



INVESTING IN ENTREPRENEURS THAT IMPROVE
HEALTHCARE

Investment Area of Interest:
Free Market Healthcare

April 2020

Executive Summary

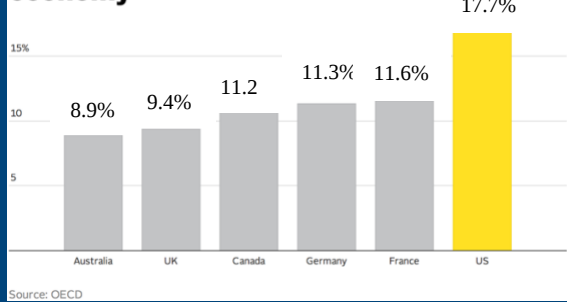
As it becomes increasingly apparent that the United States healthcare system is flawed, unique models for healthcare are emerging in a variety of forms. Individuals opposed to universal coverage are proposing alternative health plans while others are opening healthcare centers that are charged according to prices online or on a subscription basis. Patients are traveling to foreign countries to avoid the high deductible cost for treatments in the United States and entrepreneurs are creating e-commerce platforms for healthcare to allow individuals to compare costs ensure transparent pricing. All these approaches are fighting against the same problem: the rising cost of healthcare in the United States.

Main Drivers of Rising Healthcare Costs

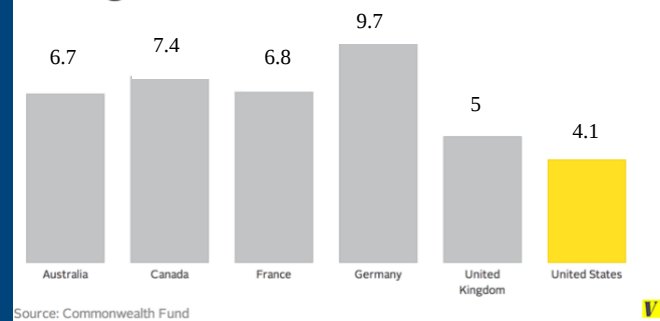
Overview

Healthcare expenditure reached \$3.6 trillion in 2018, amounting to 17.7% of GDPⁱ. The United States spends drastically more on healthcare than all other developed countries. In fact, if United States spending on healthcare was its own economy, it would be the fifth largest in the worldⁱⁱ. Ironically, at the same time its citizens are receiving less care. The United States per capita spending on healthcare was about \$9,892 in 2016, 145% higher than the OECD median, yet, the amount of practicing physicians per 1,000 population is only 2.6 in the US, in comparison with an average of 3.2 in OECD countriesⁱ.

Health spending as a percent of the economy



Average doctor visits per person

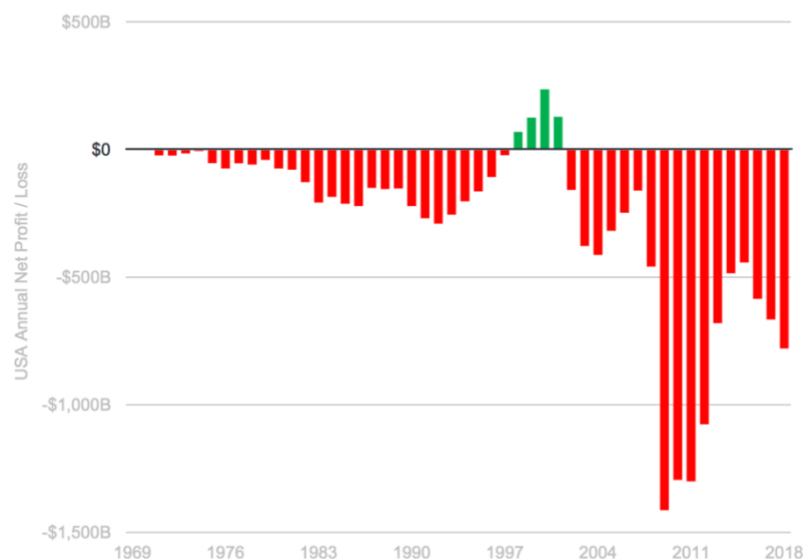


The United States spends up to 50% more than other countries for a lower average number of doctors visits.

Healthcare costs in the United States have a huge influence on the United States overall financials. As seen in the slide below, the United States income statement has revealed a net loss in the vast majority of the past 50 yearsⁱⁱⁱ. The following slide demonstrates the impact social security and Medicare, as well as rising costs and the aging population have had on the United States income statement over the last 20 yearsⁱⁱⁱⁱ. The last slide reveals the highest growth in spending has been driven by Medicare and Medicaidⁱⁱⁱ.

