Revenue cycle dystopia: Olives with no juice

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Vendor pronouncements that AI technologies can transform the healthcare revenue cycle are commonplace and overblown. While both health systems and suppliers want to believe that AI can be their savior, there are limits to how it can improve payment mechanics between commercial health insurers and providers. No revenue cycle company flew closer to the sun than Olive AI. That company's dramatic rise and steep fall constitute a cautionary tale for both buyers and sellers of revenue cycle management (RCM) services.

DROWNED AI AMBITIONS

On Oct. 31, 2023, Olive AI announced it was ceasing operations. The news stunned the healthcare industry. Bold and fast-growing, Olive embodied the potential of AI-driven process automation to rewire healthcare's friction-filled revenue cycle operations. Founded in 2012, Olive had raised over $900 million in funding from many of the United States' most prominent venture firms, including Base 10 Partners, Sequoia Capital, General Catalyst and Tiger Global.

Olive AI was a digital juggernaut. It was the darling of the health tech industry and the pride of Columbus, Ohio. According to a July 2021 press release, Olive's enterprise software operated in "more than 900 hospitals in 40 states, including 20 of the top 100 U.S. health systems."[a] At that time, Olive had 1,400 employees and carried a $4 billion valuation.

Olive benefited from the market's overexuberance during 2020-21, when easy money flowed into digital tech companies, inflating their valuations. In many ways, Olive's demise is the timeworn saga of a company paying the ultimate price for believing its own hype. In self-promoting "go save health care" bus ads, Olive mightily overpromised and vastly under-delivered.[b] As the market tightened and clients abandoned its platform, the company bled to death.

In a larger sense, however, the rise and fall of Olive AI is inextricably woven into the inscrutable, perverse and illogical character of healthcare's billing and payment mechanisms. The marketplace wanted to believe that technology could bring coherence, transparency and efficiency to the industry's convoluted revenue cycle mechanics. That dream along with Olive AI died an ignominious death.

HOT-POTATO PAYMENT

Healthcare providers confront a two-pronged challenge when seeking payment for their services. Governmental payers reimburse less than commercial payers. According to a RAND study of 2022 hospital pricing data, commercial payers on average paid 254% of traditional Medicare rates for equivalent service provision.[c] On the plus side, governmental payers process payments faster through pre-determined reimbursement formulas.

By contrast, providers and commercial health insurers engage in intense zero-sum battles to determine payment amounts and timing. The mechanics for submitting appropriate claims are both complex and constantly changing. Payment delays and denials result. Commercial insurers generally have the upper hand in negotiating disputes because they control funding flows.

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a. Olive, "Olive hits a $4 billion valuation with $400 million of capital led by Vista Equity Partners," PR Newswire, July 1, 2021.

b. Brodwin, E., "Buzzy health startup Olive fails to deliver on lofty promises," Axios, April 5, 2022.

c. Whaley, C.M., et al., "Prices paid to hospitals by private health plans: Findings from round 5.1 of an employer-led transparency initiative," RAND, Dec. 10, 2024.

As these hot-potato exchanges unfold, patient experience is usually an afterthought.

RCM PROCESS: 11 STEPS TO FOLLOW

To receive payment, providers must undertake and document the following activities through their RCM processes:

1. **Scheduling.** Document demographics and insurance coverage
2. **Pre-registration.** Validate all patient information, produce a cost estimate and receive prior authorization from payers for treatment
3. **Registration.** Check in patients to receive treatments
4. **Visit.** Conduct treatments and transcribe notes
5. **Coding.** Review procedures and notes then input treatment codes
6. **Chargemaster.** Align coding to billing parameters
7. **Claim edits.** Document exceptions-based workflows
8. **Bill holds.** Adjust for exceptions-based edits in the electronic health record
9. **Claim submission.** Providers send claims to payers
10. **Claim follow-up.** Address claim denials, unpaid claims, patient payment and secondary insurance
11. **Cash posting.** Acknowledge receipt of payment for services provided

With each step throughout this intricate payment journey, documentation errors can lead to payment adjustments, potentially slowing or negating payments. Commercial payers are not passive actors in this process. An analysis of 2023 claims in the ACA marketplace by the Kaiser Family Foundation found that qualified health plans denied 19% of in-network claims, with significant variation by insurer and state. Alabama's denial rate, for example, was 34%.[d]

d. Lo, J., et al., "Claims denials and appeals in ACA marketplace plans in 2023," Kaiser Family Foundation, Private Insurance, Jan. 27, 2025.

$1.06T

Approximate annual U.S. expenditures on healthcare revenue cycle activities

Sources: Health Affairs staff, "The role of administrative waste in excess US health spending," Research brief, *Health Affairs,* Oct. 6, 2022; and CMS.gov, "NHE fact sheet," page lasted modified Dec. 18, 2024

Healthcare RCM is where the money is. That's why both payers and providers devote extraordinary resources to managing their RCM operations. Like the U.S. healthcare system it feeds, RCM is highly fragmented. It is populated by large numbers of competing point solutions offered by countless vendors. It is not unusual for health systems to have dozens of vendors offering component RCM "solutions." The aggregate activities of these RCM vendors often complicate rather than support efficient system management.

