

Healthcare Introduction

Fall 2023

An Industry Update by:

**Generational Business
Intelligence**

Generational Business Intelligence

Generational Group is committed to helping entrepreneurs Grow Smart and Sell Smart. Generational Business Intelligence (GBI) supports these goals with concise, industry-specific updates that empower business owners throughout the growth and exit process. Understanding industry trends, buyer patterns and market dynamics enables business owners to make timely and informed decisions.

For business owners who are focused on growth, GBI updates enable them to identify market opportunities and areas of improvement within their companies, enhancing their value proposition to potential buyers.

Attached is our Healthcare Series - Fall 2023:

Healthcare Introduction

Part 1 – Healthcare Services Industry

Part 2 – Healthcare Medical Devices Industry

Part 3 – Health Insurance, Medical Services & Managed Care Industries

Part 4 – Pharmaceutical Industry

Please enjoy the update and feel free to respond with questions or comments.



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Generational Business Intelligence

Healthcare Update

Over the last few years, healthcare has significantly changed in four crucial sectors: healthcare facilities and services, medical equipment and devices, medical insurance and managed care, and pharmaceuticals and related fields. Alterations in policies, technological advancements, and demographic shifts have driven these changes. This Business Intelligence Update will delve into the trends in these four sectors.

Part 1: Healthcare Services and Facilities

The healthcare industry is experiencing a significant trend towards value-based care, prioritizing enhancing care quality while minimizing costs. This trend created new payment models and incentives for providers. Additionally, healthcare facilities are increasingly utilizing telehealth and virtual care, enabling patients to receive care remotely from their homes.

Part 2: Medical Devices, Equipment and Hospital Supplies

Medical technology constantly advances, creating more sophisticated and effective medical devices, including wearables, remote monitoring equipment, and personalized medicine. Furthermore, there is an increasing emphasis on utilizing sustainable and environmentally friendly materials in hospital supplies and medical equipment.

The medical devices, equipment, and hospital supplies industry is experiencing significant M&A activity as companies seek to gain a competitive advantage, expand their product portfolios, and access new markets and customers. This trend will likely continue as the industry becomes increasingly competitive and global.

Part 3: Medical Insurance, Medical Services, and Managed Care

Healthcare insurance and managed care are undergoing significant changes, focusing on improving access to care and reducing costs. One trend in medical insurance is the shift towards value-based reimbursement models, which incentivize providers to focus on the quality of care rather than the quantity of services provided. Additionally, a growing trend towards consumer-driven healthcare gives patients more control over their healthcare decisions and more active overall health management.

Part 4: Pharmaceuticals and Related Segments

The pharmaceutical industry has a trend toward personalized medicine, which involves tailoring treatment plans based on a patient's genetic makeup and other factors. Furthermore, the industry is increasingly prioritizing the development of treatments for rare diseases and previously neglected conditions. Another trend in the pharmaceutical industry is the reliance on artificial intelligence and machine learning to improve drug discovery and development processes.

Mergers and Acquisitions Trends

The significant themes in M&A trends in the healthcare industry, along with some examples, include:

Consolidation

Big corporations are acquiring smaller ones to widen their product offerings, augment their market share, and acquire access to novel technologies.

- In July 2022, IL2M International Corp. (OTC: ILIM), a healthcare technology holding company, announced a merger with Aamani Healthcare Group, a healthcare group specializing in Transitional Care Homes,

Home Care Support Services, Home Health Care and Hospice Care. The acquisition will expand IL2M International Corp's services offerings with the additional liquidity-enhancing capabilities of Aamani Healthcare Group.¹

- SentryHealth, a prominent integrated health management firm, revealed in March 2022 its plan to merge with Wellview, a digital population health platform. The two entities are united in their aim to enhance access and affordability of care for employers and their staff. SentryHealth's Registered Nurse Advocates employ cutting-edge data science and medical advocacy to help employees navigate the healthcare system. On the other hand, Wellview's digital health platform provides employees with virtual access to health and wellbeing experts.²

Strategic partnerships

Companies are forming partnerships to collaborate on product development and distribution, share resources and expertise, and access new markets and customers.

- In October 2022, St Croix Hospice, a portfolio company of HIG Capital, acquired Adaptive Nursing & Healthcare Services Inc from Help at Home LLC. St Croix Hospice received three Adaptive Hospice locations: Indianapolis, Jeffersonville, and Newburgh, adding its tenth state and three new branches to its service region. This acquisition aligns with St Croix Hospice's strategy of contiguous geographic expansion of their services in the Midwest.³
- Novartis, a worldwide pharmaceutical company, revealed in 2021 a strategic partnership with CureVac, a biopharmaceutical firm specializing in creating mRNA-based vaccines and therapeutics. The collaboration involves joint efforts by Novartis and CureVac to develop and manufacture CureVac's COVID-19

vaccine candidate and create next-generation mRNA-based vaccines and therapeutics.⁴

Innovation

Companies seeking to acquire innovative technologies and intellectual property to gain a competitive edge in a highly competitive industry.

- SimpleHealth, a reproductive healthcare company, made an announcement in February 2022 regarding their acquisition of Emme, a healthcare technology company that concentrates on women's health. Emme is the pioneer in providing a wholly integrated birth control system for pill management. The acquisition aims to expand SimpleHealth's birth control prescription delivery and telehealth services with Emme's exclusive and technology-driven approach. Integrating Emme's system will enhance medication adherence for SimpleHealth's patients.⁵

Diversification

To minimize risk and enhance their overall market share, companies are pursuing acquisitions in adjacent markets or areas that complement their current offerings.

- Bellus Health, a late-stage biopharmaceutical company based in Canada that focuses on relieving patients suffering from refractory chronic cough (RCC), was acquired by GSK, a global biopharma company, in April 2023. Although GSK already develops medications for managing asthma, COPD, and short-acting beta agonist, this acquisition enables GSK to obtain camlipixant. This highly selective and potentially best-in-class P2X3 antagonist is undergoing phase III development. Camlipixant could be used as a first-line treatment for adult patients with RCC.⁶

Vertical integration

Companies seek to vertically integrate their operations by acquiring or partnering with providers of medical services. This strategy

enables them to offer a more comprehensive suite of healthcare services and to exercise greater control over costs and quality.

- CVS Health, a healthcare solutions provider, announced in March 2023 the successful acquisition of Signify Health, a technology and services company that focuses on enabling clinicians to identify chronic conditions in patients by bringing them into the home. Signify Health's average home visit duration is 2.5 times longer than a typical primary care provider visit. This acquisition will strengthen CVS Health's presence in the home and advance its value-based care strategy. The merged company will improve care delivery, lower costs, increase engagement, and provide broad access to high-quality care, particularly for Medicare Advantage customers.⁷

Technology

Companies are concentrating on procuring new technologies to enhance healthcare delivery, particularly in telemedicine, electronic health records, and data analytics.

- Healthful and Sympto Health merged in February 2023, resulting in the creation of Rely Health, a care navigation infrastructure provider catering to the largest healthcare customers in the country. Rely on Health benefits from Sympto Health's concierge-level care technology and personalized patient assistance, allowing for a broader impact in the field.⁸

Geographic Expansion

The motivation behind companies seeking to expand into new markets and regions through acquisitions or partnerships is multifaceted. Factors driving this trend include changing demographics, rising demand for healthcare products and services in emerging markets, and the imperative to lower costs and improve efficiency.

- In August 2022, Residential Hospice, a division of Graham Healthcare Group, announced that it had acquired from U.S. Medical Management, Comfort Hospice of St. Louis, Missouri, and Grace Hospice of Maumee, Ohio. Comfort provides patient and family care services. The acquisition will expand the footprint of Residential Hospice into Missouri and Ohio.⁹

With the healthcare industry's constant evolution, it is essential to stay aware of the most recent changes and understand how they impact various sectors. Our Generational Healthcare Update Four Part Series provides a comprehensive overview of the latest merger and acquisition trends in healthcare services and facilities, medical devices and equipment, medical insurance and managed care, and pharmaceuticals and related segments. By examining these trends, we hope to shed light on the future direction of the healthcare industry and help stakeholders make informed decisions that will drive innovation, improve patient outcomes, and enhance the overall healthcare experience.

- ¹ [IL2M International merged with Aamani Healthcare](#)
- ² [SentryHealth merged with Wellview](#)
- ³ [St Croix Hospice acquired Adaptive Nursing & Healthcare Services](#)
- ⁴ [Novartis partnered with CureVac](#)
- ⁵ [SimpleHealth acquired Emme](#)
- ⁶ [GSK acquired Bellus Health](#)
- ⁷ [CVS Health acquired Signify Health](#)
- ⁸ [Healthful merged with Sympto Health](#)
- ⁹ [Residential Hospice acquired Comfort Hospice of St. Louis](#)

A man in blue scrubs and a woman in a white lab coat are walking in a modern hospital hallway. The man is on the left, looking towards the woman on the right. They are both wearing identification badges. The hallway has large glass windows on the left and a tiled floor.

PART 1 OF 4

Healthcare Services Industry

Fall 2023

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Global Healthcare Services Industry Overview

Global Healthcare Services Industry Overview

The healthcare services market comprises the sales of healthcare services and associated products. This encompasses various establishments, such as nursing care, medical and diagnostic laboratory services, residential substance abuse, dental services, mental health facilities, and other healthcare services.¹

As of 2022, the global healthcare services market was valued at approximately \$7.6 trillion, increasing to Compound Annual Growth Rate (CAGR) projections of 8.4% from 2023 to 2026. The global market total would reach an estimated \$10.4 trillion.¹

Growth is driven mainly by the restructuring of operations by companies and their recovery from the impact of COVID-19, which created operational challenges due to the implementation of restrictive containment measures.¹

US Hospital Facilities Market

Hospital services encompass a diverse range of medical services, from primary healthcare to educational and research opportunities provided by major medical school centers and services offered by industry-owned networks of medical institutions like Health Maintenance Organizations (HMOs).²

The US hospital facilities market size was valued at \$1.3 trillion in 2021 and is expected to reach \$2.6 trillion, posting a ~7.6% CAGR over 2022–2030.³

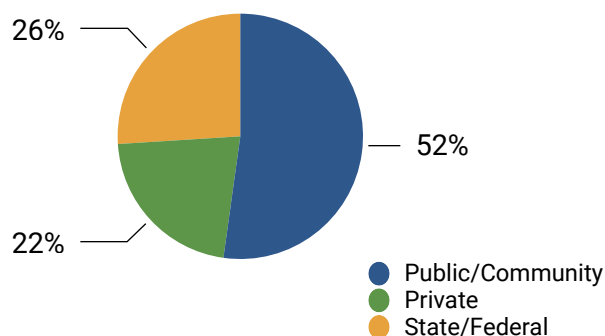
The need for hospitals with enough equipment is expected to rise due to the growing pressure for better patient care & the introduction of revolutionary healthcare technologies over the coming years.³

According to the CDC's estimates, six out of every ten adults in the US have at least one chronic disease, while four out of every ten have two or more chronic conditions. These chronic diseases are the primary causes of disability and mortality in the US and are expected to drive market growth.³

In 2020, the US government spent \$4.1 trillion on national healthcare, which accounted for 19.7% of the country's Gross Domestic Product (GDP), according to CMS. A study by NCBI revealed that approximately 40-50 million surgical procedures are conducted annually in the country.³

Research from the National Centre for Health Statistics indicates, in 2020, over 40 million inpatient surgical procedures were performed in the US, closely followed by 31.5 million outpatient surgeries.³

Market Segmentation, By Facility Type, 2021³



Acute Care Hospitals (ACH)