...USA Income Statement = Net Losses in 45 of 50 Years

USA Annual Profits & Losses

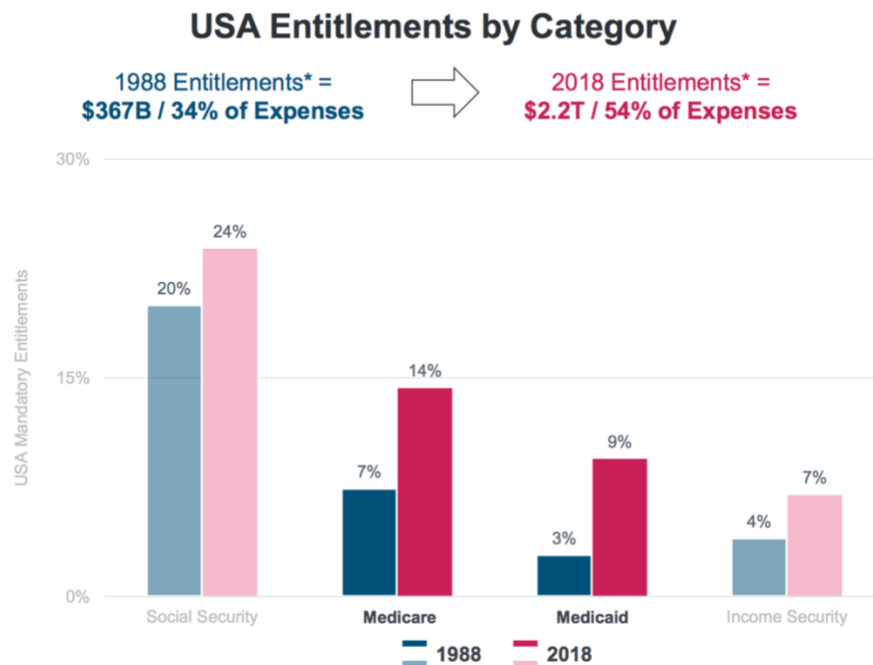


USA Income Statement = -18% Average Net Margin Over 30 Years

USA Income Statement

	F1988	F1993	F1998	F2003	F2008	F2013	F2018	Comments
Revenue (\$B)	\$909	\$1,154	\$1,722	\$1,782	\$2,524	\$2,775	\$3,330	
Y/Y Growth	6%	6%	9%	(4%)	(2%)	13%	0%	+5% Y/Y average, 1988-2018
Individual Income Taxes*	\$401	\$510	\$829	\$794	\$1,146	\$1,316	\$1,684	Largest driver of revenue
% of Revenue	44%	44%	48%	45%	45%	47%	51%	
Social Insurance Taxes	\$334	\$428	\$572	\$713	\$900	\$948	\$1,171	Social Security & Medicare payroll tax
% of Revenue	37%	37%	33%	40%	36%	34%	35%	
Corporate Income Taxes*	\$95	\$118	\$189	\$132	\$304	\$274	\$205	Fluctuates with economic conditions
% of Revenue	10%	10%	11%	7%	12%	10%	6%	
Other	\$79	\$99	\$133	\$144	\$174	\$237	\$271	Estate & gift taxes, duties / fees...
% of Revenue	9%	9%	8%	8%	7%	9%	8%	
Expense (\$B)	\$1,064	\$1,409	\$1,652	\$2,160	\$2,983	\$3,455	\$4,109	
Y/Y Growth	6%	2%	3%	7%	9%	(2%)	3%	
Entitlement / Mandatory	\$448	\$671	\$859	\$1,182	\$1,595	\$2,032	\$2,522	Risen owing to rising healthcare costs + aging population
% of Expense	42%	48%	52%	55%	53%	59%	61%	
Non-Defense Discretionary	\$174	\$247	\$282	\$419	\$522	\$577	\$639	Education / law enforcement / transportation / general government...
% of Expense	16%	18%	17%	19%	18%	17%	16%	
Defense	\$291	\$292	\$270	\$405	\$612	\$626	\$623	2008 increase driven by War on Terror
% of Expense	27%	21%	16%	19%	21%	18%	15%	
Net Interest on Public Debt	\$152	\$199	\$241	\$153	\$253	\$221	\$325	Recent benefit of historic low interest rates
% of Expense	14%	14%	15%	7%	8%	6%	8%	
Surplus / Deficit (\$B)	(\$155)	(\$255)	\$69	(\$378)	(\$459)	(\$680)	(\$779)	
Net Margin (%)	(17%)	(22%)	4%	(21%)	(18%)	(24%)	(23%)	-18% average net margin, 1988-2018

USA Entitlements = Medicare + Medicaid Driving Most Spending Growth...



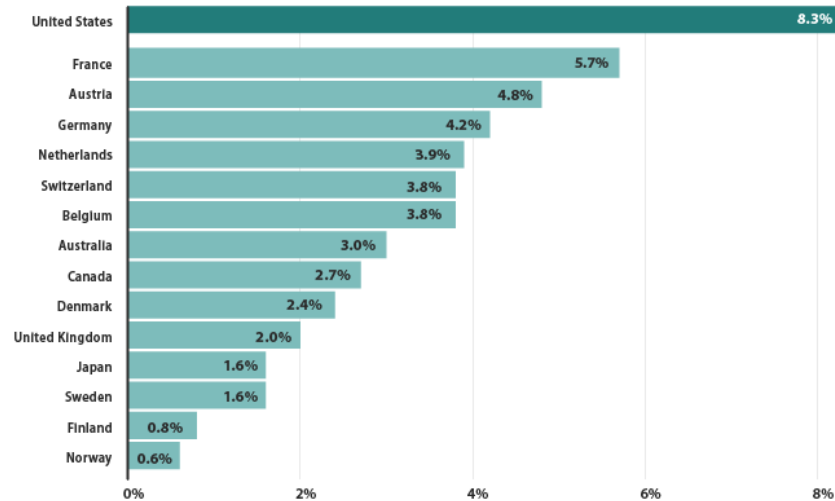
Administrative Costs

Approximately 25% of healthcare spending, or \$760 billion, is considered unnecessary or wasteful^{iv}. This is equivalent to total government spending on Medicaid or government spending on the military and primary and secondary education combined^{iv}. Administrative costs, namely time and resources spent on reporting and billing are the largest source of waste. One commonly cited solution to reduce spending on administration is the adoption of a single-payer system. However, others argue that this would be difficult as powerful individuals within the insurance industry would strongly resist this, and with a simpler system many jobs would be lost. Regardless, there is clearly room for administrative simplification, as countries like Switzerland and the Netherlands use private payers but have significantly lower administrative costs. In the United States, total administrative billing costs amount to about \$812 billion - \$2,500 per capita - or 34% of total healthcare expenditure^v. No matter how you break it down, the United States spends a drastically larger percentage on administrative costs than any other high-income country.

FIGURE 1

Administrative costs comprise a larger share of health care spending in the United States than in other high-income countries

Administrative spending as a percentage of total health expenditures, 2016*

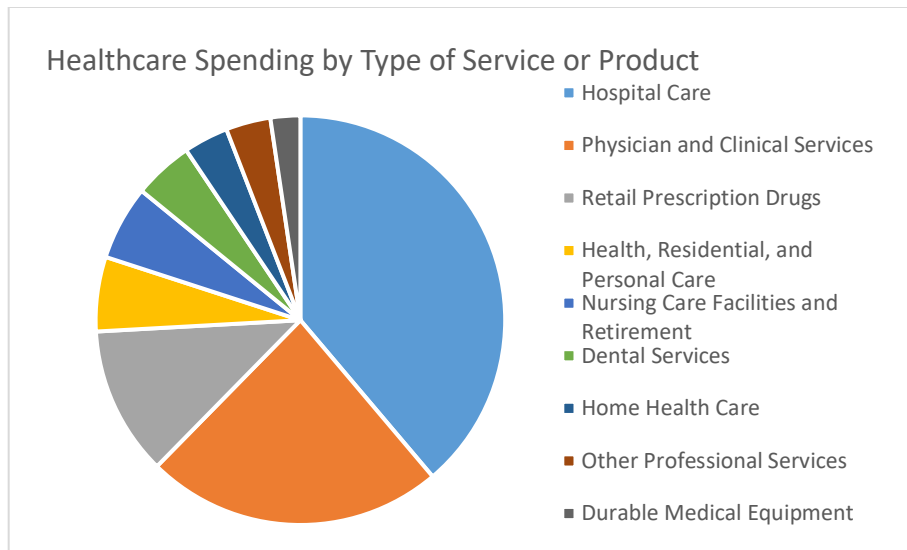


*Note: Data for Australia and Japan are for 2015; data for all other countries are for 2016.

Source: Organisation for Economic Co-operation and Development, "Health expenditure and financing," available at <https://stats.oecd.org/index.aspx?DataSetCode=SHA> (last accessed January 2019).



There are many other reasons for the excessively high costs in the United States health system as well. The products and services driving the highest costs are: hospital care (33%), physician and clinical services (20%), and retail prescription drugs (10%)^{vi}. In addition to the products and services listed below, fraud and medical malpractice lawsuits contribute significantly to healthcare expenditure.



Hospital Pricing

Within the category of hospital care, one large – and counterintuitive – driver of high prices is non-profit hospitals. In 2016, seven of the ten most profitable hospitals in 2016 were non-profits, each making over \$160 million from patient care alone^{vii}. Many people assume these hospitals must be operating with pure intentions because of their status designation; however, a big reason for the “nonprofit” title is a way to avoid paying taxes. Non-profit hospitals are not required to pay property taxes, sales taxes, or taxes on the federal or state level. This policy intended to act as an incentive for these hospitals to redirect these dollars into providing care for those who are in need and can’t afford it, yet, that is not always the case. Instead, a lot of this money is used for a wide variety of non-charitable spending, including absurdly high salaries for high level hospital executives. In 2016 almost 50% of the CEOs of the United States leading nonprofit hospitals had salaries over \$2.5 million and there were nonprofit hospital executive salaries reported at over \$20 million^{viii}. The excess capital is also used to gain political power by lobbying Congress and gaining ability to influence legislation. In fact, hospitals and nursing homes spent more than \$100 million on lobbying activities in 2018^{ix}**Error! Bookmark not defined..** Additionally, some hospitals use funds to gain market power by buying smaller practices to eliminate competition.

