

2024

Oral Health
VENTURE TRENDS

Data provided by

 PitchBook

Introduction & takeaways

The COVID-19 pandemic underscored myriad challenges across global health care. Yet among aspects of health, oral health remains less discussed or addressed only at a minimum despite growing evidence that oral health is linked to many health conditions. According to a recent report by the World Economic Forum, oral diseases affect an estimated 3.5 billion people each year, producing an annual economic burden of \$710 billion.¹ Moreover, even as billions of dollars flow into research and development of potentially lucrative therapies for cancer or obesity, the flow of investment into technological innovation for oral health has been much smaller—particularly at the nexus of startups and venture capital. However, this state of affairs may be improving.

In this report, produced as part of a mission to validate and scale transformative oral health solutions, CareQuest Innovation Partners draws on PitchBook datasets to examine trends in VC investment across oral health worldwide.

- Since the end of 2022, general VC activity has declined amid geopolitical and market volatility, among other factors, and so has VC investment in oral health. Oral health VC funding's rate of growth worldwide increased significantly leading up to a peak in 2021. Moreover, dealmaking remains resilient thus far in 2024.
- The potential market for improved oral health approaches is enormous. One recent study estimated that total annual spending on dental care could surpass \$430 billion across 32 Organization for Economic Cooperation and Development (OECD) countries in 2030.² This immense sum reflects the global market opportunity for oral care, as it takes into account all aspects of dental spending.
- Oral health VC activity is relatively small compared with other health care segments, especially in light of its market size. It has exhibited resilience even amid the recent market downturn, but it still has runway to grow.

Oral health remains an underserved segment, as annual VC invested worldwide in oral health has eclipsed \$1 billion only

1: "The Economic Rationale for a Global Commitment to Invest in Oral Health," World Economics Forum, American Dental Association, Colgate-Palmolive Company, and Henry Schein, Marko Vujicic, et al., May 2024.

2: "Forecasting Future Dental Health Expenditures: Development of a Framework Using Data From 32 OECD Countries," National Library of Medicine, Community Dent Oral Epidemiol, Milica Jevdjovic, et al., November 30, 2020.

3: "Cross-Sectional Analysis of Oral Healthcare vs. General Healthcare Utilization in Five Low- and Middle-Income Countries," Frontiers, Oral Health, Sita Manasa Susarla, Margaret Trimble, and Karen Sokal-Gutierrez, June 22, 2022. Note: All types of dental expenditures—and thus a much broader scope than the Mintel report cited—are utilized in this study.

4: "Do Health Systems Cover the Mouth? Comparing Dental Care Coverage for Older Adults in Eight Jurisdictions," ScienceDirect, Health Policy, Sara Allin, et al., September 2020.

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12.3%

Increase in consumer products subsegment of oral care, per Mintel estimates (2023-2028)

Source: [Mintel](#)

Note: Mintel narrowly defines oral care from a consumer perspective as total retail sales in toothpaste, toothbrushes, mouthwash/rinse, accessories, whitening kits, and pain relief.

twice, but some promising indicators exist. Furthermore, systemic challenges remain, including lack of access to oral health care in many countries, as well as lack of integration of preventive oral health care into universal health care coverage.³ Even among wealthy nations, close to 25% of adults report skipping dental visits.⁴ That is where CareQuest Innovation Partners comes in, collaborating with industry partners, startups, and investors to help oral health startups launch and make oral health more accessible, equitable, and integrated.

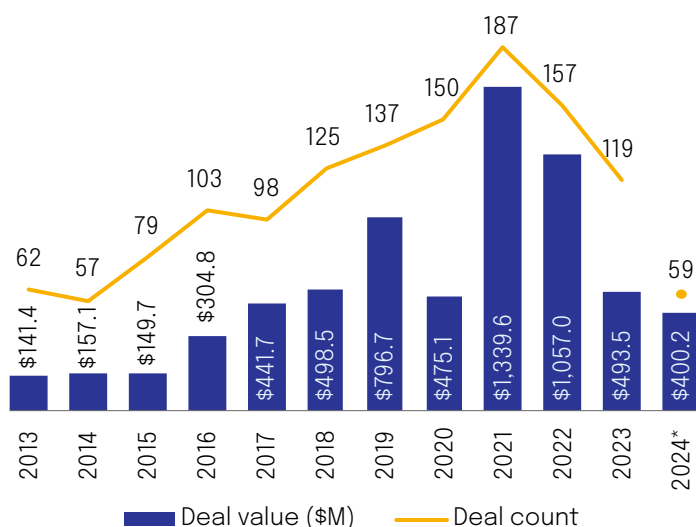
Trend analysis

In the past few years, global venture funding into oral health startups has returned to healthy levels.

Bullishness in financial markets both public and private led to a peak in VC activity for virtually every sector in 2021. That same year, there were 187 completed transactions in oral health for a total of \$1.3 billion in capital invested. In 2022, however, oral health funding did not decline as much as other sectors did, as 157 deals were completed in the sector for an aggregate of just over \$1 billion. Although 2024 to date has seen only 59 completed deals for \$400.2 million in total, that tally still compares favorably to many other full-year totals since 2013, signifying the maturation of the oral health space. Juxtaposing oral health VC activity against global deal flows, however, shows how deep the gulf between VC dealmaking for the broader space and oral health is. For example, VC activity in overall health has also declined since peaking in 2021, but VC invested in 2024 YTD in oral health is still just 0.86% of all VC invested in overall health worldwide in the same time frame.