A $1 TRILLION INDUSTRY?

Activities related to healthcare billing and payment constitute a massive industry employing hundreds of thousands of healthcare professionals. According to a report issued by Grand View Research, the U.S. market in 2025 for outsourcing healthcare revenue cycle functions will be $189.6 billion. The report projects this market will grow 10.1% annually through 2030.[e]

That's just outsourced RCM activities. Grand View's analysis excludes in-house provider and payer RCM activities, which dwarf outsourced RCM.

Given healthcare's payment dynamics and complexity, it's difficult to pinpoint the exact level of healthcare's administrative

e. Grand View Research, *U.S. revenue cycle management market size, share & trends analysis report by product (integrated system, standalone system), by component, by delivery mode, by specialty, by sourcing, by function, by end-use, and segment forecasts, 2025 – 2030,* 2024.

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expenses, including RCM. An October 2022 meta-analysis published in *Health Affairs* found healthcare's administrative expenditures ranged between 15% and 30% of total U.S. Healthcare expenditures.[f]

CMS projects that U.S. healthcare expenditure in 2025 will be about $5.3 trillion, representing 17.9% of the total U.S. economy.[g] Simple multiplication suggests that healthcare's administrative expenses in 2025 will range between $795 billion (15% of total) and $1.59 trillion (30% of total). Most estimates center around 25%.

The vast majority, perhaps greater than 80% of healthcare's administrative costs, relate to the RCM activities described above. With a 25% administrative cost allocation, that proportion suggests RCM is a $1 trillion business.

One trillion is a gargantuan number, almost beyond human comprehension. It would take 32,000 years to record a trillion seconds. A trillion dollars spent each year on processing medical claims is absurd. It represents a monstrous drag on the overall economy.

By comparison, Ibis World estimates that in 2025 U.S. automobile manufacturing revenues will be $384.5 billion, with an anemic 2.4% annual growth rate.[h] In today's America, processing medical claims is a far larger and more lucrative business than manufacturing cars and trucks.

f. Health Affairs staff, "The role of administrative waste in excess US health spending," Research brief, *Health Affairs*, Oct. 6, 2022.

g. CMS.gov, "NHE fact sheet," page lasted modified Dec. 18, 2024.

h. Samorajski, O., *Automobile & light duty motor vehicle manufacturing in the US - market research report (2015-2030),* IBISWorld, February 2025.

OLIVE PLANTING

Olive's founder and CEO Sean Lane was right out of central casting. A decorated Air Force veteran with five combat tours, Lane earned his technology chops in military intelligence making massive data sets sensible, interoperable and usable. Given the magnitude and complexity of the RCM business, it's not surprising that investors got behind Lane. He had the right stuff.

Founded in 2012 as CrossChx, Lane's initial business model employed biometrics to facilitate patient check-ins. In 2017, CrossChx introduced an AI bot named Olive that completed menial administrative tasks. As the Olive bot gained traction with clients, Lane changed the company's name to Olive AI in 2018.

In a 2022 interview with TechCrunch Live, Lane explained how Olive strategically pivoted 27 times to refine its business model.[i] Olive AI was pivot 28. Part of Olive's appeal was Lane's expansive vision for the company. He drove Olive to create an internet for healthcare. He envisioned Olive as an enterprise-wide platform that could transform healthcare companies from "wing to wing."

Lane believed the industry's biggest failing was its need to use four million "human routers" to sequence care delivery. He preached that machine intelligence built on deep neural networks could annually "liberate 10 billion hours of wasted human effort."

OLIVE PITTING

By definition, Olive had to be big and scalable. It also had to engage multiple partners to eliminate friction among providers, payers and patients. Accordingly, Lane created a ventures arm to foster inorganic growth. He expanded service offerings to automate prior authorization decisions, manage the health of populations, offer disease-specific solutions and so much more.

The bigger and more diverse Olive became, the harder it became to execute Lane's vision. As operating losses grew, Olive began cutting staff.

i. Burns, M., "How Olive pivoted 27 times on its way to a $4 billion valuation," TechCrunch, June 3, 2022.

A devastating *Axios Pro* report by Erin Brodwin in April 2022 found that Olive had generated only a fraction of the savings it promised.[j] Deeply embarrassed, disappointed customers didn't speak up even as Epic forced Olive to stop referencing its name in marketing materials and KLAS noted Olive's tendency to overstate its capabilities. In reality, Olive's vaunted AI capabilities often turned out to be 1990's-era screen-scraping technologies.

PRIDE COMES BEFORE THE FALL

Olive's hubris created the seeds of its destruction. Too many RCM companies sell the same AI vaporware as Olive did.

At the same time, there is an unhealthy reciprocity between healthcare companies and their RCM suppliers. Both are desperate to achieve efficiencies. Neither fully understands how healthcare's complex and convoluted payment mechanics complicate both human and technological challenges. Performance suffers as waste proliferates.

It doesn't have to be this way. The path from RCM dystopia to euphoria incorporates logical automation and consumerism. Olive provides a sober example of the consequences of the failure to understand that fundamental reality. ▮

j. Brodwin, E., "$4 billion health tech startup Olive overpromises and underdelivers," *Axios Pro,* April 5, 2022.

About the author

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