Creating a Consumer-Centric Patient Payment Ecosystem

High-deductible health plans highlight the need for innovation

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Key takeaways

- The rise of high-deductible health plans (HDHP) has led to increased patient medical bill burdens and lower payment collection rates.
- We calculate the US patient payment market is valued at $8.0 billion and estimate it will reach $15.0 billion by 2027.
- Relative to other retail payment verticals, the healthcare payments landscape is characterized by a higher level of complexity and a lower level of transparency. For this reason, many health-related payment service providers tend to focus only on the healthcare industry.
- Global VC funding for patient billing providers is on the rise, with $271.9 million raised over four deals in Q1 2021 compared to $270.3 million raised across 11 deals in all of 2020.

Introduction

The rise of high-deductible health plans (HDHP) has led to the growth of patient payments, revealing the shortcomings of existing healthcare payment systems. Relative to seamless payment features characteristic of modern e-commerce platforms such as Amazon (NASDAQ: AMZN) or with services such as Uber (NYSE: UBER), patient payment methods are stubbornly archaic, consisting of multiple parties sending multiple payment notices that are often lost, misunderstood, or simply ignored. These inefficiencies create significant administrative costs for providers and leave patients on the hook for bills they cannot pay or were not expecting to pay. Currently, only 55% of what is owed by consumers gets collected, costing the average local health system $45 million in bad debt.[1] Given these problems, we believe patient payment systems are ripe for disruption and note many startups are developing innovative technologies across a range of business models in an effort to modernize how patients pay for healthcare. This note will examine the healthtech payment landscape and processes, highlight emerging solutions, provide an overview of the market size and recent VC activity, and give our outlook for the industry.

Healthcare payment landscape and process

The payment landscape consists of three main stakeholders: patients, payers, and providers. Billing solution providers are also currently invested as most small practices outsource to billing providers that collect from both insurance and patients. These billing companies are typically paid per invoice regardless of amount collected and bill size. Because patients are now often covering a higher percent of the bill, billing companies have been collecting a smaller percent of the bills, negatively affecting relationships between the providers and billers.

Relative to other retail payment verticals, the healthcare payments landscape is characterized by a higher level of complexity and a lower level of transparency. This is because healthcare payments are generally shared between insurance payers and patients. This split is based on differing insurance plan parameters and the total balance due varies based on existing contracts between providers and payers. In addition, one hospital visit can often result in numerous separate bills (for example, for specialized consultations, imaging, or prescriptions), adding further complications. This creates a severe lack of transparency when it comes to determining what the patient owes, what the provider can expect to receive, and when that payment will be made. While there are many industry-agnostic payment service providers, healthcare payment platforms require industry specialization, as they must be capable of integrating with various practice management systems and electronic health records (EHRs), while also being compliant with complex privacy standards. For this reason, many health-related payment service providers tend to focus only on the healthcare industry and follow a land-and-expand business model of cross-selling additional office management features such as patient check-in, eligibility, and patient obligation estimates.

1: "Transforming Payments in Healthcare: Ooda and Highmark Executive Check-In," Ooda Health, February 2021.

Market size

With $38.4 billion in uncompensated US healthcare costs in 2017, the sum of hospital bad debt and financial assistance provided by hospitals,[2] and only 55% of patient bills being collected,[3] we see a major market opportunity for patient payment enablers. With out-of-pocket spending accounting for $406.5 billion and 11% of US healthcare costs in 2019,[4] we believe the patient payment market to be valued at $8.0 billion and estimate it will reach $15.0 billion by 2027.