Similarly, multiple factors contributed to the global slowdown in venture financing since the beginning of 2022, including geopolitical volatility, interest rate hikes, and a slowdown in VC exits. For startups and VCs, an increase in costs of capital and general opportunity costs, combined with the marked uptick in public market volatility, transformed underlying financial calculations for return prospects and startups' financial viability. Oral health companies were no different. However, where their fortunes differed given the sector's still-strong funding levels in 2022 can be explained by the nature of the oral health segment itself.

Oral health VC deal activity



Source: PitchBook • Geography: Global • *As of August 26, 2024



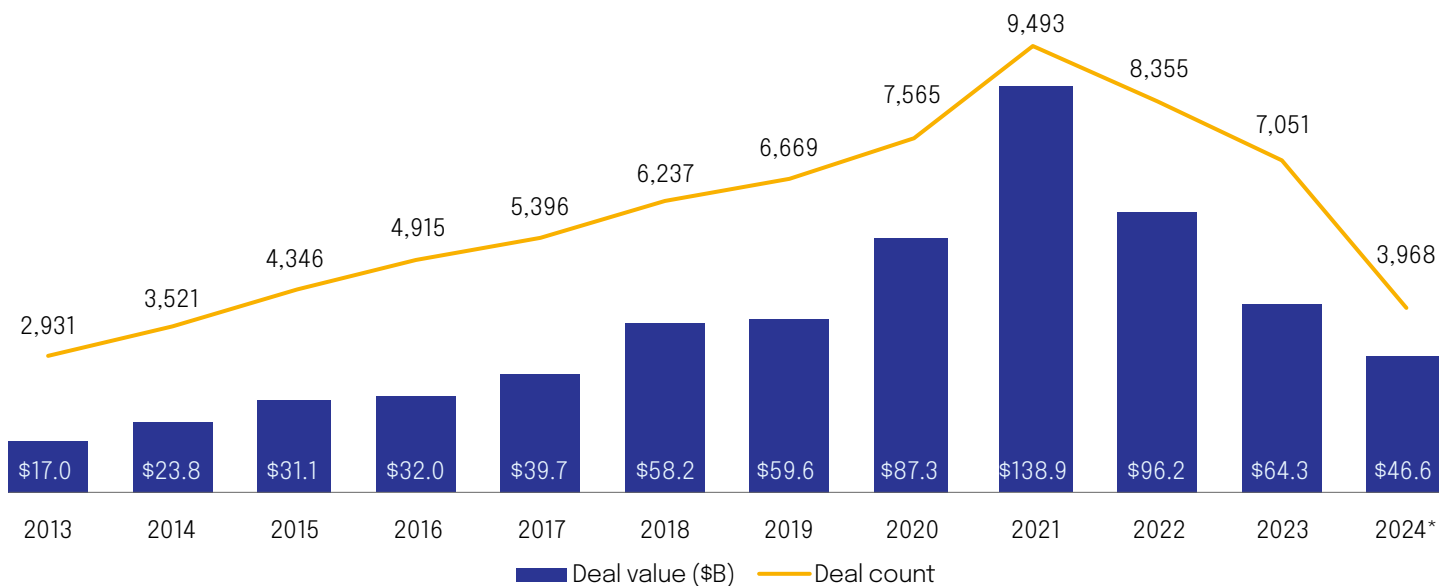
4%

2024 YTD VC invested in oral health worldwide is still only 4% of the \$9.7 billion that Mintel estimates was the size of the oral care market in 2023.

Sources: PitchBook and [Mintel](#)

Note: Mintel defines the oral care market as total retail sales in toothpaste, toothbrushes, mouthwash, rinse, accessories, whitening kits/strips, and pain relief.

