NEW ZEALAND
TRADE & ENTERPRISE
Te Taurapa Tūhono

US HEALTHCARE 101

An Overview of the US Healthcare System

ASHTAR BOULOS, MAY 2022

Introduction

Background

This report was developed in order to help New Zealand businesses better understand the US healthcare market as they begin their discovery journey.

The US has a particularly convoluted healthcare system, misunderstood frequently by its own citizens. This report seeks to present some high level statistics and provide some context about the system and definitions of some commonly used terms.

Purpose

This report aims to serve as a comprehensive, must-read guide for New Zealand businesses considering selling into the US Healthcare sector.

It is designed to be used by market entry/ early growth stage companies, providing a concise overview of some of the fundamentals of the market.

Methodology

This research used secondary desktop research based on publicly available sources and subscription databases such as Statista, the CDC, KFF, Census Bureau, McKinsey, NPR and other sources.

Limitations

The information provided in this report was sourced from secondary data sources. Due to the nature of secondary research, all values and figures should be treated as indicative, rather than absolute.

The latest information available at the time of research was used, however present values may differ.

Monetary amounts have been specified in the original currency and year cited in our research.

Table of Contents

Section 1

OVERVIEW OF US HEALTHCARE SECTOR

US Healthcare Statistics

$4.1 T

Gross healthcare spending

The US spent $4.1 trillion on health care in 2020.

19.7%

Expenditure as % of GDP

In 2020. US national health expenditure was 19.7% of GDP.

90.4%

Insured People in US

As of the first half of 2021, 90.4% of Americans had health insurance. This a major improvement from some of the lowest levels prior to the passage of the ACA, when some 16% of Americans went without health insurance in 2010.

77.3

Life Expectancy

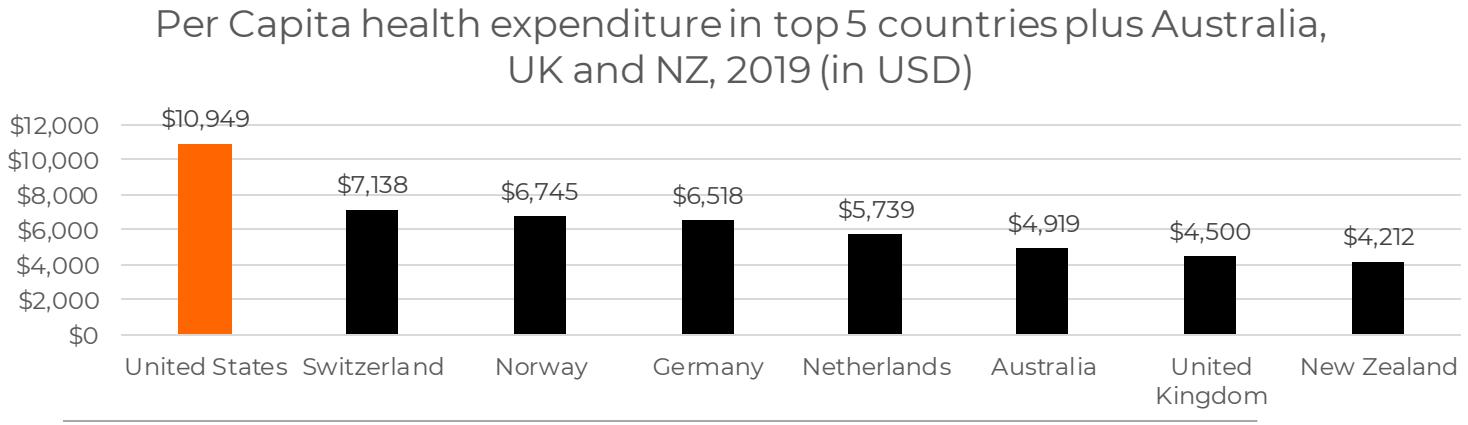
According to the OECD, in 2020, life expectancy in the US is 77.3 years, coming in 31st place. In first was Japan at 84.7 years and New Zealand came in 14th place at 82.1 years.

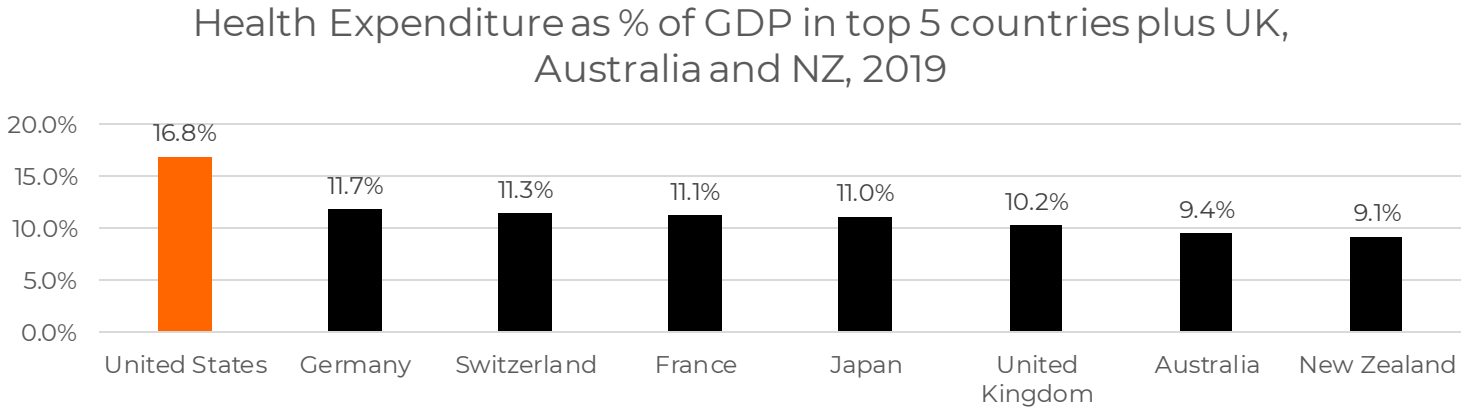
Sources: Statista, “Health Expenditure in the US,” accessed March 16. 2022.; Statista: “Percentage of people in the US without health insurance, 1997-2021,” originally sourced from the CDC.

Health Expenditure in the US Highest in the World

The United States spends more money on health care than every other country, by quite a large margin, both in terms of per capita health expenditure and as a percentage of GDP.

This remains true, despite the United States not providing universal health care coverage to its citizens. Many of the countries in the list of top 25 biggest spenders on health care have either a single payer or a universal coverage system in place.





Source: Statista health expenditures in the US Report, originally sourced from OECD, data from 2019.

Health Expenditure Only Growing in the US

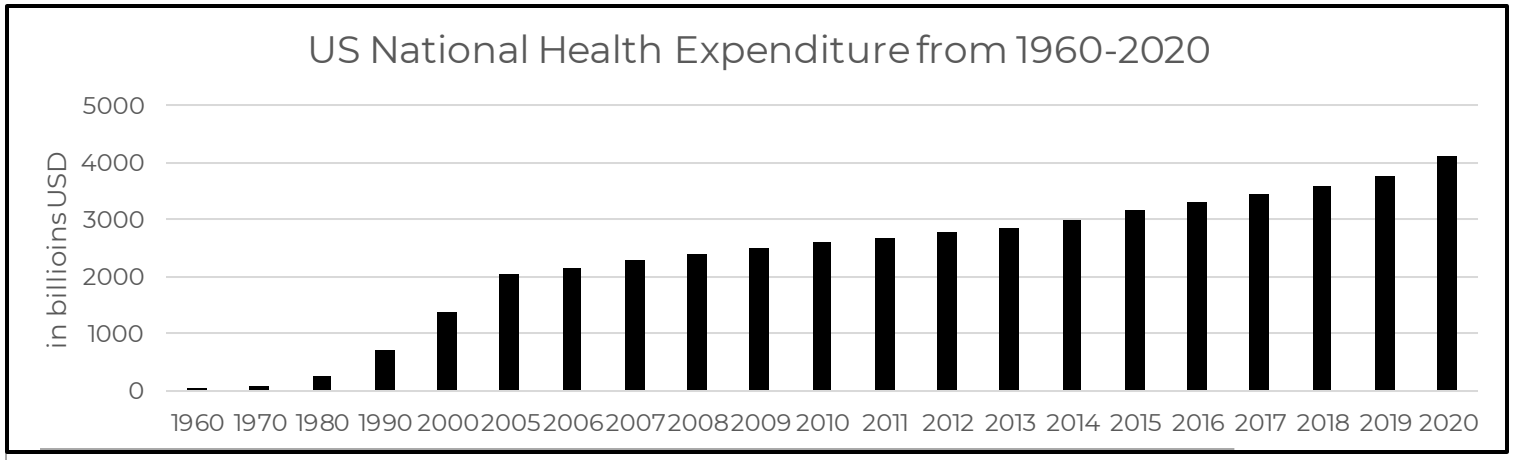
The US has been in a health care crisis for 50 years

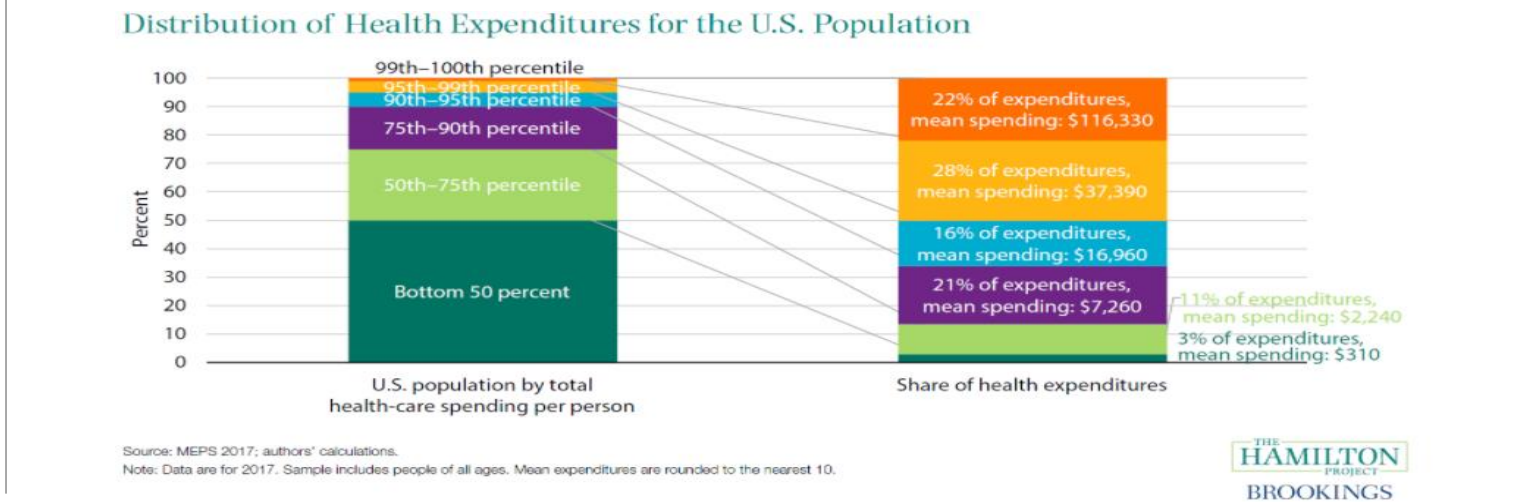
Spending on health care in the US has significantly increased over the last few decades.

Spending really began to balloon moving into the 21st century. Part of this rise is attributed to the growing population of aging adults in the US, but that accounts for a small percentage of this growth. Much of it results from the fee for service model of the US healthcare system that includes some distorted incentives as far as pricing, consumption and cost savings projects go. There has been a real increase in the cost of health care services. Truly, the cost of care in the US is much higher comparatively than in other countries.

An even more shocking revelation is that over 50% of the expenditures made for health care in the US are attributed to only 5% of people. In other words, the 5% of Americans who spend the most on health expenditures each year are responsible for 50% of all health expenditures in the US.

That being said, health care costs have been a notorious problem for decades. A Health Affairs article details the language used describing a health care crises in the US since the 1960s.





Sources: Accessed in Statista from US CMS (Office of the Actuary) from the National Health Expenditure Accounts, released December 2021; Brookings Institute publication: "A dozen facts about the economics of the US health-care system," by Ryan Nunn, Jana Parsons and Jay Shambaugh, Mar 10, 2020; Health Affairs article, "Half a Century of the Health Care Crisis (And Still Going Strong)," Michael Millenson, Sept 12, 2018.

Health Systems around the world

A unique design

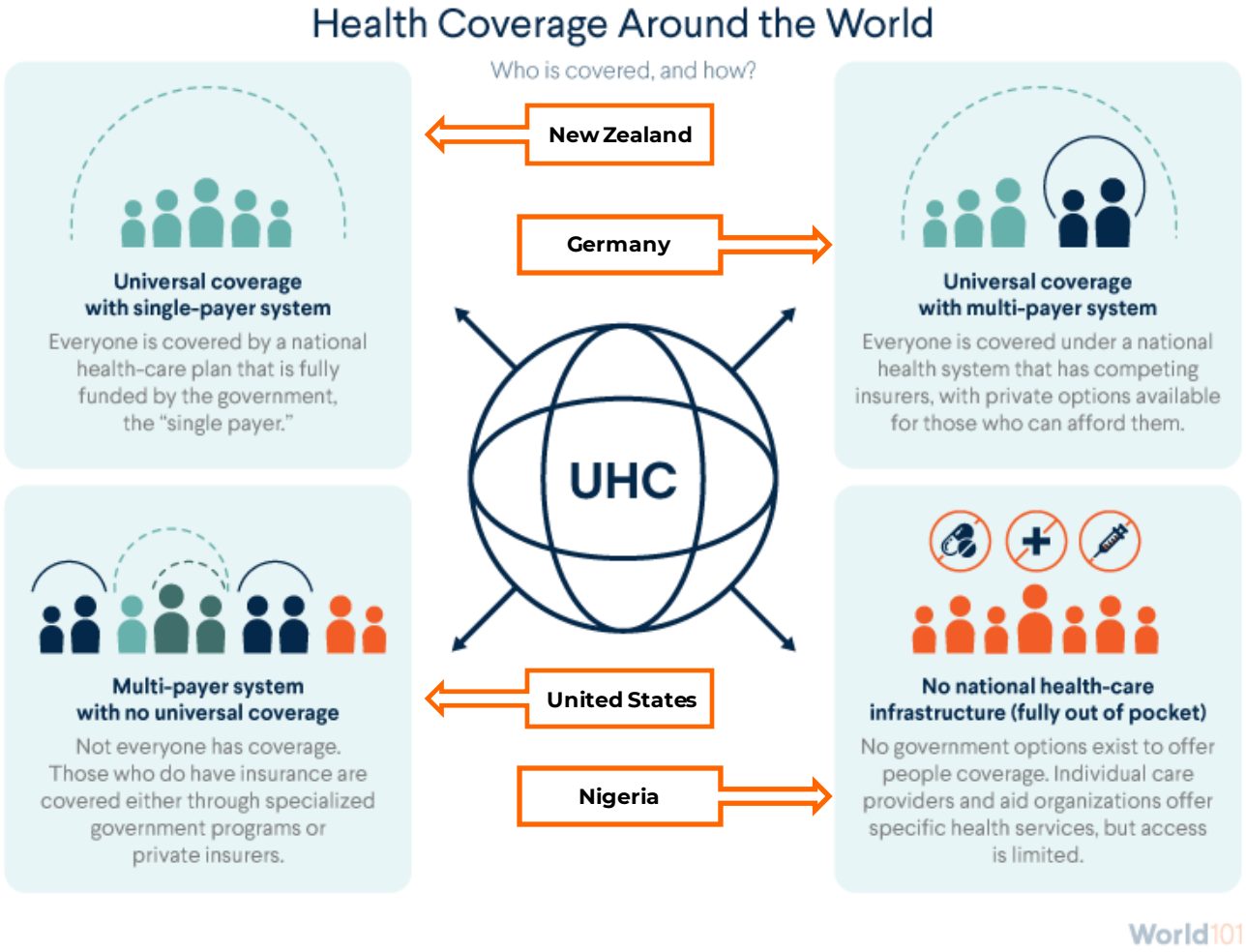
To understand a bit of how the costs became so high, it is important to understand the US healthcare system from a very high level.