How does this happen? Primarily through unmonitored billing practices. Nonprofits have the ability to essentially make up their prices when filling out the charitable contribution

section on their 990-tax forms. They inflate the cost far above the price at which Medicaid or private insurance would reimburse them, making their charitable services appear much greater in volume and cost than they really are. This is one of the many reasons that hospital prices are steadily rising. Between 2007 and 2014 hospital prices rose by 42%^x. These prices are increasing despite the fact that United States hospitals already charge 60% more than their European counterparts^{xi}. As mentioned, in the US, hospital care accounts for about one third of total health care costs, meaning rising prices in this area have huge implications on healthcare expenditure overall^{xii}.

Another strategic play in United States health care system benefiting large hospital systems is the Certificate of Need laws, which exist in 35 states. The law's stated purpose is to keep hospitals from overspending by requiring hospitals to get approval from the state before installing new medical equipment, building new facilities, or installing new technology. However, in practice this law helps powerful health system chains prevent regional competition and increase healthcare costs. Furthermore, in the case of a pandemic, like COVID-19, these laws leave the United States with a shortage of beds, ventilators, and other essential healthcare items. The Certificate of Need laws are cited as one of the reasons why the United states only has 2.8 beds per 1,000 people, fewer than Italy (3.2), China (4.3), and far fewer than South Korea (12.3)^{xiii}. Unfortunately, the lethal consequences of these laws are not limited to times of global pandemics (See below^{xiv}).



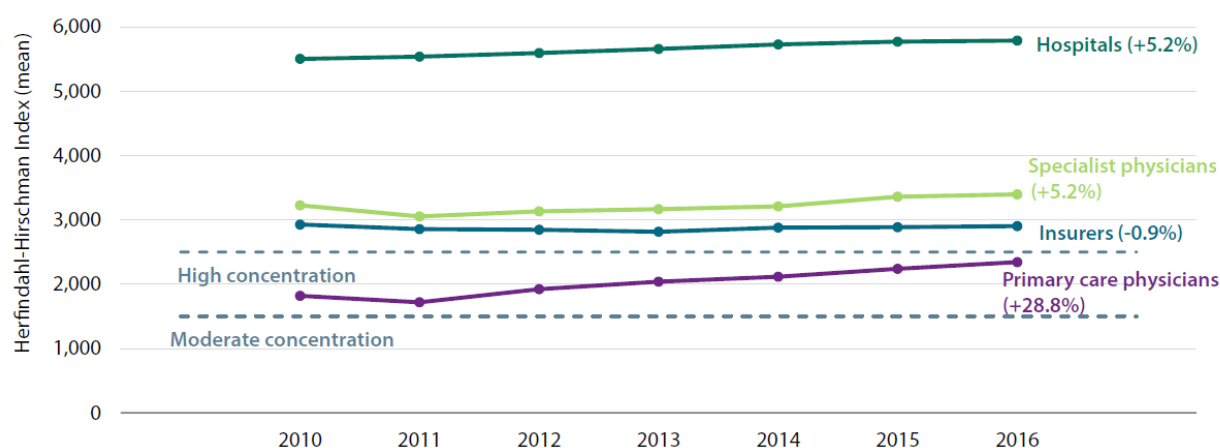
“I had to go back to the mother and tell her ‘We did what we could, but your baby died,’” Dr. Harding Recalled. “We need that NICU,” he said, his voice cracking. “We just – we need it.”

This quote is from 2 years after LewisGale Medical Center in Salem, Virginia applied for an eight bed NICU that could have saved the child's life. LewisGale had the ability and desire to fund the construction and staffing of the entire project. Despite the great need for additional services in the growing county and widespread support from the community, the application was denied due to resistance from LewisGale's largest competitor, which gained support from the State's Department of Health. The argument for preventing the construction of the facility was that “patients and obstetricians who may have been reluctant to choose [LGM], due to lack of either specialty or intermediate level special care nursery services will be more inclined to use [LGM] if the project is approved”, essentially stating their desire to eliminate choice.

The Certificate of Need Laws, among other policies acting as a barrier to entry or promoting consolidation have led to high market concentration, especially among hospitals. The Herfindahl-Hirschman Index is a metric commonly used to measure market concentration, and according to the Department of Justice/Federal Trade Commission Merger Guidelines an HHI of over 1,500 leads to moderate concern over the concentration level and an HHI over 2,500 leads to high levels of concern^{xv}. The graph below demonstrates the alarming, and still increasing, HHI index for verticals within the healthcare industry.

FIGURE 9.

Market Concentration by Health-Care Sector, 2010–16



Source: Fulton 2017.

Note: The Herfindahl-Hirschman Index (HHI) is a measure of market concentration. After defining the boundaries of a market and calculating each firm's market share, HHI is calculated by summing the squared market shares of all firms, then multiplying the sum by 10,000. Moderate concentration indicates an HHI of 1,500 and high concentration indicates an HHI of 2,500. These thresholds are established by the U.S. Department of Justice and Federal Trade Commission's Horizontal Merger Guidelines. Each HHI value is the sector-specific mean of metropolitan statistical areas values. Percentages in parentheses show growth in HHI from 2010 to 2016.

THE
HAMILTON
PROJECT
BROOKINGS

Martin Gaynor, a Professor at Carnegie Mellon University and the former director of the Bureau of Economics at the U.S. Federal Trade Commission, has proposed the following steps for policymakers to encourage competition within the healthcare market^{xvi}:

- Reduce or eliminate policies that encourage consolidation or that impede entry and competition.
- Strengthen antitrust enforcement so that federal and state antitrust enforcement agencies can act effectively to prevent and remove harms to competition.

- Create an agency responsible for monitoring and overseeing healthcare markets, and give that agency the authority to flexibly intervene when markets are not working.