Health care VC deal activity

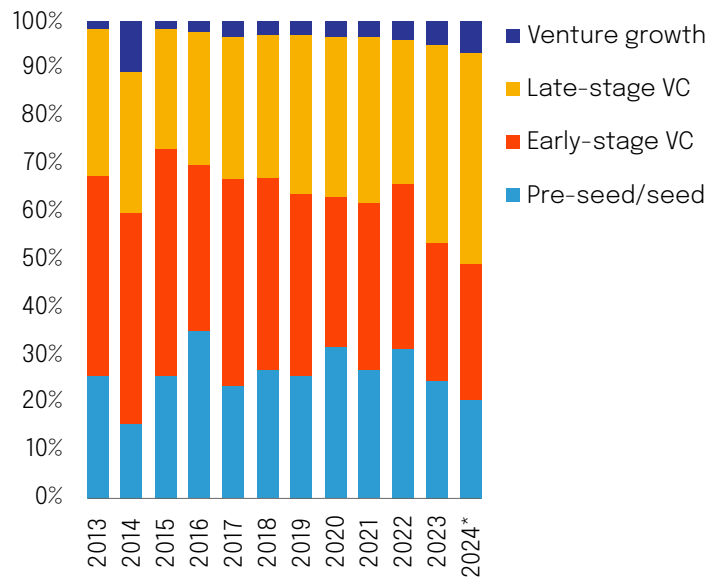


Source: PitchBook • Geography: Global • *As of August 26, 2024

Oral health stands out among health care segments due in part to the unique nature of dentistry, given the sector's historical origins and evolution. Separate insurance treatment in some cases, plus specialized training approaches, also contributes to a differentiated backdrop. For example, in the US, dental coverage is not considered an essential health benefit and thus usually must be either a stand-alone plan or embedded. The complexity of insurance for oral health, not to mention general health care, has produced opportunity niches for startups to improve interoperability, documentation alignment, and more. The consumer demand backdrop is enormous—a recent poll showed 92% of US voters supported adding a dental benefit to Medicare, for example.⁵

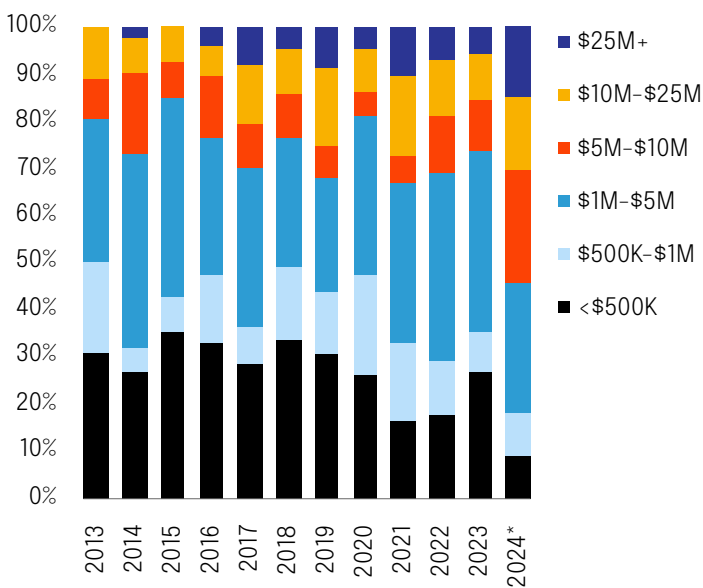
While these disparities from the rest of health care are important for companies and investment firms to note, the macroeconomic drivers and features inherent in all of health care remain intact for dentistry—ranging from the necessity of periodic care and the growing awareness of holistic health outcomes in which oral care plays an important part. For example, at least 1 in 4 adults with health insurance reported that they saw cost barriers to accessing dental care, according to a recent survey.⁶ If coverage got cheaper due to alternative

Share of oral health VC deal count by stage



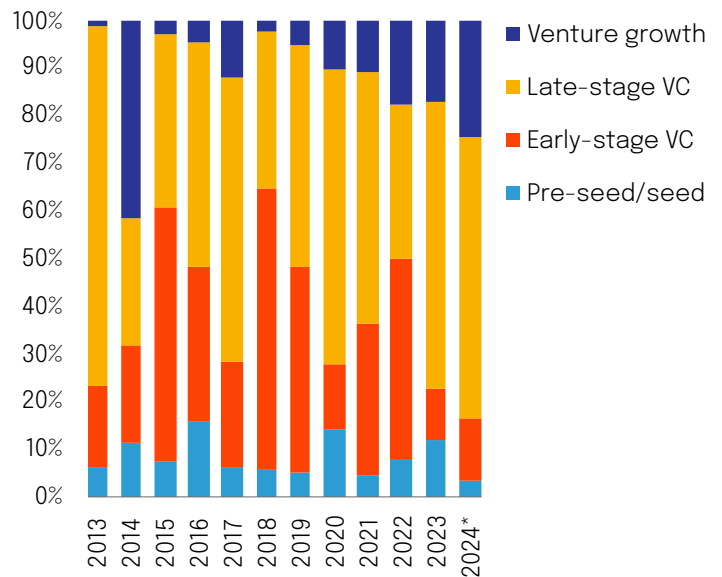
Source: PitchBook • Geography: Global • *As of August 26, 2024

Share of oral health VC deal count by size bucket



Source: PitchBook • Geography: Global • *As of August 26, 2024

Share of oral health VC deal value by stage



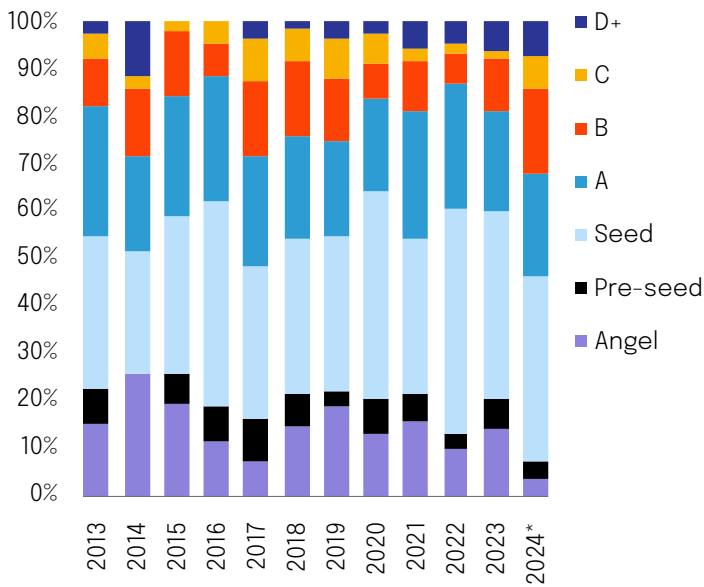
Source: PitchBook • Geography: Global • *As of August 26, 2024

