization and has the most significant potential impact — whether positive or negative — on the entire revenue cycle. In fact, there is a myriad of downstream RCM processes that are severely hampered by patient access challenges.

These pain points for the provider may negatively impact cash collections, denials, operating expenses, workforce efficiencies, and patient satisfaction. Furthermore, the added strain puts additional pressure on providers that are already dealing with a fair amount of financial instability created by higher numbers of uninsured patients, increasing bad debt and uncompensated care, shrinking profit margins, and decreases in hospital cash reserves. That said, these challenges present opportunities for innovative healthcare vendors that deliver real-time access and insights within the workflows of patient access personnel as a means of creating efficiencies, improving visibility, and optimizing the financial performance of the entire RCM continuum. Furthermore, the ability to enhance the patient experience while simultaneously increasing and accelerating patient pay collections is a tremendous opportunity as the provider industry struggles to collect from the industry's third largest payer—the patient—behind Medicare and Medicaid.

FIGURE 1.
KEY PATIENT PAY ACCESS & PATIENT PAY FUNCTIONS

Patient Access and the Accelerating Momentum of Patient Pay

It's no secret that the rising tide of patient financial responsibility stemming from a relentless cost shift to the consumer is putting a tremendous burden on hospitals, health systems, and other providers. Patients, for their part, are feeling the pain now more than ever as the rise in popularity of consumer driven health plans has led to increased premiums for individual plans purchased on an exchange and higher deductibles and co-pays resulting from employer health plans with reduced cost-sharing. Today, out-of-pocket expense for the patient amounts to 30% of the total healthcare bill.

As a result, there has been a 69% increase in consumer payments due to providers over the past four years. This dynamic has added to the financial burden providers already face relative to low operating margins and historically high levels of uncompensated care and bad debt.

In this regard, the stakes are incredibly high for providers. However, the solution is not as straightforward as it may seem and a number of key factors need to be considered before constructing a more effective patient pay strategy. The following are among the primary challenges that providers face:

1. **Consumer medical expenses are unique and the collectability and value of every patient pay dollar erodes quickly over time (see Figure 2):** Medical expenses have a tendency to be treated differently than other consumer expenses and often are a lower priority compared to mortgage, car, credit card, and even cell phone payments. This dynamic stems from the fact that hospitals have a strong sense of community and support and involvement and do not aggressively report patient credit issues. As a result, healthcare has historically been considered a right and the consequences of not paying a medical bill aren't nearly as significant as they are in other industries where the aforementioned house, car, or other possessions can unceremoniously be taken away. However, this ingrained sense of entitlement — which is perhaps created in part by decades by low deductible, employer-sponsored healthcare coverage — is deteriorating quickly and providers and patients

must adapt to the new reality. To achieve success in this area, providers must be able to accurately estimate and collect patient pay responsibility at or before the point of care. This, along with proper financial counseling and support, provides a level of price transparency and upfront clarity found in other industries while simultaneously establishing a stronger psychological connection between the care provided and ultimate cost to the patient.

FIGURE 2.
VALUE OF DOLLAR BY COLLECTION TIMING

$1.00	$.95	$.87	$.33	$.12
Precare	Point of care	3 months	6 months	1 year
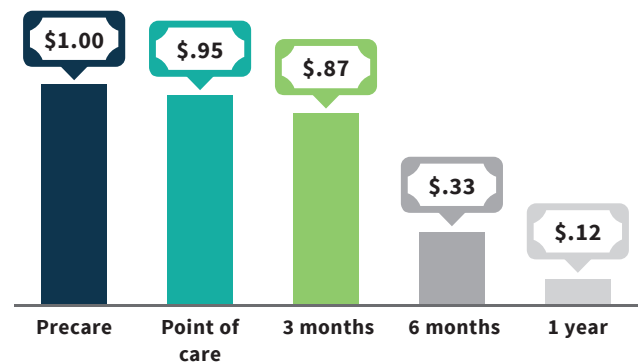
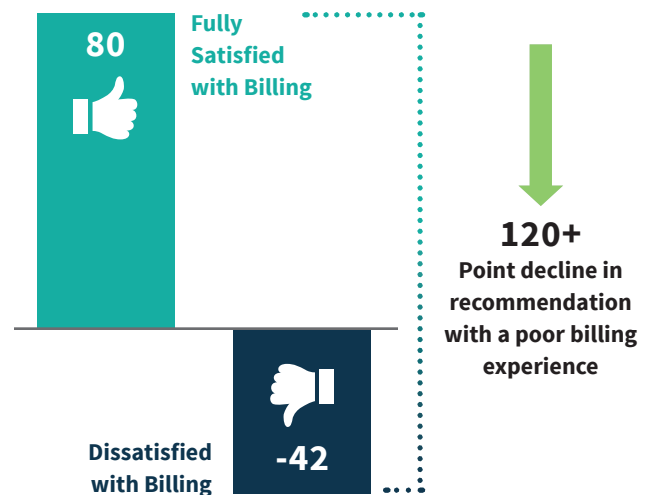Source: Advisory Board
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2. **Achieving high rates of point-of-service patient pay collections is a multi-dimensional challenge:** A range of registration, eligibility, coverage (including copays, coinsurance and deductible information), and other Patient Access function complexities make it incredibly challenging to effectively manage patient pay reimbursement at the point-of-service. The challenge is often related to a lack of data — for instance, errors or incomplete information from the payer or patient, lack of certainty around the

procedures and services the patient ultimately needs, insufficient screening for other program eligibility and/or financial assistance. The result is an inability by the provider to determine patient pay estimates at the point where their ability to capture optimal levels of reimbursement is at its highest.

3. **Providers often lack the required patient pay processes and infrastructure:** The skyrocketing patient pay dynamic is forcing provider organizations to increasingly collect on thousands upon thousands of small balance patient accounts comprised of deductibles, co-payments, and balances due after insurance. The sheer volume that providers must manage can be extremely labor intensive without the proper technology and processes in place. Even in instances where hospitals or other providers have an established system in place with the proper underlying infrastructure, traditional approaches comprised of mailing statements and calling patients to follow up on bills is largely ineffective. In fact, it is estimated that providers collect only 1/3 of patient balances larger than $200, with the balance being sent to collections or written off as bad debt. Specialization in collecting from patients along with automation in the form of data-enriched workflow software and advanced patient pay estimation and propensity to pay tools can dramatically enhance the provider's existing RCM infrastructure in this area. The key is to manage by exception given the high volume of low-dollar patient payments.

FIGURE 3.
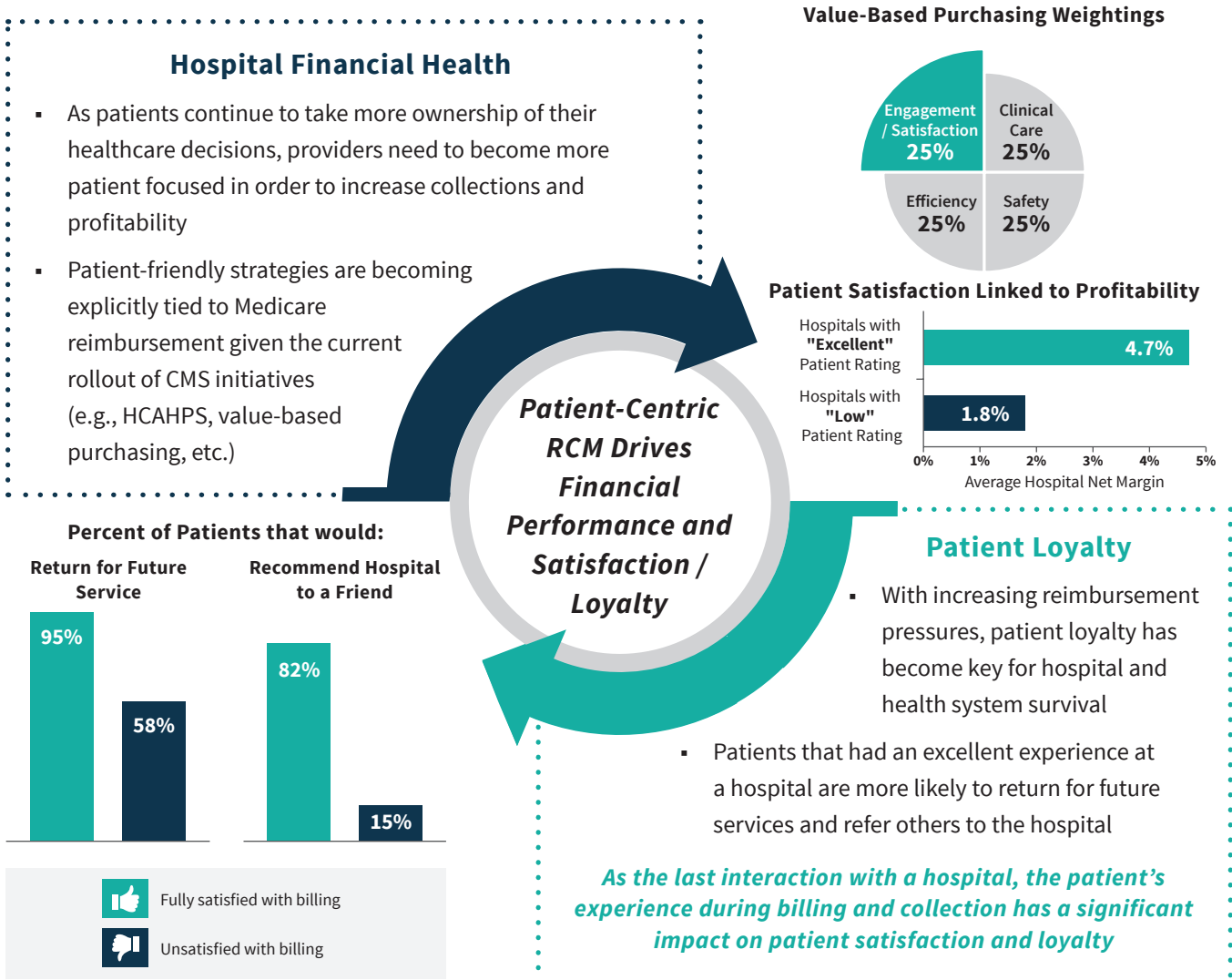**NET PROMOTER SCORE OF HOSPITAL PATIENTS AFTER BILLING**

80 — Fully Satisfied with Billing

Dissatisfied with Billing — -42

120+ Point decline in recommendation with a poor billing experience

Source: Advisory Board
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4. **Maintaining high levels of patient satisfaction is absolutely critical:** The provider's ability to collect from the patient while maintaining a high level of satisfaction can be immensely challenging. In fact, a poor billing experience can completely erase an otherwise world-class care delivery encounter for the patient. The issue is typically a byproduct of a lack of transparency or failing to properly engage the patient with helpful payment options, tools, and support during what is generally a very stressful and confusing time for the patient. The predictable result is lower patient satisfaction and diminished loyalty to the provider — measured by a Net Promoter Score (NPS) or a Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey (see Figure 3 and 4). This in turn can result in a significant issue for providers in today's increasingly competitive and patient-centric environment.

FIGURE 4.
PATIENT-CENTRIC RCM PRACTICES CAN SIGNIFICANTLY ENHANCE SATISFACTION

Hospital Financial Health

- As patients continue to take more ownership of their healthcare decisions, providers need to become more patient focused in order to increase collections and profitability

- Patient-friendly strategies are becoming explicitly tied to Medicare reimbursement given the current rollout of CMS initiatives (e.g., HCAHPS, value-based purchasing, etc.)

Value-Based Purchasing Weightings

Engagement / Satisfaction **25%**
Clinical Care **25%**
Efficiency **25%**
Safety **25%**

Patient Satisfaction Linked to Profitability

Hospitals with **"Excellent"** Patient Rating — **4.7%**
Hospitals with **"Low"** Patient Rating — **1.8%**

0% 1% 2% 3% 4% 5%
Average Hospital Net Margin

Patient-Centric RCM Drives Financial Performance and Satisfaction / Loyalty

Percent of Patients that would:

Return for Future Service
95%
58%

Recommend Hospital to a Friend
82%
15%

Fully satisfied with billing

Unsatisfied with billing

Patient Loyalty

- With increasing reimbursement pressures, patient loyalty has become key for hospital and health system survival

- Patients that had an excellent experience at a hospital are more likely to return for future services and refer others to the hospital

As the last interaction with a hospital, the patient's experience during billing and collection has a significant impact on patient satisfaction and loyalty

Source: CMS, Deloitte, Connance

5. Compliance risk abounds where two heavily regulated industries collide: A myriad of highly complex compliance and regulatory risks naturally compound as one traverses both the healthcare and consumer finance industries — two segments that have more than their fair share of regulatory red tape and onerous reporting requirements. A complex web of state and federal regulations must be carefully navigated to maintain compliance and limit the business risks associated with a violation, especially if credit is being extended to the patient. HIPAA, IRS Code 501(r), Fair Credit Reporting Act, Telephone Consumer Protection Act, Gramm-Leach-Bliley Act, and Equal Credit Opportunity Act / Regulation B are among the more notable regulations that one must navigate when managing patient pay receivables.