Select patient payment companies by backing type

Companies	Backing type*
ClearGage	PE-backed
RevSpring	PE-backed
Ontario Systems	PE-backed
Clearwave Corporation	PE-backed
Rectangle Health	PE-backed
BillingTree	PE-backed
InstaMed	Privately held (backing)
Universal payment solutions	Privately held (no backing)
WELL Health Technologies (TSE: WELL)	Publicly held
Phreesia (NYSE: PHR)	Publicly held
Revance Therapeutics (NASDAQ: RVNC)	Publicly held
Inbox Health	VC-backed
Cedar	VC-backed
Flywire	VC-backed
HealNow	VC-backed
Salucro Healthcare Solutions	VC-backed
FinPay	VC-backed
PatientPay	VC-backed
Papaya	VC-backed
Rivet	VC-backed
VisitPay	VC-backed
OODA Health	VC-backed
AxiaMed	VC-backed
Eligible	VC-backed
Collectly	VC-backed
Patientco Holdings	VC-backed

Source: PitchBook | **Geography:** North America
*As of March 31, 2021

2: American Hospital Association: Uncompensated Hospital Care Cost Fact Sheet, 2019.
3: "Transforming Payments in Healthcare: Ooda and Highmark Executive Check-In," Ooda Health, February 2021.
4: "NHE Fact Sheet," Centers for Medicare & Medicaid Services, December 16, 2020.

VC activity

Global VC funding for patient billing providers is on the rise, with $271.9 million raised over four deals in Q1 2021 compared to $270.3 million raised across 11 deals in all of 2020. Cedar pulled in the largest deal in Q1, a $200.0 million Series D, raising its post-money valuation to $3.2 billion. We tracked one exit this quarter: Vytalize Health's acquisition of MedPilot. This deal allowed the company to offer its growing Medicare population a last-mile patient engagement platform.

Recent patient payment VC deals

Company	Close date	Deal size ($M)	Pre-money valuation ($M)	Post-money valuation ($M)	Deal type
Inbox Health	March 16, 2021	$9.0	N/A	N/A	Late-stage VC
Cedar	March 9, 2021	$200.0	$3,000.0	$3,200.0	Series D
Flywire	March 4, 2021	$60.0	N/A	N/A	Series F
Cedar	June 22, 2020	$102.0	$350.0	$427.0	Series C
Papaya	March 12, 2020	$10.0	N/A	N/A	Early-stage VC

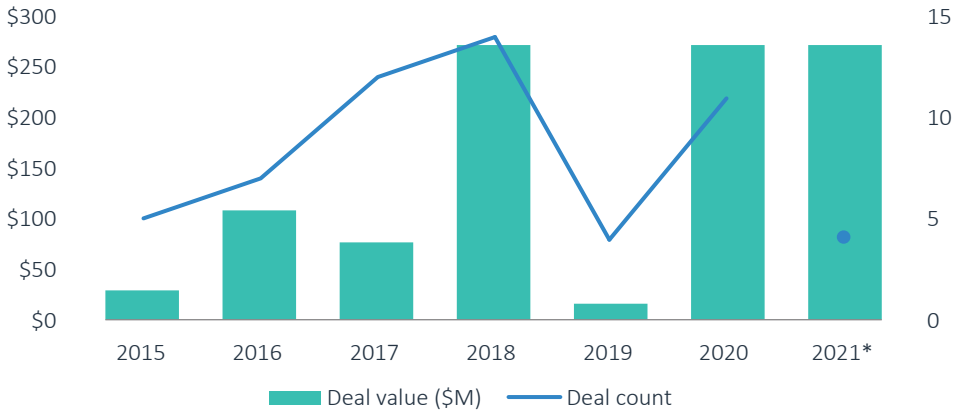
Source: PitchBook | **Geography:** US
As of March 31, 2021

Recent patient payment VC exits

Company	Close date	Exit size ($M)	Post-money valuation ($M)	Deal type	Acquirer
MedPilot	February 17, 2021	Undisclosed	N/A	M&A	Vytalize
HealthiPASS	February 19, 2021	$50.0	N/A	Buyout/LBO	Sphere Payments
Loyale	March 2, 2020	Undisclosed	N/A	Buyout/LBO	RevSpring
SwervePay	February 24, 2020	Undisclosed	N/A	Buyout/LBO	Ontario Systems
Simplee	February 13, 2020	Undisclosed	N/A	M&A	Flywire

Source: PitchBook | **Geography:** US
As of March 31, 2021

Patient payment VC deal activity



Source: PitchBook | **Geography:** Global
*As of March 31, 2021

Key drivers

Patients are the new payers: Patient responsibility for healthcare bills has increased due to rising premiums, out-of-pocket costs, and the rise of high-deductible health plans (HDHPs). Inability to pay bills or fear of unexpected healthcare costs can result in care voidance, medical debt, and late payments. For many households, healthcare is the largest annual expense, yet it remains the most opaque and uncertain. As consumers become more accustomed to seamless payments experiences such as those from Amazon or Uber, the healthcare payment space falls even further behind other verticals in terms of convenience, transparency, and technological advancement.