Oral health VC activity exhibits similar trends to the broader market (including health care) but has greater stability, as evidenced by the steady tilt toward later- and growth-stage financings in the past few years in both deal count and value.

5: "New National Poll Shows Overwhelming Bipartisan Support for Medicare Dental Coverage" CareQuest Innovation Partners, July 16, 2024.

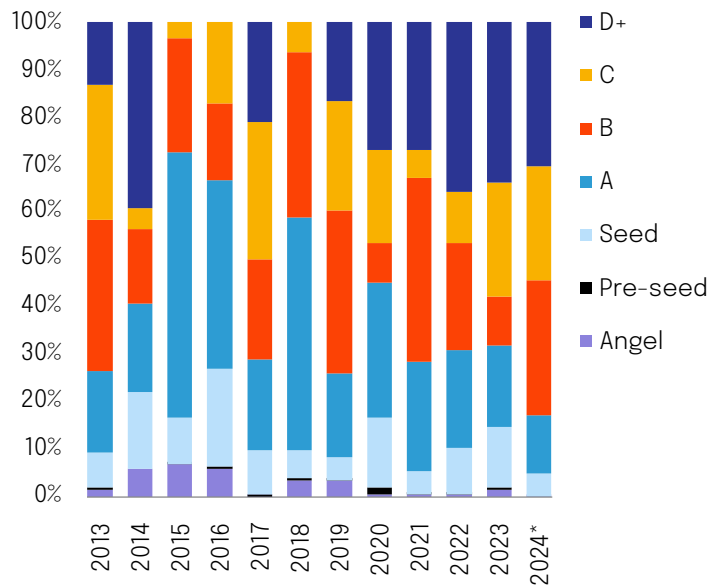
6: "Access to Adult Dental Care Gets Renewed Focus in ACA Marketplace Proposal." KFF, Rayna Wallace, Michelle Long, and Kaye Pestaina, March 8, 2024.

Share of oral health VC deal count by series



Source: PitchBook • Geography: Global • *As of August 26, 2024

Share of oral health VC deal value by series



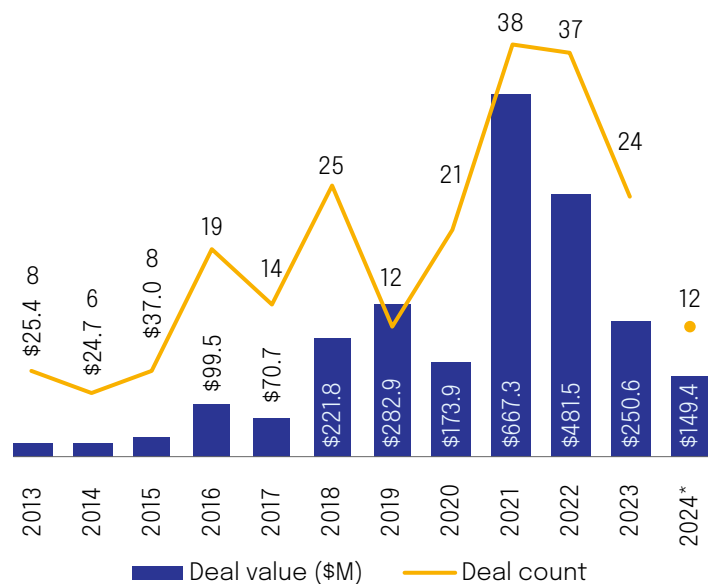
Source: PitchBook • Geography: Global • *As of August 26, 2024

Although CVC activity in oral health broadly aligns with overall market trends, 2024 figures for CVC-related activity in oral health are somewhat more robust thus far, suggesting dedicated corporate players in oral health are maintaining exposure.

treatments or innovations in delivery, perhaps more consumers—even those with health insurance—would not avoid seeking dental care, thereby expanding the potential consumer population.