A Look at the Diverse Universe of Patient Pay Solutions and New, Innovative Approaches
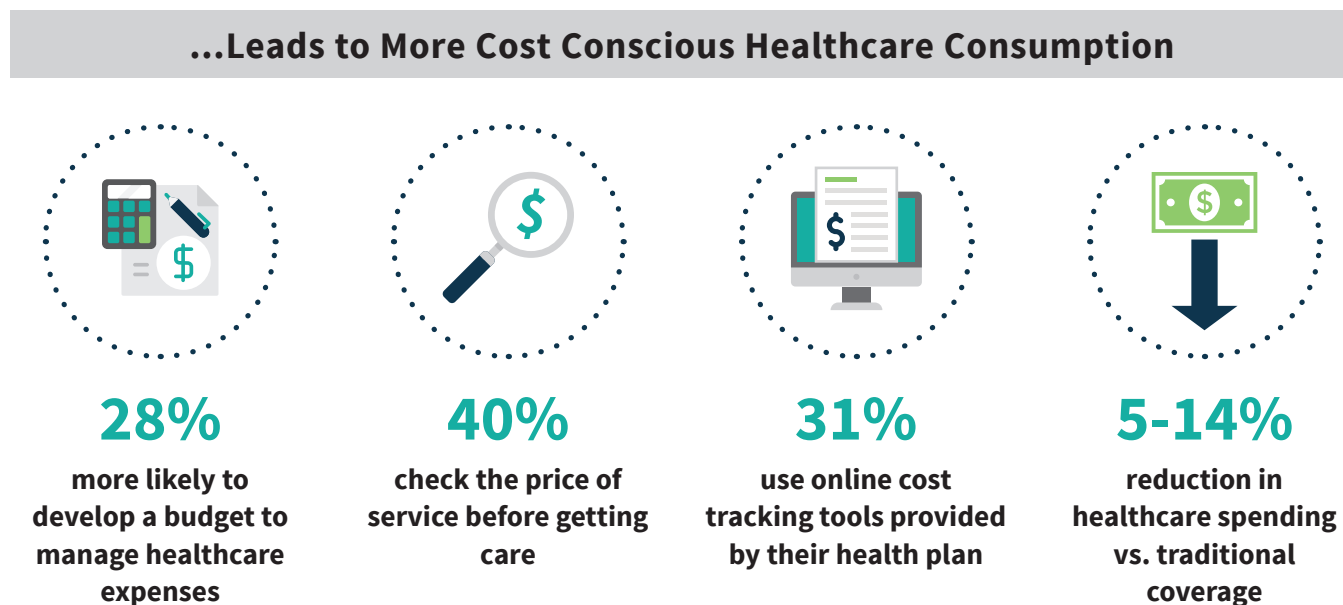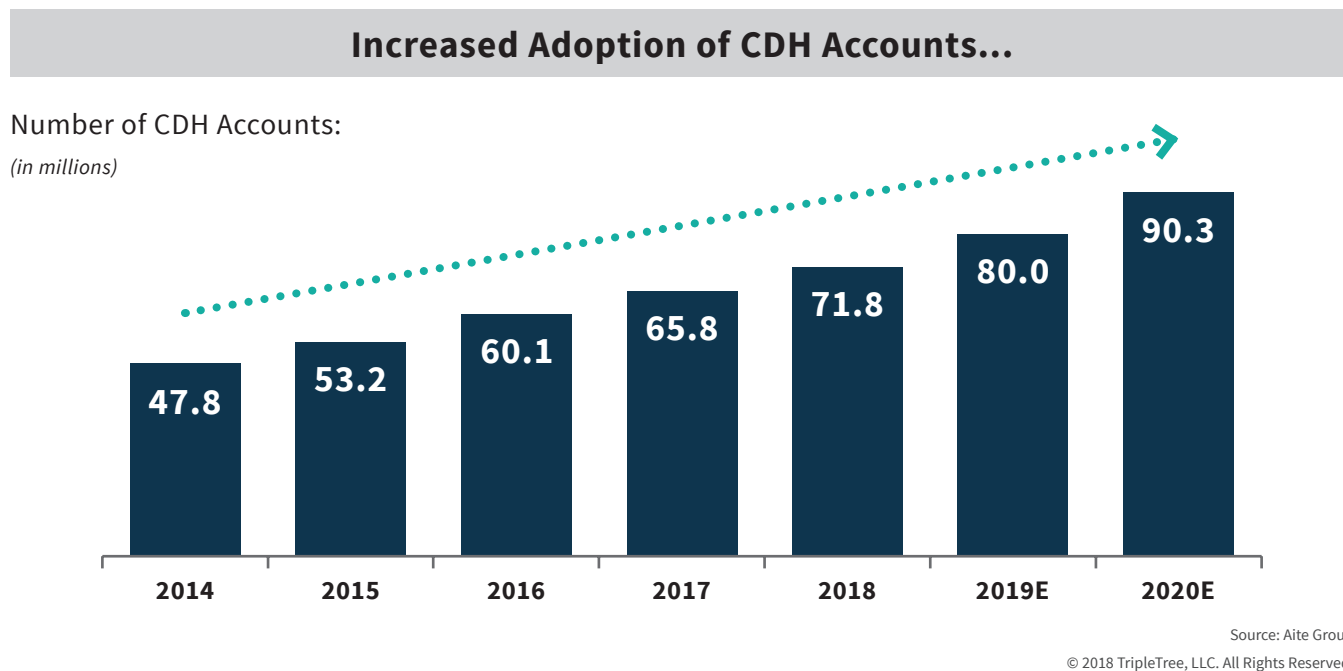
Addressing the patient pay challenge is not a one-size-fits-all approach. In fact, there is a wide range of patient pay software and technology-enabled service solutions available to providers today to help solve their patient pay problem. Fortunately, now more than ever, patients are eager to take accountability for their financial responsibilities and leverage solutions and tools that more effectively support the financing, saving, and planning process required to maintain control over the skyrocketing levels of out-of-pocket medical costs.

The dynamic is evident among members of consumer directed health (CDH) plans that have become increasingly cost conscious as deductibles continue to push higher (see Figure 5).

Meanwhile, the average patient finds the medical billing process daunting and relatively confusing to navigate, especially when compared to other industries where the good or service in question and associated price point are all known with relative certainty at the point of purchase. Due to the nature of healthcare, on the other hand, this isn't always possible — whether the patient visit is related to non-elective or unscheduled care or alternate clinical pathways that emerge only after additional diagnostics are performed. Furthermore, other industries offer a more retail-like experience for the consumer with a "frictionless," easy-to-navigate payment environment. Patients often find themselves sifting through multiple bills from a variety of providers — in some cases from hospital-affiliated physician groups (e.g., hospitalists, ED) or other providers that aren't even familiar to the patient.

These dynamics create a significant opportunity for established Patient Access companies and new, emerging patient pay-focused vendors — particularly for those that can deliver transparency, advocacy, navigation and support, flexible financing alternatives, convenient payment options, and helpful tools to the healthcare consumer that engender positive engagement and a higher probability of payment.

FIGURE 5.
CONNECTION BETWEEN RISE OF CDH ACCOUNTS AND COST CONSCIOUS CONSUMERS

Increased Adoption of CDH Accounts...

Number of CDH Accounts:

(in millions)

2014	2015	2016	2017	2018	2019E	2020E
47.8	53.2	60.1	65.8	71.8	80.0	90.3

...Leads to More Cost Conscious Healthcare Consumption

28%
more likely to develop a budget to manage healthcare expenses

40%
check the price of service before getting care

31%
use online cost tracking tools provided by their health plan

5-14%
reduction in healthcare spending vs. traditional coverage

There are, however, a number of questions on the minds of providers to ensure that both the financial outcome and patient experience are maximized:

- **When to engage the patient?** While there are multiple possible touch points with the patient, generally speaking, the industry trend has been to shift the patient pay conversation to the front-end of the revenue cycle (at the point of pre-registration or registration) to optimize the patient experience and capture as much patient pay reimbursement as possible.

- **How to engage the patient?** When interacting with patients at registration, hospitals prefer to empower their staff with the right set of data, decision making tools, and workflow software to complete the financial clearance process. Patient-focused alerts and reminders, financing options, payments, and other tools are often white labeled to ensure the continuity of the patient's experience and provider branding from a customer loyalty perspective.

- **What type of economic relationship is best with a vendor?** Depending on how the business relationship is structured among the provider and vendor, the approach and economic incentives put in place can meaningfully impact the financial outcome and patient satisfaction. For instance, the provider certainly wants to collect as much patient pay as possible, but not necessarily at the risk of alienating the patient or worse still, developing a poor reputation in the local community. Non-profit and smaller community hospitals are particularly

sensitive to these dynamics. For these reasons it is important that the two parties land on an approach that delicately, yet effectively, balances vendor incentives with the proper restraints around patient engagement and interaction.

As providers seek to refine their patient pay strategy and partner with leading vendors to help optimize results, there is certainly a growing list of alternative paths to consider. Each provider will have to determine the best approach based on the specific nuances of its organization and culture, the needs of its patient base and broader community as well as the relative sophistication of its revenue cycle staff. Impact, if any, on the provider's clinical staff and HIS / EHR system workflows are other considerations worth weighing.

Company Profile: **Centauri Health Solutions**

Centauri Health Solutions provides a diverse suite of technology-enabled solutions that support the risk adjustment, quality, and special population eligibility-based revenue programs of both payers and providers. Among its capabilities, the Company provides specialized patient advocacy and assistance services to determine program eligibility and enrollment based on the patient's unique set of characteristics and profile. Through a combination of specialized program expertise (e.g., out-of-state Medicaid, Supplemental Security Income (SSI), Social Security Disability Insurance (SSDI), and a range of other local, state, and national programs), proprietary software, and social services related data, Centauri uncovers meaningful reimbursement opportunities for its provider and health plan customers. Through direct consumer engagement, the Company ensures appropriate reimbursement to both providers and payers for these special populations.

The primary beneficiary, however, is the patient (or member in the case of the health plan). These individuals typically have lower income and/or are older, disabled, or have other special needs that need to be addressed. Supporting these people at what may be a low point in their lives can create dramatic, positive outcomes as it relates to satisfaction, loyalty, and the potential for valuable, ongoing engagement opportunities.

The personal, trusted relationship that is established with the patient is unique within the overall RCM process as the patient isn't being asked to pay or provide anything other than information that will help to reduce or eliminate their financial responsibility. In this regard, it's not just the patient relationship that can be leveraged in a variety of different ways, but the valuable social determinants data captured during the process. This data has incredible utility in mitigating downstream risk within these costlier and more difficult to manage patient populations.

For all these reasons, Centauri is positioned very uniquely in its ability to establish a vibrant, direct consumer engagement channel while playing to the industry's inevitable shift to value-based care across the provider and payer markets.

Looking Ahead

Without a doubt today's evolving, consumer-centric landscape is creating a hotbed of innovation within the broader RCM continuum for patient-facing capabilities that can simultaneously drive cash flow for the provider while consistently delivering high levels of patient satisfaction throughout the billing and collections process (see Figure 6). Hospitals, physician groups, and other providers must position their organizations to better manage patient receivables to maintain their financial stability as the amount of patient pay reimbursement continues to accelerate. Similarly, patients need to educate themselves and understand the options when confronted with a major care event and the associated expense. It's a growing reality that the patient's portion of the overall healthcare bill is rising and the potential for personal financial ruin due to medical debt and bankruptcy is of increasing concern.

To effectively combat these challenges, it is imperative that alignment is achieved among the provider, patient, and vendor. It is our prediction that the economic relationship between the provider and vendor landscape will increasingly shift to transactional or subscription-based pricing as opposed to contingent models based on a percentage of revenue collected which can potentially result in relatively aggressive collection tactics with patients. While contingent models certainly have their place — particularly in the areas of early out and bad debt — providers are reluctant to give up a substantial portion of

FIGURE 6.
REPRESENTATIVE PATIENT PAY VENDORS BY CATEGORY

"Frictionless" Payments & Communications	SwervePay® Health Services
Secure Encrypted Payments	AxiaMed
Personalized Patient Pay Experience	Simplee
Patient-friendly (0% APR) Financing	carepayment®
Comprehensive Patient Financial Engagement	visitpay

their reimbursement stream in instances where the probability of full patient payment is at its highest (i.e., at the point of patient access or even within the first 20-30 days after bill drop). Contingent pricing, however, is fair game to the extent the vendor has competencies in identifying additional coverage (e.g., public and 3rd party assistance programs) and advocating for and enrolling the patient in a streamlined manner. This "found" coverage has the dual benefit of reducing the patient's bill and providing additional revenue for the provider — a clear win-win for both the patient and provider.

We strongly believe that the focus of most patient-focused RCM vendors will continue to shift toward the point of patient access as a means of heading off potential revenue leakage and costly omissions, mistakes, and manual work-arounds further downstream in the RCM process. The reason is simple: proper management of patient pay and insurance information at the very front-end of the process allows for the integrated, proactive management of key revenue cycle functions as each patient moves through the healthcare delivery process. Providers, as a consequence, are poised to enjoy numerous benefits that extend beyond enhancing reimbursement rates and impact the efficiency of the operation more broadly.
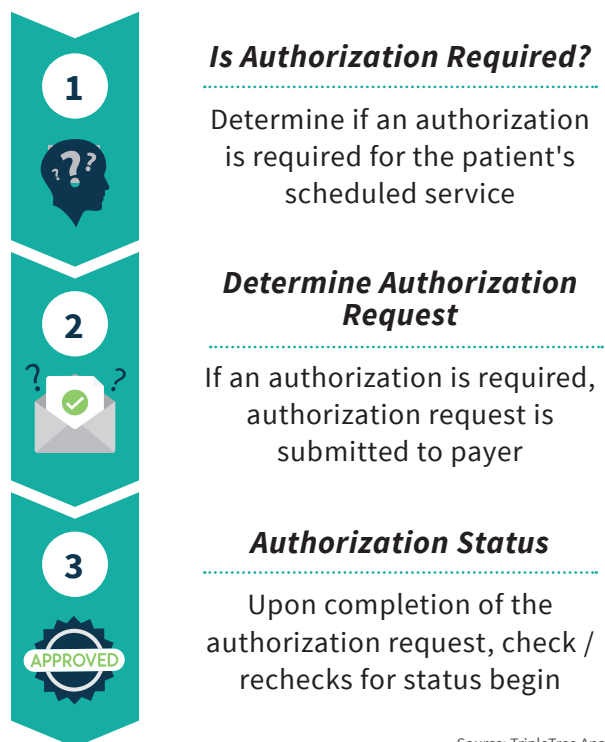
"Without a doubt today's evolving, consumer-centric landscape is creating a hotbed of innovation within the broader RCM continuum."

PRIOR AUTHORIZATION

Prior authorizations, aside from the range of other patient access functions, comprise a separate and distinct pain point for providers and are the source of an unusually pronounced point of friction with the payer community. For the uninitiated, providers are required to obtain prior authorizations from payers for certain medical procedures, tests, equipment, and therapies prior to the patient receiving the prescribed treatment. The intention of this process is to lower costs through the application of utilization management and review depending on coverage, payer-specific guidelines, and the clinical attributes of the patient as detailed in their medical record (see Figure 7).

FIGURE 7.
THREE-STEP PRIOR AUTHORIZATION PROCESS

1

Is Authorization Required?

Determine if an authorization is required for the patient's scheduled service

2

Determine Authorization Request

If an authorization is required, authorization request is submitted to payer

3

Authorization Status

Upon completion of the authorization request, check / rechecks for status begin

The front-loading of this approval by the payer theoretically results in fewer denials and less ambiguity in how a patient's treatment will ultimately be reimbursed.

The prior authorization screening and verification process is typically initiated within the Patient Access department of the hospital and involve many other constituencies, including physicians, nurses, other clinical staff, managed care, and other RCM departments as well as the patient and the patient financial services department. An employee within the Patient Access department typically collects the patient's information from the medical record and submits the authorization to the payer through any number of manual, partially automated, or fully automated channels. The payer's utilization management function reviews the information and provides an approval or denial that can vary dramatically — from a real-time, immediate response to several days or even longer. As an additional hurdle, the provider must efficiently navigate the payer's utilization management department which frequently uses a third party medical benefit management (MBM) provider to monitor eligibility and coverage dynamics as well as conduct a clinical review of the case based on medical necessity and clinical evidence (see Figure 8).

Interestingly, when referring patients to a hospital, the referring physician is responsible for completing the authorization with the proper administrative and clinical data, while the hospital is at risk financially if the authorization is insufficiently filled out or lacking the proper clinical information for the patient. This

FIGURE 8.
COMPARISON OF MEDICAL BENEFIT MANAGEMENT PROVIDERS

Vendor	eviCore healthcare	AIM SpecialtyHealth	NIA A Magellan Health Company	HealthHelp
Lives Managed	100mm	50mm	25mm	<10mm
Radiology	✓	✓	✓	✓
Cardiology	✓	✓	✓	
Radiation Therapy	✓		✓	✓
Medical Oncology	✓	✓		✓
MSK/Pain	✓	✓	✓	✓
Lab	✓			
Sleep	✓			
Post-Acute	✓			

The header "Medical Benefit Management Providers" spans the four vendor columns.