Drug Pricing

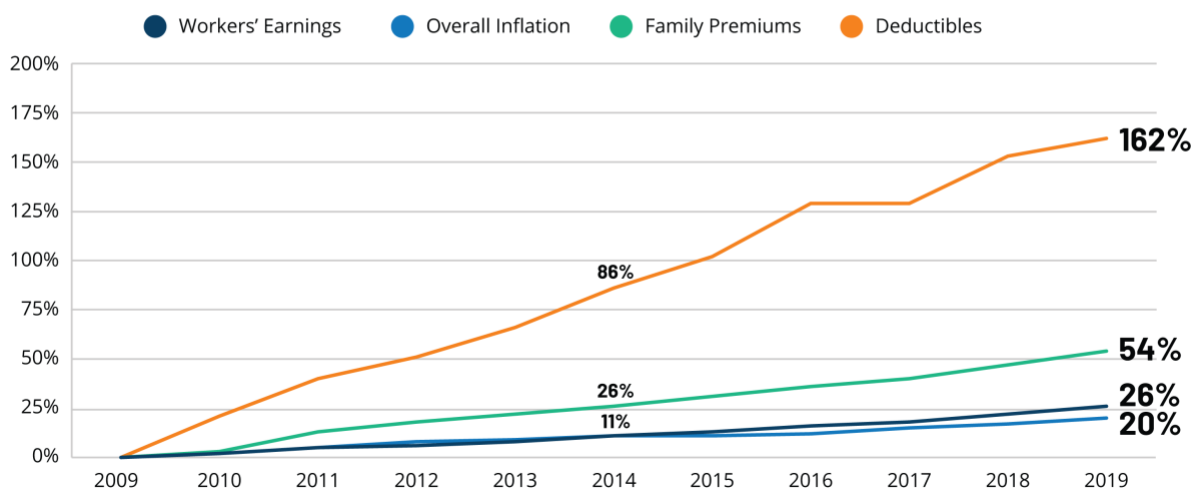
Services and administration are not the only aspect of the United States health care system with systemic flaws resulting in astonishingly high prices. Pharmaceutical companies are also notorious for charging extremely high prices, much of which is attributed to the role Pharmacy Benefit Managers (PBMs) play in the negotiation process. PBMs are in charge of managing the prescription drug benefit for public and private insurers. They receive rebates from manufacturers, which can total up to 40% or more of the drug's list price^{xvii}. The rebates PBMs obtain are factored into their reimbursement rates, so they have the incentive to select more expensive drugs as opposed to those that are more cost effective. Perhaps the misalignment of incentives is the reason the prices of commonly used drugs have risen 120% since 2008^{xvii}. One study showed that the price of oral prescription brand drugs and injectable drugs rising 9% per year, and 15% per year respectively^{xviii}.

The United States differs from other countries in that we allow drug makers to set their own prices as opposed to conducting negotiations with the government. Most countries regulate drugs and ensure that new drugs released into the market show marked improvement over pre-existing drugs, but the United States regulatory body does not restrict any drug that is safe from entering. In turn, allowing marginally better drugs to enter the market and pharmaceutical companies to charge higher prices. Nonetheless, there is a counterargument to enforcing lower drug prices as it would decrease interest from investors and disincentivize innovation within the pharmaceutical industry, thus shifting time and investment towards more profitable industries.

Rising Deductibles and Premiums

Programs like Medicaid and Medicare have been developed in order to help individuals cover the cost of care, but these programs have simultaneously increased the demand for care, allowing providers to raise their prices. Recently, there has been a shift towards high deductible health plans, meaning Americans are paying more out of pocket than ever before. The average deductible has almost doubled over the past ten years, rising from \$826 to \$1655^{xix}. Typically, a high deductible means lower premiums, yet, premiums have been steadily rising over the past ten years as well. Alarming, following COVID-19, premiums are expected to increase by up to 40%^{xx}. As health care costs become insurmountable for many American families, individuals and employees alike are becoming increasingly price sensitive. Over three quarters of employers say rising healthcare costs are their main challenge in the upcoming three years^{xx}. This creates a great potential for innovation increasing price transparency and comparison or offering an alternative form of health insurance.

Premiums and Deductibles Rise Faster than Worker's Wages Over Past Decade



Fraud

Finally, when considering the high cost of health care in the United States, one must acknowledge the prevalence of fraud. Health care fraud amounts to up to \$68 billion annually, as estimated by the National Health Care Anti-Fraud Association^{xxi}. For

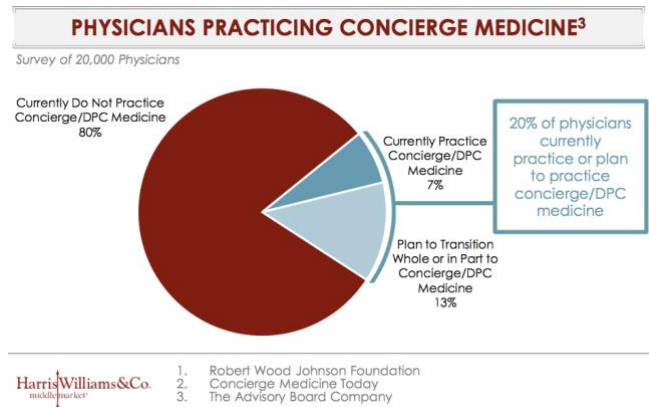
comparison, annual credit card fraud is estimated at about \$6.4 billion^{xxii}. This is a problem with Medicaid, Medicare, and private insurance alike. In 2016 the Medicare Advantage improper payment rate was about 10%, surpassing \$16 billion^{xxiii}. Fraud is committed in a variety of ways such as: billing for services that were never done or services more expensive than those actually performed, performing unnecessary services in order to receive insurance payments, misrepresenting the need for a treatment, falsifying records to make it appear like a patient needs a certain service, and many more^{xxiv}. Not only do these practices lead to extraordinarily high excess costs, they can also pose danger to the patient.

Free Market Solutions:

Direct Primary Care

Direct primary care refers to practices charging a monthly membership fee that covers the majority of care an average patient would need, at much lower prices. With high deductible health plans on the rise, these kinds of alternative health payment schemes are becoming increasingly popular with US healthcare consumers. While most DPC practices have only been around for a few years, they are becoming increasingly popular for patients and physicians alike.

The majority of direct primary care practices charge individuals between \$50 and \$75 monthly and the monthly price for family packages is typically under \$175^{xxv}. Direct primary care practices have found that adding children to the membership make it stickier, as children are more likely to become attached to a specific physician^{xxvi}. There are currently about 1,200 Direct Primary Care practices nationwide^{xxvii}. This implies only about 3% of American Family Physicians are currently practicing under the DPC model, but this approach is rapidly gaining popularity with an increase of about 8% per year ^{xxvi}. A survey of 20,000 physicians estimated slightly higher rates of 7% currently practicing and 13% planning to transition towards this model of care^{xxviii}.



Direct primary care practices report a 40% reduction in overhead costs via reduced administrative staff responsible for third-party billing^{xxix}. One study claimed that DPC reduces overall healthcare costs by 20% due to reductions in specialist, ER, and advanced radiology visits; however, that study has not been reviewed by peers or conducted by external evaluators^{xxx}. Some believe that DPC attracts a lower risk population, more specifically the “worried well” and their members are relatively healthy to begin with – thus the lack of spending on healthcare outside of primary care. Another potential downfall of DPC is that the practices themselves bear the entirety of the financial risk, and this risk is only spread amongst a limited number of patients. Finally, the typical DPC doctor is only able to treat about one third of the patients of a normal doctor, which poses problems with scaling and may be concerning considering the already existent lack of access to care in the United States^{xxxi}. The table below details the main differences between family practices and direct primary care practices.