As a result, oral health venture financing has developed differently than other sectors, with a slower start and smaller scale than overall health care (as evidenced in the disparity between global health VC activity charted on page 3) but potentially more resilience given different regulatory frameworks and barriers to entry. In another consequence, corporates or their venture arms play a key role in joining in financing rounds of oral health startups. In 2018, corporates or their VC arms joined in one-fifth of all global oral health rounds, a proportion similar to the overall CVC trend line; between 2021 and 2022, they joined in 75 rounds combined. Given their investment mandates, CVCs often join in financings that are less risky than pre-seed to seed, so their participation in rounds later in company life cycles helped drive the gradual increase in the proportion of late-stage and venture-growth oral health financings. The surge in later-stage and venture-growth rounds since January 2023 is attributable to VC firms' increased caution as they backed more mature businesses in oral

Oral health VC deal activity with CVC participation

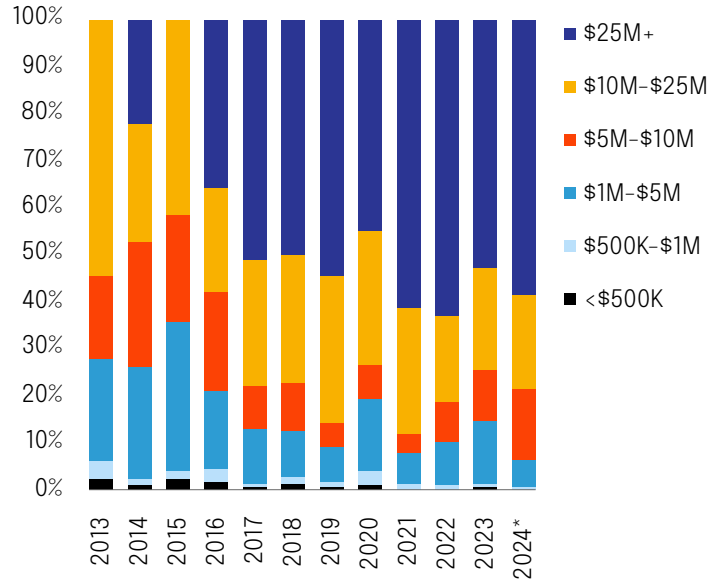


Source: PitchBook • Geography: Global • *As of August 26, 2024

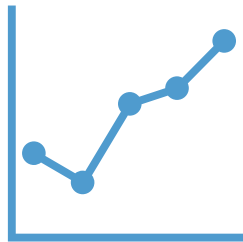
health due to perceptions of increased macroeconomic risk. Assessing global VC activity by both series and size bucket yields similar conclusions, with a growing preponderance in the proportion of \$1 million-plus rounds since 2020.

Such corporate participation does occur worldwide, but amid the VC activity downturn in the past few years (albeit a potential cautious revival in the second half of 2024 thus far), oral health venture financings have concentrated in North America by both proportional capital invested and deal counts. Interestingly, the reversion happened after a couple years wherein the proportions of VC invested varied considerably to include non-North American, -European, or -Asian countries. Of the transactions that drove that shift, much of the surge was due to funding rounds of launches of teledentistry and support platforms that aided patients in finding dental care or navigating documentation, insurance, and the like. This aligns with general global industry growth, however slow, as governments, nonprofits, and private firms look to expand oral health access and innovation worldwide.

Share of oral health VC deal value by size bucket



Source: PitchBook • Geography: Global • *As of August 26, 2024

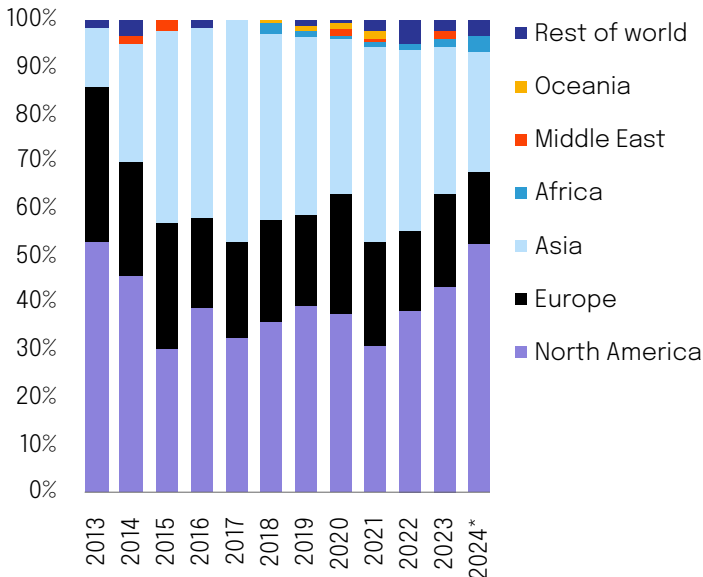


\$9.8M

Although based on a small sample, the 2024 YTD late-stage VC deal size is at an all-time high.