Other MBM Vendors: American Specialty Health, beacon health options, OrthoNet, eviti, via, carecentrix, New Century Health, naviHealth, flatiron

Source: TripleTree Analysis
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dynamic places the administrative burden on the physician and often involves a separate review process by the hospital staff to ensure scheduled patients have the proper authorizations in place prior to their visit. Thankfully for the referring physician community, the recent trend has been to shift prior authorization responsibilities to the hospital where the resources and technology support as well as the financial incentive ultimately lie.

"Prior Authorization" a 4-Letter Word?

Despite the proactive intent of prior authorizations, the process is heavily criticized throughout the industry for its high cost, manual workflow burden, and negative impact on care delivery and patient and physician satisfaction. In fact, **Health Affairs** estimates the annual cost to comply with insurance-mandated prior

authorizations is between $23 billion and $31 billion per year. Similarly, the **American Medical Association (AMA)**, which is among the industry's leading advocates for improving the existing authorization process, published the results of a recent survey across 1,000 physicians.

The findings bring context to the issue faced by physicians and their patients:

- Physicians encounter an average of **29.1** prior authorizations per week (**52%** attributable to medical service and **48%** to prescription authorizations) that require an average of **14.6** hours to complete

- **64%** of physicians reported waiting at least 1 business day for a prior authorization decision, with **30%** having to wait at least 3 days

- **84%** indicated that prior authorizations place a "high or extremely high" burden on the physician and their staff

- **92%** reported that prior authorization has a negative effect on patient clinical outcomes

- Similarly, **92%** reported a delay in the delivery of necessary care due to treatments that required a prior authorization

- **78%** reported that the prior authorization process can at least sometimes lead to treatment abandonment by the patient

According to another study by the **Council for Affordable Quality Healthcare** (CAQH), a non-profit alliance focused on "streamlining the business of healthcare," only 18% of prior authorizations are fully electronic and the average manual prior authorization costs $11.18 and takes as much as 27 minutes to complete. In contrast, 94% of claim submissions and 76% of eligibility verification transactions are fully electronic.

This lack of efficiency with regard to prior authorizations is the byproduct of several factors:

1. Manual approach that requires phone calls, IVR, faxes, email, or logging into each individual payer portal or website to work through a prior authorization submission

2. Process almost always requires the re-keying of information from the EHR and/or faxing the supporting documentation

3. Coverage guidelines are often inconsistent and vary by payer, making it impossible to leverage one payer's criteria with another's prior authorization process — in some instances there isn't even consistency within a single payer organization as its call center, website, and portal provide different guidance

4. Payer-provider transparency and communication are similarly deficient creating confusion around prior authorization requirements, criteria, rationale, and ongoing program changes

The Challenge (and Opportunity)

Automating the prior authorization process is a challenge, to say the least. The varying methods used to submit and obtain authorizations (e.g., phone, fax, secure email, payer portal, IVR, etc.) are numerous and unstandardized across payers. The EDI 278 transaction — the HIPAA electronic standard for prior authorizations — is not nearly as established as the NCPDP ePA transaction standard in the pharmacy space and lacks the informational depth and provider market penetration to be considered a viable industry "standard." Navigating the universe of payers, medical benefit management vendors, and electronic health record systems further complicates providers' ability to automate the prior authorization process.

Fortunately, there are a number of innovative technology and RCM vendors that have begun to successfully address the problem through the use of real-time connectivity, rich content, workflow automation, and next generation artificial intelligence. Leading companies in this space incorporate many, if not all, of these key functions within the delivery of their prior authorization solutions:

1. **Enhanced connectivity leveraging advanced automation:** All-payer connectivity is vitally important; however, prior authorizations today are not typically handled like standard electronic eligibility and claims transactions. Connectivity in this instance requires logging into payer portals with the proper credentials, filling in the patient's pertinent administrative and clinical information, and submitting the form to the payer for review.

Robotic process automation dramatically accelerates the information sharing and allows Patient Access to manage authorizations by exception. Following the submission, automated status checking or "pinging" is conducted to optimize the feedback cycle without manually re-logging into the payer's portal.

2. **Actionable library of payer-specific rules:** With the variability of payer-specific coverage and evidence-based guidelines, it is important to incorporate a scalable "knowledge base" within the prior authorization workflow. Artificial intelligence and machine learning capabilities are leveraged to incorporate, update, and manage the universe of payer rules as a means of generating workflow efficiencies through the incorporation of actionable insights as well as minimize the chances of a denial based on a deficient submittal or out-of-date payer criteria. Integration with the payer's medical benefit management (MBM) vendor is another means of creating greater levels of policy and guidelines transparency between the provider and payer.

3. **Clinical information extraction:** One of the more time consuming aspects of the prior authorization process is pulling in the proper clinical data from the patient's medical record to complete the clinical review portion of the process. Errors can occur as data are manually re-keyed from the EHR system, or potentially through the misinterpretation of the information by non-clinical Patient Access staff. Integration with the EHR and the use of natural language processing (NLP) technology can dramatically accelerate the extraction of pertinent

Company Profile: **Sansoro Health**

Sansoro Health is a key enabling Application programing interface (API) engine that allows RCM software vendors and providers alike to quickly and efficiently access important medical record information for a wide variety of use cases.

Specific to the prior authorization process, Sansoro's Emissary software platform automates the historically manual process of gathering and populating clinical data required for proper review and acceptance by the payer. What used to require hundreds of hours of implementation work to complete is now done in seconds (without heavy involvement by the provider's IT department), allowing leading RCM vendors to deploy their PA solutions faster and deliver a more powerful, complete software package to the provider. Vendors benefit by reducing the time, expense, and outright need to create custom APIs to share data between their software and the EHR, freeing up valuable resources to focus on product innovation and enhancements across the other areas of PA covered in this section.

Beyond the PA process, Sansoro enables a range of other important clinical, reimbursement, and compliance related functions — including risk adjustment, release of information, quality reporting, telehealth, and clinical decision support, among many other — that require access to clinical data. As healthcare shifts evermore rapidly to a digital environment, Sansoro Health acts as a valuable accelerant for leading software vendors that can benefit from having direct, real-time access to clinical data.

clinical data from the medical record. There exists a handful of technology vendors that play a highly complementary role in advancing the clinical information extraction component of a prior authorization request (see Figure 9).

4. **Actionable insights embedded within the workflow:** Whether through a vendor's proprietary user interface, 3rd party RCM software platform, or the EHR itself, the integration of the components listed above into the Patient Access workflow is crucial to the delivery of actionable, workflow-

embedded insights. This "last mile" of key prior authorization functionality delivers insights where they are needed within the work stream for optimal efficiency, financial impact, and return on investment. Additionally, bi-directional interfaces between the prior authorization workflow software and EHR provides compliance and audit defense benefits through the incorporation of the authorization number, valid dates, archived payer screenshots (when available), and supporting clinical documentation (see Figure 10).

Another dynamic that illustrates the industry's relative lack of sophistication in this area is the fact that most hospitals do not centralize the management of prior authorizations throughout their organization. The responsibility tends to fall to any number of areas within the hospital, such as patient access, registrar, patient financial services, and even specific departments (e.g., imaging, inpatient surgery, etc.). There are organizations that have identified the issue and are at the forefront of addressing the problem through a centralized approach, but it is estimated that only 10-20% of hospitals have a head of authorizations in place that oversee all of this activity and report up to the VP of Revenue Cycle or Chief Financial Officer. For these organizations, the result is a more streamlined, consistent approach that provides a degree of leverage in terms of standardized approaches and process efficiencies even if the organization hasn't yet meaningfully adopted automation.
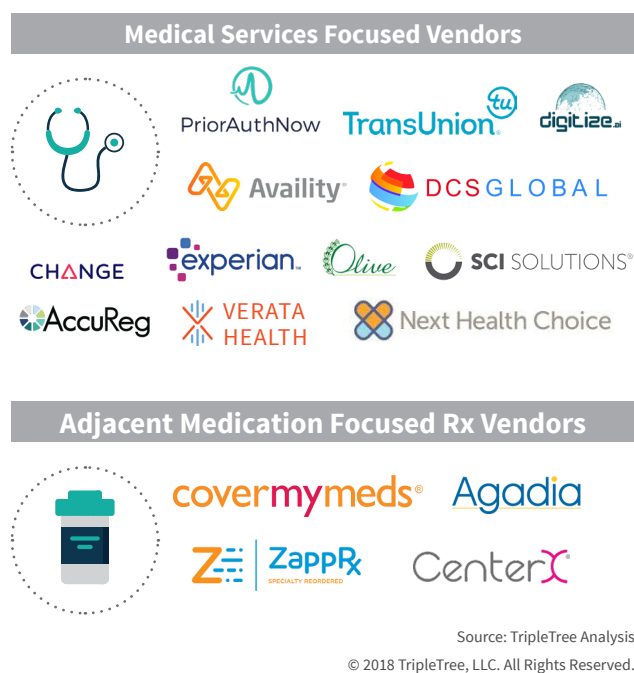
Looking Ahead

The provider and payer industries have launched a number of initiatives to help alleviate the burden brought on by the acceleration of prior authorizations. There are potential remedies for eliminating or reducing the need for an authorization, including "gold-carding" for high performing providers, eliminating the requirement for procedures or treatments with low denial rates, and avoiding a potential lapse in care due to authorizations on repeat testing or chronic conditions. In addition, there may be opportunities to align with the provider through risk-based contracting in which the provider has a strong incentive to maximize

FIGURE 9.
CLINICAL DATA EXTRACTION ENABLERS

Source: TripleTree Analysis
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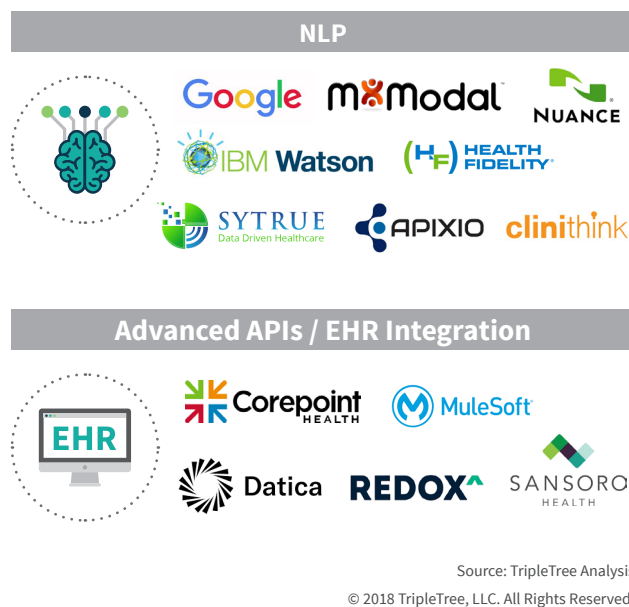
FIGURE 10.
ADDITIONAL PRIOR AUTHORIZATION SOLUTION VENDORS

Source: TripleTree Analysis
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utilization and outcomes. As not all physicians are of equal quality (nor necessarily proficient in managing utilization in the context of developing a care plan for the patient), it is likely that over the longer term the prior authorization process will become more efficient and widespread as the industry seeks to more proactively address unnecessary care, inappropriate payments, and denials.

Our view is that a tighter collaboration among the payer and provider will eventually occur due to the establishment of aligned risk-taking arrangements and greater use of point-of-care clinical decision support (CDS) capabilities leveraging evidence-based standards. Workflow-enabled solutions of this type can help identify cost containment strategies that identify alternate, less expensive care pathways and treatment options. Augmenting the prior authorization process with capabilities of this nature better equip the physician to optimize care delivery while keeping an eye on utilization and other important payer contracting dynamics.

Additionally, the need for greater levels of industry standardization is certainly required, whether through the use of common guidelines across payers, enhanced transparency, or broader adoption of the 278 electronic transaction standard. In the meantime, prior authorizations will play an important role in helping patients receive sound, evidence-based care while reducing unnecessary waste within the healthcare system.

In conclusion, true innovation in the prior authorization space will require an amalgamation of the advanced technological features described above. While the challenge is certainly significant, the opportunity and reward is a far more efficient, near frictionless interaction between the payer and provider — not to mention the positive impact on the patient's healthcare experience. Those companies that disrupt this area within the Patient Access department will find themselves at the forefront of meaningful value creation through enhanced cost containment and improved clinical outcomes.
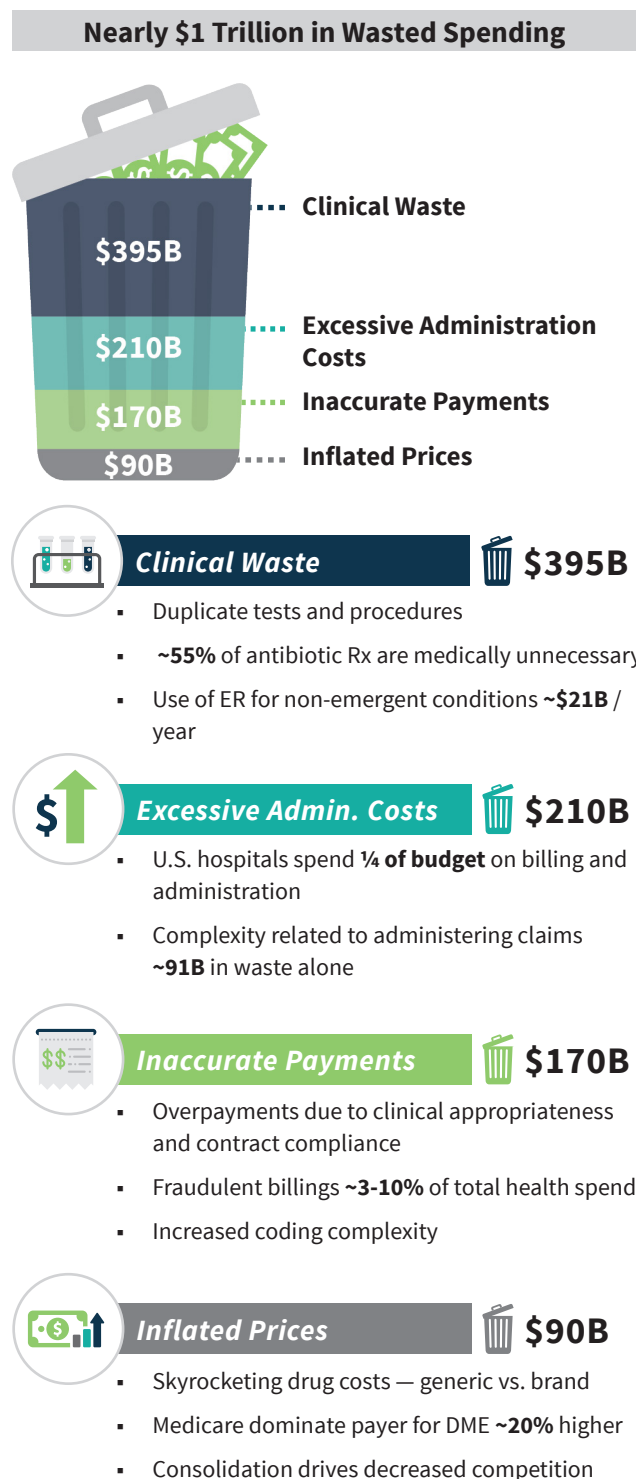
"Tighter collaboration among the payer and provider will eventually occur due to the establishment of aligned risk-taking arrangements and greater use of point-of-care clinical decision support (CDS) capabilities leveraging evidence-based standards."