Patient responsibility by the numbers

$406.5B

Out-of-pocket US healthcare spending in 2019, which accounted for 11% of healthcare costs.[5]

47%

Proportion of US adults under 65 with employment-based health insurance covered under HDHP through the first three months of 2018.[6]

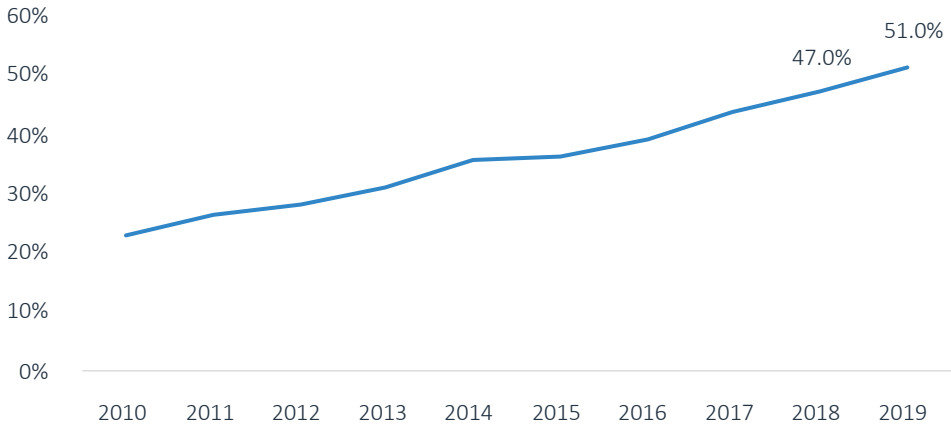
66.5%

Of personal bankruptcies in the US are tied to medical debt.[7]

2020

The average annual deductible for an individual HDHP with an HRA was $2,195 and the average out-of-pocket maximum was $4,458.[8]

HDHP enrollment among adults with employment-based insurance



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, US Department of Health and Human Services, State Health Access Data Assistance Center | **Geography:** US

Providers face pressure on profitability: In 2000, patient payments accounted for only about 5% of total healthcare provider revenue but accounted for 35% in 2017.[9] For healthcare providers, an upgraded billing and collection process can improve collection rates, shorten payment cycles, and reduce bad debt. This can subsequently reduce payment-related administration costs while improving cash liquidity positions. 83% of providers plan to meet the rise in patient consumerism by creating more retail-like customer experiences that make payments quicker and more transparent.[10]

Billing solution providers seek to lower patient collection costs: Billing providers are responsible for collecting payments from both payers and patients for providers. Collecting patient payments costs roughly four times more than collecting from an insurance company.[11]

5: Ibid.
6: "Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, January–March 2018," National Center for Health Statistics, August 2018.
7: "This is the Real Reason Most Americans File for Bankruptcy," CNBC News, Lorie Konish, February 11, 2019.
8: "HDHP/HRA and HSA-Qualified HDHP Features for Covered Workers, 2020 9540," KFF Employer Health Benefits Survey, 2020.
9: "What We Can All Do About Rising Healthcare Costs," Michael Evans and Kevin Fleming, June 28, 2017.
10: "Providers Plan to Meet Patient Consumerism Rise, Survey Finds," Healthcare Innovation, Rajiv Leventhal, October 15, 2017.
11: "2021 Medical Billing Statistics," MedData, February 17, 2021.

COVID-19 could increase future healthcare spending: The pandemic resulted in patients delaying procedures, which will likely raise future spending for healthcare costs and procedures. In addition, the postponement of procedures may worsen health outcomes, causing higher spending for health conditions down the road.