As of January 2023, there were 5,448 acute care hospitals (ACH) in the US. Of these, 60.0% were operated as not-for-profit institutions, 25.0% were used as investor-owned for-profit institutions, and state and local governments operated the remaining hospitals. It's important to note that hospitals not accessible to the public, such as federal prison hospitals, college

infirmaries, and psychiatric hospitals, are not included in this total.⁴

In 2022, hospital services accounted for 32.0% of the total national health expenditures, with an annual increase of 5.9% from 2017 to 2022, resulting in a total increase from \$1.1 trillion in 2017 to \$1.4 trillion in 2022, as per available data.⁴

Long-Term Acute Care Hospitals (LTACH)

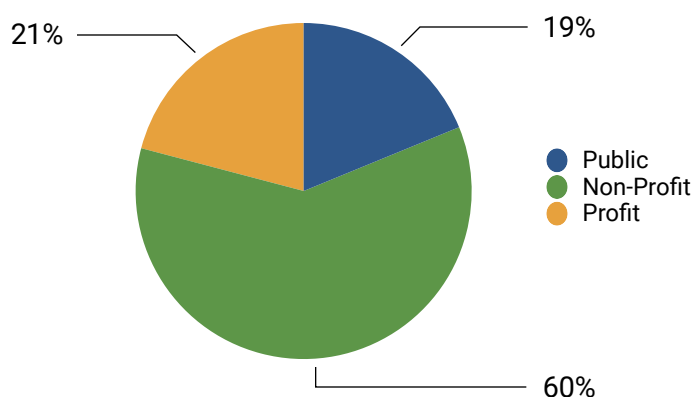
Tax Equity and Fiscal Responsibility Act (1982) authorized Medicare funding for Long-Term Acute Care Hospitals (LTACHs). As of 2002, the number of LTACH facilities stood at approximately 300, with a total annual Medicare expenditure of \$2.2 billion.⁴

Behavioral Health

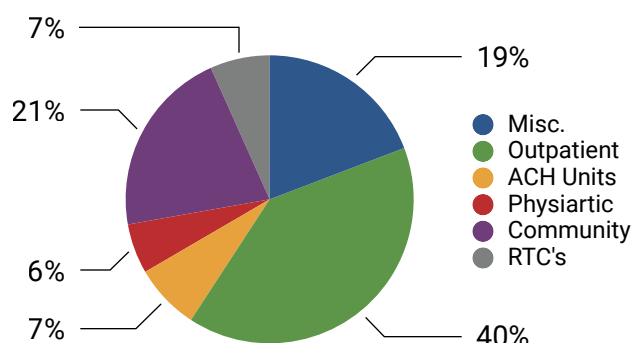
There are over 15,400 behavioral health facilities (BHF) in the US, which include psychiatric hospitals, acute care hospital specialty units, residential treatment centers, and outpatient clinics.⁴

Private not-for-profit operators are the primary operators of BHFs, with outpatient mental health and community mental health facilities accounting for 40.3% and 20.8% of the total facilities, respectively, according to the Department of Health and Human Services' National Mental Health Services survey.⁴

Behavioral Health Facility Operators, 2021⁴



Behavioral Health Facility Types, 2021⁴

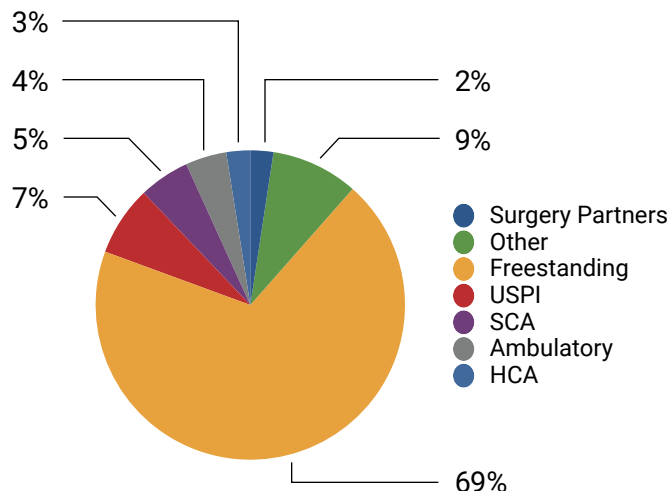


Acadia Healthcare Company, Inc., Universal Health Services (UHS), and Legacy Lifepoint Health are among the largest behavioral health companies in the US. Acadia operates 246 BHFs with 10.8K beds in 39 states. UHS operates 331 inpatient BHFs, 12 outpatient BHFs, and 24K beds in the US and UK. Lifepoint operates 30 behavioral health units in three inpatient and partner hospitals.⁴

Ambulatory Surgery Centers

Between 2011 and 2022, US Medicare-certified ambulatory surgery centers (ASCs) increased from 5,217 to 6,028. The ASC industry is fragmented, with 70% of freestanding ASCs independently owned and operated. The remaining 30% are owned and used by prominent players such as AMSURG, USPI, SCA Health, HCA Healthcare Ambulatory Surgery Centers, Surgery Partners, Inc., and other multi-site owners/operators.⁴

Market Share by Center Count, 2022⁴



Trends

- **Internet of Medical Things⁵**

IoMT, or the Internet of Medical Things, includes sensory information, automatic processing, and communication through networks for real-time diagnosis, monitoring, tracking, and disease control. This is made possible using connected medical devices, equipment, and infrastructure, which enable various applications such as automatic disinfection, intelligent diagnosis, and remote patient management. A newer sub-trend within IoMT is Cognitive IoMT, which further integrates artificial intelligence and machine learning into the mix for more advanced decision-making and predictive capabilities.

- **Medical and Technological Advances¹**

According to a TrendWatch report, high-technology diagnostics and therapeutic equipment have significantly improved healthcare service delivery. Improvements include a 70% uptick in

survival rates for two significant diseases, heart attacks, and cancer.

- **Shared Medical Appointments (SMA) Model¹**

The SMA model is increasingly adopted worldwide to optimize healthcare resources and reduce costs. This model involves a multi-disciplinary medical care team providing follow-up or routine care to multiple patients. Hospitals are adopting this model to create awareness and provide counseling to individual patients dealing with similar medical conditions.

Challenges

- **Rising Healthcare Costs⁶**

The healthcare industry has been facing a prolonged cost crisis, with various parties influencing the cost of healthcare services. This rise in healthcare expenses directly impacts the revenue of healthcare organizations by discouraging patients from undergoing necessary lab tests and follow-ups, ultimately leading to poor patient outcomes.

- **Payment Processing & Invoicing⁶**

The KF health tracking poll reveals that 25% of individuals struggle to afford medication or treatment. Addressing the increasing cost of healthcare is a significant challenge that can be tackled through collaboration between healthcare companies, insurers, and philanthropists.

- **Information & Integrated Health Services⁶**

Most healthcare providers need advanced architecture and data management systems to effectively manage data collected from various

sources, such as administrative data, patient medical records, connected device data, transcripts and clinical notes, and patient surveys. However, healthcare companies can utilize connected medical devices and AI-integrated software applications to gather data from multiple sources.

M&A Outlook

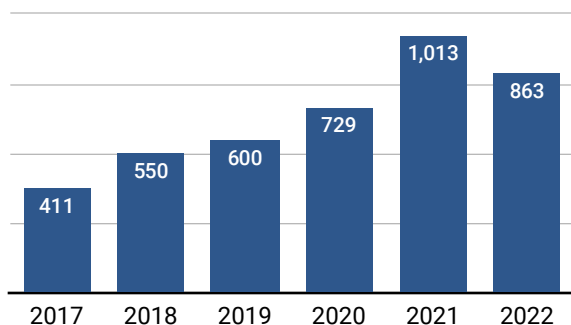
M&A activity among hospitals & health systems picked up last year after 2021's recent historic low. According to a KaufmannHall report, critical trends behind this activity included cross-market mega-deals and academic medical centers expanding their community hospital networks.⁷

In 2022, 53 M&A deals were announced among hospitals & health systems, resulting in more than \$45B in total transacted revenue, an increase from the 49 deals announced in 2021.⁷

As per Pitchbook estimates, in 2022, healthcare services accounted for 10% of PE buyout & growth deals, and predict a rebound in deal activity by midyear if economic conditions stabilize.⁸

The healthcare services PE landscape closed out 2022 with an estimated 863 deals, making it the second-best year for PE healthcare services dealmaking. However, quarterly trends show a steady decline, especially during Q4_2022, with 158 deals, 26.4% off Q3_2022's figure, still respectable by 2018-2019 standards but more than a third less than the average quarterly deal count in 2021.⁹

Healthcare Services PE Deal Count, 2017-2022⁹



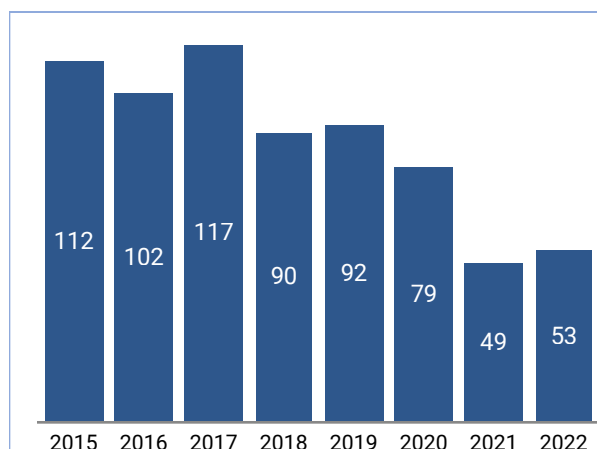
PE Healthcare Services Deals⁹

Company	Category	Closed / Announced Date	Acquirer
Dentive	Dental	Jan-2023	N/A
HouseWorks	Home care, Home Health & Hospice	Jan-2023	N/A
ABA Connect	ABA and pediatric therapy	Dec-2022	N/A
Medical Specialist of the Palm Beaches	Multispecialty clinics and networks	Dec-2022	N/A
Medi-Weightloss	Other medical specialists	Nov-2022	Audax Group
United Vein & Vascular Centers	Cardiovascular	Nov-2022	N/A
Centrata	Musculoskeletal	Nov-2022	N/A
Prime Psychiatry	Mental health and SUD treatment	Nov-2022	N/A
Discover Senior Living	Skilled nursing	Oct-2022	Coastwood Senior Housing Partners
Enable Dental	Dental	Oct-2022	N/A
Rise Health	Primary care	Oct-2022	N/A
Dental Care Alliance	Dental	Jan-2023	Mubadala, Harvest Partners
Summit Medical Group	Multispecialty clinics and networks	Jan-2023	VillageMD, Evernorth Health
Excelsior Integrated Medical Group	Multispecialty clinics and networks	Nov-2022	Rendriss, Kain Capital
Paradigm Oral Surgery	Dental	Nov-2022	BlackRock
KabaFusion	Infusion	Nov-2022	Novo Holdings
Bradford Health Services	Mental health and SUD treatment	Oct-2022	Lee Equity Partners
EyeSouth Partners	Vision	Oct-2022	Olympus Partners

Deal volumes will decline during H1_2023 due to financial distress, liquidity constraints, and dwindling war chests. Healthcare-focused managers are particularly attractive to LPs, but the fundraising environment is increasingly inhospitable. If macroeconomic conditions stabilize midyear, deal activity could rebound during H2_2023.⁹

The ACH M&A activity in 2022 was still below pre-pandemic levels but increased slightly from the lows experienced during 2021. The prevalence of megamergers during 2022 resulted in more than \$45B in total transacted revenue, surpassing 2017 at \$44.1B. The 2022 average transaction size represented a ~12.0% CAGR rate since 2012.⁴