PAYER-PROVIDER NAVIGATION & ALIGNMENT

It is often cited that there exists over $900 billion of wasteful spending in healthcare (see Figure 11). This, by any measure, is a significant amount borne by the entire landscape of providers, government and commercial payers as well as patients and their families. To a large degree, the waste is created by inefficient processes, complex payment and/or contractual dynamics, and outright "friction" between providers and payers. In fact, $210 billion of the total annual waste alone is spent on excessive administrative costs that support the business-related interactions among providers and payers. Another $170 billion is spent annually on managing inaccurate payments related to clinical appropriateness, contract compliance, and increased coding complexity, among other factors. As a result of all this excessive spending, there have been entire multi-billion dollar sub-industries that have emerged as well as a range of new initiatives that aim to enhance existing levels of automation and solve for ongoing payer-provider alignment challenges.

In fact, in 1996, the Health Insurance Portability and Accountability Act (HIPAA) established rules around the adoption and utilization of electronic transaction standards as a means of reducing the amount of paperwork and manual processes in healthcare and streamline key business processes across the entire healthcare system. HIPAA-covered entities that exchange electronic healthcare data using any of the common transaction sets (e.g., claims, eligibility, payment and remittance advice, coordination of benefits, etc.) must utilize the HHS adopted standards, primarily the Accredited Standards Committee X12 (ASC X12) based EDI standards. The Patient Protection

FIGURE 11.
SUMMARY OF WASTEFUL SPENDING IN HEALTHCARE

Nearly $1 Trillion in Wasted Spending

$395B — Clinical Waste
$210B — Excessive Administration Costs
$170B — Inaccurate Payments
$90B — Inflated Prices

Clinical Waste — $395B
- Duplicate tests and procedures
- **~55%** of antibiotic Rx are medically unnecessary
- Use of ER for non-emergent conditions **~$21B** / year

Excessive Admin. Costs — $210B
- U.S. hospitals spend **¼ of budget** on billing and administration
- Complexity related to administering claims **~91B** in waste alone

Inaccurate Payments — $170B
- Overpayments due to clinical appropriateness and contract compliance
- Fraudulent billings **~3-10%** of total health spend
- Increased coding complexity

Inflated Prices — $90B
- Skyrocketing drug costs — generic vs. brand
- Medicare dominate payer for DME **~20%** higher
- Consolidation drives decreased competition

Source: Institute of Medicine

and Affordable Care Act (ACA) followed up to HIPAA with additional guidelines — the Administrative Simplification provisions — to advance the use of standard electronic transactions, including the adoption of operating rules for each of the existing transactions and specific requirements for electronic funds transfer (EFT) and claims attachments.

Unsurprisingly, as healthcare often goes, the adoption of automation has been incredibly slow; after decades, HIPAA and ACA have only managed to drive claims submissions to near full electronic adoption (see Figure 12).

Immediate Opportunity: Moving Away from Manual and Paper-based Processes

From an RCM perspective, a significant amount of the negative financial impact stemming from manual workarounds and errors is a function of the high volume of often costly business transactions among payers and providers. Eligibility/benefit verification and claims submission, for example, are among the most frequently utilized types of transactions. However, these two examples are also the most heavily automated. Other types of interactions — including our discussion of prior authorizations in an earlier section of this report — are typically handled with a much higher degree of manual intervention. Similarly, paper-based processes — particularly mailed explanation of benefits (EOBs), payments in the form of printed checks, and printed/mailed patient statements — are among the other areas of opportunity for increased automation and cost savings.

FIGURE 12.
ADOPTION OF FULLY ELECTRONIC ADMINISTRATIVE TRANSACTIONS
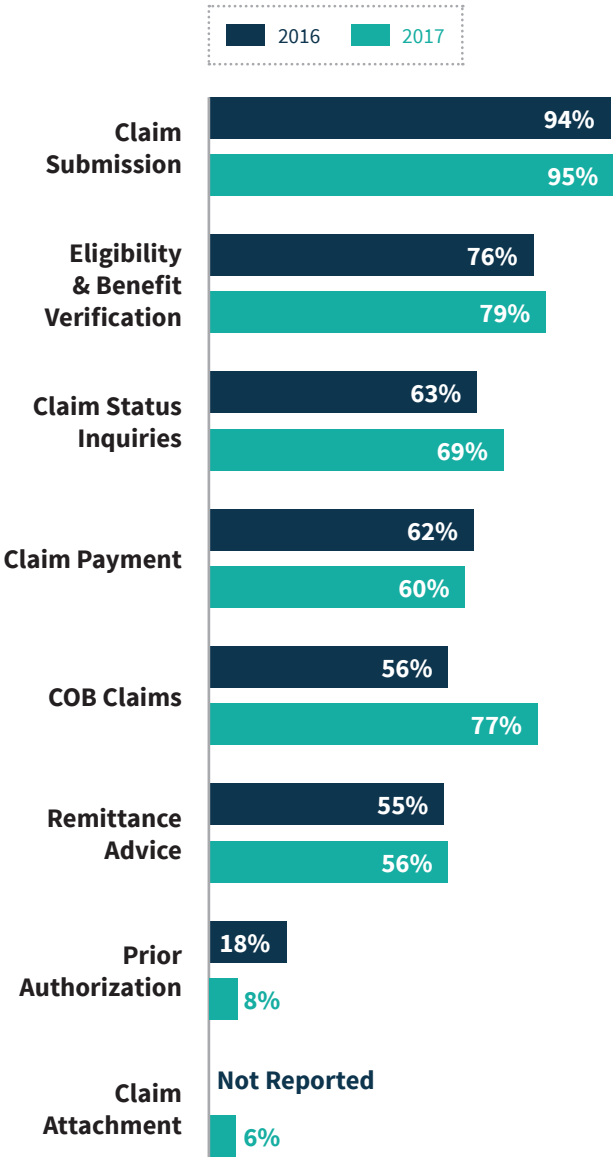
Source: 2017 CAQH Index®
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As a leading thought leader on the topic and a national convener of industry stakeholders in the development and implementation of operating rules for enhanced information exchange in healthcare, CAQH estimates that over $31 billion is spent annually by providers conducting basic business transactions with payers. Each year CAQH collects and analyzes industry data to calculate and benchmark the cost benefit in shifting the industry's progress toward greater adoption of electronic transactions. Figure 13 illustrates CAQH's findings for manual versus electronic transactions for a range of high volume claims transactions.

All told, CAQH estimates that adoption of electronic transactions for these seven transactions alone would save the healthcare industry $11.2 billion annually. Aside from the near-elimination of manual processes, instigating increased electronic adoption has the added benefit of reducing payer-provider friction through enhanced, real-time information sharing and more rapid issue resolution, when warranted, which optimizes the revenue cycle for all parties.

Adoption of Standards and Electronic Transactions are Only the Beginning...
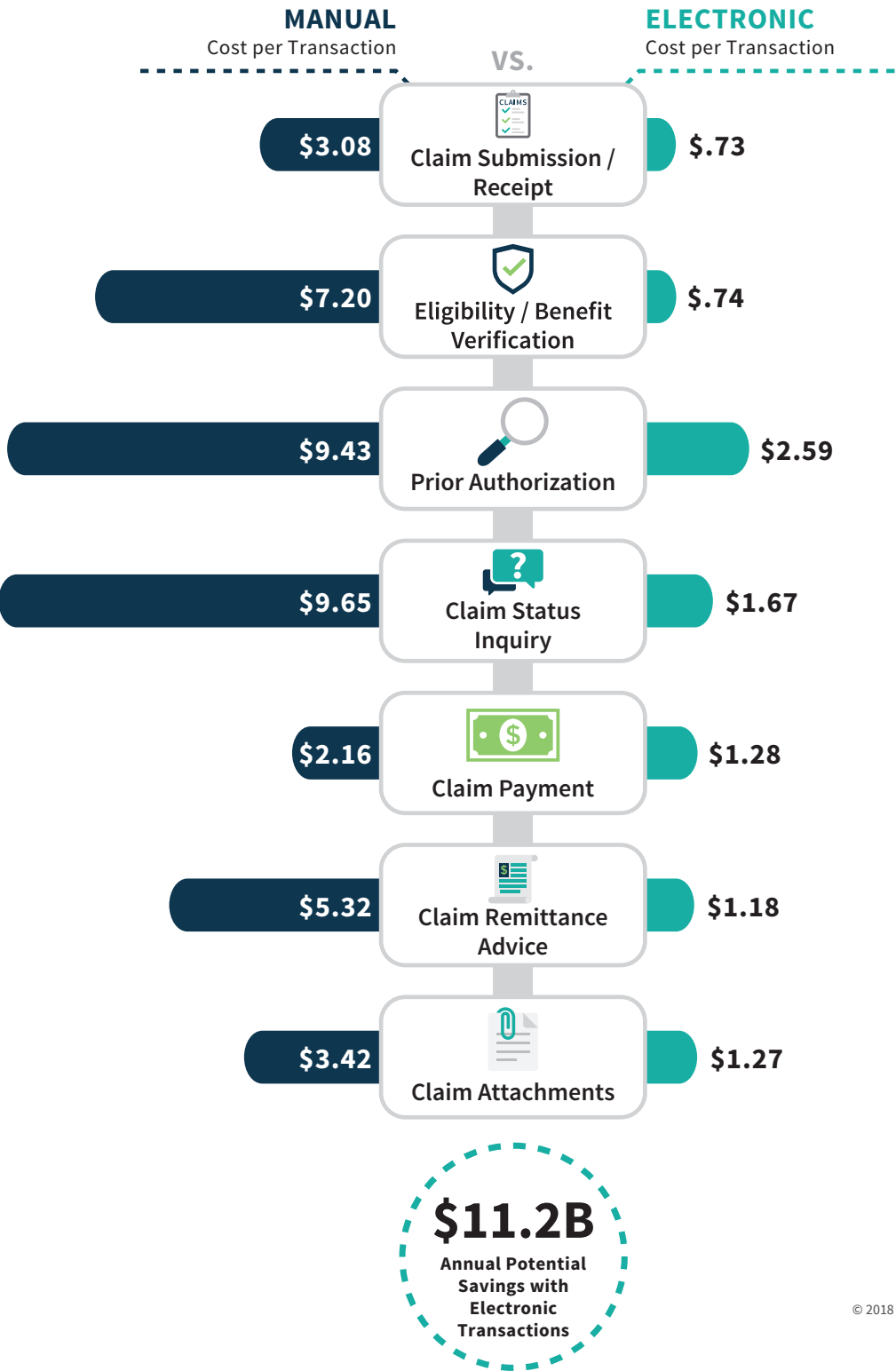
Friction between payers and providers oftentimes stems from a lack of transparency and frustration caused by navigating variable processes and requirements specific to each organization. In this respect, while providers may blame payers universally, standard EDI formats are limited in terms of the depth and granularity provided to help providers properly fix a claim prior

to submission or remediate denials in an efficient, straightforward manner. Payers may certainly be at fault for a lack of transparency, but typically the level of detail providers need can be found with the proper access, expertise, and capabilities — particularly with regard to navigating and extracting the necessary data from payer-specific portals and systems. This process includes gaining access to and normalizing Claim Adjustment Reason Codes (CARCs), Remittance Advice Remark Codes (RARCs), and other payer-specific reason codes that provide a more comprehensive view. A lack of context often results in costly, time-consuming manual workarounds as well as increased denial risk, write-offs, A/R days, and payment delays and errors, among other issues. In this regard, in the absence of detailed reason codes, asking the "right" question is paramount to selecting the correct path forward and remediating the issue in an efficient, automated manner.

For instance, enhanced context around the following transactions will meaningfully improve denial risk and other RCM-related issues that can arise:

- **Eligibility verification** at the point of patient registration is critical to avoiding errors and claim denials further downstream. Sorting out coverage among primary and secondary payers, patient pay responsibility, and whether there has been a registration error made (e.g., wrong plan code, policy number discrepancy, etc.) in real-time can go a long way in reducing one of the most frequent causes of avoidable denials.

FIGURE 13.
HOW MUCH DOES THE HEALTHCARE INDUSTRY SPEND ON CLAIMS-RELATED BUSINESS TRANSACTIONS?

MANUAL
Cost per Transaction

VS.

ELECTRONIC
Cost per Transaction

$3.08	Claim Submission / Receipt	$.73
$7.20	Eligibility / Benefit Verification	$.74
$9.43	Prior Authorization	$2.59
$9.65	Claim Status Inquiry	$1.67
$2.16	Claim Payment	$1.28
$5.32	Claim Remittance Advice	$1.18
$3.42	Claim Attachments	$1.27

$11.2B
Annual Potential Savings with Electronic Transactions

Source: 2017 CAQH Index®
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Alpha II is a SaaS-based, content-rich software platform that provides clinical and administrative claims editing solutions for ambulatory and acute provider settings. The Company addresses virtually every place of service and type of bill, including often overlooked rules pertaining to critical access hospitals, ambulatory surgery centers, nursing homes, and dialysis facilities, among other service types. The Company delivers a unique blend of capabilities to address denial prevention and partial/line item level rejections by:

- Proactively identifying relevant information based on the most up-to-date billing and coding rules and regulations

- Applying content-driven logic spanning administrative and clinical edits

- Proactively addressing issues before the claim is submitted to the payer

For the uninitiated, most claims scrubbers on the market can detect formatting and administrative errors on the back-end of the process, just prior to claims submission. Alpha II takes the typical process much further with its ability to engage the provider at various points within the workflow, particularly during the patient encounter when critical coding and charge capture activities occur. Through EHR integrations, Alpha II is embedded within the clinical workflow allowing for real-time remediation of errors or omissions. This functionality sets the Company apart and enhances its value proposition within the adjacent middle (i.e., charge and transaction entry) and back-end workflows.

Beyond flexible workflow, with the depth and breadth of Alpha II's edits, the Company addresses a major cause of claim denials and rejections: clinical and coding related issues. Examples of Alpha II's unique edits include identification of add-on codes without a parent code, ensuring billing of the appropriate administration code for injectables, mismatched procedure and diagnosis codes, up-coding and/or unbundling, incorrect coding, and missing or errant modifiers (i.e., higher complexity procedures and services). All of these denial/rejection reasons, taken together, have a significant impact on the revenue cycle and are much more difficult to identify and correct.

Alpha II has also been a CMS qualified registry since 2014 with edits that identify qualifying events for measure reporting. We believe that this clinically-oriented RCM functionality is among one of the more attractive opportunities as RCM becomes increasingly intertwined with the patient's clinical documentation. Additionally, residing within the clinical workflow presents other attractive opportunities in a value-based care world where compliant data capture for quality and performance reporting programs (e.g., CMS' Merit-based Incentive Payment System (MIPS)) is increasingly prevalent.