DIRECT PRIMARY CARE VS. TRADITIONAL DOCTOR'S VISITS		
	FAMILY PRACTICE	DIRECT PRIMARY CARE
Medical professionals practicing	79,831	1,000
Patients per doctor	As many as 2,367, according to some estimates	500 – 1,000
Cost per visit	Depends on insurance plan	Free with monthly membership – often about \$50
How long a visit is	13-16 minutes	30 – 60 minutes
How doctors get paid	Salary – about \$207,000	Paid with monthly membership fees
Can you use insurance?	Yes	No
Cost of blood tests	Depends on insurance plan, typically billed after the fact	Wholesale price, often included as part of exam for free
Cost of prescription drugs	Copay amount	Wholesale price plus 10%

BUSINESS INSIDER

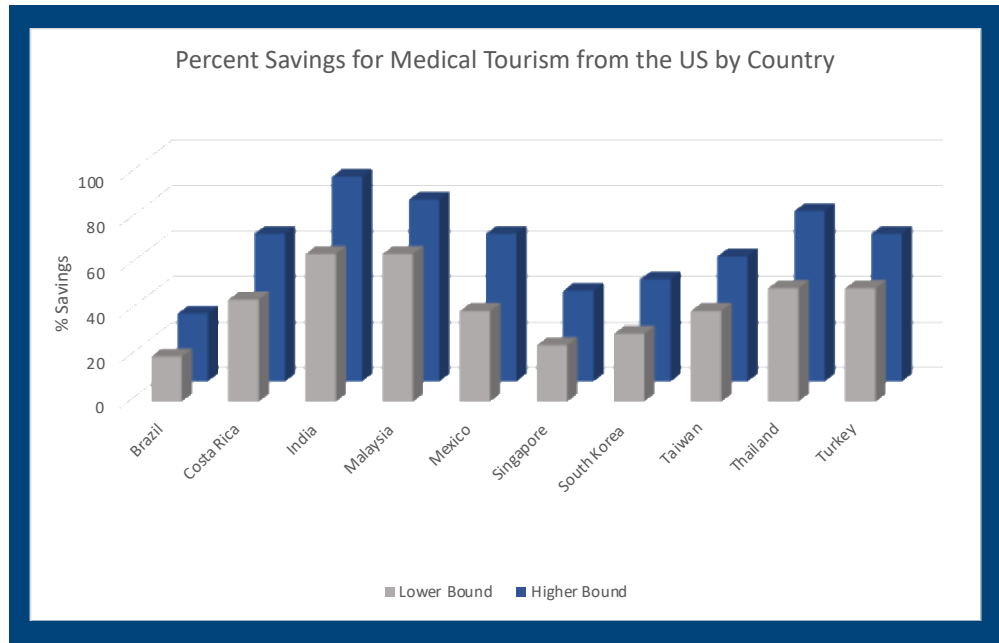
Despite some concerns, direct primary care continues to gain popularity and currently serves over 300,000 Americans in 48 states^{xxxii}. Prominent DPC companies like Denver-based Paladina Health have seen exceptional results. Over 75% of Paladina's patients say that they have seen an improvement in their health since joining Paladina^{xxxiii}. Smaller practices like DPC Healthcare in Fort Worth have also been very well received. DPC Healthcare offers in-office labs and even has a mobile clinic that travels to employer worksites. Other companies, like SteadyMD, are taking it a step further and simultaneously offering these subscription service while also transitioning entirely to a virtual care system. SteadyMD costs \$99 a month for an individual and \$169 per month for a family and covers the entire spectrum of care. With SteadyMD, all doctors' visits are done virtually and if testing is needed it is ordered from a local lab. Their plan involves no co-pays or fees on top of the membership fee and the majority of labs and bloodwork ordered by SteadyMD doctors are covered by insurance. Paladina Health, DPC Healthcare, and Steady MD are just a few examples of the many plans that are becoming increasingly popular and starting to place pressure on the insurance companies to restructure, as consumers become more price sensitive.

Medical Tourism

Medical tourism is the term for individuals traveling for the purpose of obtaining medical treatment. Medical tourism has been around for centuries, dating back to when ancient Greeks and Egyptians would flock to hot springs and baths in hopes of healing their illnesses. The trend continued with 18th and 19th century Europeans and Americans who traveled to spas in the hope of curing their illnesses and has retained a presence ever since^{xxxiv}. The medical tourism industry has grown to an estimated \$439 billion annually and is expected to continue to grow at 25% per year for the next five years^{xxxv}.

Historically, medical tourism has involved individuals from less developed countries traveling to more developed countries to obtain higher quality care; however, this trend is starting to change. This is caused by varying factors dependent on the country's health care system. For example, the rising costs of healthcare in the United States lead patients to seek lower prices elsewhere. However, in the UK and Canada, it is the long wait times that motivate patients to travel for care. Regardless of the factors motivating an individual to engage in medical tourism there are three important components required for participating: willingness to travel, upfront payments, and no insurance company interference^{xxxvi}. Innovators are using a variety of methods to address these elements and increase the demand for medical tourism. While suitable for most non-emergency treatments, medical tourism is most commonly used for surgeries, dentistry, and fertility.

In 2017, 1.4 million Americans traveled abroad to obtain healthcare^{xxxvii}. Uwe Reinhard, an economist at Princeton University, says that global competition on the United States' healthcare market could act as a catalyst towards improved quality and more choices. He compares the potential for this phenomenon to the change in the U.S. auto industry following the competition from Japanese automakers^{xxxviii}. The average price of a medical procedure done abroad is just \$5,000 and across the board medical tourism offers huge savings to healthcare consumers^{xxxviii}.



The graph above demonstrates the potential savings from medical tourism, with travel to India, Malaysia, and Thailand offering the largest savings. Most individuals who travel abroad for care report the quality to be equal, if not superior, to the quality of care they typically receive in the United States^{xxxix}. For example, simple procedures like root canals can cost up to \$1,500 in the United States but can be done in Egypt for \$120 or less. The top ten medical tourism specialties are in order as follows^{xl}:

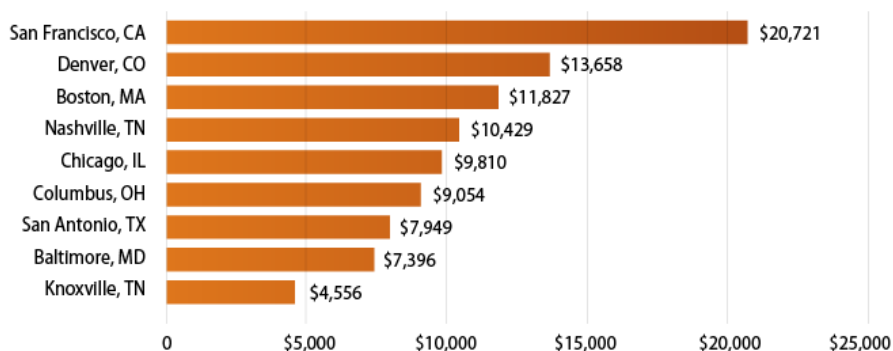
Specialty	Procedures
Dentistry	Dental Implants, Veneers, Crowns
Plastic Surgery	Liposuction, Breast Implants, Rhinoplasty
Ophthalmology	LASIK, LASEK, Cataract Surgery
Hair Restoration	Hair Transplant
Bariatric Surgery	Gastric Sleeve, Gastric Bypass
Reproductive Medicine	In Vitro Fertilization
Orthopedics	Knee & Hip Replacements, Spine Surgery
Dermatology	Mole Removal, Acne Treatment
Cardiology	CABG Surgery, Heart Valve Replacement
Oncology	Breast Cancer Treatment, Chemotherapy

But do we really need to leave the country to obtain timely and reasonably priced medical care? There are huge cost savings to be made by traveling within the country, or in some cases even within the state or county. The chart below demonstrates the enormous variation across the nation in the cost of a common procedure, a caesarian section^{xli}.