ACH Deal Count, 2011-2022⁴



Notable Transactions⁴

Announced Date	Target	Acquirer
Mar-23	UnityPoint Health	Presbyterian Healthcare Services
Feb-23	5 Steward Health Care Hospitals	CommonSpirit Health
Dec-22	Cooper University Health Care	Cape Regional Health System
Nov-22	Fairview Health	Sanford Health
Nov-22	CharterCare Health Partners	Centurion Foundation
Oct-22	Marshfield Clinic	Essentia Health
Jan-22	3 Tulane University Hospitals	LCMC
Jan-23	4 Advent Health Hospitals & Related Facilities	University of Chicago Medicine
Jan-23	Butler Health System	Excela Health
Dec-22	Atrium Health	Advocate Aurora Health
Sep-22	MercyOne Health System	Trinity Health
Feb-22	Connecticut Health System	Yale New Haven Health System
May-22	St. Elizabeth Hospital and St. Catherine Hospital Dodge City	Centura Health
Apr-22	SCL Health	Intermountain Healthcare
Mar-22	University Health Care System	Piedmont Healthcare

Financial realities, such as declining inpatient admissions, an absence of federal stimulus funds, and mandatory cuts related to sequestration, have impacted the hospital and health system M&A market. A potential counterbalance to these pressures is reimbursement rate relief from governmental and commercial insurers.⁴

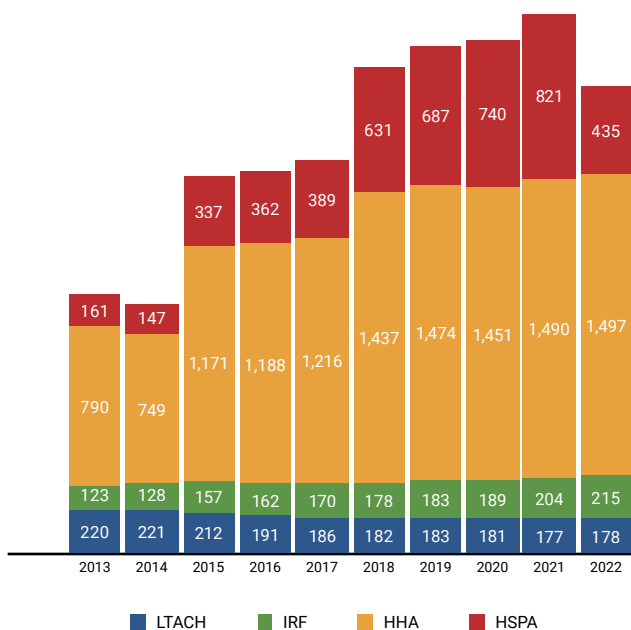
In 2023, large nonprofits are expected to be active in the M&A market as they position

themselves favorably against their competition, both providers and insurers.⁴

Additionally, antitrust regulation and pushback will continue to be prevalent in blocking certain transactions. Thereby driving health systems to pursue affiliation in new regions.⁴

During 2023, the market is expected to experience continued M&A owing to the increasing cost of tempering capital inflation and hospitals navigating continued cost pressure. Still, there may be pressure on valuations due to underlying financial performance or the willingness of buyers to pay a premium multiple.⁴

Total Public Company Post-Acute Facilities, 2013-2022⁴



PE firms are drawn towards the home health and hospice industry as there is a pressing need for scalability and efficiency. This demand arises from the shift towards value-based payment models and the emphasis on outpatient care, replacing the traditional fee-for-service

approach. Like other healthcare sectors, PE firms in the home health and hospice domain generally pursue a platform-building strategy.⁴

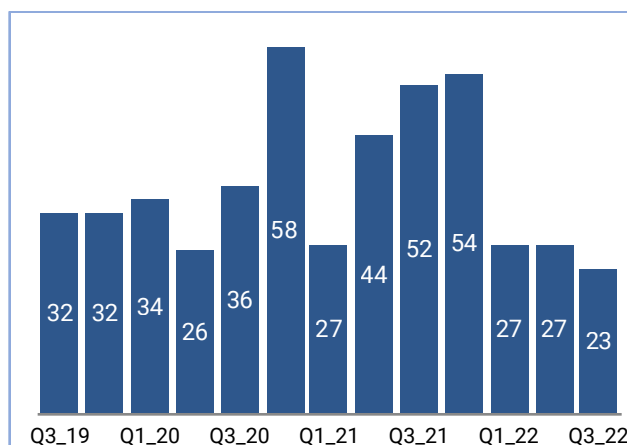
The Care-at-Home M&A industry experienced a record-setting two years, but 2022 remained sluggish due to fewer companies going to market. Transaction volume from late 2020 through 2021 was up almost 40% due to sellers trying to close transactions before the upcoming capital gains tax rate increase.¹⁰

Furthermore, CMS' proposed rule for home health caused a temporary slowdown in Medicare transactions, but now that the rules are set, an uptick is expected in Q4_2023.¹⁰

Hospice Health, Home Care & Hospice M&A

Despite the downturn, the lower middle market – companies with EVs between \$3M and \$100M – haven't taken a significant hit. Private equity and strategic buyers continue to pursue quality home health, hospice, and home care opportunities.¹⁰

Home Health, Home Care & Hospice Transactions, 2018-2022¹⁰



Reimbursement Criteria as per CMS

Ambulatory Surgery Centres⁴

- On November 1, 2021, Centres for Medicare & Medicaid Services (CMS) released the 2022 Hospital Outpatient Prospective Payment System (OPPS) and ASC payment system policy changes and payment rates final rule, increasing the ASC conversion factor by 2.0%.
 - o This amount decreased from the CY 2021 final rule, which increased ASC payment rates by 2.4%.
 - o Many significant players believe the increase must be increased given the cost pressures hospitals and ASCs face.

Diagnostic Imaging Centers⁴

- According to a study published in 2022, 50 of the most common imaging studies in diagnostic radiology experienced a combined mean reduction of inflation-adjusted payments of 44.4% from 2011 to 2021.
 - o These reimbursement pressures have been a leading factor in driving M&A activity within the diagnostic imaging industry and achieving economies of scale, a primary driver of mergers.
 - o In 2022, the diagnostic imaging industry experienced reimbursement cuts, redistributive effects of the CMS proposed clinical labor pricing update, and phase-in implementation of previously finalized updates to supply and equipment pricing.

Acute Care Hospitals⁴

- On August 2, 2022, CMS released the FY 2023 Inpatient Prospective Payment System (IPPS) policy changes and payment rates final rule, which increased IPPS payment rates by 4.3% in 2023. This movement is an increase from the FY 2021 final rule, which increased the IPPS payment rates by 2.5%

Behavioral Health⁴

- CMS published its FY 2023 Inpatient Psychiatric Facility (IPF) PPS final rule with a 3.8% rate increase after a 0.3% productivity adjustment. Total IPF PPS payments will increase by 2.5%, or \$90.0M, compared to FY 2022 payments. This shift is up from the proposed rule issued at the end of Q1 2022, which suggested a 2.7% increase.

Endnotes

- ¹ [Healthcare Services Global Market Report 2022](#)
- ² [US Hospital Facilities Market Business Wire](#)
- ³ [US Hospital Facilities Market](#)
- ⁴ [2023 Healthcare M&A Report](#)
- ⁵ [Healthcare Industry Trends & Innovations](#)
- ⁶ [Top 10 Healthcare Challenges](#)
- ⁷ [M&A activity among health systems](#)
- ⁸ [Future of M&A and Strategic Partnerships](#)
- ⁹ [Healthcare Services Report](#)
- ¹⁰ [Q3 2022 Home Health, Hospice and Home Care M&A Update](#)

PART 2 OF 4

Healthcare Medical Devices Industry

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Global Medical Devices Industry Overview

According to forecasts, the global market for medical devices will increase from \$495.46B in 2022 to \$718.92B in 2029, with a CAGR of 5.5%.¹

Top 10 medical devices companies in the world (2022).²

Total Revenue From Medical Devices (In \$B)²



US Medical Devices Market

In the US, the Medical Devices sector would likely generate a revenue of \$163.70B by 2023. Cardiology Devices is the market's largest sector, with a \$22.47B predicted market size in 2023. Market volume is projected to reach \$199.10 B by 2027, with the revenue predicted to expand at a rate of 5.02% per year (CAGR 2023–2027).³

Medical Equipment and Supplies Manufacturing

Global Medical Equipment and Supplies Market⁴

In 2021, the Hospital Equipment and Supplies Market was valued at \$39.21B, and it is expected

to grow at a CAGR of 12.21% from 2023 to 2030, reaching a projected value of \$110.63B by 2030.⁴

Increasing disposable hospital supply usage, increased awareness of the need to reduce hospital-acquired infections (HAIs) and expanding demand for various diagnostic choices are driving market growth. Additionally, personalized medicine is anticipated to spur growth in the global hospital supply and equipment market.⁴

US Medical Equipment and Supplies Manufacturing Market

The industry's revenue is anticipated to increase at an annualized rate of 1.1% over the five years to 2025. Due to the COVID-19 pandemic's increased demand for medical equipment & the demand for medical equipment & supplies. This increased demand has led to higher costs and, thus, higher profits.⁵

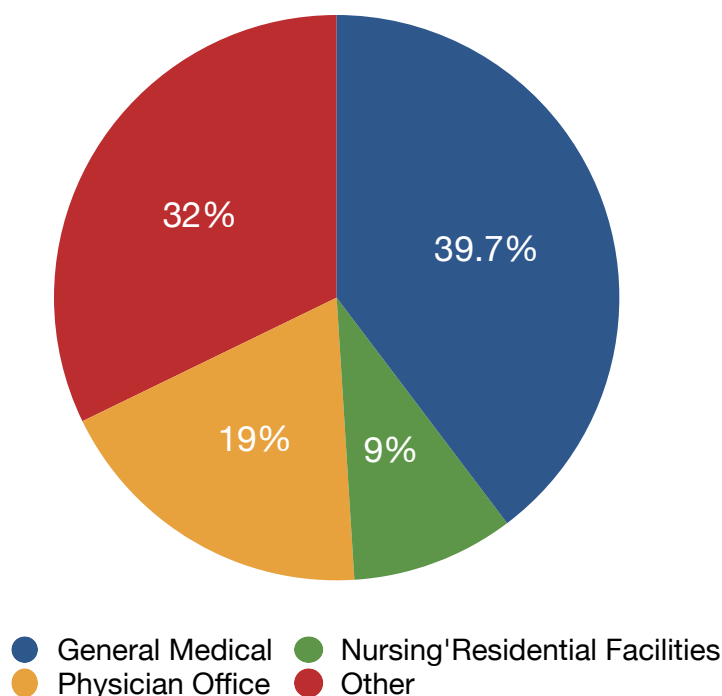
Medical Equipment and Supplies in the US, 2020 ⁵	
Particulars	Medical Instrument & Supply Manufacturing
Revenue (\$M)	\$93,560
Businesses	16,494
Exports (\$M)	\$26,414
Imports (\$M)	\$39,218
Domestic Demand (\$M)	\$106,364
Annual Growth in Revenue (2015-2020)	0.4%
Annual Growth in Revenue (2020-2025)	1.1%

In 2020, the Medical Equipment and Supplies Manufacturing industry consisted of 5,565 pay-rolled businesses in the US, employing a total of 241,812 workers with average annual earnings of \$117,868.⁵