- **Claim submission**, or more precisely clean claim submission, requires an up-to-date maintenance of payer reimbursement rules and regulatory requirements that shift around and change frequently. Incorporation of the proper edits and intelligent claim scrubbing tools — whether utilized in the clinical workflow at the encounter-level or during back-end claims editing — are essential in reducing costly clinical and administrative denials.

- **Claim status inquiries** retrieve up-to-date status details on pending commercial or government claims. The standard EDI claim status code that is returned, however, can be very limited and lack the specificity to avoid a denial or underpayment. Specialized vendors with an ability to extract granular, payer-specific adjudication codes that reflect the full context of the claim's status, provide an opportunity to manage claim issues by priority or exception, rather than manually reviewing large volumes of claims pushed to a staff's work queue.

- **Attachments**, which are associated with approximately 5-10% of claims, are solicited by payers as a means of substantiating the adjudication and payment of the claim. The attachments process — which provides the necessary supporting documentation, in some cases comprising the patient's entire medical record — is typically very manual in nature (i.e., printed and mailed documents) and often disjointed from the claims submission process. Automation in the way of secure, electronic delivery of attachments is a positive first step. The opportunity, however, is in submitting the electronic claim and attachment simultaneously to create cohesiveness across the claims lifecycle that in turn will reduce payment delays and possible denials. **The Department of Health and Human Services** (HHS) via the Affordable Care Act (ACA) legislation and Centers for Medicare & Medicaid Services (CMS) are supportive in moving in this general direction as a means of alleviating challenges associated with exchanging health information and creating efficiencies within the overall revenue cycle.

- **Remittances** provide a source of information in determining why a claim was denied or paid out at an amount other than what was billed by the provider. The detail, however, is often very limited in nature and often lacks the granularity required to substantially optimize provider billing and denial management processes. Beyond extracting the necessary adjustment detail (i.e., CARCs, RARCs, and Claim Adjustment Group Codes (CAGCs)), it is important that denial and underpayment reason codes are normalized and mapped across all payers to ensure workflow prioritization and limit the potential for write-offs and/or issues that impact patient statements. Providers have also experienced errors and insufficient adjustment code information when using standard lockbox services that use OCR scanning and paper explanations of payment (EOP).

FIGURE 14.
INNOVATIVE COMPANIES ENHANCING RCM WORKFLOWS

	Opportunity	Innovative Companies
Registration & Payment Assurance	▪ 30-50%+ of denials result from front-end registration issues: eligibility and benefit determination, prior authorizations, medical necessity, and data quality ▪ Proactive intervention results in significant efficiencies downstream and increased revenue	AccuReg
Referral-Driven Patient Scheduling	▪ Integration of key pre-registration functions ▪ Strengthen provider networks by acquiring (and keeping) patients, growing outpatient revenue, and delivering an optimized patient access experience	SCI SOLUTIONS®
Claims Scrubbing & Editing	▪ Clinical workflow embedded solutions proactively enhance the accuracy of clinical edits and claims prior to payer submission ▪ Robust content leveraging a depth of experience among clinical specialties is critical to identifying clinical and administrative errors	ALPHA II
Coding Accuracy & Compliance	▪ Coding, clinical compliance, and revenue integrity capabilities focused on enhancing accuracy and compliant reimbursement ▪ Hybrid models delivering SaaS-based software and technology-enabled services provide delivery model flexibility in catering to the provider's specific needs	THE T SYSTEM®
Attachments	▪ Proactively address documentation related denials by anticipating the clinical information the payer requires either at or following the claim submission ▪ Tracking and "work-by-exception" automation until claim is resolved	VYNE
Claim Status & Denial Analytics	▪ Enriched data access powers advanced, real-time claim status capabilities for both government and commercial payer claims which significantly shortens the revenue cycle ▪ Complementary, detailed denial analytics further enhance RCM insights and cash flows	eSolutions

Source: TripleTree Analysis

These transaction types are due for disruption because they are generally:

1. Still handled manually a high percentage of the time

2. Increasingly complex from an administrative or information exchange perspective

3. Involve specific requirements that can vary by each individual payer

4. Often require coordination among multiple parties (i.e., primary and secondary payers, clearinghouses, billing companies, financial institutions, other agents working on behalf of the provider, etc.)

An entire landscape of innovative RCM software and analytics companies have emerged that address these critical RCM workflows (see Figure 14). The leading organizations have competency around intelligently extracting data, analyzing that data in the proper context, and delivering actionable intelligence into the workflows of the providers' staff or outsourced RCM service provider. The combination of these capabilities (i.e., connectivity, context, and informed workflow automation) creates the greatest potential to optimize financial performance for the provider while helping accelerate the industry's progress toward a more highly automated, frictionless environment. For these reasons, it is important that providers select the right RCM technology partner to capture the full extent of potential benefits:

1. Reduce costly manual or paper-based processes

2. Improve payment accuracy (both under- and over-payments) through clean claim submission and rapid, proactive remediation, when warranted, prior to adjudication

3. Advance denial management and prevention efforts

4. Enhance internal RCM operations through the prioritization of errant claims and other issues as well as provide detailed drill-down capabilities specific to each payer by provider, location, and service type

5. Improve existing levels of compliance, auditability, and oversight of relevant processes, systems, and personnel

6. Tighten revenue cycle timelines overall, leading to more rapid reimbursement and cash flow

Recondo is a leading provider of SaaS-based RCM automation solutions to hospitals and outpatient providers. At the center of Recondo's value proposition is an artificial intelligence-enabled workflow automation and logic engine which powers an intelligent, data-driven software suite spanning the patient access and back office areas of the RCM continuum. The company addresses several challenging areas for providers — including registration QA and eligibility, prior authorizations, patient pay estimation, and claim status inquiries — through a unique combination of proprietary rules and algorithms, workflow automation, and machine learning and NLP functionality. This blending of content, data, and automation at the right moment in the workflow helps dramatically enhance the provider's existing levels of financial performance, compliance, and operational intelligence and efficiencies.

Recondo brings incremental value to traditional EDI transactions that typically lack the data, clinical context, and payer specific payment policy rules required for partial or complete automation. Left unaddressed, these manual processes today create 1.1 million hours per week of follow-up work by the provider's in-house RCM professionals.

Payment Estimations

Prior Authorization

Eligibility

Claims Status

Looking Ahead

Vendors in this category naturally have a competitive edge and barrier to entry in terms of data access, payer intelligence, and application of advanced technologies. Many clearinghouses (e.g., **ABILITY Network**, **Availity**, **Change Healthcare**, **eSolutions**, **SSI Group**, and **Waystar**) have begun developing or acquiring software products that leverage information flowing through their data "highways" which carry large volumes of EDI and other business transactions among payers and providers. In other instances, niche technology companies have emerged to address specific industry pain points within these critical eligibility and claims processes. As more and more data is digested by these vendors' systems, there exists an opportunity to apply robotic process automation and machine learning to existing processes to further optimize RCM performance and outcomes.

We also expect to see the industry accelerate its consolidation of data among various sub-components of the broader RCM continuum as a means of more proactively addressing denials and underpayments at their source. For instance, while intelligent claims status capabilities can help inform and head off a potential denial post-patient encounter, 30-50%+ of denials are actually caused by front-end registration issues (e.g., eligibility, medical necessity, authorizations, and data quality issues). Doesn't it make sense to leverage the knowledge gleaned further downstream in the RCM process to better inform and enhance front-end processes to ensure a full and accurate payment? It seems obvious, and has been achieved with mixed

success in the market, but this integrated strategy isn't without its own set of challenges. For instance, changes to the provider's internal operations, personnel turnover, and payer mix shifts can all throw off an otherwise sound process across front- and back-end RCM processes. The key is in delivering real-time, analytic-driven insights to the proper staff at the proper time. These capabilities allow for a high degree of automation by empowering and intelligently guiding staff on a prioritized, 'by exception' basis while retaining the provider's ability to maintain operational flexibility as inevitable changes to the organization occur.

Emerging value-based contracting (VBC) and reimbursement models will only complicate the process further and potentially lead to increased denial rates. As such, it is imperative that providers equip themselves with the proper data-driven strategy and tools to address RCM issues proactively. This objective can be achieved by delivering actionable information to those within the provider's organization that can make the greatest impact. Further, through the use of machine learning, error-prone processes and other inefficiencies can be automated so that problems don't reoccur and continue to be a drag on productivity and financial outcomes.

"Doesn't it make sense to leverage the knowledge gleaned further downstream in the RCM process to better inform and enhance front-end processes to ensure a full and accurate payment?"

SPECIALIZED RCM: REVENUE INTEGRITY & COMPLEX CLAIMS MANAGEMENT

The ever-increasing complexity of reimbursement structures, including the continued shift toward risk sharing and value-based care, is changing the means by which healthcare providers are paid. These changes, compounded by more onerous clinical documentation and compliance standards, are leaving providers exposed to revenue leakage. In fact, providers may be leaving as much as 1-10% of net patient revenue on the table, according to some estimates, depending on the provider's patient base and reimbursement mix. The following are among the more pronounced areas of revenue leakage experienced by providers — defined herein as areas of "specialized RCM":

- **Underpayments:** while outright denials are relatively easy to flag for follow up and processing, significant challenges exist in identifying underpayments made by managed care or government payers. The problem stems from the fact that hospitals and health systems manage a tremendous volume of claims each year and the zero balance accounts — or those accounts that have been paid or adjusted off in some way — are effectively marked as "complete" and not focused on further. The reality is that there is significant revenue to be realized in these accounts due to payer contract or government fee schedule errors, clinical severity adjustments or omissions, missing or unbilled charges, and improper remittance adjustments, among other issues. Underpayment recovery involves a complex, retroactive review of claims based on the reimbursement the provider should have received — a process that sounds much

easier than is actually the case. Once issues are identified, the appeals process can begin — as long as the time line for disputing a claim hasn't lapsed — and appropriate process and organizational changes can be made to improve future reimbursement and cash flow.
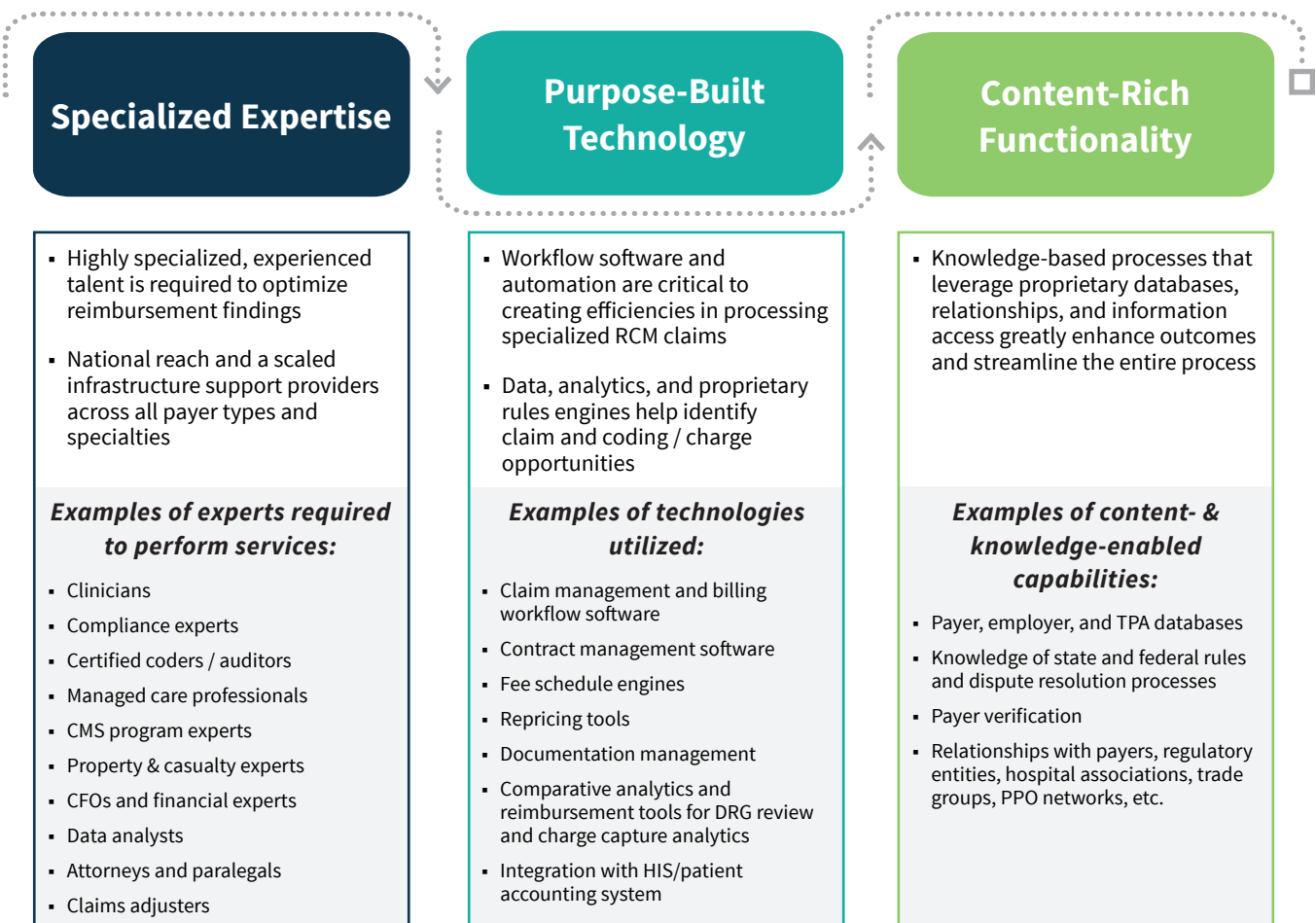
- **Complex Medicare reimbursement programs:** a wide variety of Medicare reimbursement programs exist to properly compensate providers, including examples such as Medicare reimbursable bad debt, post-acute transfer, IME/GME reimbursement (shadow billing), disproportionate share hospital payments, and uncompensated/charity care (Worksheet S-10). Managing the complexities of these programs from an eligibility and compliance perspective is exceedingly challenging for providers and as a result, a significant amount of reimbursement goes uncollected.

- **Workers compensation claims:** while workers comp claims comprise a relatively small percentage of total claims, the reimbursement impact for the provider can be tremendous. However, these types of claims are notoriously difficult and time-consuming to manage: workers comp claims submissions and payments are often handled through paper-based processes, state and federal fee schedules and hospital PPO contracts are complex and difficult to manage, and the required supporting documentation and attachments are often laborious to track down for submission. All of these issues make collecting proper reimbursement exceedingly difficult for the provider.

- **Motor Vehicle Accident (MVA) claims:** similar to workers comp claims, MVA claims often require a time- and labor-intensive approach and hospitals often lack the expertise and resources to properly collect. The difficulty starts with identifying accident-related claims — whether at the point of registration or through downstream analysis running claims against other data sources — and continues with a comprehensive coordination of benefits review before the billing process begins targeting the responsible parties. Involvement by investigative

teams, including adjusters, legal counsel, and other experts is required to ensure compliance and full payment of MVA claims.