The US is unique in its health care delivery design. There are different insurance payers, some private and some public. The Affordable Care Act changed the landscape of insurance significantly by requiring citizens to have insurance coverage. Some 8% of Americans remain uninsured even after the passage of the ACA.

New Zealand falls under the single-payer model; all citizens are covered under government funded health insurance. There are also private insurance plans available for noncovered services and copayments but these are optional in New Zealand.

In some countries like Cuba or the UK, the hospitals and clinics are run by the government. In other instances, the doctors may not be government employees, but may be compensated by the government.

Some examples of countries with universal coverage with a multi-payer system are Germany, Japan and France.



Source: World101 – "How Health Care Works Around the World," accessed Mar 8, 2022.

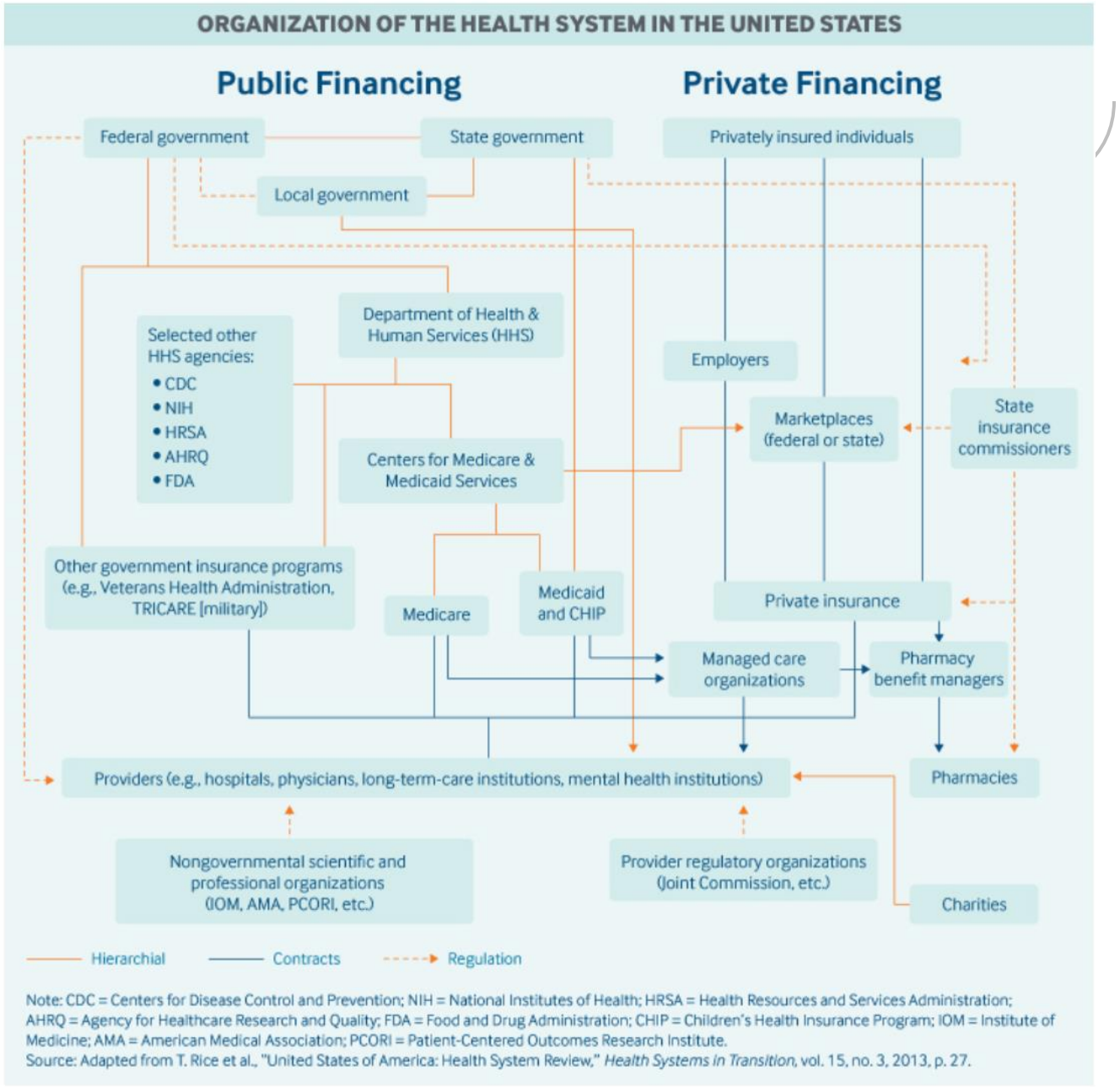
SECTION 1

Health System Financing in the US

A complicated matrix

The way that health care is financed in the United States is complicated. Public financing for health care comes down from the federal, state and local governments to support the various Medicare and Medicaid programs, as well as the medical programs available to US veterans.

On the private side, approximately 50% of the US population is enrolled in an employer sponsored health insurance plan. In this mechanism, premium payment costs are shared by the employer and employee, and most other health related costs are paid by the individual or by the health plan if coverage allows.



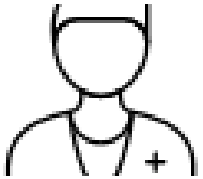
Source: The Commonwealth Fund, "International Health Care System Profiles: United States," Roosa Tikkanen, Robin Osborn, Elias Mossialos, Ana Djordjevic, George A. Wharton, June 5, 2020.

Major Roles in US Health Care Landscape

The first thing to understand about health care in the US is some of the language used to describe the relationships at play.

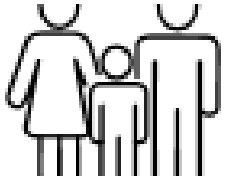
Payers

The term “payer” is used to describe the body who makes the initial reimbursement for a medical service. This can be the health insurance company or the government, depending on whether the health insurance plan is through a private insurance company or a government plan like Medicare, Medicaid, or other government plans.



Providers

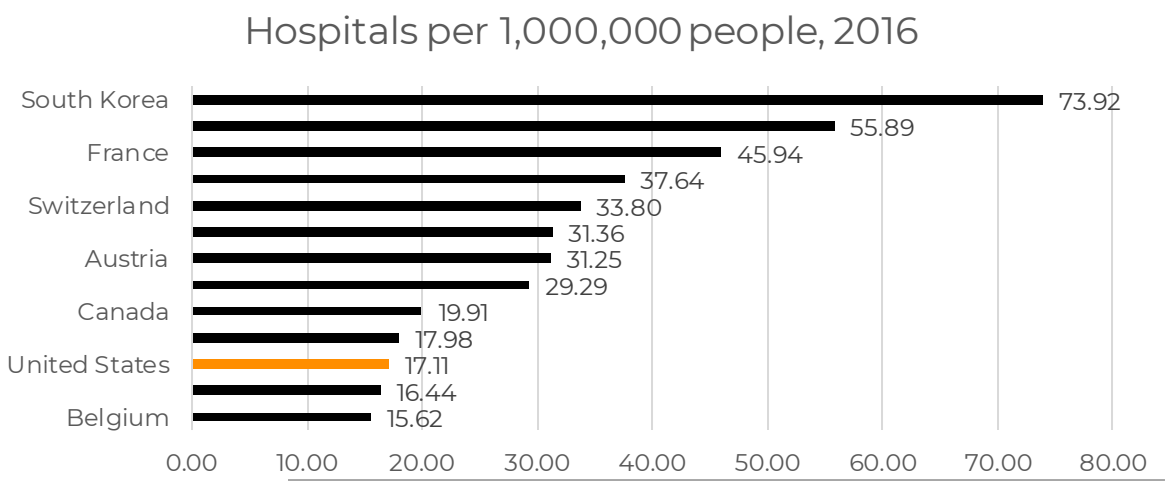
The term “provider” is used to identify the medical entity providing the service, be it a doctor, hospital, laboratory, or other entity providing the medical service (ie visit, test, etc)

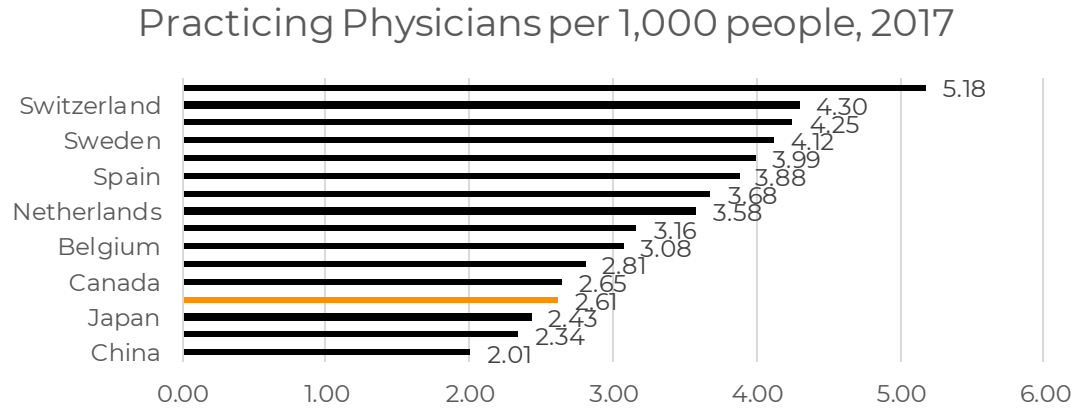


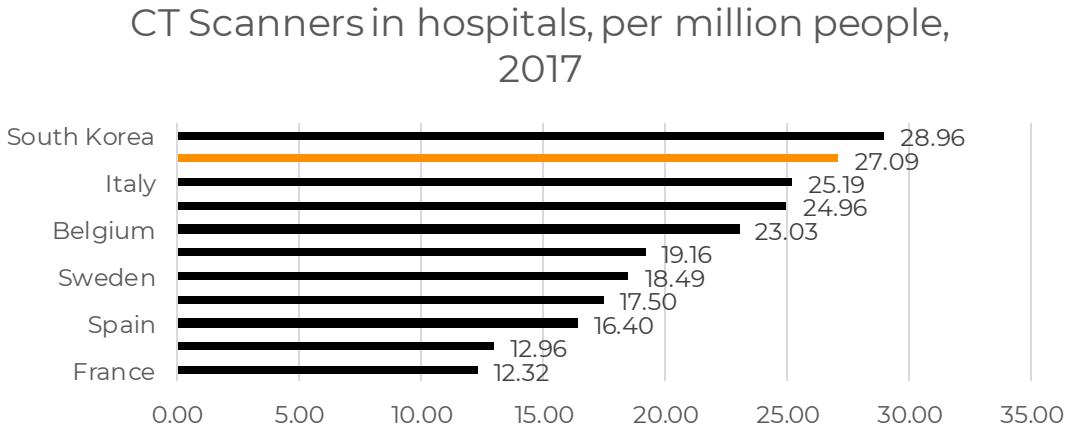
Members/Patients

The term “member” or “patient” refers to the person either enrolled in the medical insurance plan or receiving the medical service.

Some Comparative Health Care Statistics







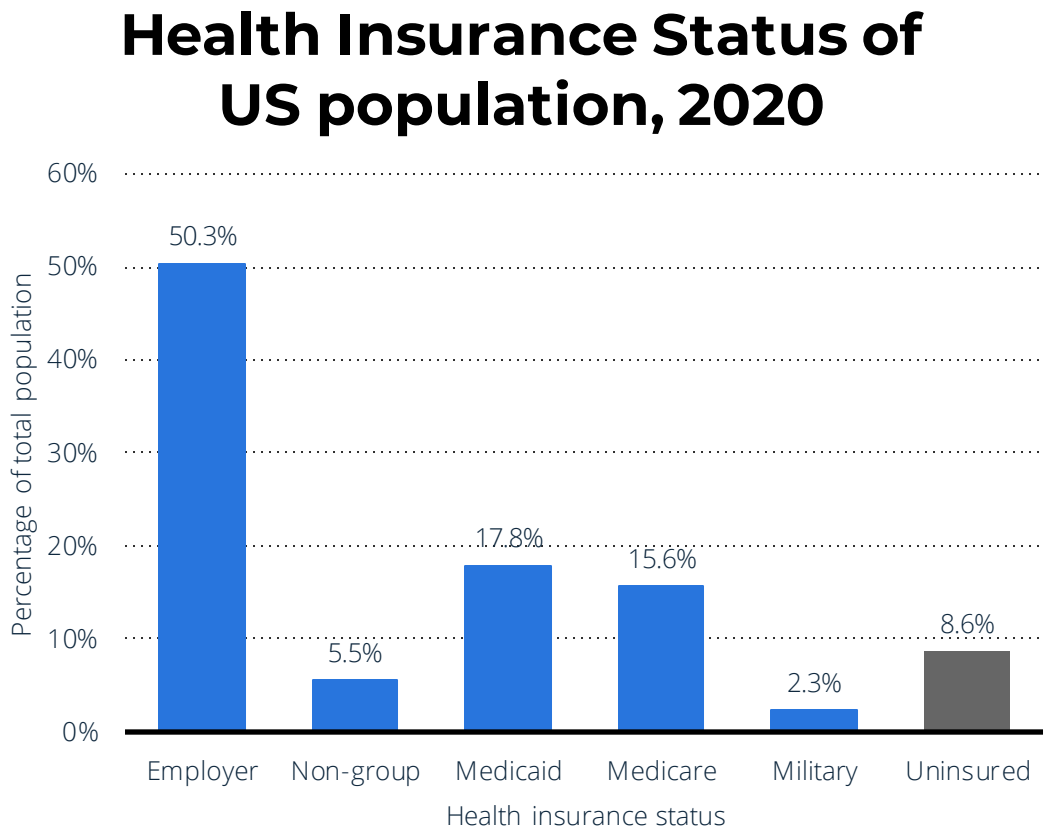
Country	All hospital employment	Hospital healthcare staff	Administrative and other hospital staff
Switzerland	25.0	17.4	7.6
United States	20.1	10.6	9.5
France	19.6	13.0	6.6
Belgium	18.4	11.8	6.6
Canada	17.5	11.5	6.1
Germany	16.3	12.0	4.3
Netherlands	15.0	15.0	
Austria	13.3	13.3	
Spain	12.0	9.1	2.9
Italy	10.3	7.6	2.7
South Korea	7.2	7.0	0.2

How Health Insurance Is Accessed

In the United States, most Americans with health insurance are covered by a private insurance plan contracted through their employer.