Government regulations: The Centers for Medicare & Medicaid Services (CMS) is continually building a roadmap to improve interoperability and has issued regulations to drive change in how clinical and administrative information is exchanged between payers, providers, and patients. This may reduce the burden of certain administrative processes, such as prior authorization. In December 2020, CMS proposed a rule to streamline the prior authorization process. The rule would require payers to build and maintain provider and patient access application programming interface (API) which would include information about patients' pending and active prior authorization decisions, include specific reasons for denials, and quickly send authorization decisions.

Multiple approaches to improving the system: Startups are developing several technology-based approaches to improving the current status quo. This includes improving the process of verifying insurance coverage, estimating patient obligation, collecting payments in an office before the appointment begins, billing patients immediately after point of care, and offering payment plans.

Verifying insurance coverage and estimating patient obligation: Technology can help verify patient benefits and increase price transparency through estimating patient costs. This enables individuals to make more informed decisions and better plan for financial obligations. PointCare helps health systems find coverage for self-pay patients and provides an integrated insurance validation service to help organizations check and monitor insurance coverage to patients. Anagram enables independent practices to pull real-time insurance benefits, gain access to out-of-network patient benefits and offer cash discounts. In addition to its technological offerings, Anagram's service team resolves insurance denials for providers.

Collecting payments and/or payment methods before providing care: When providers can estimate patient responsibility before providing care they may collect payment before rendering services. Startups are providing technology to increase accepted payment methods and store patient payment information on file to charge post-care. Salucro's patient-centric payment solution provides digital statements, familiar payment options, and third-party financing options. In addition, its technology enables providers to securely process transactions while integrating with their EHRs and engaging patients through on-demand channels with text alerts and payment reminds. Health iPass' patient-centric payment system features self-service patient check-in, insurance eligibility verification, automated collection of prior balances, co-pays and pre-service deposits at check-in and collection. In addition, it stores patient payment information to enable providers to automatically bill the patient post-care if the bill falls within a

Post-care patient communication

Cedar

Cedar, a B2B2C company, provides a white-labeled billing process and communication platform to large hospitals and physician groups. Cedar's flagship product, Cedar Pay, provides intuitive medical bills and payment options to patients through omnichannel outreach (paper, text, email, call). Their dynamic data-science-driven models proactively identify and execute personalized payment approaches, which may involve customizable payment plans. The company enables patients to pay through its app and boasts a 95% patient satisfaction score. It raised a $200.0 million Series D in March 2021. Cedar notes it experienced a decline in revenue during the COVID-19 pandemic but has begun to experience a rebound in volume. Over the long term, Cedar hopes to embed better price estimates and personalized resolution pathways prior to point-of-care.

Inbox Health

Inbox Health's data-driven platform automates and personalizes the entire patient billing communication process. It provides white-labeled comprehensible billing statements, accepts a variety of payment methods, uses algorithms to personalize messages and determine the best communication methods and times to reach out, and provides a dashboard to help billers and providers better understand collection rates. Inbox Health initially sold its platform to individual providers but quickly realized that to scale it must sell direct to billing providers. Inbox Health enables billers to accelerate collection rates, thus improving relationships and reducing phone calls and paper statements. Inbox Health collects a percent of what it collects certain pre-care estimated range. The company was acquired by PE-backed Sphere Payments, a multi-industry commerce solution, in December 2020 for $50.0 million.

Post-care patient communication and billing services: Digital-forward patient engagement and billing technology enables better payment collection by providing consumer-friendly communication and payment methods. Many of these billing solutions offer payment plans to spread payment over time, as only 39% of Americans can pay an emergency expense over $1,000, according to a January survey from Bankrate.[12] Patients using these payment plans do not receive a loan; the provider simply agrees to be paid overtime. Cedar claims 20% of dollars collected through its app are associated with a payment plan. Flywire uses healthcare-specific insight and technology to optimize the payment experience while eliminating operational challenges from invoicing to payment reconciliation. Flywire acquired OnPlan in 2018 and Simplee in 2020. It targets health systems and hospitals with over $100 million in net patient revenue and is used by four of the top 10 US hospitals and over 30% of US households. It plans to launch pre-service payment plans, COVID-19 relief payment options, and single-sign-on and telehealth payments for EPIC (a leading EHR) users. PatientCo provides payment solutions from communications to billing communication. It facilitates over $1 billion in transactions between patients and providers annually. The company uses analytics to personalize the collection rate to the highest rate affordable by the patient to help quickly pay off bills and repay providers.