The revenue "leakage" stemming from these RCM sub-categories is pronounced and all share similar levels of complexity requiring a sophisticated blend of specialized expertise, technology, and content- or knowledge-rich capabilities to effectively address the issue. The following table provides an overview of the critical and differentiating components of a well-positioned specialized RCM vendor (see Figure 15).

FIGURE 15.
REPRESENTATIVE COMPONENTS OF A STRONGLY POSITIONED SPECIALIZED RCM PLATFORM

Specialized Expertise	Purpose-Built Technology	Content-Rich Functionality
- Highly specialized, experienced talent is required to optimize reimbursement findings - National reach and a scaled infrastructure support providers across all payer types and specialties	- Workflow software and automation are critical to creating efficiencies in processing specialized RCM claims - Data, analytics, and proprietary rules engines help identify claim and coding / charge opportunities	- Knowledge-based processes that leverage proprietary databases, relationships, and information access greatly enhance outcomes and streamline the entire process
Examples of experts required to perform services:	***Examples of technologies utilized:***	***Examples of content- & knowledge-enabled capabilities:***
- Clinicians - Compliance experts - Certified coders / auditors - Managed care professionals - CMS program experts - Property & casualty experts - CFOs and financial experts - Data analysts - Attorneys and paralegals - Claims adjusters	- Claim management and billing workflow software - Contract management software - Fee schedule engines - Repricing tools - Documentation management - Comparative analytics and reimbursement tools for DRG review and charge capture analytics - Integration with HIS/patient accounting system	- Payer, employer, and TPA databases - Knowledge of state and federal rules and dispute resolution processes - Payer verification - Relationships with payers, regulatory entities, hospital associations, trade groups, PPO networks, etc.

Source: TripleTree Analysis
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Why Differentiation and Complexity Matter in Specialized RCM

Vendors within this specialized RCM category generate all, or at least a meaningful portion, of their revenue through performance-based pricing arrangements (i.e., percent of collections rate based on reimbursement received) with their provider customers. As such, the means by which reimbursement opportunities can be efficiently identified and processed is critical to defending a strong value proposition and fostering a long-term relationship with the provider.

The high levels of complexity in this segment create a natural barrier to entry with much larger incumbent RCM services providers that do not have the proper technology and experience managing complex claims and denials. Part of the challenge, in this respect, is amassing the right set of expertise and talent on such a large scale to address all payer types, claim types, and impacted specialty areas. For that reason, while specialized RCM vendors may compensate their professionals at 3-5 times the rate of an average RCM employee at a hospital or outsourced services vendor, operational leverage is created via scale and these vendors' ability to process significant reimbursement opportunities for the provider no matter what the situation.

FIGURE 16.
RECENT M&A ACTIVITY IN SPECIALIZED RCM

Source: TripleTree Analysis
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Looking Ahead

Recently there's been a pronounced acceleration of investment and M&A activity in this sector based on the growth profiles and significant market opportunity ahead of leading specialized RCM vendors (see Figure 16). The opportunity in the complex claims area is borne out of a deep understanding of the nuances, challenges, and best practices required to find significant reimbursement opportunities for providers. In this regard leading specialized RCM companies can expect to see continued strong demand for their services as hospitals and other providers struggle with ongoing reimbursement cuts, increasingly onerous compliance requirements, and internal RCM operations that are already stretched thin. In our view, these companies are ideal acquisition targets for large RCM outsourcing organizations that need to round out their billing and accounts receivable management business lines with specialized, complex claims capabilities that create new revenue and cross-sell opportunities.

As we look ahead, it's possible that certain specialized RCM vendors will grow to encompass all of the specialized RCM sub-categories listed above — in fact, RevInt already has. It doesn't need to stop there as an opportunity exists to extend into other attractively positioned service lines at the front- or back-end of the revenue cycle (e.g., Medicaid and special programs eligibility services, patient financial counseling and support, charge audit and clinical documentation improvement services, and forward-thinking patient self-pay solutions, to name but a few).

In any event, we expect to see ongoing consolidation and positive market activity in this complex yet highly valuable area of RCM.

"Specialized RCM companies can expect to see continued strong demand for their services as hospitals and other providers struggle with ongoing reimbursement cuts, increasingly onerous compliance requirements, and internal RCM operations that are already stretched thin."

HEALTHCARE PAYMENTS

By any comparison, managing the $3.5 trillion spent annually on healthcare in the U.S. is incredibly daunting. This equates to $10,348 per consumer, and the spend is only increasing each and every year. As it relates to provider reimbursement, while CMS and commercial payers together still comprise the majority of payments to providers, the patient is becoming an ever-increasingly important component to the provider's financial success (or solvency). Consumer out-of-pocket healthcare spending is expected to rise from $416 billion in 2014 to $608 billion in 2019 due to the increasing prevalence of high deductible health plans (HDHPs) with average deductibles that are consistently increasing year over year.

The amount of spend, however, is only part of the story. Healthcare has its own set of complicating factors that make the process of billing and collecting payment for services so complex. And the level of complexity is only accelerating as healthcare providers struggle to keep pace with a range of changes that are reshaping the entire landscape. For instance, providers can no longer rely on government and commercial payers to keep them afloat financially; instead, managing the financial risk associated with value-based contracting and collecting from individual patients in a "consumer-friendly" manner are becoming increasingly critical. As noted previously, existing payment processes are very similar to the healthcare transactions environment in that there are significant inefficiencies related to legacy manual and paper-based processes (e.g., paper checks, printed patient statements, onerous administrative requirements, etc.).

As we look ahead there are a number of major considerations providers must navigate in shaping a sound payments strategy:

- **The healthcare payments process is complex and involves multiple constituencies:** The claim-through-payment lifecycle involves a wide range of participants including the patient, provider, payer, clearinghouses, billing companies and financial institutions. Secondary and tertiary payers, as well as a range of third party RCM and payment integrity vendors, may also get involved as providers and payers alike pursue proper payments. A streamlined, well-integrated RCM strategy incorporating internal and external, third party vendor processes is a good start. Beyond a well-tuned infrastructure, optimized patient pay collections and clean claims submission efforts — via rigorous compliance, payer contracting, and denial prevention — are all necessary for proper and full payment.

- **Disjointed transaction and payment processes:** Claims, remittances, and payments are often sent through different channels and are not easily reconcilable. Remittances (835 transactions) that lack detailed adjustment codes, for instance, create a significant problem in auto-settling and balancing payments — this phenomenon can potentially impact multiple claims at a time. Furthermore, payments made from government and commercial payers are received separately from those of patients. As a result, providers must have the proper systems and processes in place to collect, aggregate and reconcile payments that align with the total

amount due to ensure the provider is reimbursed completely for services delivered. Integration with the provider's health information system (HIS) or practice management (PM) system is important for streamlined payment posting — not all vendors have this level of direct connectivity. Furthermore, underpayment detection (versus managing outright denials) requires specialized expertise and effective reconciliation of claims, EOPs, and payments. Without the right set of capabilities and deep insights in this area, providers are susceptible to significant revenue leakage.

- **Shifting payer mix and managing varying payer requirements:** Payer/coverage mix shifts also create payment inefficiencies as providers work to stay on top of onerous paper-based processes and EFT and electronic remittance advice (ERA) enrollment requirements that vary for each payer and third party administrator (TPA). Furthering the administrative burden, once the provider is enrolled, payers often send claim payments to the point of service (based on the provider's tax identification number, or TIN) as opposed to a dedicated payment center, creating the need for manual intervention and rerouting which further extends the timing of payment.

- **Accelerating patient pay dynamics:** As noted previously, patient pay responsibility has exploded over the past decade due to consumer-directed health trends and a rise in HDHPs. This shift creates a burden for providers needing to collect a high volume of relatively small dollar payments

from individual patients. This requires a different infrastructure than insurance (claims) billing and a more "friendly" approach to ensure optimal payment levels.

- **Increasing demand for consumer convenience and flexible payment options:** Mobility and consumer choice are paramount when catering to consumers. Providers must be able to support multiple payment options (e.g., all major credit cards, ACH/Check21, PayPal, various types of health funding sources (including HSAs, FSAs, HRAs), paper checks, and cash) that are capable of supporting EMV (chip) and NFC (contactless payments) technologies. Scheduling, check-in, and billing are natural points of contact with the patient that can be integrated and expanded upon with other convenient patient-facing tools, such as appointment reminders, test result notifications, provider communications and other preventive care outreach, and satisfaction surveys, among other opportunities.

- **Security and compliance are critical:** The healthcare industry is heavily targeted by cyber criminals and identity thieves. As such, the headline and actual security risk associated with a massive data breach is a top issue among most every major provider organization today. Providers, as a consequence, are doing whatever they can to facilitate a high quality care-through-payments experience for the patient while simultaneously protecting a substantial amount of personal information. From a healthcare perspective, the Health Information Trust Alliance Common Security

Framework (HITRUST CSF) certification is important as it is used by all organizations that "create, access, store or exchange sensitive and/or regulated data." From a payments perspective the Payment Card Industry (PCI) Data Security Standards (DSS) are important as is PCI compliant point-to-point encryption (P2PE) which protects sensitive point-of-service payment card data via encryption from the time a card is swiped or keyed until it reaches a secure endpoint. Digital wallets, which provide added convenience for periodic payments or recurring payment plans, can leverage tokenization as a means of enhancing data security while reducing the provider's compliance risk and PCI scope (i.e., sensitive information never touches the provider's server). These capabilities, among others, are vitally important when navigating two heavily regulated industries.

A Diverse Landscape of Opportunity

While the healthcare payments environment is certainly complex and comes with its fair share of challenges, this rapidly changing, complicated backdrop gives rise to a wide variety of business opportunities for well-positioned, innovative companies in the sector. The following is an evaluation of several different strategies playing on the broader thesis and market opportunity within the healthcare payments landscape:

Strategy #1: Become the Healthcare Payments Network

"Trust" is an important word in healthcare, and one that takes time to build from both a reputation and scale perspective. Founded nearly 15 years ago, **InstaMed**

is among the leaders in the healthcare payments arena having established a national network that today includes 100,000+ healthcare organizations, including thousands of hospitals, clinics, and payer organizations across all 50 states. Taken together, the company touches roughly two-thirds of the market and processes tens of billions of dollars of payments annually. The "trust" factor comes not only from that established scale and diversity of coverage, but also from the benefits and features that accompany it. Most notably, from a provider-facing perspective, InstaMed incorporates invaluable clearinghouse, security/compliance, and patient-centric functionality with its payment capabilities to positively influence financial performance, streamline key RCM and payment processes, and reduce other operational challenges associated with handling sensitive patient data.

Payment certainty is critical for providers and knowing precisely where payments are coming from (and by extension, identifying balances that remain outstanding) is an ongoing challenge for providers. As a merchant acquirer, InstaMed sits at an important intersection among all constituencies participating in its network which allows for true facilitation of the payments process at the most granular level. For instance, whereas other RCM vendors that utilize 3rd party payment processing capabilities may deliver one lump sum payment each month, InstaMed can break the same amount down by paying entity, time of receipt, and reassociate the EFT back to the remittance for reconciliation purposes. This level of depth provides complete control over the payments process and deeper insights into the provider's cash flow stream.

FIGURE 17.
OPPORTUNITIES: BECOME THE HEALTHCARE PAYMENTS NETWORK

- National network
- Provider-facing
- Patient-centric functionality
- Security
- Compliance
- Improve provider-financial performance

INNOVATIVE COMPANIES
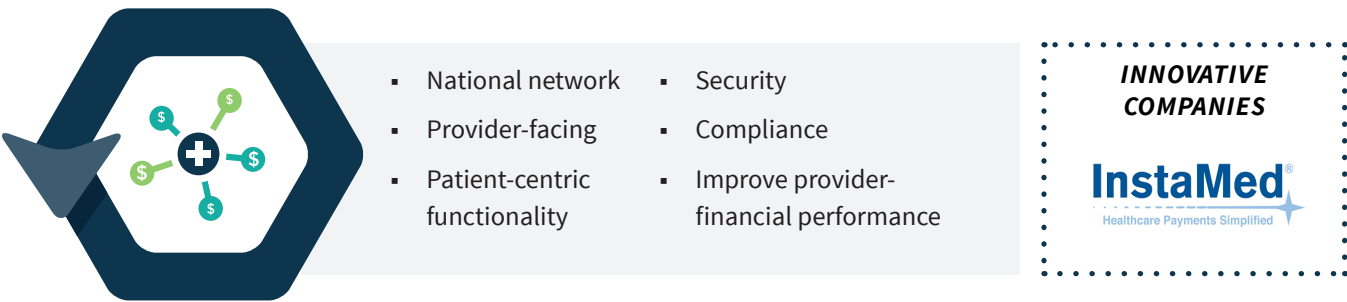
By leveraging payer and clearinghouse data as well as other proprietary IP, InstaMed also delivers the necessary healthcare industry expertise to enhance existing RCM processes and reduce the amount of "friction" experienced by all constituencies. This level of domain expertise and success has been experienced by a few noteworthy public companies operating in other industries, most notably **Shopify** (NYSE: SHOP) and **MindBody** (Nasdaq: MB) in the eCommerce arena, and **PayPal** and **Square** (NYSE: SQ) in the mobile payments space. We believe there exists a similar, if not greater, opportunity in healthcare given the pronounced regulatory and compliance backdrop as well as the complexity specific to the healthcare payments environment; the latter of which is increasingly impacted by a shifting payer landscape and new value-based contracting and consumer dynamics.

Security and compliance are among the most critical factors to solve for when expanding a national payments network. Compliance with the requisite healthcare and payment industry standards, as referenced above, is table stakes. Aside from driving higher levels of automation and payment process efficiencies, a break out opportunity for InstaMed and other similarly positioned companies is in rationalizing

the number of vendors coming in contact with sensitive patient information. For instance, as many as a dozen vendors (directly or indirectly, via secondary vendor interactions) may come in contact with patient claim and payment information throughout an entire billing cycle. Each new entity brings with it additional potential security risk for the provider organization. Beyond vendor rationalization, InstaMed deploys tokens and P2PE features that further alleviate the provider's internal compliance risk by reducing the exposure to sensitive information.

Patient payment facilitation is an accelerating requirement for provider financial sustainability and success. InstaMed's early focus on serving the provider community was an intelligent strategy as the long-term potential of catering to and upselling providers with additional patient-facing capabilities creates another large market opportunity for the company with significant demand. InstaMed's mobile device agnostic solutions enable a range of patient-centric functions, including appointment check-ins, benefits and coverage review, patient pay estimation, digital wallet for co-pays and payment of outstanding balances, eStatement enrollment, and a variety of automatic payment options and payment plans. Patient convenience throughout

the payment and billing process will ultimately lead to other opportunities to deepen the provider's relationship with the patient (e.g., transparency, personalized engagement, secure provider-patient communications, pre- or post-visit delivery of educational content, and preventive care interventions, among other potential opportunities) to engender improved patient satisfaction, communications, and clinical outcomes.