About 35% of Americans are covered through government insurance plans, either via Medicaid, Medicare or military programs.

Distribution of Insurance Access



Source: Statista Report, "Health Insurance in the United States," data from US Census Bureau, accessed May 2022.

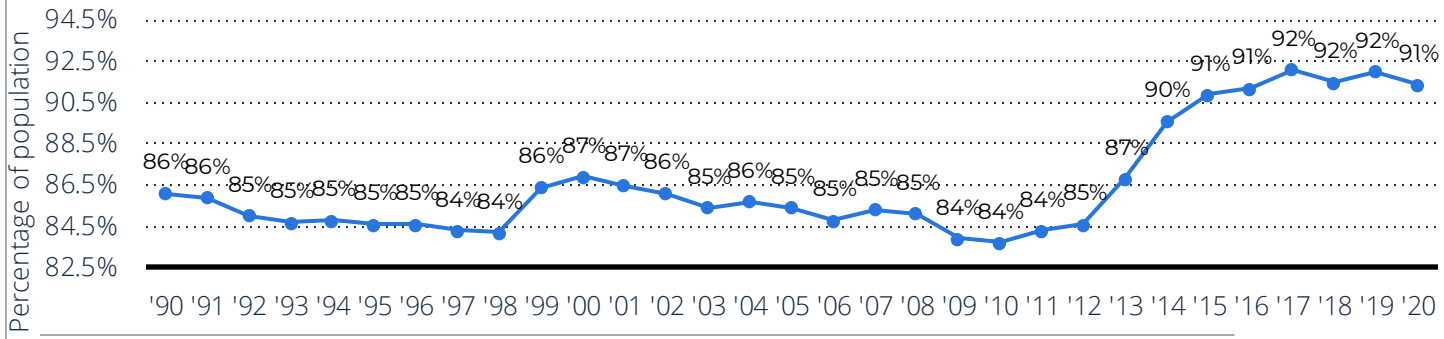
Health Insurance Coverage in the US

The Affordable Care Act passed under President Obama, which caused a major uptick in insurance enrollment between 2013-2015 when the ACA took effect. The ACA made health insurance coverage mandatory for all Americans, implementing a penalty for those who could not provide proof of insurance coverage.

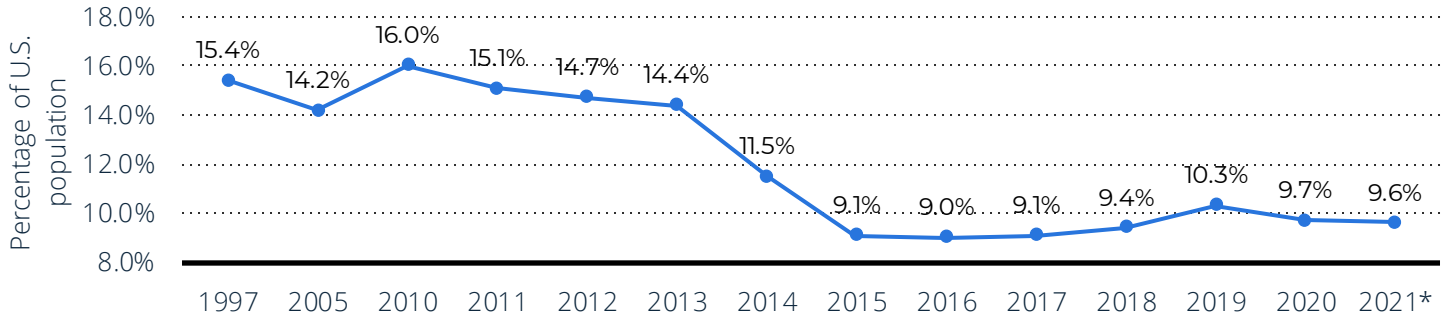
In order to achieve this, the ACA also expanded various programs to subsidize the cost of insurance for those falling in income gaps that made it affordable to them.

The ACA established the infrastructure for the health insurance exchange, which made affordable health plans available to Americans, regardless of their employment status. That said, more than 50% of Americans still get their health insurance coverage through their employer.

% of insured in the US, 1990-2020



% of uninsured in the US, 1997-2021



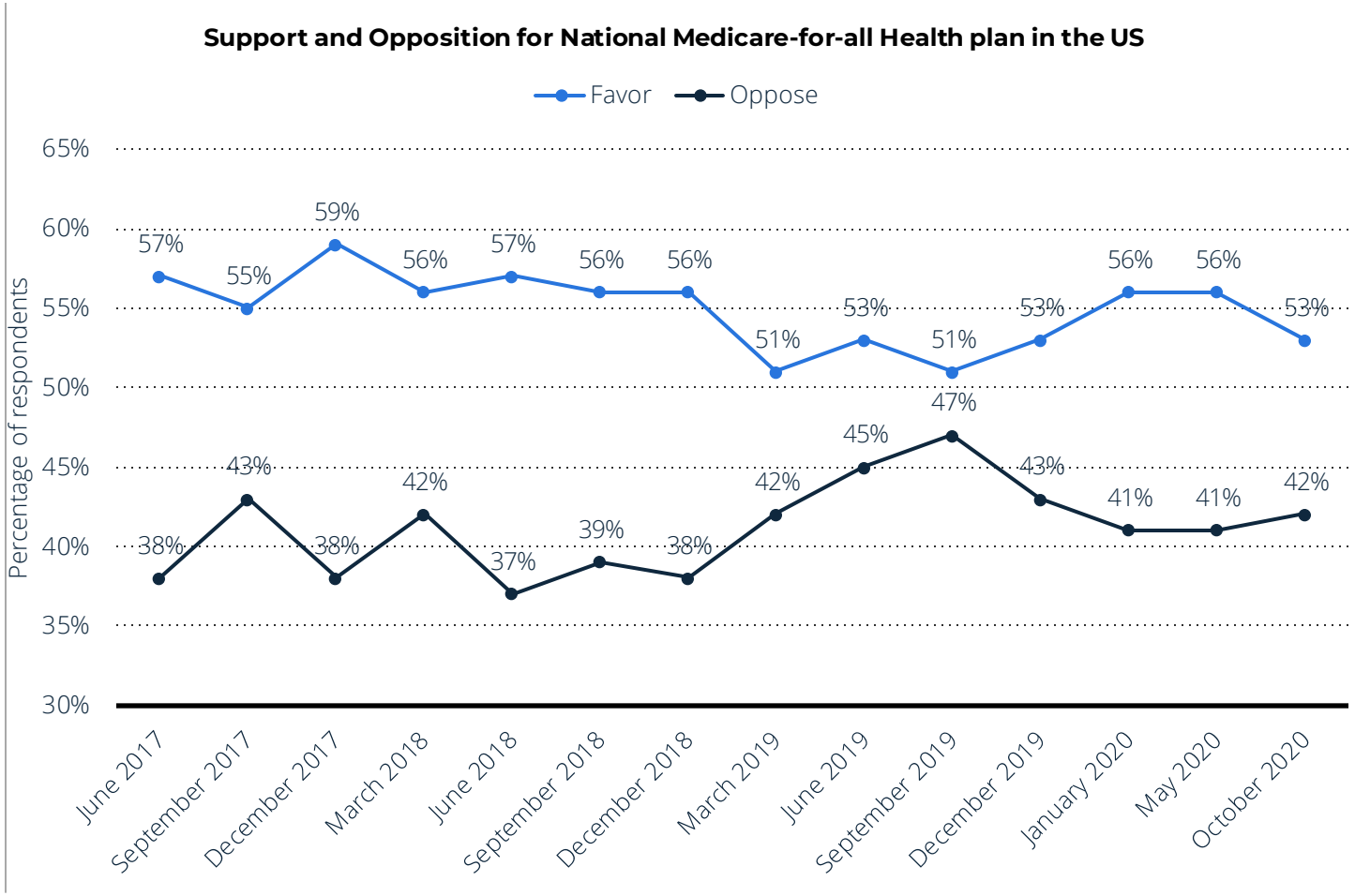
Source: Statista Report, "Health Insurance in the United States," originally sourced from CDC.

Will universal health care ever come to the US?

An ever contentious conversation in the US, this is perhaps one of the most partisan concerns in the US. Yet, despite what the media would have folks believe in the US, a majority of the country support a medicare-for-all approach in the US.

There are many reasons why a more universal approach has not been implemented yet.

Some of this comes down to language. The United States operates under a “fee for service” model, where a value based care model would be better suited to keep costs lower and provide better health outcomes for citizens.



Source: Statista report, “Health Insurance in the United States,” originally sourced from Kaiser Family Foundation.

Fee for Service vs. Value Based Care

Aside from the highly charged language surrounding the health care debate in the US, the practical reality is the fee for service model is well established and it is difficult to innovate in that type of environment without a major overhaul to the infrastructure of the system.

A Harvard Business Review report about a different financing model gave a few examples about quality improvement initiatives in hospitals that resulted in 450 fewer deaths per year and the hospitalization rate dropped by almost 900 cases per year (a clear positive outcome for the clinical efficacy) but also resulted in a lost of over $3 million in revenue per year dur to the lower hospitalization rate.

A similar example came through relating to a quality improvement for premature babies and their lung development. Clinical trials at process improvements showed intubation rates for the infants falling from 78% to 18%, resulting in a $329,000 revenue dip from avoided insurance payments.

TYPE OF WASTE	% OF ALL WASTE	PAYMENT METHODS: Cost-plus	Fee for service	Per case	Population-based payment
Production level Inefficient production of individual care units, such as drugs, tests, nursing support	5%	Payer	Provider	Provider	Provider
Case level Use of unnecessary or suboptimal services in treating a case	50%	Payer	Payer	Provider	Provider
Population level Unnecessary or avoidable patient cases	45%	Payer	Payer	Payer	Provider

SOURCE INTERMOUNTAIN HEALTHCARE
FROM "THE CASE FOR CAPITATION," JULY–AUGUST 2016

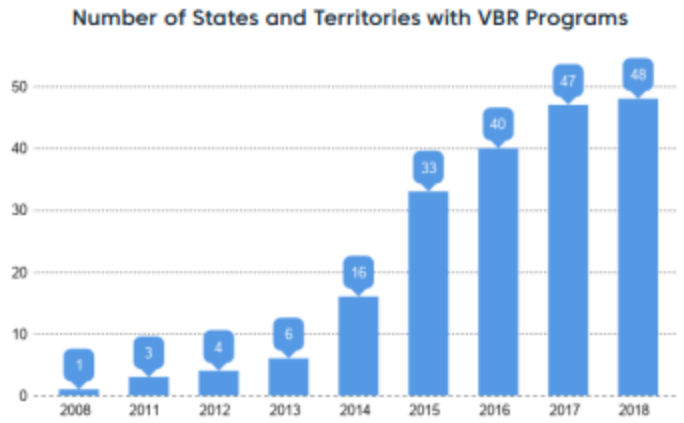
Source: Harvard Business Review, "The Case for Capitation," from the magazine July-Aug 2016, by Brent C. James, MD and Gregory P. Poulsen.

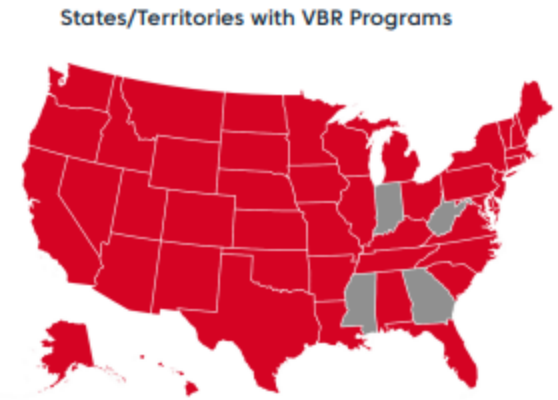
Value Based Care in the US

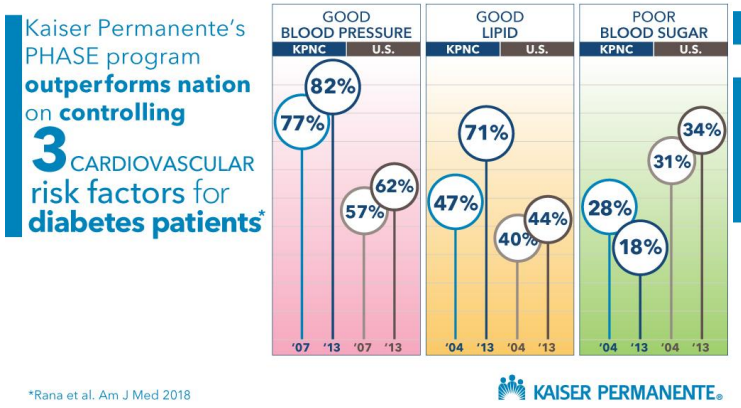
That being said, especially in the past 7 years since 2015 more states have been implementing programs to support programs that look to reform health care financing.