US Medical Device Manufacturers Market

Revenue from the manufacturing of medical devices is anticipated to increase by 3.0% CAGR to \$57.7B during the next five years. Medical device producers will keep developing novel materials that can endure extreme temperatures, high-stress settings, and other challenging circumstances. Additionally, they will emphasize creating products personalized to each patient's needs and continuing to advance remote monitoring technology for effective patient health monitoring. ⁶

Major Marketing Segmentation⁶



A decline in the demand for medical equipment used in elective procedures, such as bariatric surgery, hip replacement surgery, and cosmetic surgery, has been noted. The business is projected to recover starting mid-2021 thanks to supportive government initiatives to relaunch elective procedures. Recent growth in the need for less invasive procedures is anticipated to propel the market for medical device suppliers. ⁷

Industry Trends

Since COVID-19 began, the market for medical technologies has expanded by 10 to 14%. The market barely increased by more than 4% during the pre-pandemic era from 2017 to 2019. Medical equipment companies widely used disruptive advances such as AI, machine learning, and 3D printing technologies to address the enormous problems brought on by the pandemic. As a result, healthcare organizations and public hospitals modified how they handle data and care for patients. ⁸

- **Internet of Medical Things (IoMT)
Modernizing Healthcare**

By 2029, the IoMT market is expected to grow by 28% and reach \$285.5 B. Significant improvements in new technologies, such as smart sensors, smart devices, and other lightweight communication devices, are driving the development of medical equipment that collect data and form partnerships with IoMT systems. These developments help healthcare organizations enhance patient outcomes, cut costs, and boost productivity. ⁹

- **Blockchain Technology**

According to studies, 40% of patients are open to disclosing their personal information when it is collected for medical research. Blockchain, also known as digital ledger technology (DLT), has gained popularity throughout the medical device value chain and improved data-sharing privacy across a vast network of device users. ⁹

- **5G Technologies**

Real-time data transmissions are made more accessible by 5G networks, which is essential for a quick and precise diagnosis. A 5G device is up to twice as fast as a Wi-Fi or 4G-based one. ⁸

o Overall, remote patient monitoring has more options due to 5G networks. Such technologies, for instance, were used in China at the start of the COVID-19 pandemic. Hospitals had to make a long-distance, real-time diagnoses of infected patients in rural locations. However, the size of the MRI and CT imaging files made them impossible to send for remote analysis. Due to these circumstances, engineers installed 5G CT scanners at outlying hospitals.⁸

• AI and Machine Learning

AI and machine learning algorithms are also critical current topics in the medical device business. With the expansion of medical technology in healthcare facilities, these technologies are becoming increasingly necessary. With the expanding volume of data from medical records, the new AI and ML features provide healthcare professionals with fresh and crucial insights. As a result, these technologies enhance diagnostic judgment while delivering high levels of precision. Additionally, doctors can create interventions that are more effective with the help of AI and ML.⁸

M&A Outlook

The market for medical device mergers and acquisitions (M&A) and initial public offers (IPOs) was considerably changed by economic uncertainties in 2022, as deal value and volume decreased from the year before. Investor confidence and market volatility decreased, which caused a year-over-year decline in deal-making. This decline prevented the year's transaction volume from reaching the record-breaking levels seen in 2021. In comparison to the 21 megadeals in 2021, there were only 11 deals worth \$1B+ in the entire year, according to consultancy and accounting firm EY data. The drop in the value of many companies' shares

during the recession was the main cause of the slowdown in deal-making.¹⁰

According to GlobalData's transactions database, \$2.6B in medical devices industry M&A agreements were announced globally in June 2022, with ResMed's \$1 B purchase of MediFox DAN Group taking the lead. Medical devices M&A deals totaling \$12.46 B were announced as of June 2022, up 67.3% from the previous year's period.¹¹

MedTech's Top 10 Acquisitions of 2022¹²

Acquiror	Target	Announced	Deal Value	Price / Acquired Company Share
J&J	Abiomed	Nov	\$16.6B	\$380.0
Stryker	Vocera Communication	Jan	\$3.09B	\$79.25
Thermo Fisher	The Binding Site	Oct	\$2.6B	N/A
Becton Dickinson	Parata Systems	Jun	\$1.53B	N/A
ArchiMed	Natus Medical	Apr	\$1.2B	\$33.5
Masimo	Viper Holdings	Feb	\$1.0B	N/A
ResMed	MediFox	Jun	\$1.0B	N/A
Medtronic	Affera	Jan	\$0.9B	N/A
The Cooper Companies	Cook Medical's Reproductive business	Feb	\$0.9B	N/A
Boston Scientific	Apollo Endosurgery	Nov	\$0.6B	\$10.0

Top Themes Driving Key M&A Deals in the Medical Devices Sector in 2022

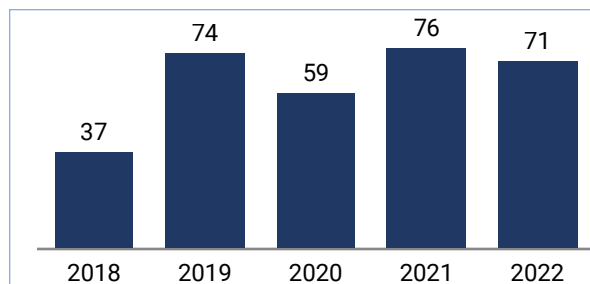
- **Artificial Intelligence:** The private investment firm, Bain Capital, acquired Evident, a provider of specialized health tech, for USD 3.1B. Among its portfolio is an AI diagnosis tool using image data alongside an augmented reality (AR) system for a stereomicroscope.¹³
- **Big Data:** Amazon acquired the telemedicine provider One Medical for USD 3.9B. The company offers in-person & virtual care options and collects patient data, which will be beneficial for Amazon as it looks to strengthen its healthcare presence.¹³

Medical Device Outsourcing M&A Market

With 20 acquisitions announced or completed in Q4 and a total of 71 deals in 2022, the M&A volume has continued to grow at a steady rate. This represents a 5.3% quarter-over-quarter increase, underscoring the brisk pace of M&A in the medical device outsourcing sector in 2022.¹⁴

Buyers have continued to pay premiums for high-quality target companies as the average transaction multiple has amounted to 13.9x EV/EBITDA from 2018 through September 2022.¹⁵

Medical Devices Outsourcing M&A Approaches Historic Levels, 2022¹⁵



Premium valuation drivers for targets have included a blue-chip client base, a scalable business model, multi-site manufacturing

facilities, highly specialized capabilities, recurring revenue, and healthy margins.¹⁵

Consolidation among strategics contributed to the consistency of deal volume in 2022 (31.0% of transactions), but private equity buyers drove the majority of transaction activity (69.0%) for the third consecutive year.¹⁴

Private equity platform acquisitions accounted for 32.4% of deal activity in 2022, while private equity add-ons comprised 36.6% of M&A deals in another strong year for activity among financial buyers.¹⁴

Favorable long-term and recession-resistant dynamics have led sponsors to deploy capital toward the sector.¹⁵

Challenges

Medical device manufacturers encounter several difficulties. Medical device companies have a lot to consider keeping consumers safe & stakeholders happy, from issues with quality and product recalls to negotiating a strict regulatory landscape.¹⁶

Here's a look at seven significant challenges facing medical device manufacturers:

- **Rising Healthcare Costs:** Speaking of rising costs, the cost of Healthcare – already exorbitant – keeps increasing. Medical devices may become pricey and out of reach for individuals who need them to treat or manage a chronic ailment.¹⁷
 - o The problem is further compounded by the availability of several medical equipment options that are not covered by traditional insurance.¹⁷
- **Cybersecurity Concerns:** Cybersecurity concerns increase as more devices go digital. A Bluetooth-enabled device, for example, can act as an entry point for data theft.¹⁷
 - o Due to HIPAA concerns over patient privacy and protection, the manufacturing

of smart devices has become more complicated and expensive. A strict cybersecurity strategy might prolong the development process by months, increase production costs by zeroes, and cause difficulties when applying for regulatory approval.¹⁷

- **Counterfeiting and Imitators:** Responsible manufacturers bear the burden of doing things right, while counterfeiters flood the market with unproven devices. These knockoffs are competitively priced & often well-packaged.¹⁷
- **Regulatory Challenges:** Except for the areas where it is strictly regulated, the medical device market is only moderately regulated. For both patients & device manufacturers, this discrepancy ultimately presents challenges. Getting unregulated gadgets into patients' hands is challenging since insurance does not cover them because of financial concerns.¹⁷
 - o Additionally, the lengthy, expensive, and generally onerous FDA evaluation procedure for new devices discourages many emerging device manufacturers from applying for approval. This gap will only exist if the approval process becomes more condensed and responsive or the regulatory guidance changes.¹⁷

Endnotes

- ¹ [Fortune Business Insights](#)
- ² [Proclinical](#)
- ³ [Statista](#)
- ⁴ [Verified Market Research](#)
- ⁵ [Maine.Gov](#)
- ⁶ [IBISWorld](#)
- ⁷ [Maximize Market Research](#)
- ⁸ [MedDevice Online](#)
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- ¹⁰ [Medical Buyer](#)
- ¹¹ [Medical Device Network](#)
- ¹² [MedTech Dive](#)
- ¹³ [Medical Buyer](#)
- ¹⁴ [Capstone Partners](#)
- ¹⁵ [Capstone Partners](#)
- ¹⁶ [Ideagen](#)
- ¹⁷ [Medcity News](#)



PART 3 OF 4

Healthcare

Health Insurance, Medical Services, Managed Care Industries

Fall 2023

An Industry Update by:
**Generational Business
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Global Health Insurance Industry

The global health insurance industry will likely post a 6.8% CAGR to \$3.8T from \$2.24T between 2022 and 2030.¹

The demand for health insurance is driven by the rising awareness of health insurance benefits, the growing number of diseases, the increasing elderly population, surging internet penetration, and the rising popularity of insurance policy aggregators.¹

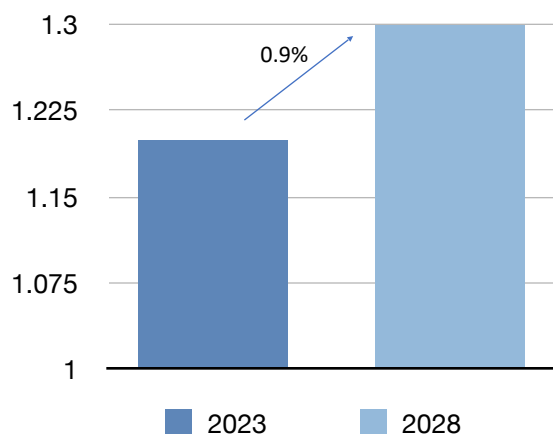
US Health & Medical Insurance Industry

Even though, 8% of the US population does not have health insurance, the US still accounts for the highest growth in health premiums in North America owing to medical inflation, increasing employment, & carry-over of benefits from governments healthcare policies.²