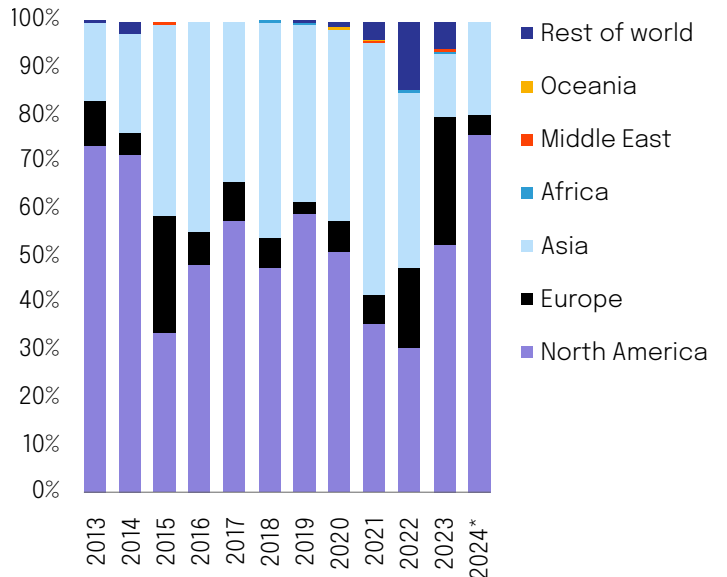
Source: PitchBook

Share of oral health VC deal count by region



Source: PitchBook • Geography: Global • *As of August 26, 2024

Share of oral health VC deal value by region



Source: PitchBook • Geography: Global • *As of August 26, 2024

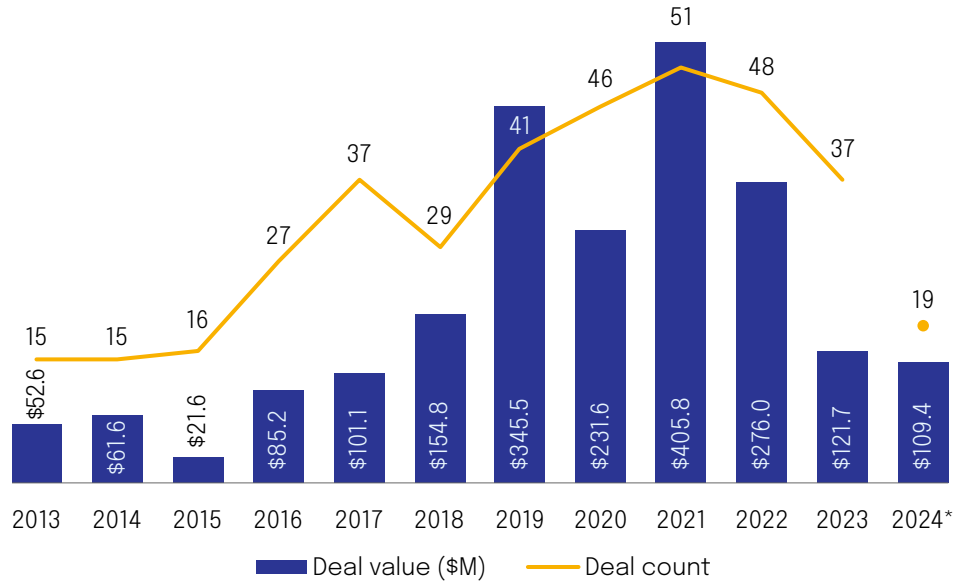
AI is increasingly adopted in some key use cases such as imaging and modeling, while other frontier innovations include novel materials and compounds for cosmetics.

Hence the uptick in oral health and orthopedic financing activity in the bullish era of late 2020 to the end of 2022, while cosmetics in oral health has also seen a consistent stream of funding activity—albeit much less given competition from incumbent cosmetics corporations and nascent technology, such as color-correcting gels and augmented reality to showcase cleaner teeth.

Key innovations shaping the cosmetic and orthopedic spaces include:

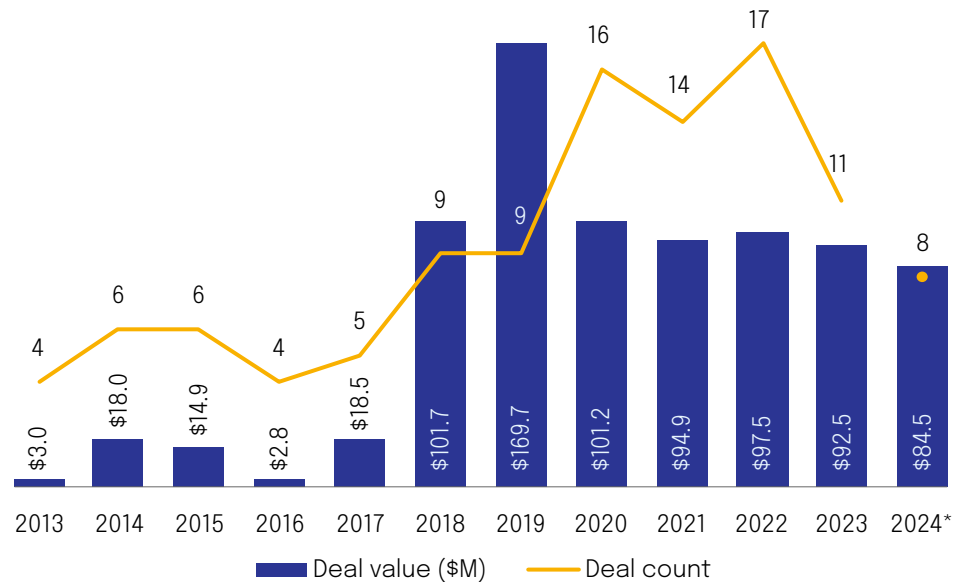
- 3D-printed, customizable orthodontic treatments, often coupled with AI-powered scans.
- Robotic assistant surgical systems for oral surgeries.
- Intra-oral imaging for holistic 3D scans for diagnostics.
- Bioactive materials for restoration of dental tissue and improved appearance.