FIGURE 4

The cost of a cesarean section varies across the United States

Median C-section prices among the commercially insured population in selected metropolitan areas, 2016



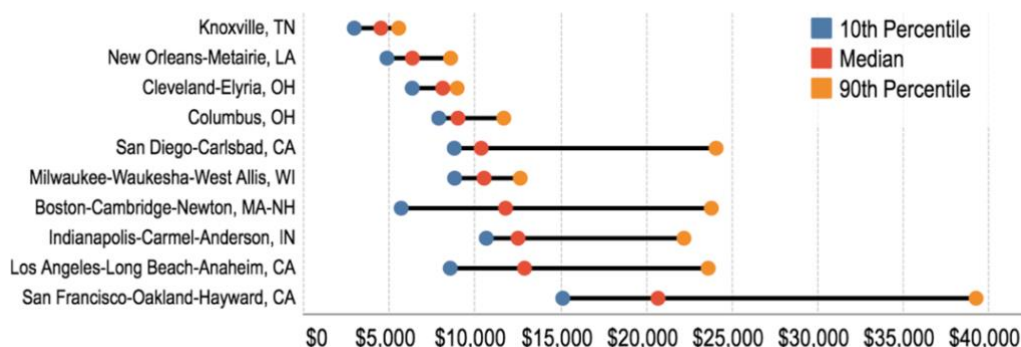
Source: Kevin Kennedy and others, "Past the Price Index: Exploring Actual Prices Paid for Specific Services by Metro Area," Health Care Cost Institute, April 30, 2019, available at <https://www.healthcostinstitute.org/blog/entry/hmi-2019-service-prices>.



You can take it one step further and compare the cost of procedures within metropolitan areas and you still see cost differences of up to almost \$20,000^{xli}.

C-Section Delivery

Range of Service Prices for Select Metro Areas, 2016



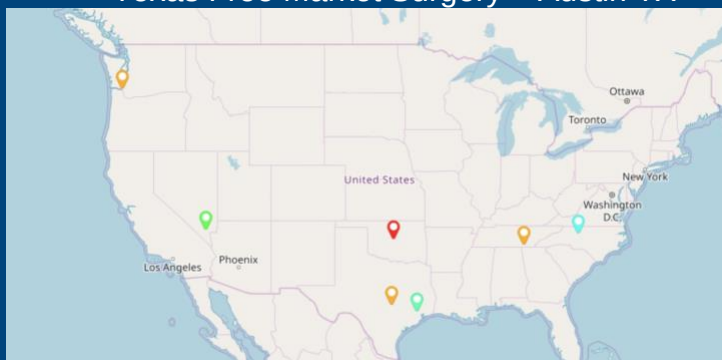
Clearly, there is no consensus on the actual price of a caesarian section, allowing providers and insurance companies to adjust the price to increase profitability. Studies show that increased quality is not highly (if not inversely) correlated with the cost of a procedure. So why do Americans put up with this? There are two main reasons: lack of price transparency and desire for familiarity and recovery in the comfort of their own home.

Freestanding/ Ambulatory Surgery Centers

Keith Smith of The Oklahoma Surgery Center is tackling the first of those two problems: lack of price transparency. In 1997, Keith and a fellow anesthesiologist recognized the inefficiencies in the healthcare system and decided to open up a freestanding, cash taking surgery center with a transparent pricing model. Located in Oklahoma City, this surgery center performed more than 6,000 surgeries in 2019. About 40% of their patients are residents of the state of Oklahoma, with about 5% of their patients coming from abroad and the remaining 55% from across the United States^{xlii}. All their prices are fixed and posted online and once a patient engages with the center the selected surgeon will call the patient directly to discuss treatment options. There are several other surgery centers following the same insurance-free model.

Surgery Centers with Cash Pay Programs:

- The Surgery Center of Oklahoma – Oklahoma City, OK
- Forsyth Surgical Associates – Winston Salem, NC
 - Lonestar Surgery Center – Houston, TX
 - No Insurance Surgery – Las Vegas, NV
 - Pacific Surgical Center – Longview, WA
 - QuikSurg – Chattanooga – TN
 - Texas Free Market Surgery – Austin TX



Below are some examples of treatments for which the Oklahoma Surgery Center offers lower prices than the average healthcare facility in the United States.

Treatment	Surgery Center of Oklahoma Price	Average Price in the US
Carpal Tunnel Release	\$2,750	\$4,000 - \$12,000
Microdiscectomy	\$8,855	\$15,000 - \$50,000
Breast Mass – Excision/Biopsy	\$2,365	\$10,000 - \$20,000
Bilateral Hernia	\$4,325	\$3,900 - \$12,500
Toe Amputation	\$2,900	\$4,400 - \$6,630
Chalazion	\$1,870	\$3,729 - \$3,948
Nasal Valve Repair	\$3,600	\$4,500
Platelet Rich Plasma Injection	\$725	\$500 - \$2,000
Clavicle Fracture Repair	\$6,375 - \$8,375	\$11,000 - \$17,000
Inguinal Hernia	\$3,060	\$4,200 - \$6,200

The savings from The Oklahoma Surgery Center are not atypical; savings from going to a freestanding ambulatory surgery center instead of a hospital are usually about 45-60% but can reach up to 90% depending on the procedure^{xlili}. These surgery centers are providing an alternative to hospital-based care and increasing competition, putting pressure on hospitals to lower their prices. One study claimed that for each ambulatory surgery in the market per 100,000, the outpatient department of a hospital in the area received between 3.25% and 5.15% lower payments^{xliv}. This is a result of the hospital's diminished negotiation power with commercial insurers. Another benefit of ASCs like The Oklahoma Surgery Center is they do not require consistently staffed health care workers. Instead, they contract with well renowned local surgeons, nurses, and anesthesiologists to ensure they are providing high quality care at low costs.

Ambulatory Surgery Centers have gained momentum and will continue to do so in the coming years. In 2017, more than half of outpatient surgery procedures were done by

ASCs, an increase of about 20% since 2005^{xlvi}. In 2018, 23 million procedures were performed by 5,700 ASCs, generating \$35 billion in revenue^{xlvi}. Furthermore, the volume of procedures is projected to increase by about 6.5% this year^{xlvi}. The most popular specialty surgeries performed by ASCs are orthopedic, spine, and cardiology procedures^{xlvi}.

The first ambulatory surgery center opened in Phoenix, Arizona in 1970^{xlvi}. This model quickly gained traction with physicians, as it provides them with increased control over scheduling surgeries, assembling skilled teams, and deciding which equipment is best suited for the surgery^{xlvi}. Additionally, physician incentives are more clearly aligned as 90% of ASCs have some physician ownership^{xlvi}. Yet, physicians aren't the only ones gaining interest in owning a part of an ambulatory surgery center; 23% of ASCs have some portion of hospital ownership and 2% of ASCs are owned entirely by a hospital^{xlvi}. This demonstrates the value that an ASC may provide as a partner to a hospital. ASCs have also been thought of as more attractive to banks than many other investments as they are generally thought of as safe and effective^{xlvi}. Additionally, ambulatory surgery centers also provide enormous benefits to patients including but not limited to^{xlix}:

- **Lower Costs** – The lower costs at ASCs provide benefit to patients, insurers and taxpayers alike. The Department of Health and Human Services estimated savings of \$15 billion to taxpayers and \$3 billion to Medicare patients if all eligible surgeries were done at outpatient surgery centers.
- **Improved Safety** – The CDC estimated surgical site infections were developed in about 8.95 out of every 1,000 patients in hospitals, compared to only 4.84 out of 1,000 patients in ASCs.
- **More Convenience and Accessibility** – ASCs tend to be located closer to patients than their hospital counterparts
- **Reduced Duration of Stay** – Patients in outpatient surgery centers have a 26% reduction in stay duration when compared with hospitals
- **Predictable Scheduling** – Fewer surgeries are delayed or cancelled in ASCs than in hospitals due to the lack of unpredictable emergency room visits

Patient Success Story:



In 2018, the Ambulatory Surgery Center at Nicklaus Children's Hospital performed an impressive six hernia repair surgeries in one day, all on the Jean-Jacques children. Each of the children needed an umbilical hernia repair, which occurs when the stomach muscles around the umbilical cord do not entirely join after birth. These surgeries were all done within a period of 3 hours, each lasting less than 30 minutes. The siblings felt extremely comforted by being enabled to go through the procedure all together and every surgery was a success!