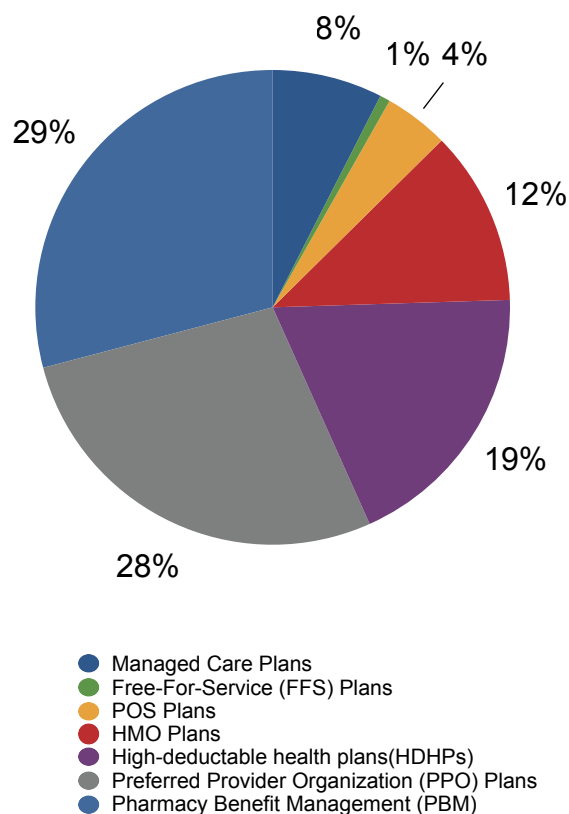
US Health & Medical insurance market witnessed considerable growth in 2022 with the increase in participation of 55 new market players entered the market, marking the highest growth in participation since 2015.³

Over the past five years, industry revenue grew at a 2.3% CAGR, with a 0.7% drop in 2023. During the next five years, the revenue will likely grow at a 0.9% CAGR to \$1.3T due to medical cost inflation and increased demand from the aging US population.⁴

Industry Outlook 2023–2028 (In \$T) ⁴

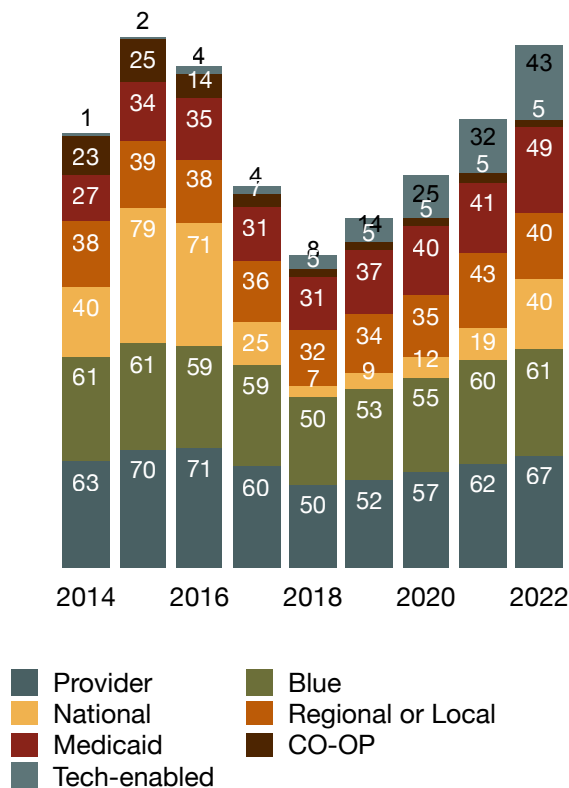


Products and Services Segmentation⁴



Government regulations and government-sponsored programs also determine the demand for health insurance. For example, the Affordable Care Act (ACA) elements that make health insurance cheaper for consumers, such as medical loss ratios, may increase the number of consumers willing to hold policies.⁴

Insurer Participation in Health Insurance Exchanges across Insurer Types Over 2021–2022³

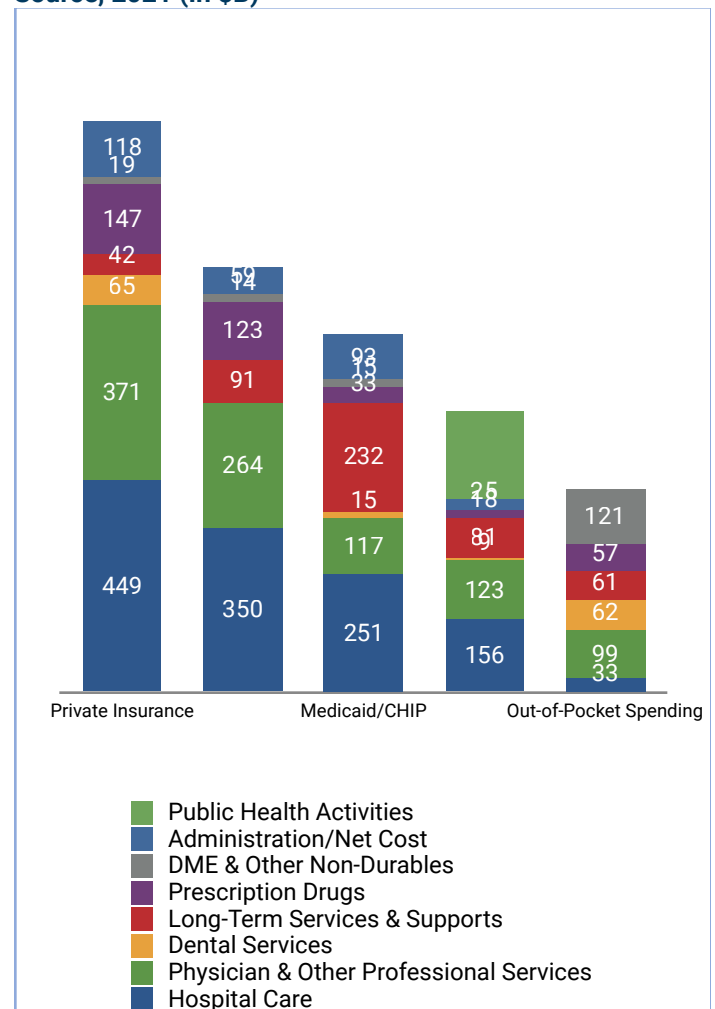


Tech-enabled and Medicaid plans, such as Oscar and Bright Health, have grown significantly since 2014, while others have declined or remained stagnant.³

As a federal health insurance program with an estimated 60 million enrollees in 2021, Medicare covers healthcare services for most individuals aged 65 and older, as well as specific permanently disabled individuals under the age of 65.⁵

The program accounted for \$901B in HCE in 2021, with most spending recorded for hospital care, physician, and professional services.⁵

Health Consumption Expenditures by Type and Source, 2021 (In \$B)⁵



Private health insurance expenditures accounted for 29.9% of overall HCE in 2021, while Medicaid and CHIP programs accounted for \$756B (18.7%).⁵

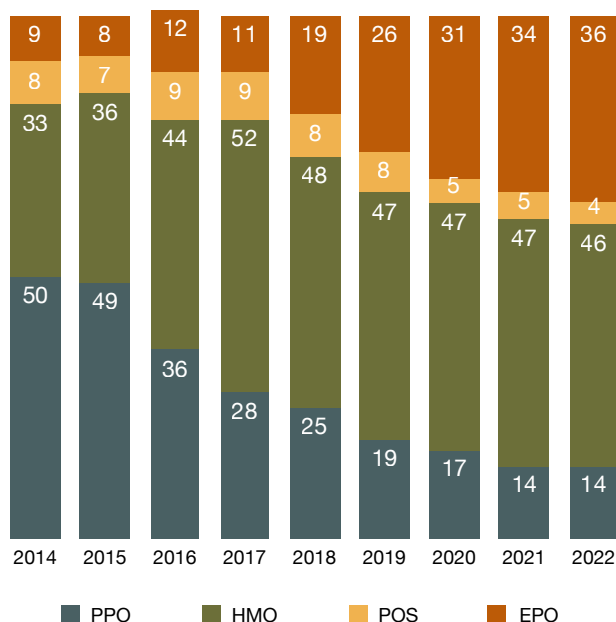
Managed Care

US Managed Care Services Industry

The industry is expected to achieve a Compound Annual Growth Rate (CAGR) of 6.1%, reaching a market size of \$4.12T by 2027. Several factors drove this growth: increasing global healthcare spending, the rise of urban populations, the growing elderly population, increasing cancer cases, favorable government initiatives, and the increasing adoption of healthcare insurance.⁶

The private health insurance market recorded the highest share, followed by Medicare and Medicaid.⁶

Managed Care Plans Offerings, 2014-2022³

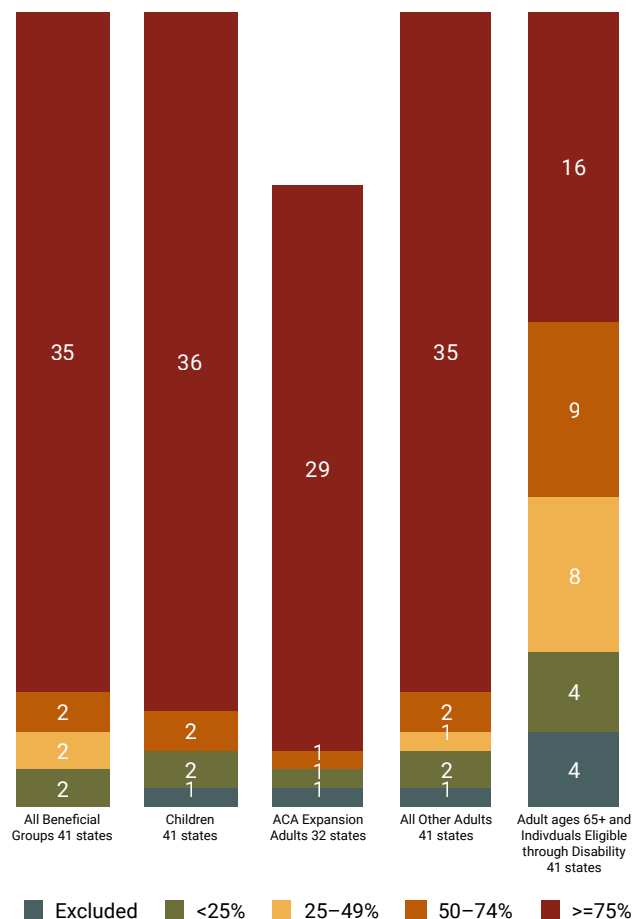


In FY 2021, Medicaid's state and federal spending totaled \$728B, with payments made to MCOs accounting for 52% of total expenditures. Over three-quarters of MCO, states directed at least 40% of total Medicaid dollars to payments to MCOs, an increase of three percentage points from the previous fiscal year.⁷

As of July 2022, 41 states, including DC, have implemented managed care plans to provide care to Medicaid beneficiaries. North Carolina implemented its first MCO program in July 2021, enrolling 1.8M beneficiaries in January 2023.⁷

As of July 2022, 36 MCO states reported covering 75% or more of all children through MCOs, 32 states were using MCOs to cover newly eligible adults, 35 states reported covering 75% or more of low-income adults in pre-ACA expansion groups, and 16 states reported the coverage of 75% or more of adults aged >65 and people eligible through disability.⁷

MCO Managed Care Penetration Rates Across Medicaid Eligibility Groups⁷



Key Trends

- Business Model Transformation**

Multiple changes, such as the reduction of additional funding from the Affordable Care Act, are creating resistance against profit pool businesses in healthcare. To tackle this issue, payers are now exploring the next-generation managed care model, which involves greater involvement in care delivery and integration of the patient's care journey for improved profitability.⁸

- **Healthcare Ecosystems**

The rapid advancement in digital technology, artificial intelligence, and machine learning will accelerate changes in healthcare and positively affect the managed care industry.