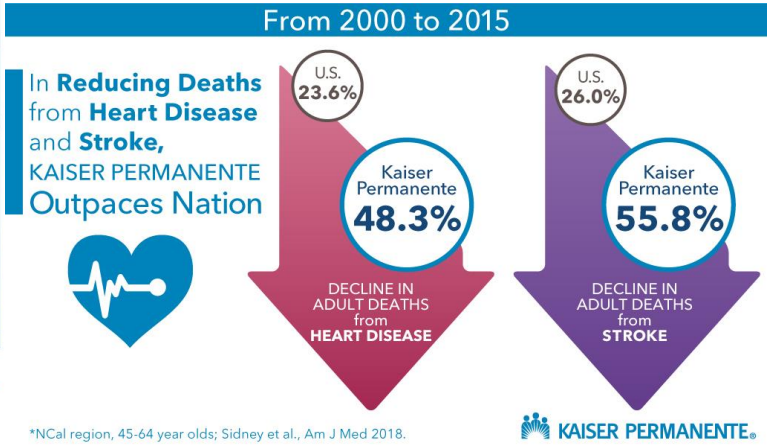
According to a study done by Change Healthcare, 48 states and territories (including Puerto Rico and the District of Columbia) have implemented value-based reimbursement programs.

It's also worth highlighting the largest value-based care medical system in the US is Kaiser, which operated nationally and is known for having a vertically integrated hospital system, physician network, and insurance plan. In 2020, their yearly revenue was $88.7 billion with over 300,000 employees nationally. The number of people enrolled in their health plan has been increasing over the last 10 years. They have experienced a 45% increase in members with 8.7 million members in 2010 to 12.6 million members in 2021.









Source: Primary Care Collective, "Value-Based Care in America: State-by-State," published in 2019; Kaiser permanente; Statista, "Kaiser permanente's number of members 2007-2021," accessed June 2022.

Medical Devices in the US

The primary purchasers of medical devices in the US are hospital systems, responsible for 37.4% of medical device purchases in 2021. Wholesalers purchase about 26.3% of medical devices to then resell.

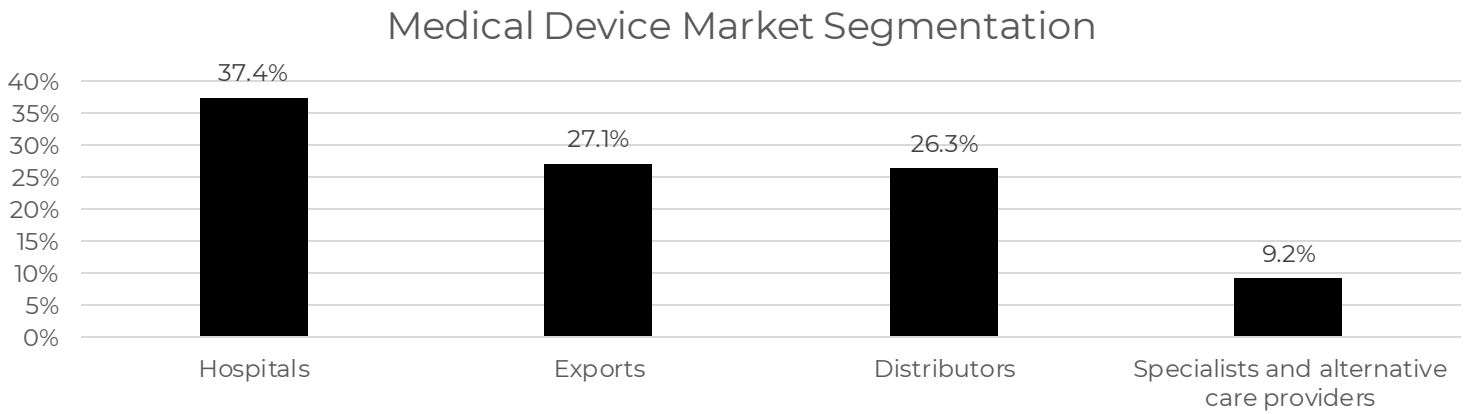
The medical device wholesalers also sell the majority of their goods to hospitals, dominating 63.8% of their market sales.

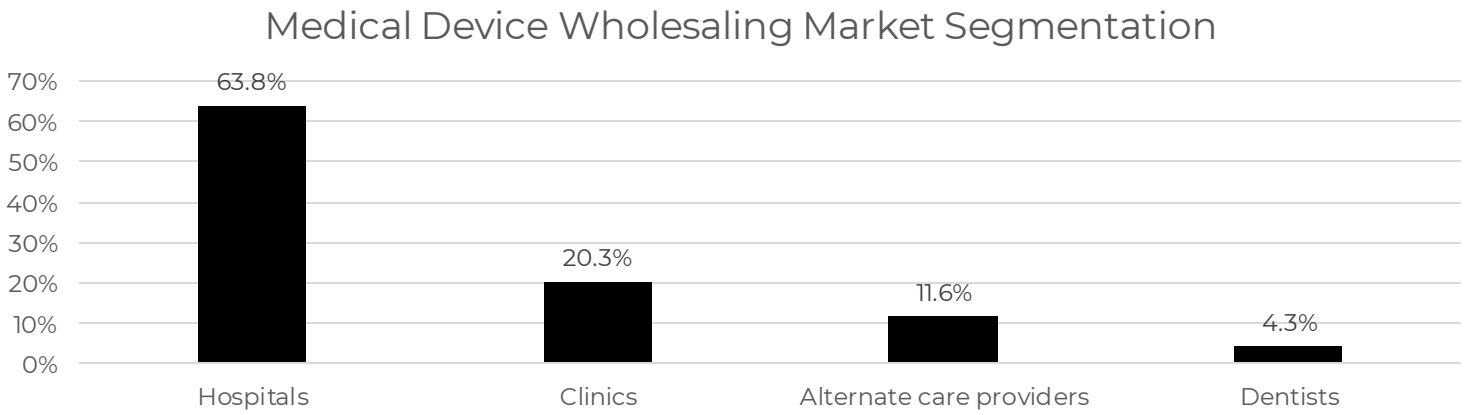
According to Ibisworld, the medical device manufacturing market in the US had an industry revenue of $45 billion in 2021, and the medical device wholesaling industry revenue was $307.3 billion in 2021.

Medical device wholesaling is a highly fragmented market. The three largest companies accounted for less than 12% of the industry revenue in 2021 (Cardinal Health , 5.7%, McKesson Corp, 3.63%, Henry Schein Inc., 2.6%).

The 3 largest medical device manufacturers accounted for almost 2/3 of the industry revenue in 2021 (Medtronic, 39.22%, Abbott Laboratories, 13.67%, General Electric, 11.59%).

Purchasers for healthcare software could be more diverse, as some of the solutions could be used by payers (health insurance companies) or health care delivery groups.





Source: Ibisworld, NAICS Report 33451B, "Medical Device Manufacturing in the US," updated January 2022 by Jack Curran; NAICS Report 42345, "Medical Supplies Wholesaling in the US," updated May 2022 by Jack Curran.

Medical Trade Associations in the US

Below are some of the most popular medical trade associations for certain sectors of the industry. Another great resource for information and statistics about hospital systems is Becker's Hospital Review.

Medical Devices: AdvaMed

AdvaMed (Advanced Medical Technology Association) is the world's largest medical tech association that represents device, diagnostics and digital technology manufacturers.

Their website includes research and policy papers, offers the opportunity to sign up for their newsletter, and includes information about registering for membership or to participate in their conferences.

Surgery/Ortho: AAOS

The American Academy of Orthopaedic Surgeons (AAOS) provides education and practice management services for orthopedic surgeons and other health professionals.

Their website includes links to their publications, guidelines and best practices around medical coding, patient safety, quality programs, options to enroll in courses and information about their annual meeting.

Health IT: HIMSS

The Healthcare Information and Management Systems Society is a nonprofit focused on improving health care quality, safety, cost-effectiveness and access through best use of IT and management systems.

Their website includes a link to their library that makes many webinars available on demand, provides a section with information about related news, and information about upcoming events.

Telehealth: ATA

The American Telemedicine Association is a nonprofit focused on promoting access to medical care for consumers through telecommunications.

Their website includes information about recent policy related to telemedicine, information about coming events, relevant news, interest groups, and research and other resources.

Source:

Section 2

US REGULATORY FRAMEWORK FOR HEALTH CARE

Primary Regulatory Body is the FDA

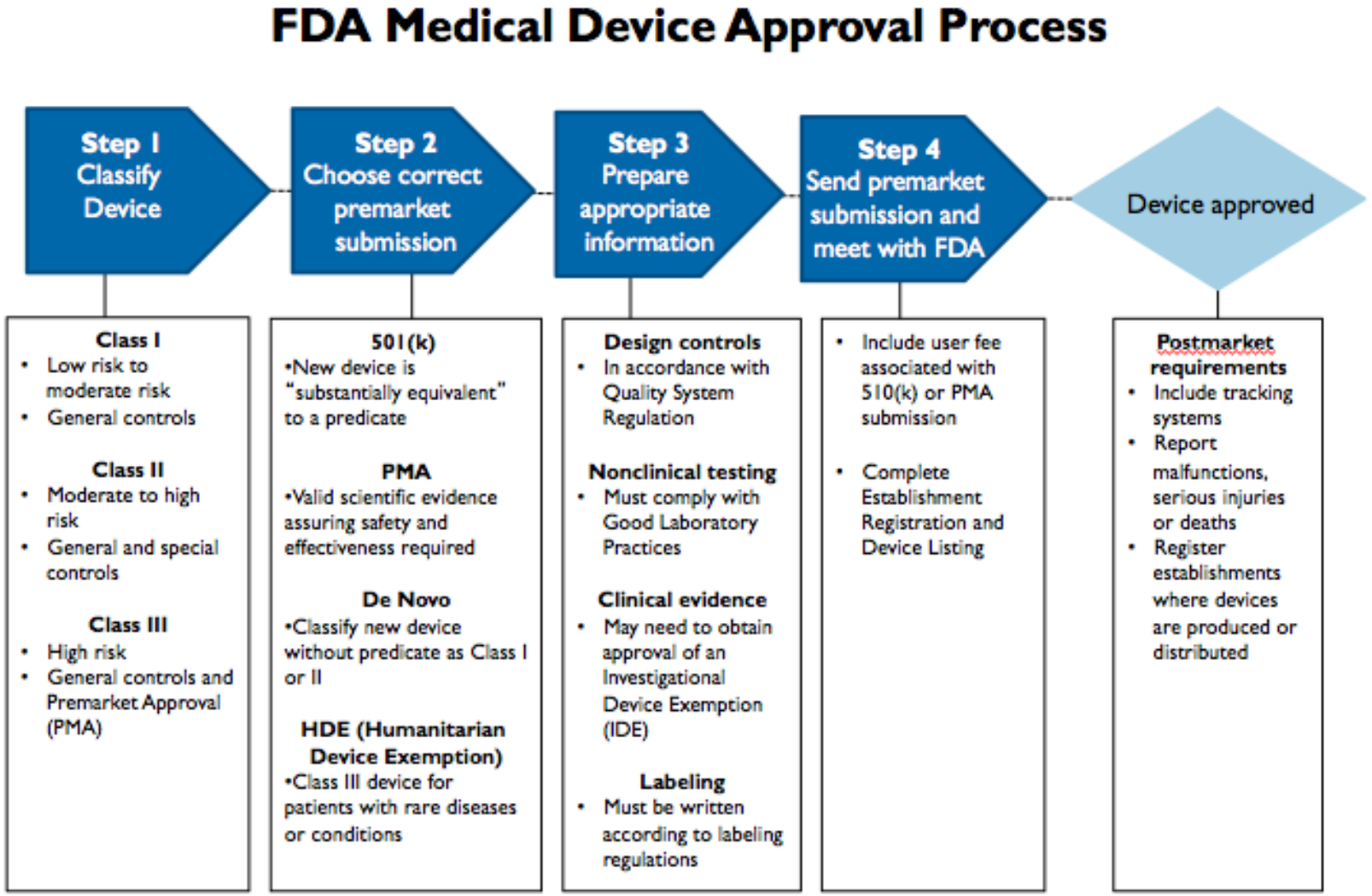
In the United States, the primary regulatory body that oversees medical devices, cosmetics, prescription and over the counter drugs, prescription and over the counter devices, food, dietary supplements, radiation-emitting devices and tobacco is the Food and Drug Administration (FDA).

Medical devices can range in definition from hospital gowns to pacemakers to more advanced robotic equipment. Medical devices are broken up into three different classes and the process for approval is different depending on which class your device falls into.

The three classification levels refer to the potential level of harm to the patient, with class 1 being the least invasive and posing the least risk to patients.

There is now legislation that clarifies certain software is regulated under the FDA as well and is also required to go through the premarket approval process if it being used for certain medical practices.

FDA Medical Device Approval Process



Source: National Journal.

Timeline and Pricing for 510(k) Approval

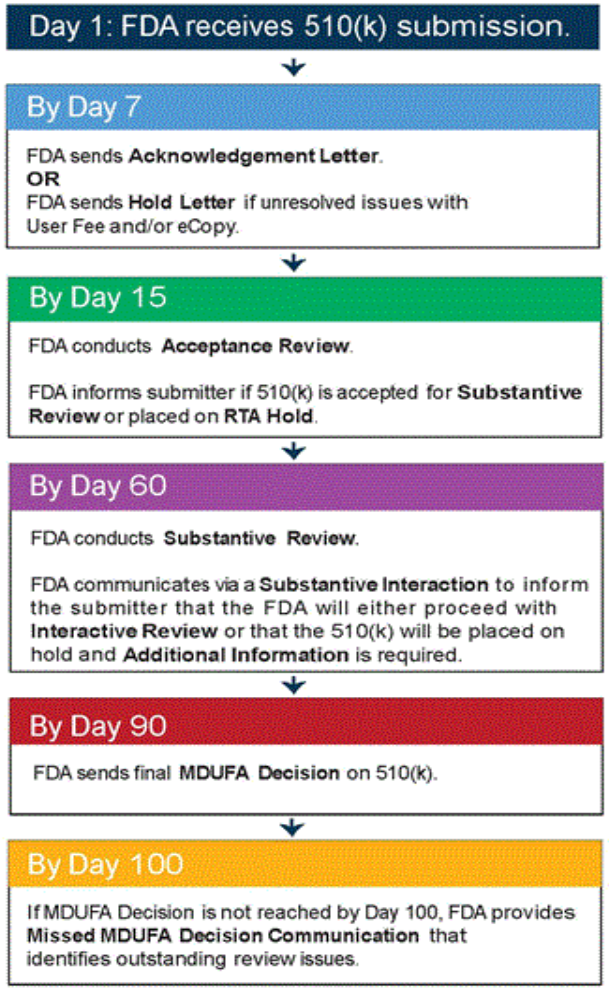
Be conservative in your planning

The FDA requires a minimum of 90 days notice from all device manufacturers to notify the FDA of their intention to sell their device via a process listed under section 510(k) of the Food, Drug and Cosmetic Act.