Payers and 3rd party developers similarly leverage InstaMed's network to enhance the payments process and better cater to healthcare's rapidly evolving consumer-oriented environment. As with providers, the benefits are largely the same. Payers and developers alike want to leverage the payments channel to enhance the consumer engagement experience among their members or users as a means of increasing throughput and utilization of adjacent offerings while building greater market awareness and brand equity. The frequency by which consumers interact with these organizations' portals, web sites, mobile apps, and other user touch points can be dramatically increased with the inclusion of robust, yet flexible payments functionality. Again, the trust that comes with an established network is critical for payers and developers as well as other major constituencies that require capabilities that allow for broad coverage and national consumer reach. Managing payments across geographies is inherently difficult (e.g., settling based on varying cut-off times, tracking tax implications, etc. are among the technological challenges faced by payments vendors). Similarly, facilitating money

transmission comes with its own complex web of regulations and licenses at the federal and state-by-state levels. Large payers and developers that desire unrestricted market reach must align with payment vendors with such capabilities with broad geographic coverage.

Companies such as InstaMed that distinguish themselves as a trusted healthcare payments network hold a great deal of potential. Barriers to entry are similarly high once critical scale is achieved and the proper technology and security protocols are put in place. Looking ahead, it's conceivable that leading healthcare payments companies will be able to disintermediate categories of vendors that occupy adjacent segments of the broader claims and billing lifecycle, whether by streamlining health insurance payments or patient pay processes, or both. At a minimum, the immediate opportunity — with an extremely long-term demand horizon — is to become the de facto infrastructure over which the vast majority of healthcare payments flow. Controlling this critical payments intersection is an incredibly valuable piece of real estate that can be capitalized on in a number of different ways.

Strategy #2: Leverage a Payer-sponsored Payments Network

Healthcare waste is a two-way street and payers are eager to create efficiencies and heighten provider satisfaction wherever possible. Processing payments is no exception. Whether it's reducing the volume of paper checks and printed explanations of benefits (EOBs) or dealing with the often onerous nature of compliance, enrollment, and reconciliation requirements, payers have a vested interest in supporting a streamlined, provider-centric payments model. As a result, a growing ecosystem of vendors has emerged to help support this effort. The companies listed in Figure 18 represent the market leaders in terms of provider access and payer and/or TPA client coverage. Several have capabilities that extend beyond the health insurance marketplace and provide value to providers and payers alike for dental, workers compensation, and auto medical claim payments — providing greater coverage across the various payment revenue streams.

Payer benefits: A common approach to gaining provider adoption is to provide the payment functionality for free and work with their organization to convert existing paper-based processes. Payers are well-incented to pick up the cost as the reduction in print, postage, and service fees alone can result in significant operational savings. For instance, reducing paper usage from 100% to just 50% can result in a 70-80% reduction in costs, or $1 or more in PMPM savings. Beyond the immediate hard dollar savings, an integrated payments approach also automates a number of payer processes, including provider acceptance and concurrent EFT/
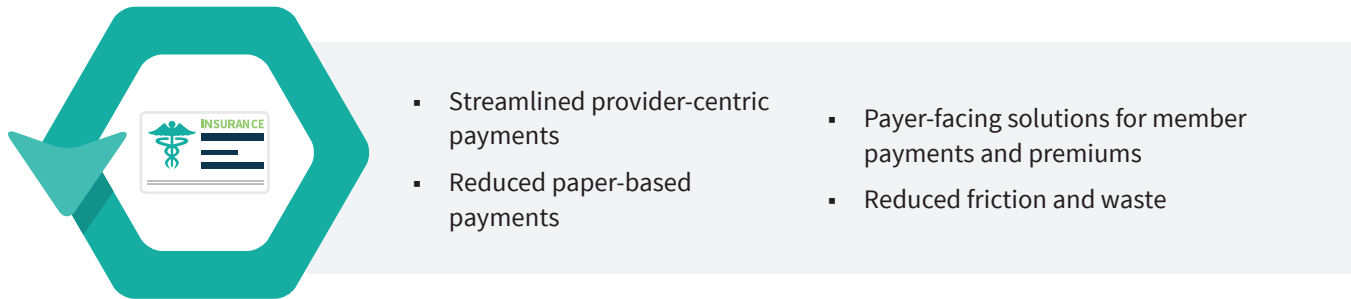
ERA delivery, enhanced reconciliation with direct integration to the payer's adjudication system, and more streamlined funds management/disbursement and treasury functions. Vendors will also typically provide complementary payer-facing solutions such as electronically collecting premium payments from members and supporting a variety of payment options within the payer's portal.

Provider benefits: While the implementation process can be perceived as a hurdle to overcome with providers, the benefits are similarly dramatic to that of the payer community.

The following are among the primary reasons for providers to opt-in to a payer-sponsored payments network:

1. Elimination or reduction in volume of paper checks and printed explanations of payment (EOP)

2. Enhanced EFT and ERA enrollment among multiple payers, including low volume payers that providers ordinarily skip over given the associated administrative burden

3. Intelligent payment routing based on provider preferences accelerates payment by as much as 1-2 weeks as payments do not need to be manually rerouted to the proper payment center. This primarily benefits large health systems and multi-site provider organizations that receive payments at disparate TIN locations as opposed to a centralized payments location

FIGURE 18.
LEVERAGE A PAYER-SPONSORED PAYMENTS NETWORK

- Streamlined provider-centric payments
- Reduced paper-based payments
- Payer-facing solutions for member payments and premiums
- Reduced friction and waste

Company	Providers	Payers	Other
CHANGE HEALTHCARE	**600,000**	**N/A**	**$31.5B in ePayments annually**
ECHO Payments Simplified	**900,000**	**77,000 ERISA health plans and fully insured groups**	**$16B payments annually**
InstaMed Healthcare Payments Simplified *(Includes provider and payer offerings)*	**100,000+ healthcare organizations**	**200 payers in network (3,000 payers total)**	**$70B payments annually; 35+ clearinghouses, 100+ billers, 50+ PM systems**
JOPARI *(P&C focus)*	**900,000**	**1,000 (Property & casualty insurance payers primarily)**	**$12B payments annually**
payspan	**1,300,000 provider payees**	**650**	**107M consumers reached**
zelis	**275,000+ contracted providers with access to 1.5M**	**150 (26,000 individual groups)**	**$14B payments annually**

Note, the nuances by which each vendor defines their network (e.g., active vs. passive access, contracted vs. uncontracted, individual providers vs. provider organizations with a tax identification number, etc.) are not necessarily consistent.

Source: company, publicly available data

4. Auto-settling and auto-reconciliation enhancements through integrations with payer adjudication systems (i.e., balanced 835s and detailed adjustment codes to clarify denial reasons) create significant provider workflow efficiencies

5. Improved payment posting and re-association functionality within the provider's EHR or practice management system

6. Multiple payment options supported, including ACH, virtual payment cards, and other popular payment alternatives

One potential drawback for providers is that a growing percentage of overall reimbursement vis-à-vis patient pay collections is not widely addressed by payer-sponsored networks. While greater crossover among payers and providers is occurring, vendors that serve payers exclusively are not necessarily incentivized to offer patient payment capabilities to providers, at least directly. Indirectly, however, these vendors are certainly accelerating payments and allowing providers to more quickly collect patient pay balances and file secondary payer claims. Issues such as ACH payment failures, delayed settlements, and deficient adjustment codes can all lead to incorrect patient statement balances — a dynamic which can introduce a host of related patient satisfaction and collections issues.

Looking ahead we believe these payer-focused payment vendors are well positioned as the broader payer landscape seeks to do their part in reducing the amount of friction and waste within the healthcare system. Furthermore, with the benefits that accrue to providers, certain agnostic vendors within this category have an opportunity to commercialize across both the payer and provider industries, whether on a stand-alone basis or inorganically, combining with another company. Others are well positioned to expand into other payer solution categories in building out a comprehensive claims management and proper payments platform. Either way this segment is poised for rapid growth and increasing prominence with hundreds of billions of dollars in waste still existing within the healthcare system.
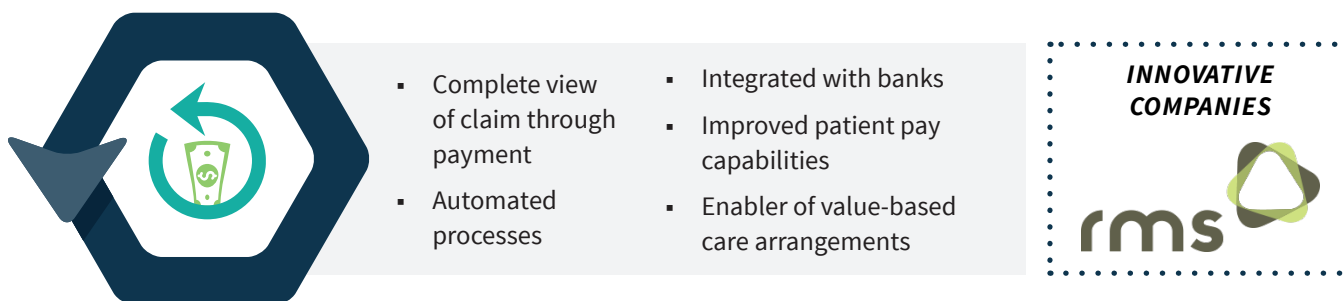
Company Profile: **Zelis**

Zelis is a leading claim-through-payment lifecycle solutions provider to health plans and third party administrators (TPAs). The Company simplifies the claims process by addressing pricing failures, administrative inefficiencies, and fraud, waste, and abuse in a coordinated fashion to ensure payment accuracy while optimizing the overall cost of a claim. All of the Company's capabilities are delivered on prepayment basis which creates immediate efficiencies and dramatically reduces the amount of waste among both the payer and provider communities.

While Zelis serves payers and TPAs from a customer perspective, the Company is unique in that its capabilities generate significant benefits for the provider:

- **Direct access to granular adjudication detail:** Zelis has more than a decade of proprietary EDI integrations with leading claim adjudication vendors. These connections allow for providers to extract rich detail relative to claim or remittance advice adjustments made during the adjudication and payment process. This access eliminates the need for providers to manually contact payers to obtain this important information to better manage and prevent denials and underpayments.

- **Network repricing transparency:** similarly, providers are provided full insight into the network pricing discounts applied to a claim.

- **Payment automation:** providers enrolled in Zelis' payments network receive faster payment cycles with line item detail that seamlessly reconciles to the remittance advice. Additionally, EFT and ERA enrollment is significantly simplified across multiple payers and intelligent payment routing ensures payments are sent to the proper provider payment center, avoiding unnecessary reimbursement delays.

Through this functionality, Zelis is well-positioned to deliver a strong value proposition to multiple constituencies which compounds with each new customer or provider that opts into its network. This innovative strategy is capable of rapidly addressing the high levels of waste resident within the healthcare system as well as engender much more positive payer-provider collaboration and meaningful efficiencies across the claims lifecycle.
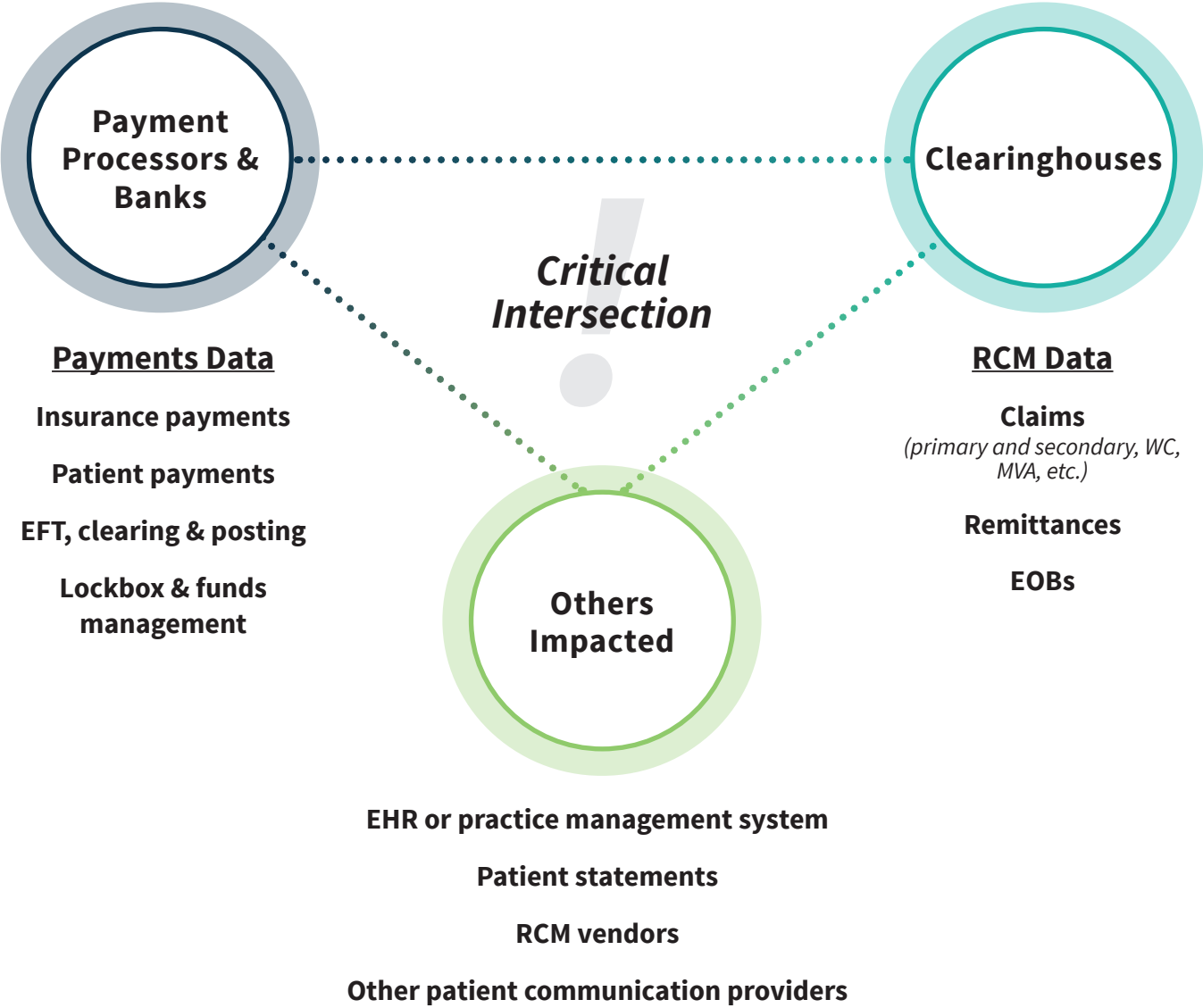
FIGURE 19.
FACILITATE A UNIFIED, 360° VIEW

- Complete view of claim through payment
- Automated processes
- Integrated with banks
- Improved patient pay capabilities
- Enabler of value-based care arrangements

INNOVATIVE COMPANIES

rms

Strategy #3: Facilitate A Unified, 360 Degree View of Claims, Remittances, and Payments

Providers are without a doubt plagued by manual RCM workflows, lack of data-driven insights, and a number of other financial challenges stemming from payer mix shifts, tracking down secondary/tertiary payers, accelerating patient pay trends, and value-based contracting. In the case of payments, challenges range from a prevalence of paper EOBs and printed checks to sophisticated payment models requiring payment attribution and "patient-friendly" billing/payments. Meanwhile, the velocity of claims, EOBs/ERAs, and ACH/check payments data from a variety of disparate sources is accelerating and providers face difficulty in automating and analyzing such large volumes of data for revenue optimization purposes. Common issues include:

- Prevalence of manually processed claims significantly slows the payment cycle

- Accurately consolidating ERAs and electronically converting EOBs for reconciliation to the claim and payment — data quality is a real issue in this area

- Delays and issues producing secondary claims in a timely manner

- Up to 30% or more of patient statements are incorrect as a result of faulty primary or secondary bills and related coverage and coordination of benefits issues

- EOPs lack detail and context to properly identify and remediate payer denials and underpayments

- Volume of outstanding, low dollar patient pay balances are difficult to manage and often get written off

- Processes, procedures, and technical formats are not standardized across payers (e.g., varying file names and formats, payer-specific adjustment codes, generic codes lacking detail, reassociation issues, etc.)