To make their services easily accessible to customers and develop applications such as predictive analytics, technology giants are investing billions of dollars in research and development.⁸

Regulators are focused on achieving interoperability and freeing up data to be utilized around the patient, creating a synchronized environment for efficient and automated collection and analysis of data. The aim is to develop consumer-centric personalized health and social care ecosystems. This shift is expected to have a positive impact on the managed care industry.⁸

- **Medicaid Expansion**

Despite the passing and implementation of Medicaid expansion legislation in 2018 and 2019, the legislation's full implementation remains incomplete in many areas due to referendums and pending legislation. This legislation's impact is significant for healthcare organizations and patients, as it increases access to healthcare for more people than previous policies.⁸

Consequently, health systems must be equipped to handle the growing number of patients while maintaining quality and CMS standards of care. These changes have resulted in critical care hospitals and small healthcare organizations merging and outsourcing specialty services to other companies.⁸

- **Consumerism**

Patients are increasingly making healthcare decisions based on costs, knowledge of options, and technology. Government bodies have asked healthcare providers to respond with price transparency and effective quality outcomes. Consumers can use new gadgets such as wearable devices to manage specific medical conditions.⁸

Since over 80% of consumers research their healthcare options online and rely heavily on the reputation of hospitals, physicians, and providers, the importance of costs and publicly reported quality scores cannot be overstated.⁸

In addition, CMS has devised new price transparency measures requiring hospitals to disclose their prices that are negotiated with payers for standard services and items. The aim is to provide patients with general cost information.⁸

Key Statistics: Trends in Health Insurance at Private Employers

- Private-sector employers increased premiums and cost-sharing for employment-sponsored health insurance in 2021.⁹
 - o In 2021, average health insurance premiums were \$7,380 for single coverage, \$14,634 for employee-plus-one coverage, and \$21,381 for family coverage, representing increases of 3.2%, 3.1% & 3.0%, respectively, from their 2020 levels.⁹
 - o The average employee contribution to single coverage in 2021 was \$1,643, a 7.2% increase from 2020. Single premium contributions increased at small (12.3%), medium (14.1%), and large firms (5.6%).⁹

- o Single & family coverage deductibles increased by 3.0% and 3.9% to \$2,004 & \$3,868, respectively, from 2020 to 2021.⁹
- There were no significant changes in enrollment rates or offer rates during 2020-2021.⁹

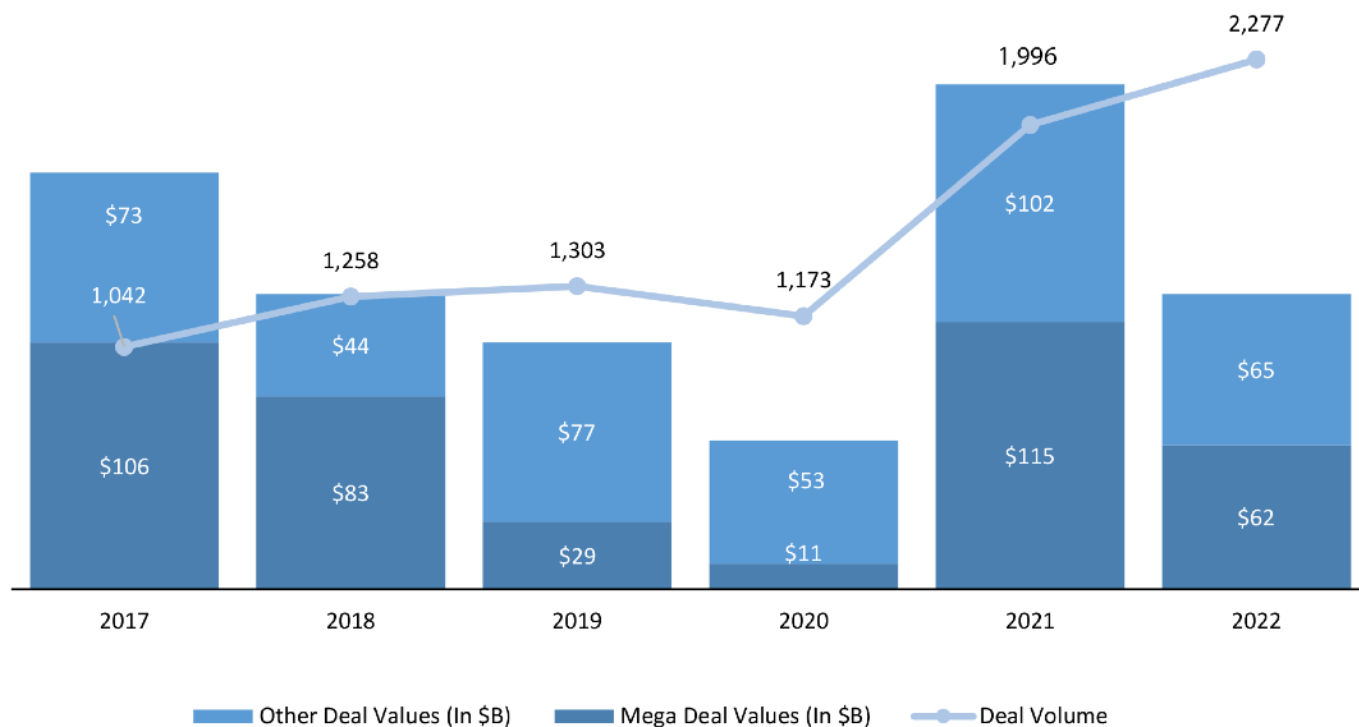
Challenges

- *High cost of Insurance Premiums*
Health insurance covers medical treatment costs and provides financial support to the policyholder. It also covers pre- and post-hospitalization expenses. To purchase health insurance, the policyholder must pay insurance premiums regularly. The market's growth is being hindered by high insurance premiums, which are often determined by the insurance plan.¹⁰
- *Lack of Awareness*
Despite being one of the rapidly expanding segments in the world, the healthcare sector has a low penetration rate of health insurance policies. This low penetration rate can be attributed to two drivers: the high cost of medical care and the need for more awareness regarding the benefits of health insurance policies.¹⁰

M&A Outlook

Health services deal volumes have increased from 2021 but have softened in Q4_2022. Year-over-year deal volumes have increased each quarter through Q3_2022, but some pullback came in Q4_2022 (251 deals) compared to Q4_2021 (307 deals). The decline in deal values from the peak established in 2021 can be attributed to a greater proportion of smaller value roll-up and platform add-on transactions in the activity.¹¹

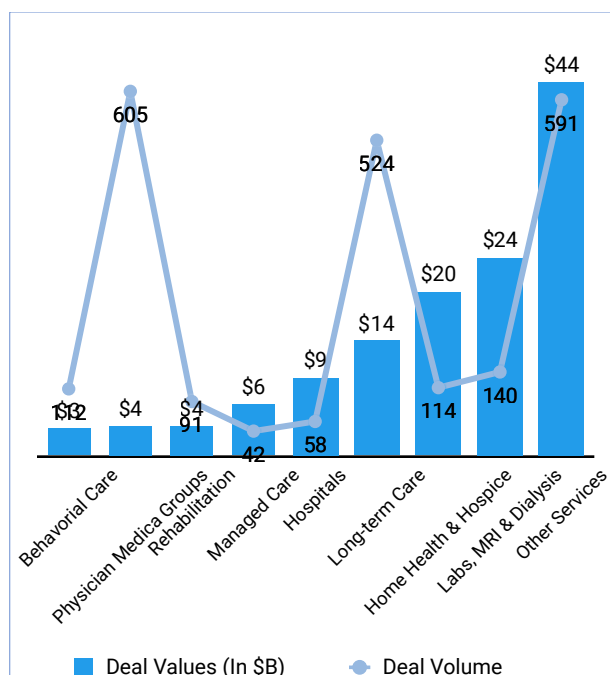
Health Services M&A Deals, 2017-2022¹¹



(LTM Period: Up to November 15, 2022)

Home health & hospice was one of two sub-sectors that saw growth in announced deal value from 2021. There were 114 home health and hospice deal during 2022, contributing to a 74% increase in deal value from 2021. Two massive deals propelled the growth: CVS's acquisition of Signify Health for \$8.0B and UnitedHealth/Optum's purchase of LHC Group for \$6.0B.¹¹

Health Services M&A Deals, 2017-2022¹¹



Nearly half of announced deal value during 2022 was from megadeals, consistent with the ratio seen in 2021.¹¹

The 12 months ending November 15 had seven megadeals, including an \$18B merger between two healthcare real estate investment trusts and (Up to June 30, 2021)

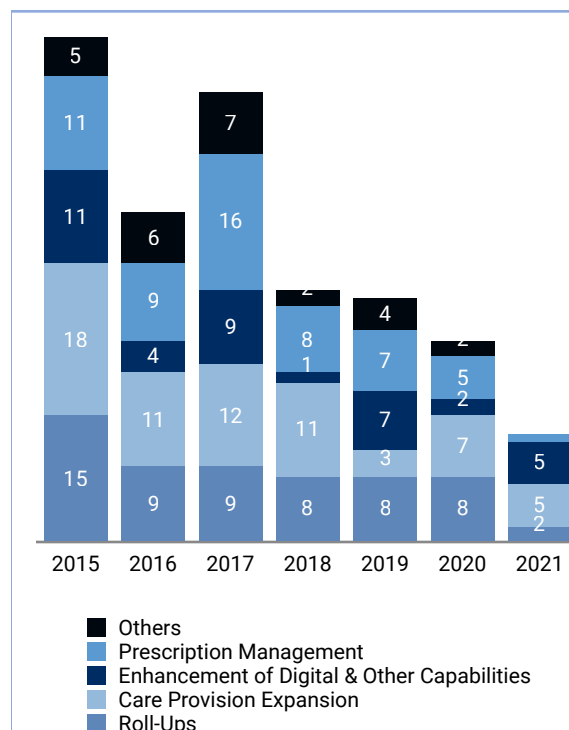
UnitedHealth Group is one of the few national payers to have been an M&A powerhouse. It has acquired almost as many assets as the other national payers combined and has pursued many deals outside its core business, unlike competitors.¹²

Payer M&A in the healthcare sector has increased due to the rapid adoption of digital technology, requiring companies to develop or acquire new capabilities quickly.¹²

M&A activity by payers has been supported by investment capital and the participation of private equity firms, which have acquired and consolidated service companies to divest or take them public.¹²

an \$8.9B acquisition of Summit Health-City MD by Village MD (a Walgreens subsidiary). These two deals collectively represent \$26.9B of the total \$44.3B of other services deal value in the 12 months ending November 15, 2022.¹¹

Payer M&A Deal Count, 2015-2021¹²



Endnotes

- ¹ [Health Insurance](#)
- ² [US Health & Medical Insurance Industry](#)
- ³ [Mckinsey Report](#)
- ⁴ [IBIS Report](#)
- ⁵ [US Healthcare Coverage & Spending](#)
- ⁶ [US Managed Healthcare Services](#)
- ⁷ [KFF report](#)
- ⁸ [Top Managed Care Industry Trends](#)
- ⁹ [Trends in Health Insurance at Private Employers](#)
- ¹⁰ [North America Health Insurance Market](#)
- ¹¹ [Health services: US Deals 2023 outlook](#)
- ¹² [Post-Merger Integration for Health Care Payers](#)



PART 4 OF 4

Healthcare Pharmaceutical Industry

Fall 2023

An Industry Update by:
**Generational Business
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Global Pharmaceutical Industry

The global biopharmaceutical industry is projected to grow moderately until 2026 due to increased spending on COVID-19 vaccines and therapeutics.¹

The Global Spending & Usage of Medicines 2022: Outlook to 2026 report projects that the global spending on medicines, which includes COVID-19 vaccines and novel therapeutics, will achieve a 3-6% CAGR and reach \$1.8T by 2026.¹