There is now legislation that clarifies which software is regulated under the FDA as well and is also required to go through the premarket approval process.

Most class 1 devices are not required to go through the 510(k) application process, but class 2 is. 43% of medical devices fall under class 2, which can include things like syringes and contact lenses. On average, it takes 177 days to clear the 510(k) approval process, though it can vary based on the device category. It is recommended to estimate approximately 6 months to move through this process.

According to the FDA website, the 510(k) application costs $12,745 and the annual establishment registration fee is $5,672. That does not include any external payments for review prior to the application process.



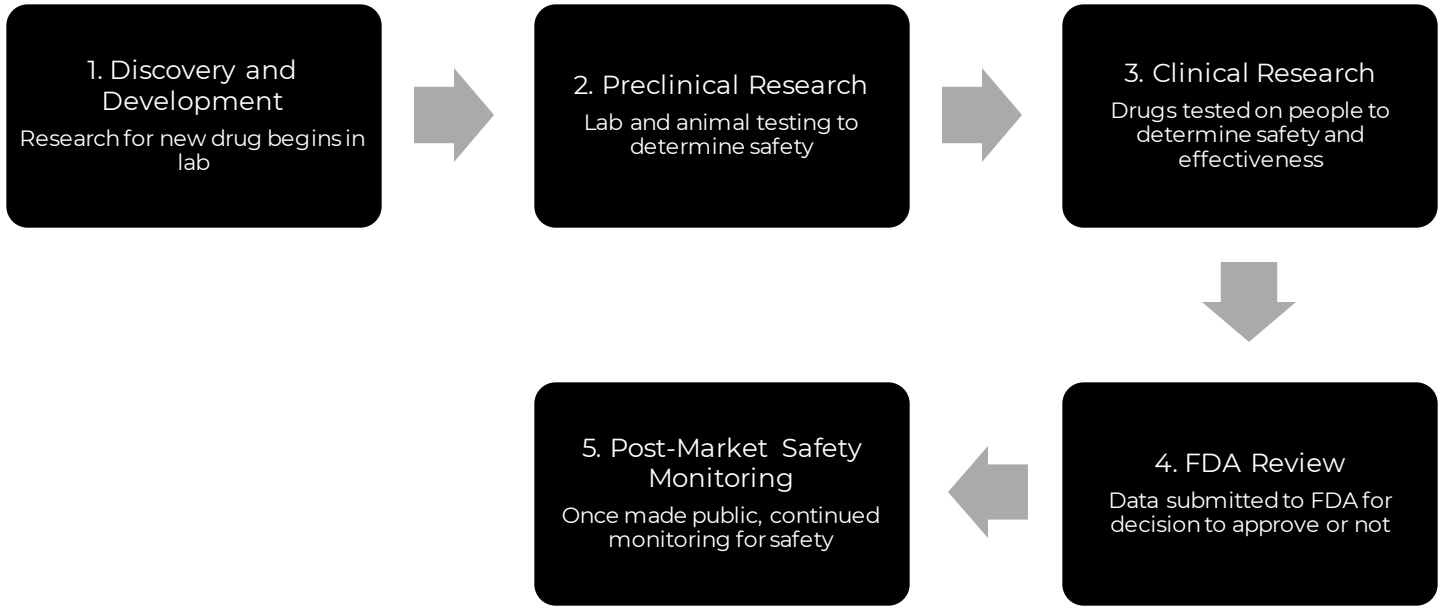
Source: FDA.gov webpage, "510(k) Submission Process," accessed April 2022; FDA.gov page "Medical Device User Fee Amendments" accessed April 2022; Qualio article – "FDA Medical Device Approval Process," published July 27, 2021 by Robert Fenton;

Drug Development and Approval Process

Prescription and over-the-counter drugs as well as biotech solutions are also regulated by the FDA in the US. The main agency for drugs under the FDA is the Center for Drug Evaluation and Research (CDER).

There are many steps required for a drug to be approved in the US and according to estimates on the VA website, it can take **10 years** for a new drug to go through the trials and approval process.

The estimates on costs to get drugs developed and approved vary very widely, with some estimates as low as $3 million and some as high as $2.6 billion.



Source: FDA.gov, accessed April 2022; Dept of VA.gov, accessed April 2022.

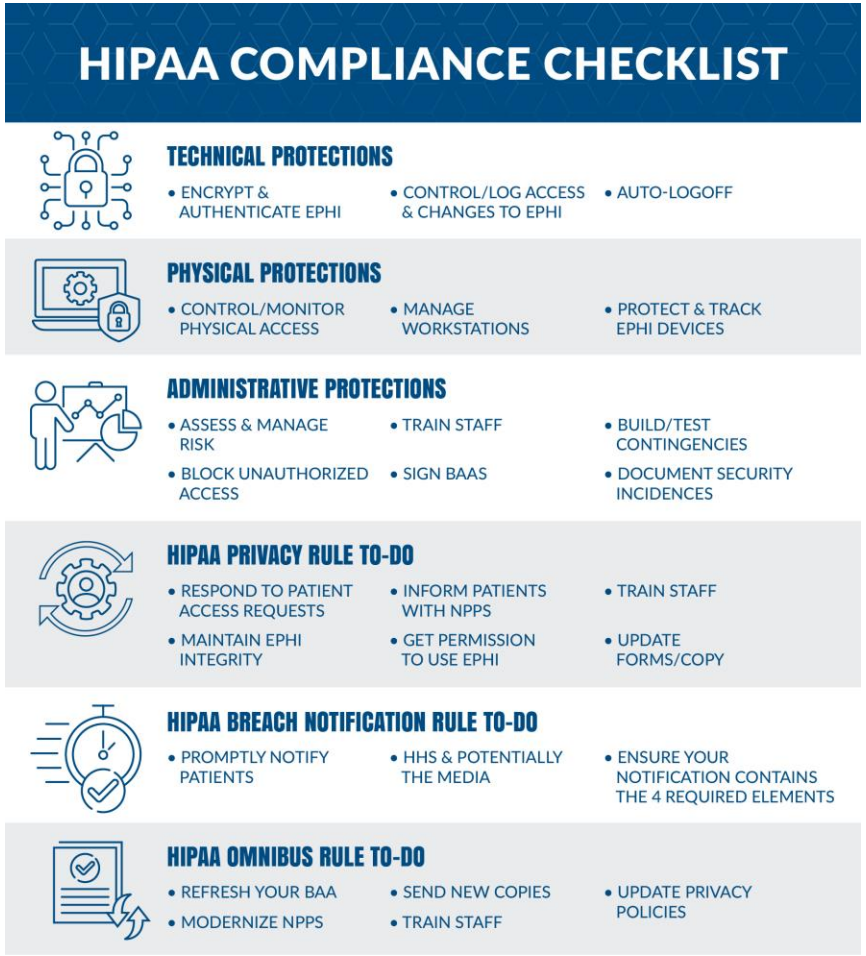
Patient Confidentiality Regulation

Keep in mind that there are stringent regulations in place to protect patient data and privacy.

The major piece of federal legislation is **HIPAA** (Health Insurance Portability and Accountability Act of 1996), which created standards to protect sensitive patient health information from being disclosed without patient consent. This has been expanded to include electronic data privacy provisions as technology has rapidly evolved. It is important to understand this regulation and how it may apply to your product as you enter the market to ensure your product is in compliance.

HITRUST (Health Information Trust Alliance) is an organization that offers a common security framework to manage risk, data and compliance, especially health care organizations.

SOC2 is an optional compliance framework established by the American Institute of CPAs (AICPA), while HIPAA is mandatory. It covers organization oversight, vendor management programs, internal corporate governance and risk management processes, as well as regulatory oversight.



Source: CDC, AICPA.org

Other Agencies of Note

CDC

The Centers for Disease Control and Prevention is the USA's national public health agency.

It is a federal agency under the Department of Health and Human Services.

Its main focus is on infectious disease control and prevention, food borne pathogens, environmental health, occupational safety and health, and injury prevention.

CMS

The Centers for Medicare and Medicaid Services (CMS) is a federal agency under the Department of Health and Human Services.

This agency works in collaboration with state governments to administer Medicaid and the Children's Health Insurance Program (CHIP).

VA

The US Department of Veterans Affairs (VA) is an agency under the executive branch of the federal government responsible for providing healthcare services to eligible military veterans at VA medical centers and outpatient clinics around the US.

CLIA

The Clinical Laboratory Improvement Amendments (CLIA) of 1988 are US federal regulatory standards that are relevant to all clinical lab testing on humans in the US.

Section 3

TRENDS

Technology Driving Trends in Health Care

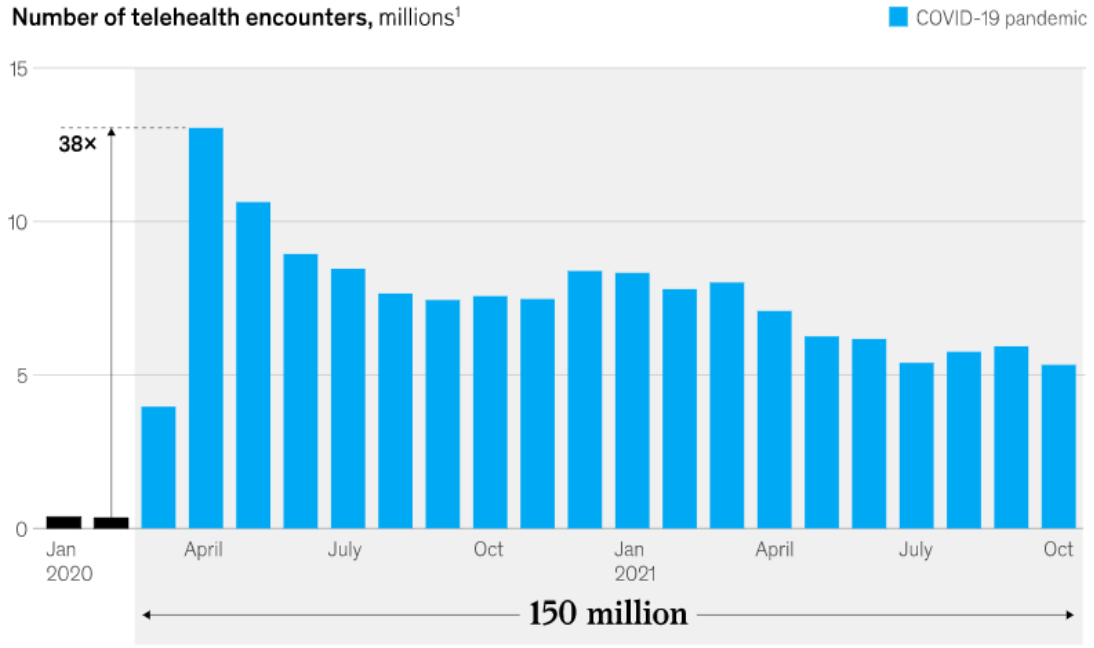
Major changes are happening in health care sector as technology is driving many parts of the industry to innovate. While there had been advancements in this area before, Covid-19 really accelerated a lot of these innovations, spurring on more investment in and development of different solutions. Some of the leading areas of change have been in the following areas:

- Telehealth/telemedicine
- AI/machine learning adoption in health care software
- Wearable devices

Telehealth in particular saw massive adoption over the last couple of years as Covid-19 raged, driving demand for virtual care options. Regulatory changes allowed for broader adoption, where prior to that point care providers had not been able to bill for virtual visits. Removing this barrier drove rapid adoption and many patients have indicated that they plan to continue using this care delivery option.

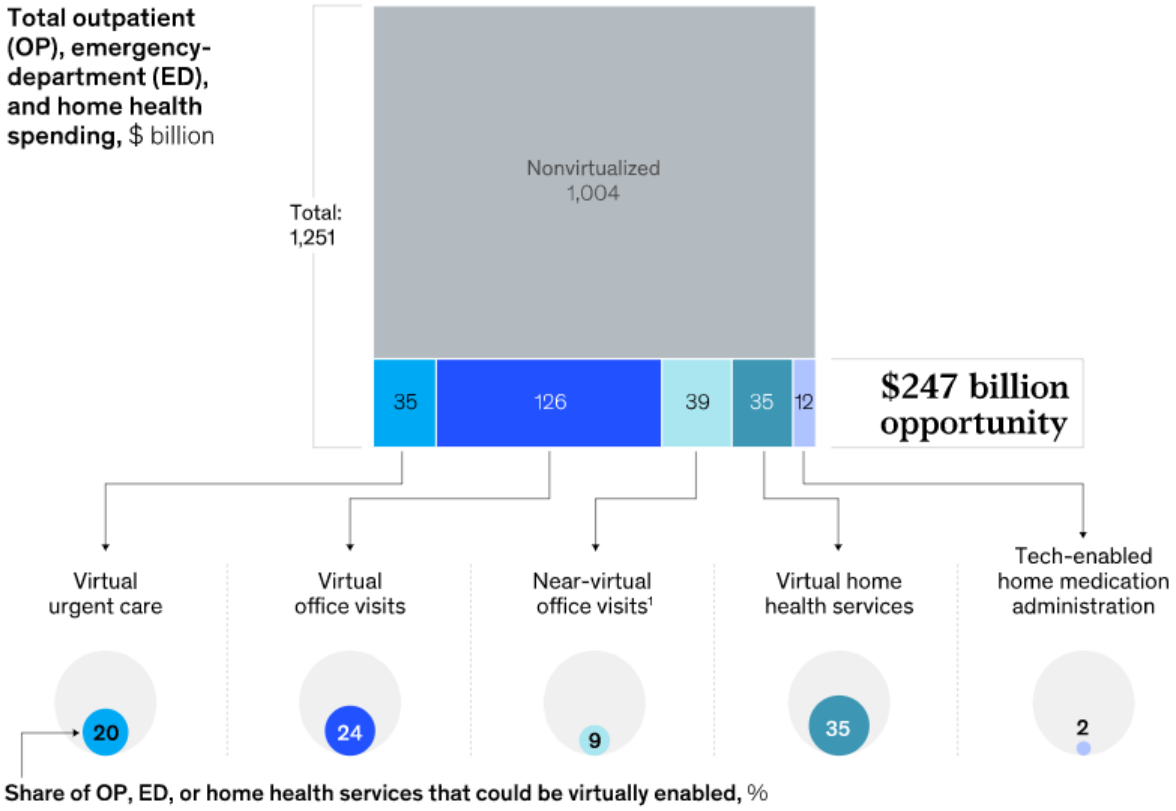
Virtual visits grew 3,000% at the beginning of Covid

Virtual health visits grew by 38 times early on in the COVID-19 pandemic.