- Other issues, including variations in settlement speed, ACH failures, and claw backs, also contribute to significant manual intervention and potential revenue leakage

FIGURE 20.
CRITICAL INTERSECTION AMONG RCM PROCESSES, PAYMENTS, AND SYSTEMS

Payment Processors & Banks

Clearinghouses

Critical Intersection

Others Impacted

Payments Data

Insurance payments

Patient payments

EFT, clearing & posting

Lockbox & funds management

RCM Data

Claims
(primary and secondary, WC, MVA, etc.)

Remittances

EOBs

EHR or practice management system

Patient statements

RCM vendors

Other patient communication providers

For the most part, many of these issues stem from natural limitations that market participants have relative to seamlessly tracking and reconciling the total, original amount billed with the payments received from a variety of payers. For instance, payment processors and banks have strong payments and lockbox capabilities but lack the "full picture" of the claim-through-payment cycle and cannot reconcile funds received back to the claim and are even further deficient when it comes to patient payments. On the other hand, clearinghouses often lack the closed loop necessary for a 360-degree view of the claim, remittance/835, and payment, creating gaps in the revenue cycle for providers. Meanwhile, industry-agnostic payments vendors often do not effectively address the rising patient pay dynamics. Other vendors are deficient in terms of the level of data access, automation, and influence to solve these challenges for providers — in many cases, these vendors are simply not set up and equipped to address the critical intersection among all these processes, vendors, and systems (see Figure 20).

Revenue Management Solutions (RMS) is an example of a highly innovative company that delivers robotic process automation-enabled software solutions with the necessary flexibility and intelligence to solve these complex problems for providers and their RCM staff. RMS plays within the interchange of data among the provider's clearinghouse, payers, lockbox provider, patient payment portal(s), and HIS/patient accounting system to accurately capture full reimbursement among all payers (including patients).

In fact, RMS significantly accelerates provider reimbursement and enhances RCM workflows in a variety of ways:

- **Payment reconciliation:** RMS provides a complete 360 degree view of the claim, EOB/ERA, EFT/payment, and patient payments resulting in enhanced RCM workflows and early identification of non-payments (by payers and/or patients), underpayments, denials, and a variety of technical issues that can occur that impact provider reimbursement (e.g., ACH, posting, adjustment code normalization, re-association, etc.). Reimbursement is optimized through the rapid identification of revenue "leakage." Furthermore, RMS' electronic conversion and reconciliation capabilities significantly enhance existing, manual-based processes and enable auto-loading/posting into the provider's HIS or PM system. Playing at this critical intersection allows RMS to capitalize on a number of potential, future opportunities, including automated denial and underpayment identification, remediation, and prevention. Through RMS, providers will have the necessary functionality to manage reimbursement issues by exception, based on automated "kick-outs" flagged by the system.

- **Secondary bills:** RMS' technology is able to parse or "snip" relevant information out of an EOP for rapid, HIPAA-compliant secondary billing. Data is automatically consolidated and comprehensive reports are produced to help determine where an account is within the remittance cycle.

- **Patient pay:** RMS reduces time-consuming manual data-entry, scanning, and filing processes which allow the provider to reconcile patient payments with billed statements. Additionally, in conjunction with its partners, RMS supports guarantor-level billing (single bill capabilities), which is increasingly important in today's consumer-centric healthcare environment.

- **Complex, value-based payment arrangements:** It will be increasingly important for providers participating in ACOs and other emerging value-based contracting models to be able to attribute, track, and post files and payments to the proper provider HIS or PM system. RMS' advanced software and business rules are capable of rapidly disassembling large complex files into multiple files that can be easily and compliantly posted to the proper patient accounting system.

- **Patient information retrieval:** Automating the tracking, management, and retrieval of historical patient record information for the past 7-10 years allows for in-depth, longitudinal reporting across the full life cycle of a patient's encounter history. Data is centrally accessible and presented in a standardized format for enhanced RCM business intelligence (e.g., identifying reimbursement and reconciliation trends) and optimized provider workforce management.

- **Seamless integration with banks:** RMS set the industry standard for banking partner integration and alleviates this highly complex exercise for its provider customers.

RMS, like other similarly well-positioned technology companies specializing in an RCM niche, has an attractive market opportunity and technological advantage that can be applied to adjacent RCM workflows in desperate need of robotic process automation and AI-driven functionality. Furthermore, playing at such a valuable intersection in healthcare certainly presents its own set of interesting opportunities that align closely with where the industry is ultimately headed (e.g., complex payer dynamics, patient pay, and new value-based contracting models). All told, RMS enjoys an extremely large and growing core market opportunity.

Strategy #4: Capitalize on the Tremendous Patient Pay Opportunity

Accelerating patient pay trends are creating financial challenges for providers that are ill equipped to handle a massive volume of relatively low-dollar receivables from individual consumers. For a vast number of providers, the required infrastructure just isn't there yet. Unlike insurance billing, collecting from patients is a nuanced, less-than-straightforward exercise where:
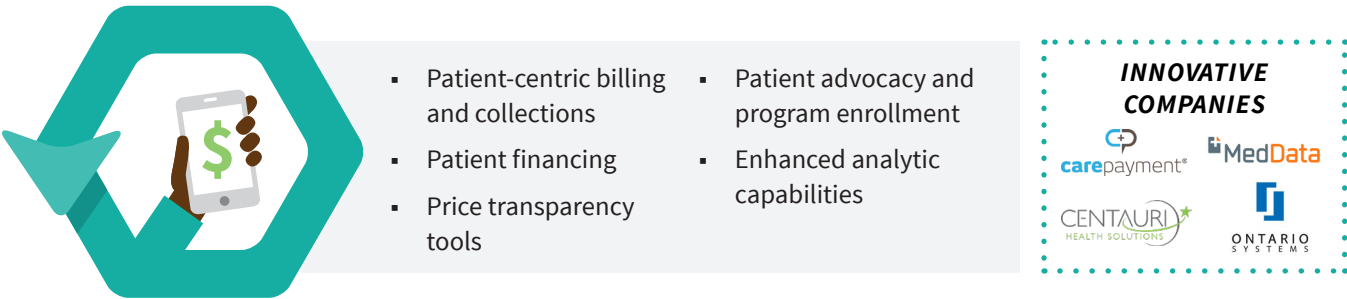
1. The patient's ability to pay often means less than their willingness to pay

2. Collecting up front may be the best and only way to get paid

3. Financing medical debt is relatively novel, despite its extreme maturity in other industries

4. The patient doesn't understand their own coverage, much less other assistance programs for which they may be eligible

5. Patient satisfaction is paramount, but often proves elusive and challenging to attain due to a wide variety of issues both in and out of the provider's control

The tables on the following pages provide a deeper view of the patient access function and focus on specific patient pay touchpoints that occur throughout the RCM continuum — highlighting the broad range of approaches, business models, technologies, and analytics applied to help solve this multi-faceted challenge for providers.

"While the healthcare payments environment is certainly complex and comes with its fair share of challenges, this rapidly changing, complicated backdrop gives rise to a wide variety of business opportunities for well-positioned, innovative companies in the sector."

FIGURE 21.
CAPITALIZE ON PATIENT PAY OPPORTUNITY

- Patient-centric billing and collections
- Patient financing
- Price transparency tools
- Patient advocacy and program enrollment
- Enhanced analytic capabilities

INNOVATIVE COMPANIES

carepayment® MedData CENTAURI HEALTH SOLUTIONS ONTARIO SYSTEMS

DISCRETE PATIENT PAY FUNCTIONS

Patient Pay Category	Overview & Points of Differentiation
Point-of-Service	
Patient Pay Estimation / Price Transparency	- Comprehensive offering will calculate estimated patient responsibility based on eligibility, contract terms, deductibles, co-pays, coinsurance, and out-of-pocket status and limits - Most effective when integrated with the provider's ADT and EHR systems - New innovative approaches include negotiating bundled rates for services across multiple providers and/or price estimation based on a percentage of equivalent Medicare or Medicaid rates
Patient Advocacy & Program Enrollment	- Patient assistance provided to determine other program eligibility and enrollment based on the patient's unique characteristics - Typically delivered as an outsourced service, including both on-site and remote service delivery alternatives - Differentiation typically through program specialization, software, and content databases that ensure efficient and compliant navigation of complex Medicaid, Supplemental Security Income (SSI), Social Security Disability Insurance (SSDI), and a range of other local, state, and national programs
Pre- & Post-Encounter	

Propensity to Pay & Patient Pay Analytics	- Beyond propensity to pay, analytical capabilities can include:
	  - Identification of registration-related errors that cause denials
	  - Patient responsibility estimation
	  - Program eligibility determination
	  - Patient pay performance and benchmarking

Patient Payments	- Secure patient payment capabilities and transaction processing solutions - Generally support multiple payment methods, including credit card, debit, ACH, Check 21, cash, etc. - Often provides digital payment options (e.g., online patient portal, mobile) - Differentiation through the establishment of a "payments network" among providers, payers, patients, and vendors as well as patient-friendly portals and related payment tools

DISCRETE PATIENT PAY FUNCTIONS CONTINUED

Patient Pay Category	Overview & Points of Differentiation
Pre- & Post-Encounter	
Patient-Centric Billing & Collections	• Patient-centric billing and collections require a unique approach, capabilities, and compliance rigor that cannot be adequately addressed by standard insurance-centric billing platforms • Differentiating features include guarantor-level billing, payment history and identification of outstanding balances, program and consolidated patient-friendly billing that incorporates multiple bills from known (e.g., hospital) and unknown providers (e.g., ED, hospitalist, anesthesia, etc.)
Patient Financing & Payment Plans	• Patient financing solutions with both non-recourse and recourse options • Full recourse is common for non-elective procedures and generally carry interest rates of 0% APR • Non-recourse approaches can potentially result in poor patient satisfaction if interest rates and terms are not clearly laid out • Proprietary analytics capable of accurately stratifying patient propensity to pay and risk are critical in effectively pricing a book of patient receivables for financing purposes
Post Patient Encounter *(Typically)*	

Early Out & Bad Debt Collections	• Outsourced self-pay collection services typically delivered through a call center model
	
	• Adjacent services offerings include: claims management, A/R resolution, denials, etc.
	
	• Often leverage internal software to aid in:
	  - Patient- and guarantor-level billing and collections activity (software can be proprietary or third party)
	  - Billing statement creation
	  - Patient communications
	  - Charity screening and program eligibility, typically through third parties
	  - Patient pay analytics

Patient Statements, Electronic Billing, Payment & Engagement Options	• Printed billing statements are still used widely by providers • Electronic statements, patient portals, and various payment options are emerging to augment and/or potentially replace printed statements • Moving upstream and capturing point-of-service payments presents an immediate and significant opportunity for organizations in this category • Additionally, there exists an opportunity to capitalize on the unique patient communications and engagement intersection to deploy complementary, highly personalized solutions to round out a comprehensive patient-centric platform (e.g., pre-registration patient portals, appointment reminders, patient satisfaction surveys, patient pay analytics including enhanced propensity to pay insights, etc.)

TRIPLETREE'S PERSPECTIVE

As we reflect on the RCM industry's progress and change over the past decade, we can't help but be amazed at the level of automation and technological complexity that have been adopted in certain areas. Providers and vendors alike are becoming increasingly adept at deploying intelligent, data and content-driven strategies that allow for the greatest financial impact. As we conclude this *Industry Perspective*, we predict there will be further advancement in the following areas of RCM:

- **Proactive management of key RCM functions will continue to move upstream:** Patient Access, specifically the areas of pre-registration and registration, will become ground zero in managing many facets of the overall RCM continuum. The need to correct for avoidable denials and other preventable issues at their source of origin will drive increasing demand for intelligent solutions in this area.

- **Technology and automation will drive Darwinian-like natural selection in RCM:** The ability to manage by exception is the ultimate goal. Provider RCM departments, already stretched thin, will do more with less as operational efficiencies are created. Successful RCM services-based businesses will increasingly adopt technology or develop proprietary IT capabilities to maintain a competitive edge over the competition.

- **Actionable data and information will empower providers:** As payer contracting dynamics become increasingly complex and value-based reimbursement models proliferate, knowledge and data will equate to power in balancing the scales with payers and optimizing the financial success of the provider community. Vendors that incorporate non-traditional RCM data sets (e.g., cost and quality data) are optimally positioned to address RCM's next major transformation toward value-based care.

- **RCM will be increasingly integrated with the clinical workflow:** The intermingling of clinical and RCM functions will drive meaningful reductions in the revenue cycle and create significant operational efficiencies. Intelligent prompts via EHR-integrated clinical coding edits or computer-assisted clinical documentation improvement will proactively address issues and allow for compliant capture of key metrics utilized for new risk-based contracting dynamics. Further, the prior authorization process will potentially evolve toward a prospective, evidence-based "check" as providers and payers collaborate more closely on managing cost and quality.

- **Patients will demand a retail-like experience similar to other industries:** Shouldering so much of the healthcare cost burden will bring with it intense patient scrutiny in healthcare's increasingly consumer-oriented environment. This represents one of the most profound and potentially transformational areas in healthcare — and RCM sits at its center.

- **Healthcare payments present an opportunity for disruption**: Whether through payer- or patient-originated payments, scaled vendors with sophisticated RCM and patient engagement functionality will have the opportunity to disrupt the existing landscape while solving for some of the most pressing challenges faced by providers.

- **Value-based reimbursement is going to be a reality:** There's simply too much waste and expense resident within the broader healthcare system to go unchecked indefinitely. In short, we cannot afford to have the current state of affairs persist. The nature of the payer-provider relationship still revolves around a fee for service paradigm in which the game of one-upmanship seems to consistently run in the face of good sense. Increasingly, we expect that the quantification and proper attribution of reimbursement among all participating providers will be based on the quality and cost of care delivered. As a consequence, tensions that arise within certain areas of the RCM continuum will naturally abate as risk-sharing and greater provider-payer alignment take hold.

For all the points noted above, we believe the RCM industry will continue to experience positive disruption and change over the long-term, perhaps even more so than other areas of healthcare. As a result, Next Gen RCM vendors will find themselves at the nexus of the transformation shaping tomorrow's healthcare landscape. In the meantime, we look forward to closely following the innovative companies helping to drive the industry's ongoing advancements and progress.

"We believe the RCM industry will continue to experience positive disruption and change over the long-term, perhaps even more so than other areas of healthcare."

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