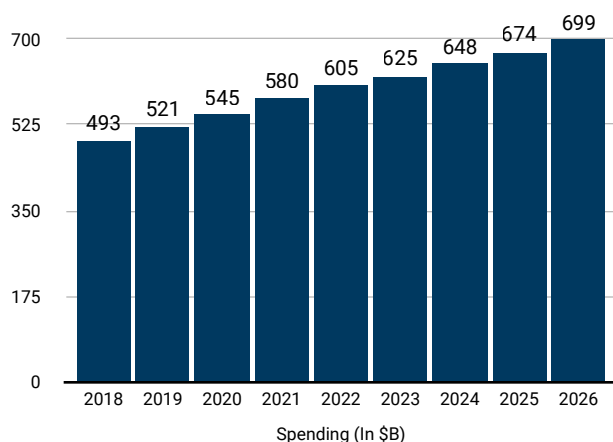
US Pharmaceutical Industry

According to the IQVIA Institute's analysis, the US market is forecasted to grow at a 0-3% CAGR over 2022–2026, down from earlier net-price levels of 3.5% over 2017–2021.¹

The number of new products will contribute \$114B to spending over 2022-2027, up from \$93B over the last five years. The most significant drivers of the slowing growth rate are reduced price growth for brands and the increased impact of brand losses of exclusivity, including biosimilars, which more than doubled to \$141B over the forecasted period.¹

As of May 2021, there were 154k people employed in the pharmaceutical & medicine manufacturing industry, representing a 3.8% increase in employment over May 2020.²

US Medicine Spending & Growth, 2018-2026 (In \$B) ¹

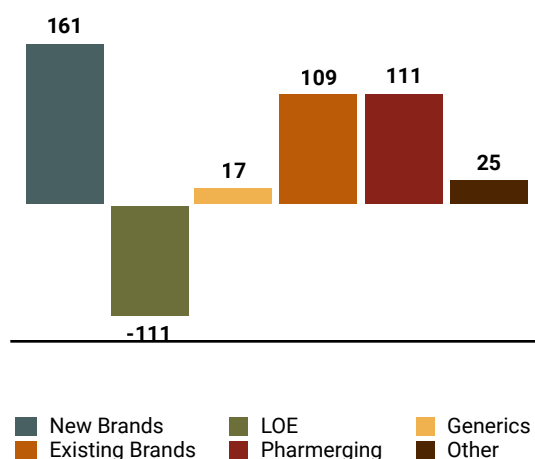


The spending on medicines in the US at invoice prices is expected to increase by \$119B until 2026, similar to the \$124B increase over the past five years. The largest growth driver will be the increased usage of existing protected branded products, which are expected to add \$149B in spending over 2022-2026, much higher than the \$89B increase over 2016-2021.¹

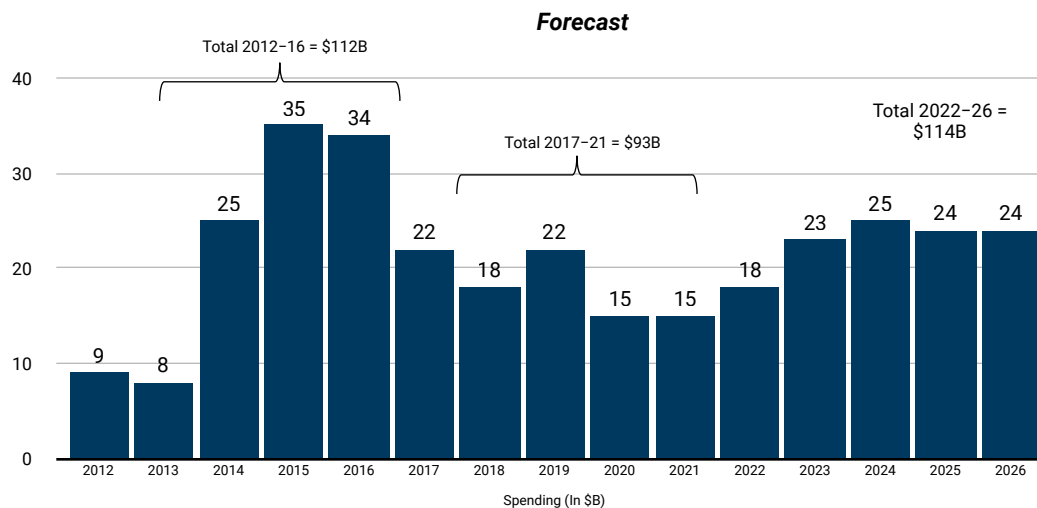
Medicine spending at invoice prices in the US is expected to reach \$700B by 2026, with off-invoice discounts and rebates reaching 39% and net spending increasing only \$44B.¹

US medicine spending grew from \$1,112B in 2016 to \$1,424B in 2021 owing to new brands, pharmerging, existing brands, and generics.³

US Medicine Spending, 2016-2021 (In \$B)³



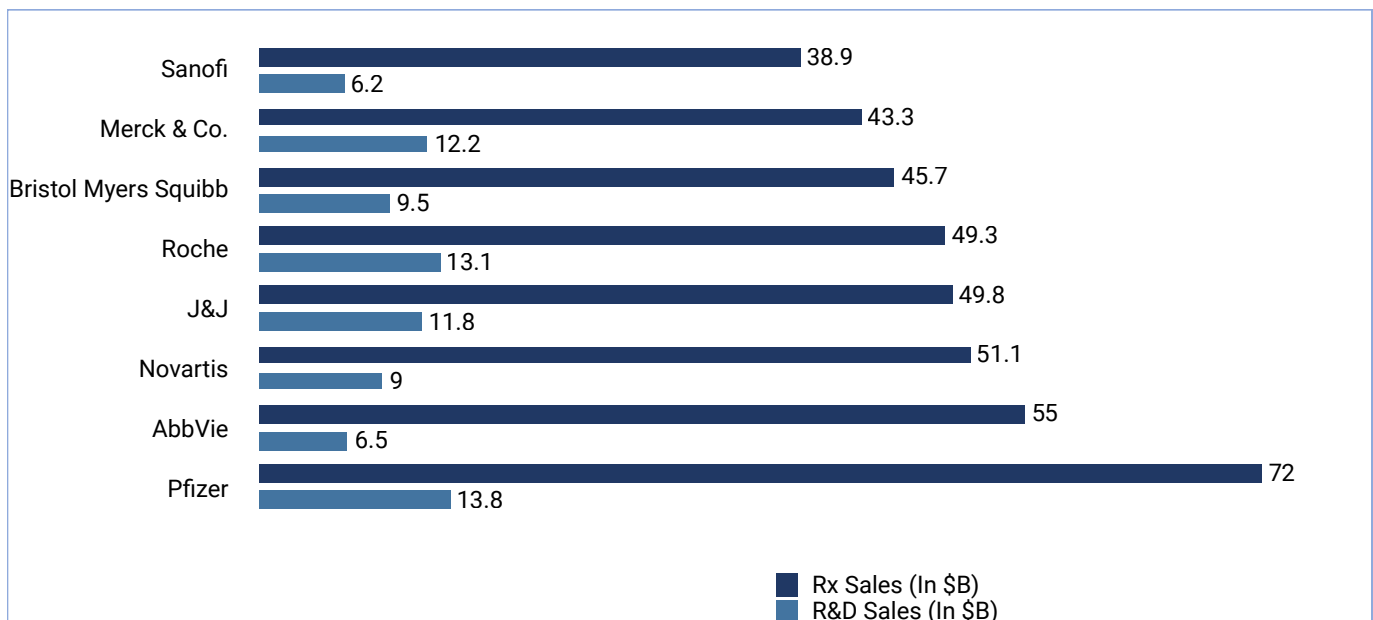
New Brand Spending in the US (In \$B)³



Performance of US Players in the Industry

Pharmaceutical sales revenues in the US have accounted for nearly half the global total in recent years. In 2021, five of the 10 leading pharmaceutical companies worldwide were from the US, and in 2022, this number increased to six.⁴

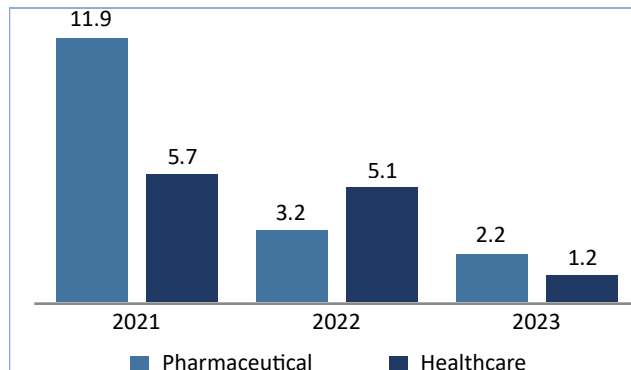
World's Biggest Players in Pharma (In \$B)⁵



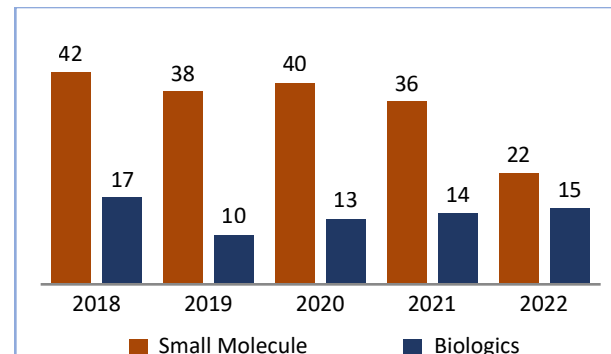
(Rx Sales is Prescription Drug Sales)

In 2022, the US accounted for ~45% of the global pharmaceutical market and 22% of global production. Furthermore, US pharmaceuticals' output & sales remained robust in 2022, driven by the worldwide vaccination rollout and pent-up demand for essential & nonessential medical treatments.⁶

US Pharmaceuticals & Health Care Value Added Output (Y-0-Y % Change)⁶



Number of New Small-Molecule & Biologic-based Drugs, 2018-2022⁷



Vaccinations and the aging population will drive the demand for drugs in the mid to long term.⁶

Industry Trends

• New Drug Approvals Down in 2022

On an absolute level, biologics' new drug approvals increased only slightly in 2022.