[1]Includes evaluation and management visits only; excludes emergency-department, hospital inpatient, and physiatry inpatient claims; excludes certain low-volume specialties; extrapolated to the commercial market.
Source: Compile Health database; McKinsey analysis

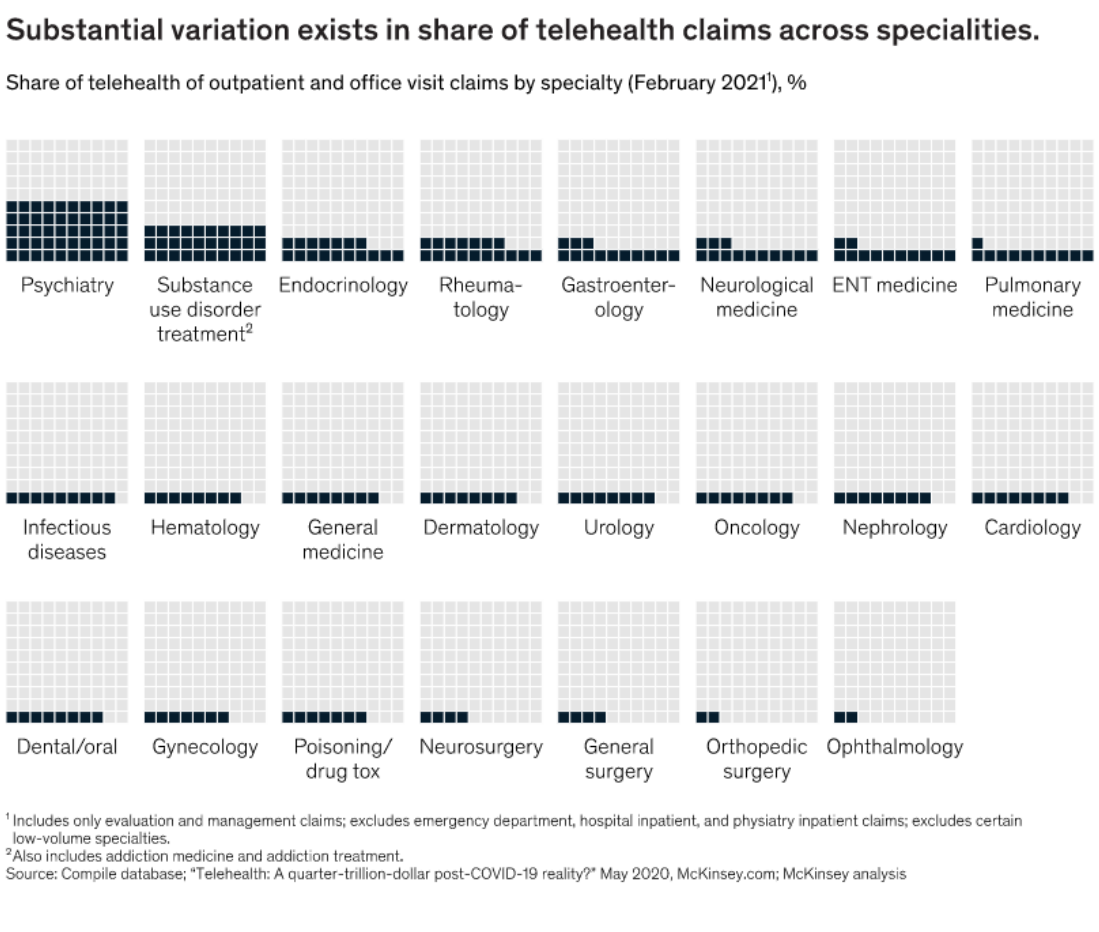
Around 20 percent of all Medicare, Medicaid, and commercial outpatient, emergency-department, and home health spending could be virtually enabled.

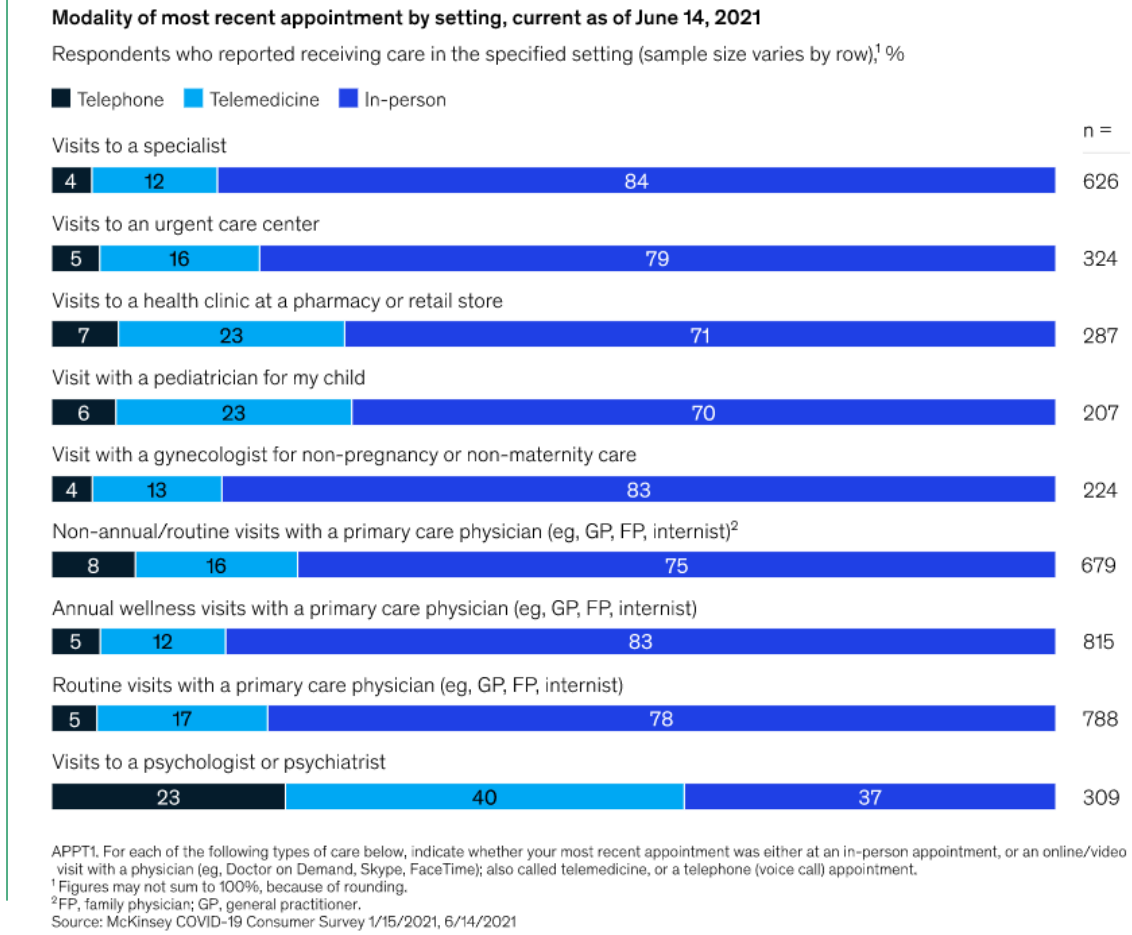


[1]Near-virtual office visits are services that require lab tests or diagnostics, with a portion of the visit requiring in-person interaction (for example, a blood draw), but the consultation with the physician or the review of the lab test results is virtual.

Source: McKinsey article, "The next frontier of care delivery in healthcare," Shubham Singhal, Mathangi Radha, and Nithya Vinjamoori, March 24, 2022.

Behavioral Health Well Suited for Virtual Care





Source: McKinsey article, "Telehealth: A quarter-trillion-dallar post-Covid-19 reality?," Oleg Bestsennyy, Greg Gilbert, Alex Harris and Jennifer Rost, July 9, 2021.

Advancements in AI and Wearable Technology

Increasingly, there will be a need for more tech solutions and improvements to enable the kind of virtual future patients are expecting.

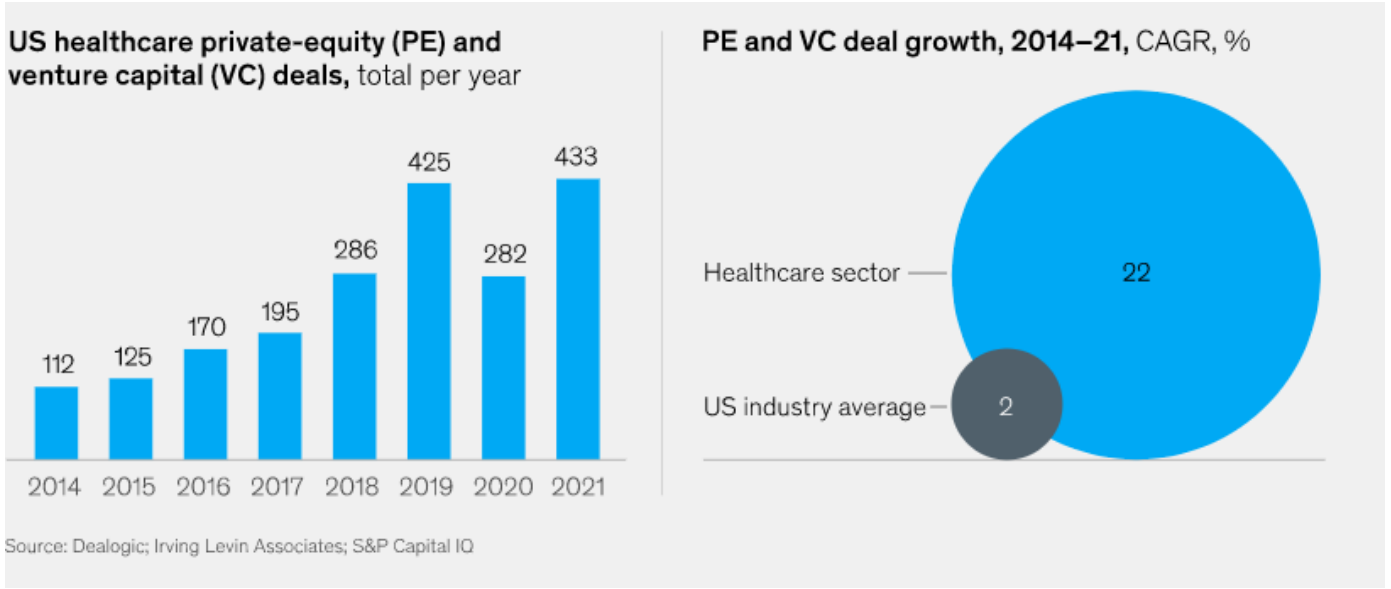
Not only do patients expect virtual visits to continue, more than 60% of patients expect to be able to schedule or change healthcare appointments online according to a recent McKinsey study.

Additionally, virtual capabilities can help reduce the amount of visits seen in office, easing some of the demand on an already over-burdened healthcare system.

Increasingly, post-surgery and chronic care monitoring could be assisted by rapidly improving wearable technology.

An HIMSS Future of Healthcare report indicated that 80% of healthcare providers expect to increase their investment in technology and digital solutions over the near term.

These virtual solutions are also showing an improvement in access to care in rural areas.



Source: McKinsey article, "The next frontier of care delivery in healthcare," Shubham Singhal, Mathangi Radha, and Nithya Vinjamoori, March 24, 2022; Forbes article, "The Five Biggest Healthcare Tech Trends in 2022," Bernard Marr, Jan 10, 2022.

Headline line 1
Headline line 2

SUBHEADLINE 1

SUBHEADLINE 2

NEW ZEALAND
TRADE & ENTERPRISE
Te Taurapa Tūhono

Appendix I

DICTIONARY OF TERMS

Dictionary of Terms

Affordable Care Act (ACA)

Sometimes referred to as “Obamacare,” this was the piece of health care reform that went into effect in March 2010 that established the infrastructure for the health care exchange, required Americans to have health insurance coverage, provided more opportunities for affordable insurance, required insurance companies to cover more preventive services, and expanded the Medicaid program to cover more adults (among other things).

Annual Limit

Some insurance plans place a limit on the amount of money they will pay each year. It may be specific to certain services like prescriptions or a set number of visits to certain providers. If the annual limit is reached, the member/patient is then responsible for all costs billed after until the year ends.

Accountable Care Organization (ACO)

This is the label given to a group of health care providers who work collaboratively to coordinate care with the aim of achieving better health outcomes that result in cost savings.

Affordable Coverage

This legalese applies only to insurance plans offered through job-based plan. This enables purchasers to qualify for a tax credit if the lowest-cost, self-only, job-based insurance plan available to them costs more than 9.61% of the employee’s household income

Annual Deductible Combined

For insurance plans with multiple covered persons, this is the amount that must be paid by the covered persons out of pocket before the insurance company begins to pay.

Benefits

This term refers to services or items covered under a health insurance plan. Insurers will often list out the benefits of different plans for consumers to consider before enrolling in the plan. The packages will list information like deductibles, copays and co-insurances for common types of services, as well as limits and out of pocket maximums.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Broker

This term refers to licensed individuals who may make recommendations and help people enroll in insurance plans through the Marketplace.

COBRA

COBRA is a federal law that allows people to continue receiving health insurance coverage for a temporary period of time after employment ends. It requires that the covered person pay all of the premiums, including the portion that was previously paid by the employer. COBRA is an acronym that stands for Consolidated Omnibus Budget Reconciliation Act.

Centers for Medicare and Medicaid Services (CMS)

CMS is the federal agency that oversees and runs Medicare, Medicaid, CHIP and the Marketplace that was established by the ACA.

Coinsurance

Coinsurance refers to the percentage of costs a member would pay for a certain service or item as stipulated by the insurance plan. Oftentimes, coinsurances apply once a patient has met their deductible.