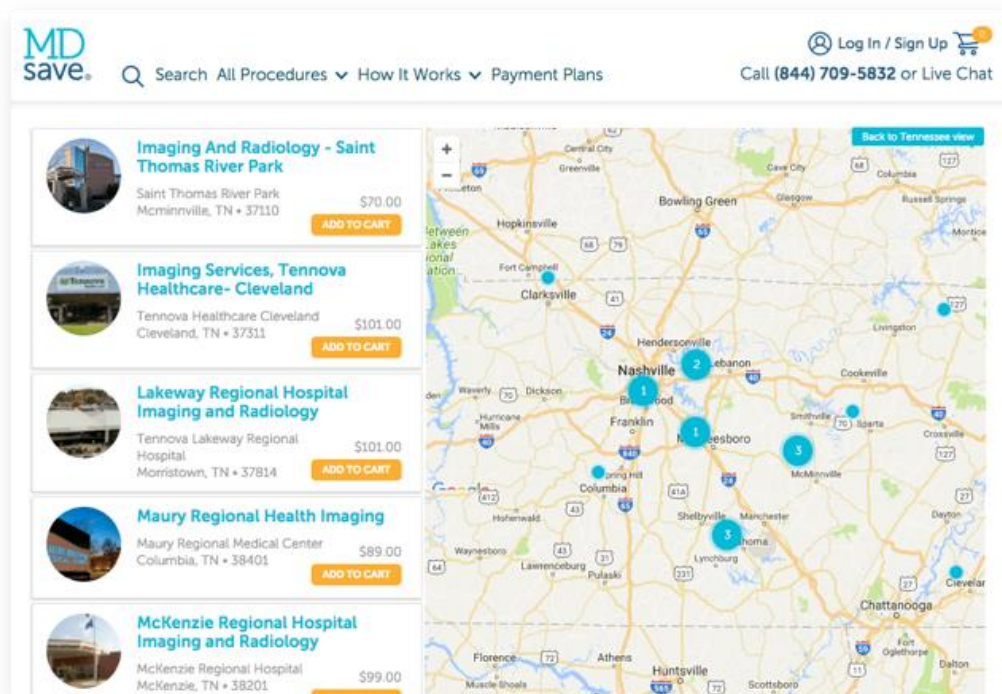
Alternative Health Plans

For other types of healthcare services, like urgent care, alternatives to insurance are also quickly emerging. More than a third of healthcare costs in the United States go towards compensating insurance company employees and the time providers spend on billing, making it clear that there is a space for disruption and improved efficiency in this area. A company called Mira is offering a subscription model for unlimited preventative and urgent care visits with affordable copays. Mira targets employers, who may offer this health plan to employees in place of or in addition to insurance coverage. Similarly, Apostrophe Health is a platform for self-insured employers that negotiates low rates and directly pays providers for services. They eliminate copays at the time of service and pay the providers directly and immediately so there is no billing follow up required, therefore, dramatically reducing provider overhead time. These types of payment plans are becoming increasingly popular instead of or conjunct to health insurance as high deductible plans become increasingly prevalent.

Faith-based organizations have also begun to offer similar pooling structures. For example, Florida-based MediShare is a Christian healthcare sharing ministry where members directly contribute to the cost of each other's Medical bills. MediShare has over 400,000 members and has covered the cost of \$2.6 billion in healthcare costs. MediShare creates a pool of individuals sharing common beliefs that are able to help each other directly without the involvement of large and perhaps inefficient insurance companies.

Price Transparency

As mentioned above, one of the major inefficiencies in the healthcare system is the lack of price transparency. Companies like MDSave have been asking why the e-commerce platforms used for most commodities have not yet been applied to healthcare – and why couldn't they be? MDSave equates their platform to the Expedia for healthcare and offers bundled services from owned and affiliated providers. Their website allows customers to compare prices and purchase care immediately. They argue that healthcare is an industry changing much less frequently than others, so there is no reason we couldn't apply the same methods of price comparison we do to – per say -- the airline industry. Furthermore, increasing price transparency may reduce the amount of medical billing errors.



The screenshot above shows MDSave's simple user interface for finding and booking procedures. To become more widespread and make more of a dent in healthcare costs they will need to continue to grow their provider network and type of procedures.

A few other notable companies in the price transparency space are Change Healthcare, Healthcare Blue Book, Amino, and Castlight Health.

One of the primary reasons for the lack of price transparency is the fact that no one really knows how much medical care costs. Prices have been and still are determined based on “reasonable, usual, and customary fees”, essentially meaning they are made up. A recent survey revealed that 90% of leaders in healthcare are “flying blind” in terms of understanding their costsⁱ. In the past few years, methods for determining accurate costs have emerged. One example is activity and time-driven cost accounting, in which each step of the care process is observed and then carefully documented and aggregated. The Healthcare Financial Management Association and Strata Decision Technology have teamed up to develop a formal structure for this method and named it the L7 Cost Accounting Model, which is available for healthcare facilities to purchase in order to better understand their costs and restructure their pricing accordingly. This is appealing for many of the health care systems, as their average net margins are under 3% and over 30% are operating at a lossⁱⁱ. So while some hospitals benefit greatly from the ambiguous payment structure, others are suffering and in need of a much more clear cut model. Improving documentation of costs, and thus increasing price transparency has the potential to revolutionize health care for patients and providers alike.

Direct Primary Care



Equal enables employer direct primary care programs to be set up faster and more easily. They have a seamless enrollment process and unified payments for all enrolled employees and dependents.



Equal measures DPC practice coverage by monitoring how many employees doctors have close by and fully controlling when employees become eligible. This service is free to



Employees get freedom of choice on which doctor and they decide how much they are willing to pay. They charge a flat fee to the employer.



Undisclosed



Detroit, MI
<https://www.tryequal.com>
3 employees



Hint offers a DPC management platform which helps independent primary care groups, innovative health systems and integrated provider networks to deliver care.



Hint offers a solution including enrollment and eligibility, billing, payments, commissions, cross-system data syncing and reporting, insights, and DPC affiliate network



There are over 1,000 clinics nationwide using the HintOS platform.



\$10 million in funding raised since founding in 2013. Most recently raised a \$6 million Series A in May 2018.



San Francisco, CA
<https://www.hint.com/>
54 employees



Forward offers a membership that uses technology in conjunction to access to a personal doctor to provide a new healthcare experience to patients.