- o In 2022, the FDA's CDER approved 22 new small-molecule drugs and 15 new biologics, representing a recent high and one more than the 14 new biologic drug approvals in 2021. This event was only recently eclipsed by 17 new biologic drug approvals in 2018, surpassing the recent new biologic drug approvals of 14 in 2021, 13 in 2020, and 10 in 2019. The decrease in small molecules' share of new drug approvals was largely due to the overall decline in new drug approvals.⁷

- o In 2022, 35% of new drug approvals were from large biopharmaceutical companies. BMS led all companies with three new drug approvals, followed by Roche with two. Eight large biopharmaceutical companies had one recent drug approval, including AstraZeneca, Boehringer Ingelheim, Eli Lilly and Company, Gilead Sciences, Johnson & Johnson, Novartis, Pfizer, and Sanofi.⁷
- o 54% of new drug approvals in 2022 and 2021 was a significant increase over previous years, with innovative drugs accounting for 33%-40% in last years.⁷

• Quantum Computing

The rapid emergence of quantum computing is attributed to its ability to potentially revolutionize drug discovery and speed up the development of new treatments.⁸

- o QuEra Computing developed a quantum processor with 256 qubits, surpassing its last 127 qubits version, whereas Google announced its plans to create a machine with 1M qubits by 2029.⁸

- **Pharma Technical Development to Seize the Opportunity for Modernization**

Pharmaceutical technical development is a complex & multifaceted discipline that is essential for the successful production of medications.⁸

- **High Throughput Screening to Expand**

As per Growth Plus Reports, High throughput screening (HTS) is expected to revolutionize biomedical R&D in 2023, with a global market of \$18.1B by 2030.⁸

HTS technology offers the potential to quickly and accurately evaluate the efficacy of compounds & biological agents across a wide range of biological systems. As it becomes more accessible, the biomedical research industry will benefit from drug discovery, development & delivery advances.⁸

M&A Outlook

The pharmaceutical and life sciences sector experienced a difficult year for M&A in 2022, with deal values and volumes reaching multiyear lows as a result of macroeconomic headwinds and market dislocation. However, it is expected that M&A activity will increase significantly in 2023, with a projected total deal value ranging between \$225-275B across all subsectors, driven by corporate cash, investments, and biotech valuation.⁹

Mergers and acquisitions in the pharma and biotech industries will primarily concentrate on oncology and immunology, with an increasing interest in other areas such as cardiovascular diseases, the central nervous system, and vaccines.⁹

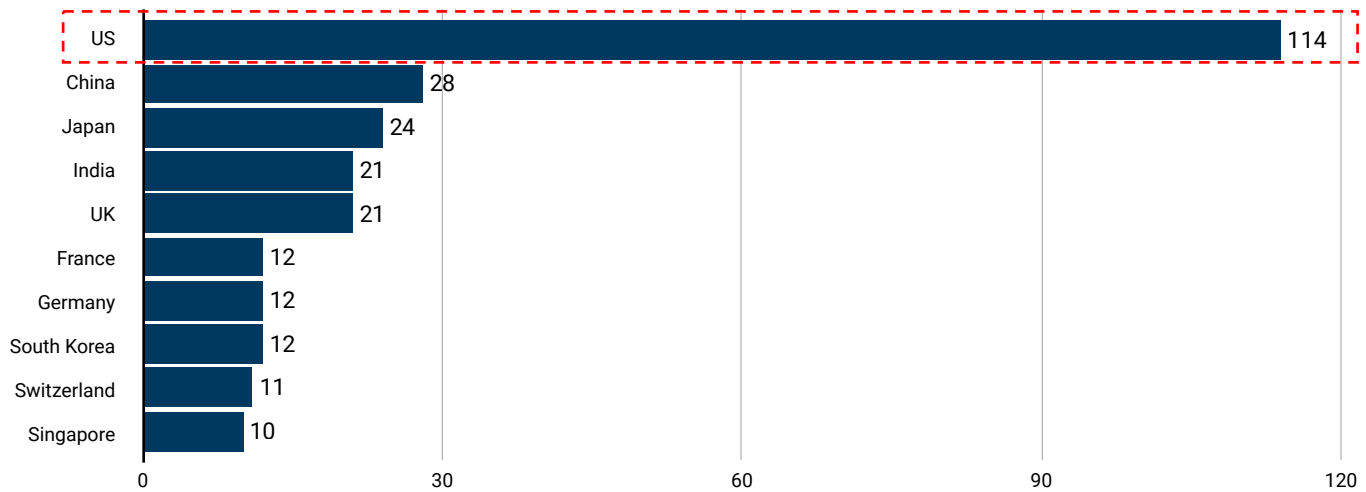
Buyer	Seller	Transaction Value (In \$B)
Amgen	Horizon Therapeutics	\$30.3 (Announced)
Johnson & Johnson	Abiomed	~\$19 (Closed)
Pfizer	BioHaven Pharmaceutical	\$12.2 (Closed)
Pfizer	Global Blood Therapeutics	\$5.6 (Closed)
Bristol Myers Squibb	Turning Point Therapeutics	~\$4 (Closed)
Amgen	ChemoCentryx	~\$4 (Closed)
GSK	Affinivax Inc	\$3.3 (Closed)
Biocon Biologics	Biosimilar Portfolio of Viatris	\$3.3 (Announced)
Bain Capital	Scientific Solutions Business of Olympus Corp	\$3.1 (Announced)
Thermo Fisher Scientific	The Binding Site Group	\$2.6 (Announced)

Pharma and biotech M&A will focus on oncology and immunology, but other areas such as central nervous system, cardiovascular diseases, and vaccines will see a spike in interest.⁹

Partnerships are becoming increasingly important in the pharma and life sciences sectors, with Pfizer and BioNTech forming a strategic alliance to help protect individuals against influenza and COVID-19. Organizations are shifting their operational models to build a more comprehensive collaboration ecosystem.⁸

Academia and industry are teaming up in various fields such as quantum computing, while companies like AstraZeneca and Huma are partnering to advance digital health innovations.⁸

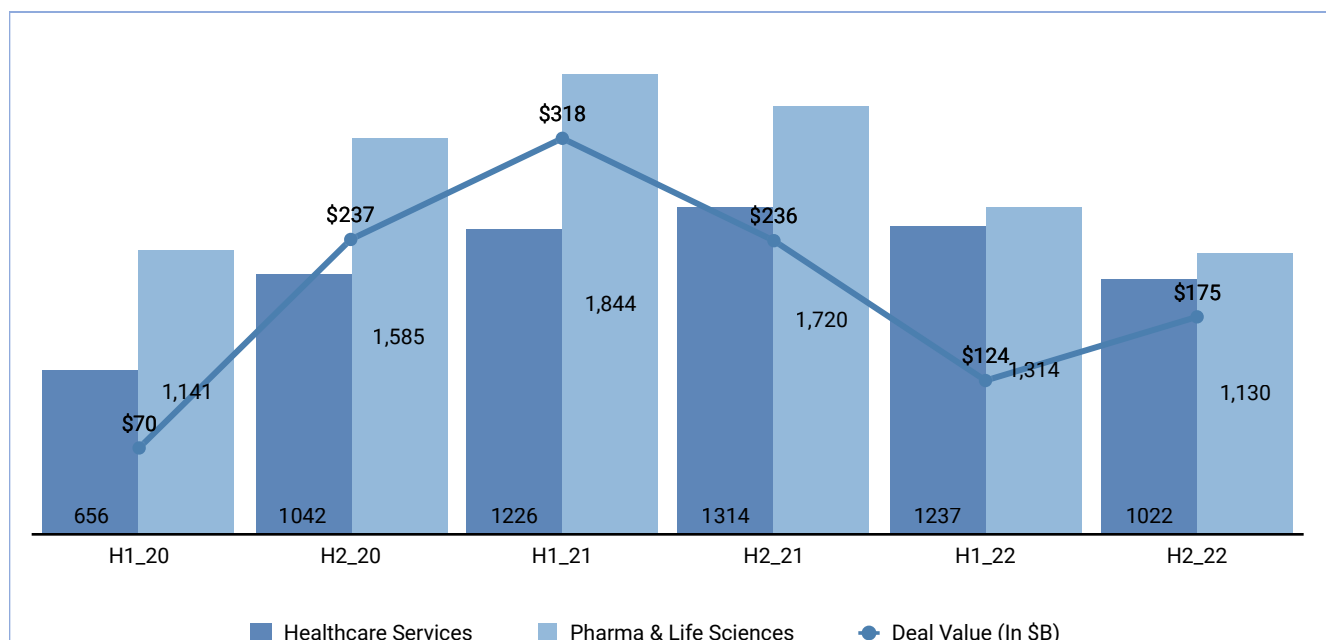
Pharmaceuticals Deal Count, By Country (July-August)¹⁰



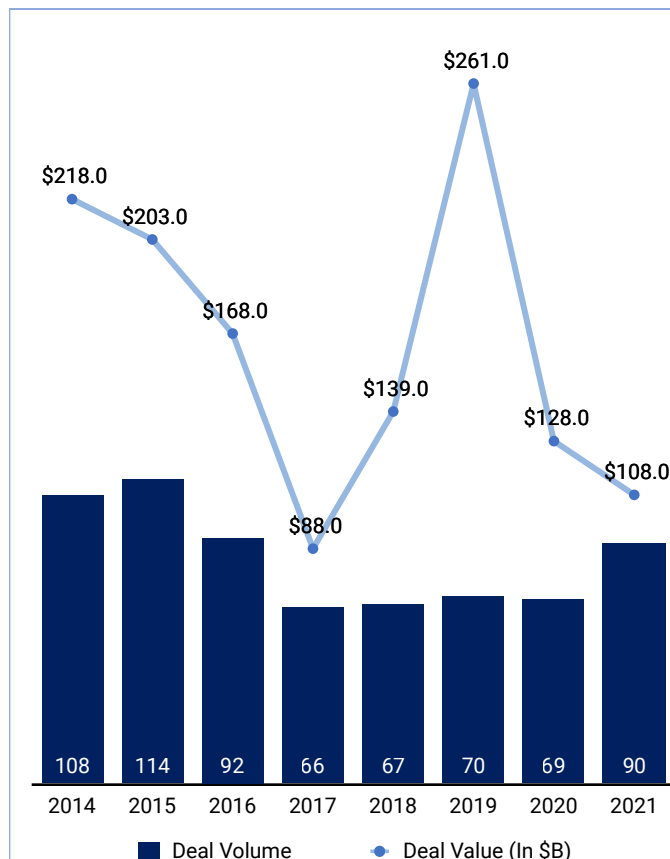
256 deals were recorded involving top pharmaceutical companies in the three months to April, with numerous high-profile contracts, licensing agreements, partnerships, mergers, venture financing, equity offering, asset transaction, debt offering, acquisitions, and PE deals.¹⁰

In 2022, global M&A volumes and values in health industries declined by 23% and 46%, respectively, from pre-pandemic levels.¹¹

Health Industries M&A Deal¹



Biopharma M&A Deals, 2014-2021¹²



(Data as of October 30, 2021)

In Biopharma, majors opted for smaller bolt-on deals instead of transformative M&A opportunities, with 88% of total deal volumes in 2021 being bolt-on deals.¹²

Challenges

The pharmaceutical industry is vital for employment and economic balance but must face challenges that threaten its sustainability.¹³

- **Regulatory and Pricing Pressures**

Pharmaceutical companies have expertise in navigating the regulatory obstacles of bringing products to market. At the development and manufacturing levels, protocols ensure the privacy of clinical trial participants, the

confidentiality of testing data, and the safety of laboratory and manufacturing personnel.¹⁴

- **Need for a Qualified Workforce**

The pharmaceutical industry needs a workforce with significant knowledge, experience, and skills to ensure a successful future, which gives rise to the need for a highly qualified workforce.¹³

- **Supply Chain Disruptions**

The pharmaceutical industry has traditionally been protected from supply chain disruptions due to high inventory levels. Still, recent years have seen widespread supply chain pressures across many sectors, primarily due to the pandemic.¹³

Endnotes

- ¹ [Global Bio/Pharma Market in 2022 & Beyond](#)
- ² [Pharmaceutical & Medicine Manufacturing](#)
- ³ [Global Use of Medicines 2022](#)
- ⁴ [US Pharmaceutical Industry - Statistics & Facts](#)
- ⁵ [The World's Biggest Players in Pharma](#)
- ⁶ [Pharmaceuticals Industry Trends US - 2022](#)
- ⁷ [Trends in New Drug Approvals](#)
- ⁸ [Future of Pharma](#)
- ⁹ [Pharmaceutical & Life Sciences](#)
- ¹⁰ [Pharmaceutical Deals In Early 2022](#)
- ¹¹ [Global M&A Trends in Health Industries](#)
- ¹² [Biopharma Deal-Making In 2022](#)
- ¹³ [Challenges Facing The Pharmaceutical Industry](#)
- ¹⁴ [Biggest Challenges for the Pharmaceutical Industry](#)