Copayment

A copayment is a fixed fee patients pay for a covered health service. This payment goes to the service provider (ie doctor, laboratory, etc) and is stipulated in the plan before the patient enrolls. These can apply before or after the deductible has been met, depending on how the plan is structured.

Claim

A claim is a request for payment that is sent to the health insurance company after a service has been provided. The health insurance company will review the claim against what is covered under the member's individual plan and respond with an explanation of benefits (EOB) to the member and the service provider and include a payment if circumstances require.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Cost Sharing

This term refers to the costs covered by members under their own plans, inclusive of deductibles, coinsurance, copayments and other similar charges but not including premium payments or charges incurred by out of network providers/services.

Dental Coverage

It is worth noting that benefits to cover dental costs are always separate from medical coverage. This can refer to preventive services, like regular teeth cleanings, or resulting from other incidents.

Deductible

A deductible is the amount a member must pay for covered health services out of pocket before health plan will begin paying for services.

Department of Health and Human Services (HHS)

This is the federal agency that sits over CMS.

Durable Medical Equipment (DME)

DME refers to any equipment or supplies ordered by a health care provider used for everyday or extended use. For example, DME could refer to thing slike wheelchairs, oxygen equipment, crutches, etc

Emergency Room Care

Emergency services tend to be quite costly and thus are covered under different language in a health insurance plan. Emergency room care refers to the services that result in a patient ending up in an emergency room.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Eligibility Assessment

This term refers to the process by which Medicaid eligibility is determined. In some instances, it is determined through the Marketplace while in other places, the Marketplace may conduct and initial assessment that is passed on to the State Medicaid agency to conduct the final eligibility determination.

Emergency Services

This term refers to the medical interventions that resulting unexpectedly and any determinations made to prevent the condition from worsening.

Essential Health Benefits

One of the things that changed under the ACA was the requirement of essential health benefits, a list of categories of coverage that health insurance plans must offer in order to be eligible for purchase. It includes requirements for things like pregnancy and childbirth, mental health, doctor services, and outpatient hospital care, among other coverages.

Exclusive Provider Organization (EPO) Plan

This term refers to a type of managed care plan where services are only covered if provided by/within that plan's networked providers. Normally exceptions are made for emergency services.

Emergency Medical Transportation (EMT)

This refers specifically to the ambulance services utilized during an emergency medical event.

Family and Medical Leave Act (FMLA)

This refers to the federal legislation that guarantees up to 12 weeks of leave for employees for certain circumstances. This could be for mental health, serious illness or disability, to have a child, care for a family member or for other reasons.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Fee for Service

This is the phrase that describes the current health care system that predominates in the US in which health care providers bill and are compensated for each service provided.

Generic Drugs

This is the term used to refer to a prescription drug approved by the FDA as being safe and effective that has the same ingredients as a brand-name drug, but are often priced lower than the brand name.

Group Health Plan

This refers to a health plan offered by an employer or employee organization, rather than a consumer going directly to an insurance company seeking coverage. There is less flexibility in terms of the benefits provided, but often the premiums are lower when offered at a group rate.

HIPAA

HIPAA stands for the Health Insurance Portability and Accountability Act and was passed in 1996. This is a set of federal laws designed to protect sensitive patient information from disclosure without patient consent. It also outlines requirements to protect electronic storage and sharing of patient records.

Health Insurance Marketplace

Established by the ACA, this is a federally operated "exchange" where consumers can shop for and enroll in health plans. Some states may run their own marketplaces. The landing page usually asks information about your household and income to determine if you qualify for tax credits or other programs.

Health Coverage

This phrase refers to one's legal entitlement to payment or reimbursement for health services as stipulated under contract with a health insurance company or group health plan offered by your employer or a government agency.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Health Maintenance Organization (HMO)

This is one of the more restrictive types of insurance coverage, limiting a member's coverage unless formally approved by a member's primary care provider, normally through a referral or pre-approval process. These types of plans are normally restricted to a small geographic area, only providing reimbursement if the services are provided within a specific service area. Normally these do not have robust out-of-network coverages either.

In Network

Individual health providers (doctors or health systems) will often negotiate their own reimbursement rates with health insurance companies for various procedures and services in order to be "in network" with those plans. A member's insurance reimbursement/coverage will usually be more robust if they visit a provider or location that is "in network" with the insurance plan.

Out of Network

If the medical provider or location does not have contracted rates with the health insurance plan, that is considered "out of network," and either must be paid fully out of pocket by the patient/member without applying toward the deductible or will have a much lower reimbursement rate depending on the specific plan stipulations.

Inpatient Care

This refers to the care received when admitted to a hospital or skilled nursing facility, normally for a longer term period, as opposed to outpatient care which is normally much shorter of a duration of time spent in the medical facility.

Job-based Health Plan

This refers to health insurance plans that are offered to employees and their family members through their employer.

Non-preferred Provider

This is another phrase similar to "out of network" to refer to a health care provider who does not have a contract with a health insurance plan.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Medicaid

Medicaid is the federal insurance program that is available to low-income people, families, pregnant women, and people with disabilities. Some coverages vary by state, as the states have the ability to expand the program beyond the baseline established by the federal government.

Medicare (Part A, B, C, etc)

Medicare is the federal insurance program available to people over the age of 65 and some younger people with disabilities. There are different Medicare plans for the different types of coverage. Part A covers hospital insurance, Part B covers medical insurance (outpatient care, doctor visits, durable medical equipment like wheelchairs, walkers, Part D is prescription drug coverage. Part C is also referred to as Medicare Advantage Plan, and it is a plan with Part A and B coverage that is administered through a private insurance company that is approved by Medicare. They usually also include vision, dental, and prescription coverages.

Open Enrollment Period

This is the yearly period when people can enroll in a health insurance plan for the upcoming year. This usually happens between September-November. There are also opportunities for special enrollment for certain life events, like losing other health coverage, enrolling in a new job, having a baby, etc.

Premium

This is a fixed payment paid each month to the insurance company regardless of whether the insurance is being actively used or not. Under an employer based insurance plan, premium payments are typically shared between the employer and the employee.

Primary Care

This is the term used to describe health services focused on prevention, wellness and treatment for common illnesses.

Primary Care Provider

The providers tend to be long term providers and can be licensed as MDs, DOs, NPs, or PAs. If your insurance plan requires referrals for specialists or prior authorizations for certain medications or procedures, these often need to be provided by the primary care provider, viewed as the coordinator of care for their panel of patients.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Preferred Provider Organization (PPO)

This is a type of health insurance plan that usually has the most flexibility. The plan contracts with a group of participating medical provider networks and provides a discount for using services within that network. It is generally not as geographically constrained as an HMO plan.

Qualifying Leave Event (QLE)

This refers to the type of special major life events that may make one eligible for a special enrollment period in health insurance plans outside of open enrollment. This could include loss of health coverage, a change in household, a change in residence, among other events.

Referral

Referrals are formal, written orders from a primary care provider for a specific treatment, test or prescription. Under an HMO insurance plan, referrals are required from the PCP for patients to visit a specialist or the plan will not pay for any portion of the claim.

Social Security

This is the system that distributes financial benefits to retired or disabled folks and the spouses and dependents based on their reported earnings. It is collected via tax payments made while people are working.

Urgent Care

Urgent care clinics provide medical care when an illness or injury requires urgent attention but may not be severe enough to warrant a visit to the emergency room. Emergency room visits are quite expensive, but it can be difficult to schedule urgent appointments with a primary care provider for acute issues, so urgent care can provide a good solution in those moments.

Value-Based Care

This health care model is quite different from a fee for service model. This care model links provider payments to actual health outcomes. The goal is to reduce inappropriate care and reward better health outcomes.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Vision Coverage

Vision coverage is usually separate from medical insurance coverage. This health benefit will cover most preventive vision care like eye exams, contacts and glasses. Medical insurance would be used in the case of major eye injury, however.

Veterans Affairs (VA)

VA health care benefits are available for many veterans who served in the active military, naval or air service. These plans have no premiums and provide many medical benefits. Tricare is a similar program for military retirees and their spouses and dependents that has no copayments or premiums.

Wellness Programs

Wellness programs are incentives offered either through the insurance plan or through the employer on behalf of the plan to incentivize preventive behaviors. They may offer you a discount on your health insurance premium for attending preventive health screenings, enrolling in diabetes management programs, smoking cessation programs, or weight loss programs. Sometimes they may be discounts on gym memberships or other incentives.

Worker's Compensation

There are federal and state level worker's compensation programs that require employers to compensate employees who fall ill or are injured resulting from a workplace condition.

Integrated Delivery System/Network (IDS/N)

An integrated delivery system is a health system that intends to coordinate care through the patient journey and manage population health from managing the insurance risk down to managing patient health outcomes. Kaiser is one example of a vertically integrated system that has 3 incorporated systems: a health insurance arm, a medical provider arm, and a hospital system all integrated under one company with the intention to manage costs, risks and health outcomes.

Group Purchasing Organizations (GPOs)

This is the term that refers to the entity that coordinates across multiple groups of businesses in order to leverage the purchasing power of a larger group of buyers to influence discount prices from insurance vendors.

Source: healthcare.gov glossary, accessed April 5, 2022.

Dictionary of Terms

Specialist

While primary care providers (PCPs) tend to be health generalists, they will often refer patients to specialists as needed. Specialists are providers with expertise in a specific area of medicine who may help with testing, diagnosis or treatment plans of certain symptoms and confitions.

Over the Counter (OTC) Drugs

Over-the-counter drugs are drugs that do not require a prescription from a doctor in order to purchase and can easily be found in pharmacy aisles at the store. There is a schedule that dictates how heavily controlled certain drugs are in the US.

Secondary Care

This is another term to refer to a specialist. This refers to medical providers aside from one's primary care who may have a more specialized expertise to assist with one's condition.

Pre-existing Condition

Pre-existing conditions are known health problems a person had before enrolling in a health insurance plans. One of the major achievements of the ACA was making it illegal for health insurance companies to deny coverage or charge higher rates to people with certain pre-existing conditions when enrolling in health insurance plans.

Source: healthcare.gov glossary, accessed April 5, 2022.

Appendix II

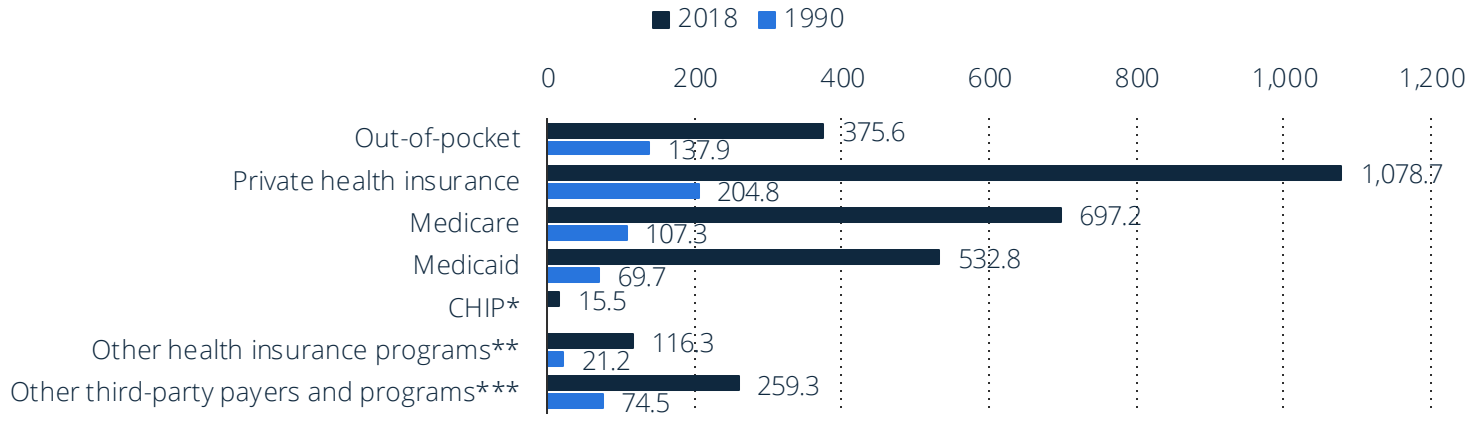
OTHER CONTENT

Growing Cost of Health Insurance in the US

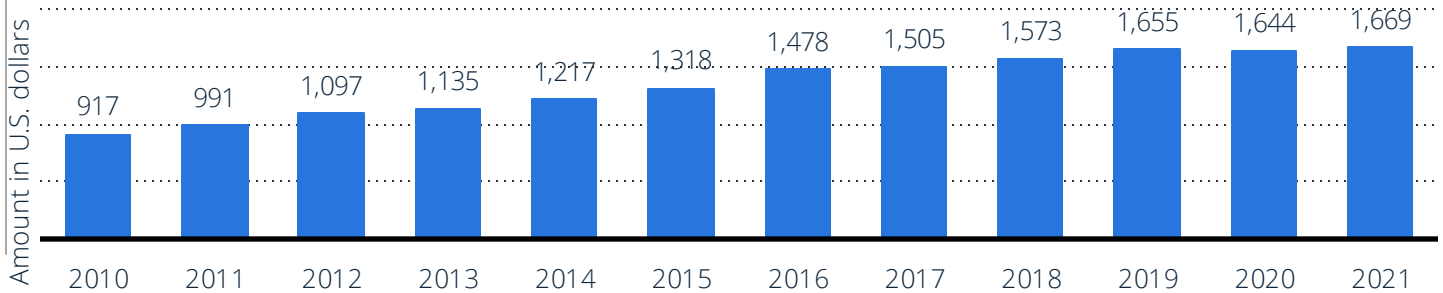
As previously mentioned, the cost of health care and health insurance has ballooned in the US over the last couple decades.

The graph comparing 1990 to 2018 is particularly telling, and part of the increase in cost resulted from employers looking for opportunities to ease the cost they were contributing to premium payments for their employees sponsored under their programs, but that was largely triggered by massive increases to premiums as well.