Outlook

Shift toward pre-care transparent pricing: We believe there will be a shift away from post-care, paper billing toward transparent, real-time payment with several payment method options and the ability to split payments for larger bills. These offerings will benefit both the patients and providers. Patients avoid surprise bills and can pay in the form that best meets their needs, while providers collect a greater amount of the bills and decrease operational costs. Rivet, a revenue cycle management platform, allows providers to give patients upfront pricing estimates and collect payment prior to or shortly after providing care. Its machine learning system reviews estimate accuracy, practice data, billing rules, and contract details to provide accurate estimates.

Payers to become invested in improving patient payment rates: Currently, patient payment is primarily understood as a patient-provider issue. However, these challenges can create problems—67% of providers experience hurt performance due to rising patient liability, according to Ooda Health, which can then be used to justify rate increases in payer negotiations.[13] Furthermore, 80% of patients are either frequently or occasionally distracted by bills and payment concerns, resulting in lower medical plan adherence.[14] This may result in decreased health and higher

12: "Survey: Fewer than 4 in 10 Americans Could Pay a Surprise $1,000 Bill from Savings," Bankrate, Jeff Ostrowski, January 11, 2021.
13: "Why Patient Payments are a System Issue," Ooda Health, August 2019.
14: Ibid.

and charges a SaaS fee for its holistic dashboard which enables billers to better understand their performance. The company raised $9.04 million in a late-stage round in March.

Patient payment

Ooda Health

Ooda Health aims to increase patient payments through improving coordination between the providers and payers. It has two main solutions: OodaPay, a billing solution, and Ooda Optic, a prior authorization solution. OodaPay brings together payers and providers to give patients a payer-branded holistic statement that consolidates all provider bills and EOBs associated with a single encounter. Integration of real-time HSA, FSA, and HRA balances as well as deductible status informs patients of available funds and makes it simple to pay from the right account. Patients may pay through multiple payment methods and are given access to flexible financing options. OodaPay requires both payers and providers to use their technology and believes its greatest barrier to entry is convincing payrs to take responsibility for their part of the bill. Ooda boasts a 30% increase in collections and generates revenue by keeping a commission for each bill collected and charging a SaaS fee.

future medical costs.[15] Patients are also often frustrated by the lack of coordination between health insurers and providers. Currently, patients receive an EOB from their insurance provider and a separate bill from their medical provider. Patients are often confused by the bills and 65% say they would switch to a new provider if the payment experience was easier.[16] Furthermore, Ooda Health analysis reports that "35% of provider bills do not match the respective explanation of benefits (EOB) within 10%."[17] Patientco is working with providers to merge health insurance EOB with their health system's information. Unlike most patient billing providers, PatientCo experienced heightened engagement as the pandemic began to subside. The company attributes this increase to their new features. For example, it created an automated way to manage "bill holds" to ensure COVID-19 patients do not receive a surprise bill.

Healthcare-specific solutions to outperform industry-agnostic fintech solutions: Integration with EHR/practice management systems are key components of delivering seamless healthcare payment solutions. Deep technical integration is needed to incorporate payment infrastructure with revenue cycle, insurance, and clearinghouse infrastructure. We believe horizontal companies seldom have the knowledge needed to successfully venture into the medical payment industry. Furthermore, providers often seek full-stack solutions that handle administrative tasks such as collecting intake forms and scheduling appointments.

15: "Adherence and Health Care Costs," Risk Management and Healthcare Policy, Aurel O. Iuga and Maura J. McGuire, February 20, 2014.
16: "Trends in Healthcare Payments Eleventh Annual Report: 2020," InstaMed, March 2021.
17: "Why Patient Payments are a System Issue," Ooda Health, August 2019.