Orthodontics & orthopedics oral health VC deal activity



Source: PitchBook · Geography: Global · *As of August 26, 2024
 Note: This dataset is based on a subset of companies within the overall oral health population that focus on orthodontics and orthopedics.

Cosmetic oral health VC deal activity



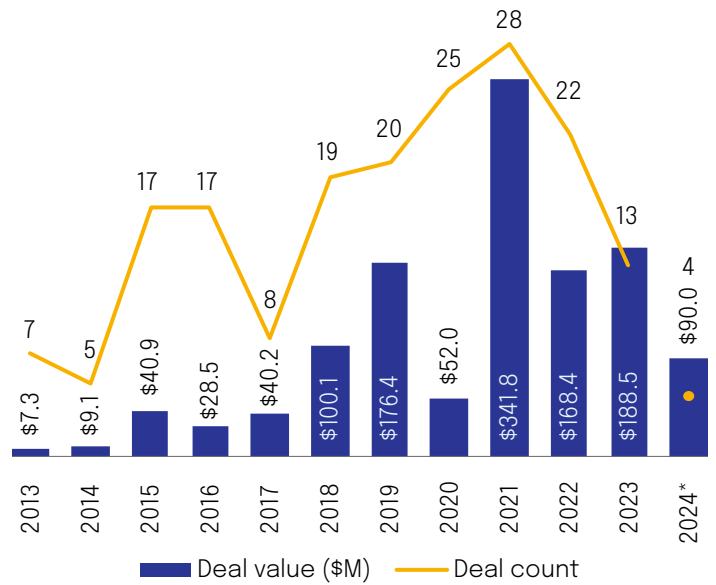
Source: PitchBook · Geography: Global · *As of August 26, 2024
 Note: This dataset is based on a subset of companies within the overall oral health population that focus on cosmetics.

Spotlight

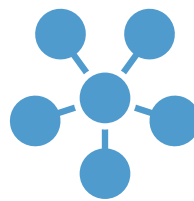
Zeroing in on two key oral health subsegments—the intersection of oral health and digital health, as well as the much-hyped AI & machine learning (ML) space—provides a valuable comparison. Like many sectors in the past few years, VC activity in companies that are engaged in both oral health and digital health peaked in deal count and value in 2021 and then slowed to levels similar to those of the 2010s. Oral health and AI & ML-focused companies, meanwhile, have seen somewhat more volatility in VC invested annual tallies, especially in 2024 YTD relative to the count of completed deals, which signifies some outlier transactions are occurring.

These disparate trends reveal several key findings. Digital health has seen more skew in investment tallies due to its broader scope and sheer variety of startups that are focused on the full gamut of opportunities, from teledentistry to gut-biome-derived supplements. But commercialization remains difficult in the face of competition for many digital health offerings on the part of major health care providers and insurance companies. Meanwhile, AI is not a panacea for any technical sector, but it does present potential opportunities in patient data analysis and diagnosis, as well as more helpful interfaces. Thus, in the recent AI boom, the intersection of AI and oral health has received more consistent investor interest. For example, AI-based dental tech platform Pearl, which identifies pathologies emerging over time based on dental records and mouth scans, raised a \$58 million Series B in June 2024. Such deals likely will not explode in frequency, but that financing illustrates the known use cases for AI applications in oral health that can secure investor interest.

Oral health and digital health VC deal activity



Source: PitchBook • Geography: Global • *As of August 26, 2024
 Note: This dataset is based on companies that are within both the oral health and digital health sectors.