Personal Health Care Expenditure in US in 1990 and 2018



Avg Annual Deductibles for Employer-Sponsored Health Plans in US

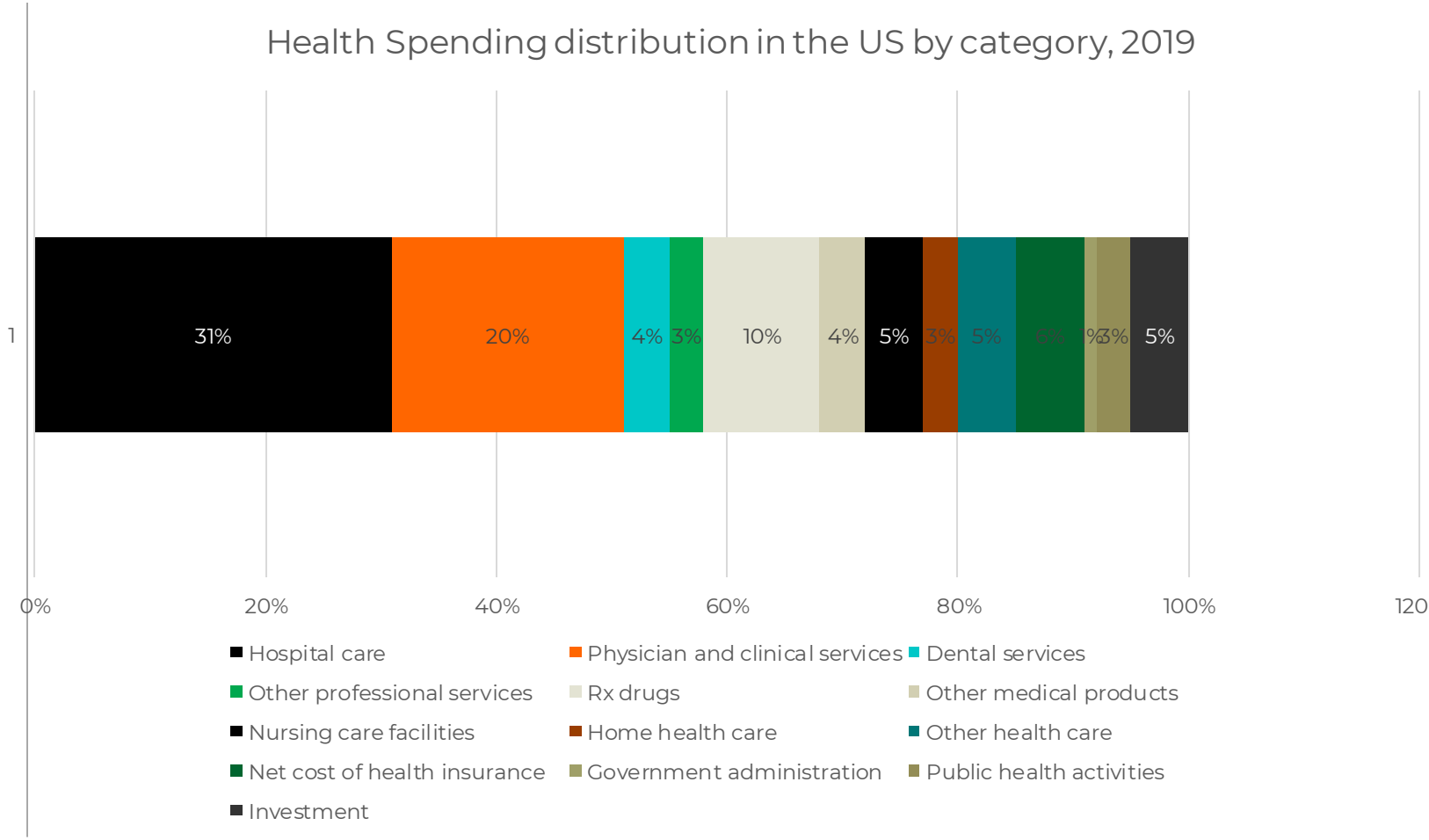


Source: Statista Report, "Health Insurance in the United States," accessed May 2022.

Health Spending Breakdown

In the US, medical insurance coverages are often separate from dental and vision insurance coverages.

While the major costs associated with US health spending can be attributed to hospital care and physician/clinical services, 10% of spending on its own can be attributed to prescription drugs and 4% to dental services.



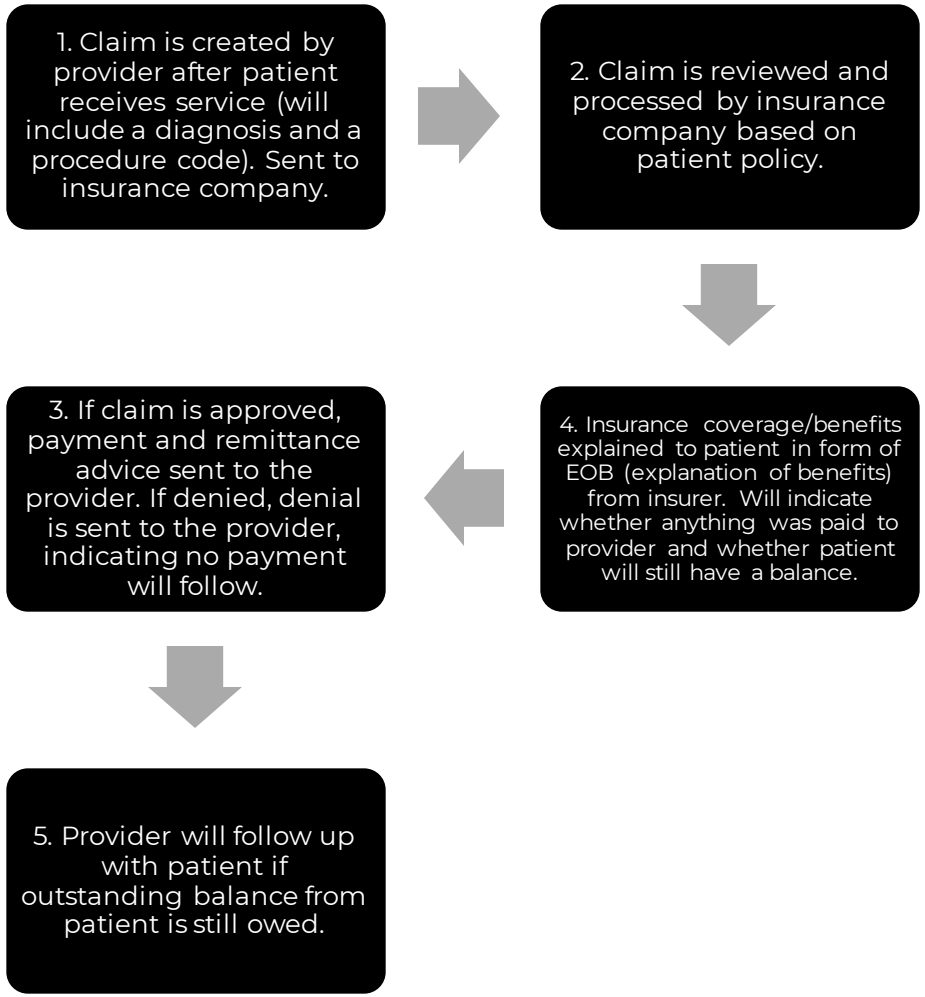
Source: Statista report, "Health Expenditures in the United States," from CMS.

Lifecycle of a Health Insurance Claim

One of the contributing factors to the rise in health care costs in the US is the lack of transparency in the real costs of health care.

It is a common complaint amongst consumers of health care, that costs are practically impossible to find out in advance and unexpected (and large) health care bills are very common, even amongst those with health insurance coverage.

If we look at the lifecycle of health care claims in the US, it helps to explain how that could happen with the many layers of review and adjustment that happen.



Source: Statista report, "Health Insurance in the United States," from US Census Bureau.

Pre 20th Century Medicine

Before the 20th century, hospitals were predominantly places where the poor went to die. If you were wealthy, a physician would come to your home when you were ill. Physicians who worked in hospitals at that time were often volunteers, not receiving compensation for their work at hospitals.

It wasn't until 1928 that antibiotics were discovered. There were no medications to manage pain during surgeries, physicians performed surgeries in their street clothes with instruments that had not been sanitized.

Babies were born at home and the laboring mothers were assisted by midwives. The elderly were attended to at home by their relatives.

At the time, the idea of preventative medicine was not at all developed so people spent very little on health care.

Source: USA Today, "What health care and hospitals looked like 100 years ago," John Harrington, Oct 13, 2019; NPR, "Accidents of History Created US Health System," Alex Blumberg and Adam Davidson, Oct 22, 2009; TIME, "The American Health Care System Has Lots of Problems. Here's When They Started," Lily Rothman, Jul 13, 2017.

Scientific Advancements Change the Industry

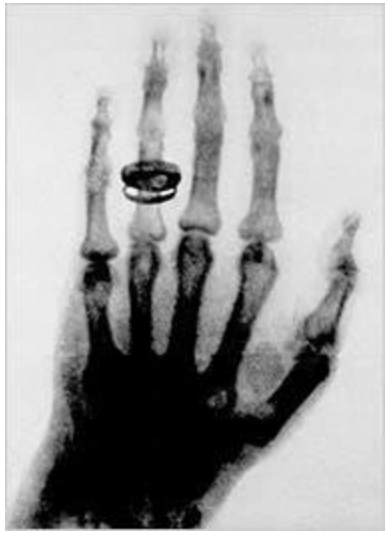
Toward the end of the 1800s and beginning of the 1900s, scientific discovery led to some major improvements in the medical world.

Louis Pasteur's germ theory took off and vaccines began to develop for cholera, tetanus, diphtheria, typhoid, Bubonic plague, whooping cough, tuberculosis and many others.

Aspirin was developed in 1899, x-rays were discovered in 1895, insulin was used to treat diabetes in 1922 and penicillin was discovered in 1928.

Where previously there had not existed any standards or regulations for physicians, that started to change and membership in the American Medical Association (AMA) began to grow rising from 8,000 members in 1900 to 70,000 in 1910.

At the same time, the 1918 influenza pandemic led to an influx of patients into hospitals. There was a major investment to build more hospitals at that time. Between 1909 and 1932, the number of hospital beds increased 6 times as fast as the general population and more were being funded publicly, where previously they had been primarily privately financed.



Source: Hajar, Rachel. "History of medicine timeline." Heart views : the official journal of the Gulf Heart Association vol. 16,1 (2015): 43-5. doi:10.4103/1995-705x.153008; AMA Journal of Ethics, Virtual Mentor. 2008;10(5):324-331. doi: 10.1001/virtualmentor.2008.10.5.mhst1-0805.

The First Health Insurance Plans

The improvements in medical treatments increased the demand for these services. Hospitals were no longer only seen as a place where people went to die.

At the same time, the cost of care was quite high and most average families could not afford the very large bills that resulted from hospital visits, resulting in hospitals with empty beds.

There was an appetite to explore ways to enable average families to access care. In 1929, a group of school teachers in Dallas, Texas got together and contracted with Baylor University Hospital to receive up to 21 days of inpatient care per year in exchange for a payment of 50 cents per month.

Then the Great Depression hit and hospitals were left empty because of an inability to pay. More and more people were looking for cost effective ways to access health care; the Blue Cross idea took hold and began to spread. By 1937, more than 600,000 people were enrolled across 26 similar plans, which combined to form the Blue Cross network and was recognized by the American Hospital Association (AHA).

Source: AMA Journal of Ethics, Virtual Mentor. 2008;10(5):324-331. doi: 10.1001/virtualmentor.2008.10.5.mhst1-0805; ; NPR, "Accidents of History Created US Health System," Alex Blumberg and Adam Davidson, Oct 22, 2009.

Employer Based Health Insurance Grows in Popularity

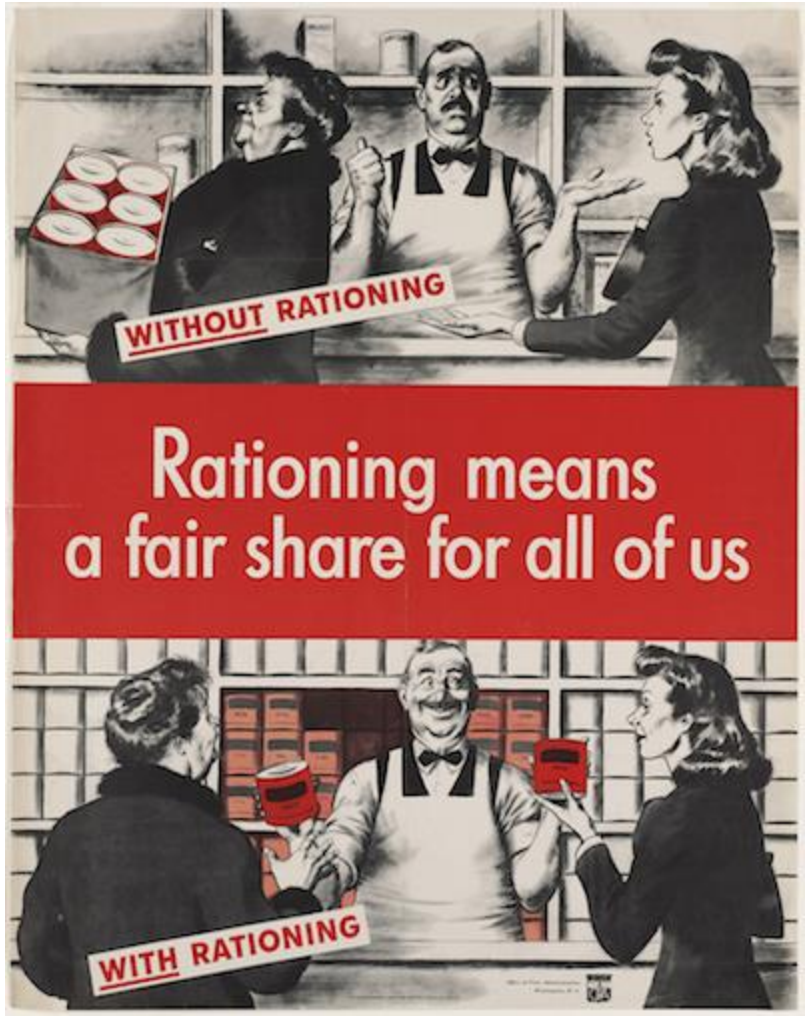
As the broad acceptance of Blue Cross expanded to provide access in almost every state, there was still relatively low voluntary enrollment in the plans. World War II and some new tax laws changed that.

During World War II, there were rations on everything and a massive shortage of labor. Wage caps had been implemented, so factory owners were looking for creative incentives to attract more labor.

At the same time, the IRS ruled that employer-based health care would be tax free in 1943.

The result of these two events was that voluntary enrollment in employer-based health insurance went from 9% of the population in 1940 to 63% in 1953, and over 70% by the 1960s.

As a result, it has become pretty commonplace in the US to expect to receive health insurance benefits through one's employer.



Source: NPR, "Accidents of History Created US Health System," Alex Blumberg and Adam Davidson, Oct 22, 2009.