The custom-built exam room removes the need for paper and increases transparency between the doctor and patient. Forward has also developed a body scanner to rapidly gather



Forward intends to remove barriers to taking care of one's health. The \$149 monthly fee paid by patients includes everything, even labs.



Forward raised a Series C round of an undisclosed amount in May 2019.



San Francisco, CA
<http://goforward.com/>
267 employees

SteadyMD

SteadyMD offers a subscription healthcare plan with comprehensive care entirely online.



SteadyMD pairs individuals with doctors based on their personal medical needs, interests, and goals.



SteadyMD costs \$99 per month for an individual plan or \$169 per month for a family plan.



SteadyMD has raised \$4 million since their founding in 2016, the most recent round being a Series A in 2019.



Saint Louis, MO
<https://www.steadymd.com/>
38 employees



**Healthcare
Bluebook™**

Healthcare Bluebook makes it easy to shop for healthcare by allowing individuals to search for a medical procedure and find providers in their area and then compare providers that offer fairly priced



Healthcare Bluebook uses a simple green-yellow-red coding system to clearly demonstrate the cost level differences between providers.



Healthcare Bluebook is used by over 5,000 companies and has served 300,000 lives.



Healthcare Bluebook raised \$10 million since their founding in 2007 and was recapped by Primus, a HC focused PE fund, in 2017



Nashville, TN
<https://www.healthcarebluebook.com/>
110 employees



**PALADINA
HEALTH™**

Paladina Health provides patients with direct access to their primary care physician by reducing physician's patients panels and using data to drive their approach.



Paladina Health builds real relationships between the doctors and patients, with Paladina doctors addressing 80-90% of the health problems their patients have.



Paladina offers patients longer appointment times, shorter wait times, no co-pays or co-insurance, and telemedicine benefits.



Paladina Health raised a \$165 million growth equity round lead by New Enterprise Associates in 2018.



Denver, CO
<https://www.paladinahealth.com>
139 employees

Medical Tourism



Doctours helps individuals find high quality care for the most affordable price and offers a comprehensive planning solution including the booking of flights and hotels.



Doctours has transparent pricing and in-depth profiles of all doctors. They also offer free consultations.



Doctours is in the process of expanding their services to 35 countries and already offers more than 330 medical procedures.



Doctours has been funded by a variety of influential angels who have previously launched their own successful ventures.



Los Angeles, CA
<https://www.doctours.com/>
6 employees



Medigo allows customers to navigate the global healthcare system with tech-driven efficiency.



Medigo can process claims with their proprietary software and has direct billing agreements in place with hospitals across the world.



Medigo has over 1,400 providers in more than 50 countries and has served over 200,000 patients from 195 countries.



Medigo has raised €10.5 million since their founding in 2013, most recently a series a round of €3.5 million.



Berlin, Germany
<https://www.medigo.com/>
52 employees



GloboMD helps individuals looking for quality medical and beauty procedures find great doctors and accommodations for a set list of procedures in certain locations.



GloboMD connects patients with clinics and hospitals which have earned the most respected international accreditations and certifications in beauty and health care.



GloboMD offers a variety of locations in North, Central, and South America.



Undisclosed



New York, NY
<https://globomd.com/>



Air Doctor makes medical care accessible by connecting travelers to private doctors worldwide.



Air Doctor allows an individual to select a doctor based on specialty, location, language and other clients reviews and then book an appointment online for a visit at home or at the



Air Doctor currently operates in 42 countries and is expanding quickly across the globe.



Air Doctor has raised \$10.9 million since their founding in 2018, most recently a \$7.8 million Series A round in 2020.



Motza Illit, Jerusalem
<https://air-dr.com>
32 employees

Alternative Health Plans



Mira offers a healthcare membership which allows individuals to get affordable copays for preventative and urgent care without insurance.



Mira is free for providers to join and eliminates billing and collection. Members pay \$25 per month for unlimited preventative and urgent care visits as well as prescription discounts.



Mira has over 20 clinics in-network in New York and is in the process of expanding to Los Angeles and Philadelphia.



Mira has received funding from angel investors since their founding in 2019.



New York, NY
<https://www.talktomira.com/>



Apostrophe offers self-insured employers and their employees health plans with transparent pricing and simple billing.



Apostrophe negotiates the lowest possible rates and then pays providers directly for the services completed.



Apostrophe gives members simple and fully audited bills and flexible repayment plans, and also offers virtual care options.



Apostrophe has raised \$6.8 million since their founding in 2016, most recently a Seed round in 2018.



Denver, CO
<https://www.apostrophe.health/>
37 employees



Decent is a form of health insurance for the self-employed which offers unlimited in person and telemedicine visits with a primary care doctor and uncapped benefits once an individual reaches their out of



Decent offers three different types of plans, allowing the individual to decide how comprehensive they want their insurance to be and what rates they are willing to pay.



Decent has offices in Seattle, California, Austin, and Poland and is primarily focusing on developing their business in Texas via a partnership with the Texas Freelance



Decent raised \$8 million in a Seed round in 2018.



San Francisco, CA
<https://www.decent.com>
28 employees

Price Transparency



MDSave is an online marketplace for healthcare services that allows individuals to compare prices and purchase and schedule these services.



MDSave pre-negotiates bundled pricing with their network of providers and allows individuals to apply their purchase to their insurance deductible.



MDSave has a network of over 290 providers and includes more than 1,600 procedures.



MDSave has raised \$29.4 million since their founding in 2011, the most recent raise being \$2.875 million in 2018.



Brentwood, TN
<https://www.mdsave.com/>
67 employees



The marketplace for medicine.

MediBid stimulates transparency and introduces competition among hospitals with their medical marketplace.



MediBid cuts out restrictive preferred provider networks and allows doctors to benefit from lowering their prices by cutting the middlemen out of the financial side of medical care.



MediBid gives patients access to a wide variety of doctors and facilities located both locally and overseas.



Undisclosed



Katy, TX
<https://www.medibid.com/>
9 employees



Castlight allows employers to offer a comprehensive health navigation app to their employees, enabling them to make better care decisions and improve their overall wellbeing.



Through the Castlight app, employees have tools to motivate healthy habits and make decisions on accessing care.



Castlight has an integrated ecosystem of 20 partners for condition management, lifestyle tracking, and personal wellbeing.



Castlight Health is a public company with a market cap of \$100.30 million.



San Francisco, CA
<https://www.castlighthealth.com/>
606 employees



Amino is a healthcare financial wellness platform that integrates with existing healthcare benefits to help employees book, find, and pay for high value care.



Amino can reduce a company's annual healthcare costs by up to \$1,300 per employee.



Amino is powered by a database of over 12 billion de-identified health insurance claims for 220 million patients.



Amino has raised \$45 million since their founding in 2013, most recently a convertible note in 2018.



San Francisco, CA
<https://partners.amino.com/home>
56 employees

- i <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical>
- ii <https://www.vox.com/2014/9/2/6089693/health-care-facts-whats-wrong-american-insurance>
- iii <https://www.bondcap.com/report/itr19/#view>
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- vi <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf>
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- xxiii <https://publicintegrity.org/health/fraud-and-billing-mistakes-cost-medicare-and-taxpayers-tens-of-billions-last-year/>
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- xxviii https://www.harriswilliams.com/system/files/industry_update/primary_care_sector_overview_6_18_2016.pdf
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