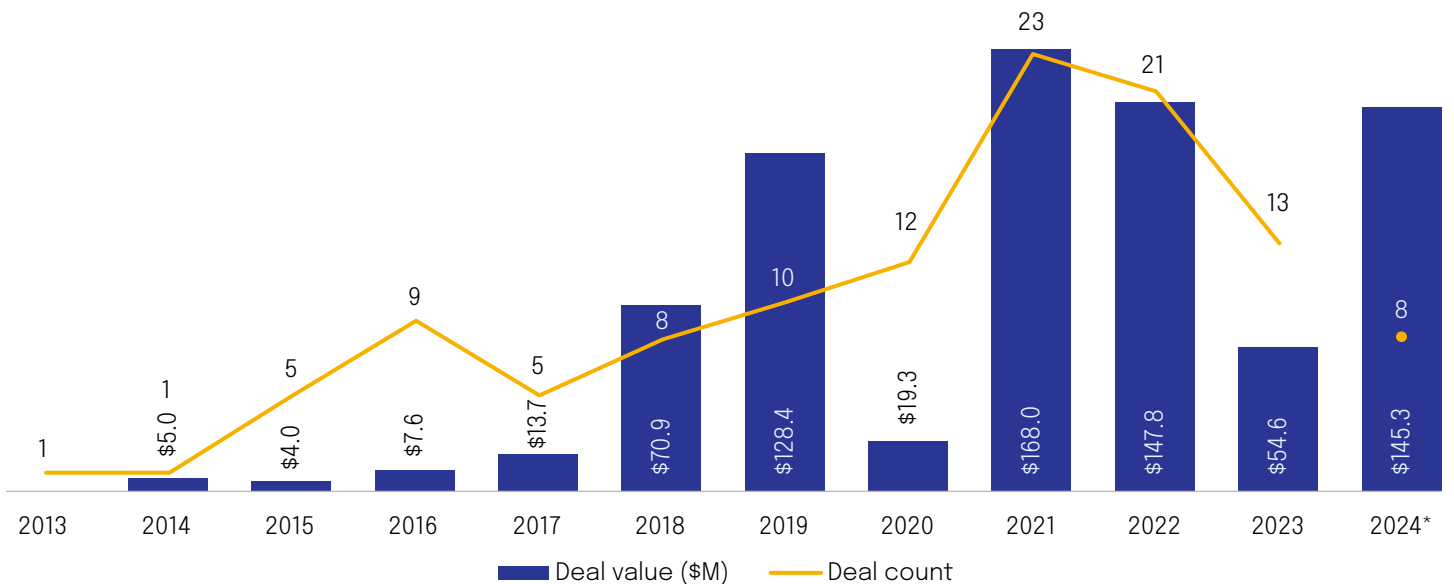


98.3%

Accuracy of an artificial neural network to assess oral tissues, in an example of how AI tools can be used in a greater range of oral care applications

Source: BMC Oral Health

Oral health and AI & ML VC deal activity



Source: PitchBook • Geography: Global • *As of August 26, 2024
 Note: This dataset is based on companies that are within both the oral health and AI & ML sectors.

Looking forward

The vast spectrum of potential technical innovations in oral health makes it difficult to pinpoint where the most critical, cutting-edge technological advances are required. But the most recent cohort of startups that CareQuest Innovation Partners and health care incubator and innovation hub MATTER selected for their SMILE Health program provides some useful examples.

Oral health segments represented in the cohort include a focus on platforms and products that can be delivered more cost-effectively without sacrificing reliability, while also improving access to care. These include DentKits' at-home dentures, which utilize digital denture and teledental technologies plus 3D printing in order to produce more accessible, cost-effective,

“While barriers to adoption across the broader market of oral health players remain intact, they are receding, as the convergence of VC funding and market-driven tech advancements signals a promising future for oral health innovation and our health care continuum.”

Denise Marks, chief financial officer and EVP at CareQuest Institute for Oral Health

and personalized options, and ThriveLink's AI telephonic enrollment agents, which help families verbally enroll in social and health programs, including health and dental insurance, food stamps, and utility assistance. As noted earlier, insurance for oral health, and its integration into general insurance, remains a rich opportunity for startups tackling insurtech interoperability challenges. This is especially true as the medical industry increasingly recognizes the role of oral health in overall health, which may eventually require regulatory shifts that would prompt programs like Medicare or Medicaid to reconsider their approaches, as well as commercial payers. In addition, advancements in diagnostics and treatments are exemplified by Oraliva, an AI-assisted diagnostic platform for oral cancer lesions, and biotech company Umayana, which makes a range of products that prevent and treat oral wounds that occur as a result of cancer treatments with its patented molecular compound and formulations.

These startups and the segments they represent indicate an early yet growing proliferation of key technical advances, such as multiple AI approaches and bespoke, cost-effective manufacturing into the field of oral health. Although these companies and others in oral health are still at the early stages, this classic process of startups testing out product-market fits in different segments while also striking partnerships with incumbent organizations showcases how the convergence of VC and market-driven technical innovation could be fruitful for the whole sector. This should help spur exits in the future. Although there have been only a handful of exits as of late, more benign market conditions saw 20 combined exits between 2020 and 2021. Given the spate of later-stage and growth financings in the past few years, a cohort of oral health companies is likely maturing to the point of liquidity that will likely drive substantial returns.

Across the entire oral health sector—and the venture market in general—key challenges remain, ranging from the macroeconomic to the growing recognition that oral health plays a key role in overall health, which could drive reductions in care costs by improving accessibility at the preventive care level. However, such processes will be necessary as the global need for improvements in oral health accessibility and innovation in technologies that can help improve cost reductions and thereby accessibility remains critical. VC activity levels indicate that the oral health and venture nexus may still be in the fledgling stages, but the outlook is promising.

About CareQuest Innovation Partners

CareQuest Innovation Partners® validates and scales transformative solutions to improve overall health through oral health. Together, with our ecosystem of leading industry partners, startups, and investors, we make health care more accessible, equitable, and integrated. Joined by the shared mission to improve the oral health of all, CareQuest Innovation Partners is the for-profit subsidiary of CareQuest Institute. To learn more, visit carequestinnovation.com and follow us on [X](#) and [LinkedIn](#).

Methodology

Reports are prepared in accordance with PitchBook's methodology, which is described in detail on the PitchBook [report methodologies page](#). The oral health taxonomy was created in collaboration with CareQuest Innovation Partners and PitchBook utilizing a mixture of keywords and industry codes, combined with deduping, to produce the company population that underlies the overall oral health space. From there, that oral health population of companies was segmented by existing PitchBook verticals and combinations of keywords as needed.

