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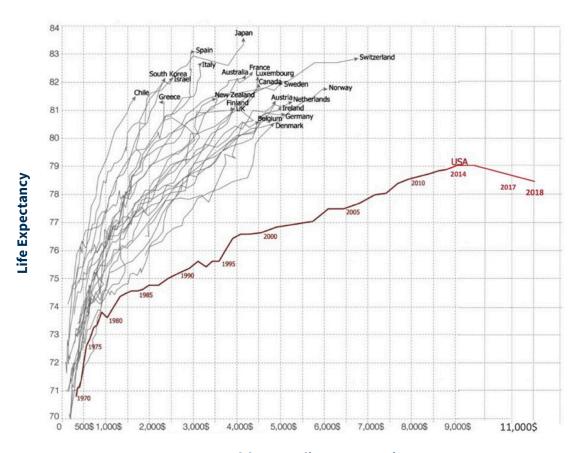


A Huge Disconnect in U.S. Healthcare Spending

Residing in what is arguably the healthcare capitol of the U.S. (Nashville), it probably is presumptuous of me to write anything on this topic. However, I was so stunned by the following chart that I could not help but do some research in an attempt to understand some of the dynamics behind this ugly picture. Scholars and think tanks generate a huge amount of ink on this topic, so my objective is simply to provide a condensed and readable primer. In addition to concern for the well-being of my compatriots, my interest stems from the fact that healthcare spending represents 19.7% of GDP! As Senator Everett Dirksen once said,

"A billion here, a billion there, and pretty soon you're talking about real money."





Health Expenditure Per Capita

The U.S. spends more than twice the amount

of most industrialized countries yet has the lowest life expectancy by a large margin. The horizontal axis depicts healthcare expenditure per capita and the vertical axis life expectancy, which is one measure of the efficacy of a country's health care system. The variance with the rest of the world is simply shocking; the U.S. spends more than twice the amount of most industrialized countries yet has the lowest life expectancy by a large margin. While not illustrated separately, a very sad fact is that U.S. life expectancy is reduced in part by the highest rate of both infant and maternal mortality among these countries. I do not have updated information for the comparison set, but U.S. healthcare spending per capita grew from \$11,040 in 2018 to \$11,462 and \$12,530 in 2019 and 2020, respectively. At the same time, life expectancy fell from 78.8 in 2019 to 77.3 years in 2020, although a portion of that decline is attributable to Covid-19. While the data is preliminary, it appears that the decline in life expectancy in the U.S. during the pandemic was more severe than in many countries, so the large gap pictured above likely became even more extreme. Simply stated, the U.S. spends more and gets less than comparable countries. One interesting aside is that utilization of healthcare services is actually lower in the U.S. in some categories, which means that the difference in overall spending is largely a function of unit cost or price. Specifically, while recent increases have been somewhat more moderate, PWC estimates that the unit cost of treatment grew at an average annual rate of 8.2% over the past fifteen years.

This is a complex topic since both cost and outcomes are impacted by a number of variables, including economics, demographics, consumer expectations, regulation, geography, politics, genetics, and most notably, individual behavior. So, I do not point the finger at any culprit nor can I provide any easy solutions. Rather, my goal is simply to inform by detailing many of the cost and outcome differences that underlie this chart. Since life expectancy is not the only measure of the impact of healthcare spending, I also include several related metrics.

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THE COST OF HEALTHCARE

A discussion of the cost of healthcare often takes the form of the blame game in which for-profit healthcare, bureaucracy and malpractice litigation are favorite targets along with "greedy" doctors, health insurers, and pharmaceutical companies. To sidestep all of the emotion, let's look at the actual breakdown of health expenditures, which is provided by Peterson-KFF.

Healthcare Spending By Category %

	US	COMPARABLE COUNTRIES
In-patient & Out-patient Care	62	49
Drugs and Medical Goods	13	16
Administrative Costs	9	3.7
Long-Term Care	5	20
Preventative Care	3	3.3
Other	8	8
Total	100	100

First, here are a couple of observations regarding the U.S. The cost of drugs is a source of great consternation and frequent political chatter. According to a January 2021 report by the Rand Corporation, U.S. drug prices are 250% higher than the average of those in 32 other countries. However, this category only represents 13% of total healthcare spending and therefore contributes just 10% of the difference between overall health expenditures in the U.S. and other countries. So while drug prices are indeed a concern, some of the anger may be overblown or misdirected.

Second, 9% of all U.S. healthcare expenditure is consumed by administrative costs. This category excludes the overhead of healthcare providers, so it is composed of roughly equal parts of the administrative costs of insurers and those of government programs, such as Medicaid and Medicare. Perhaps the size of administrative costs is not surprising given that everyone who touches the U.S. healthcare system knows that it is incredibly byzantine.

Third, only 3% of the total is allocated directly to prevention, whereas 62% is consumed by in-patient and out-patient care, a great deal of which represents treatment for existing illnesses. I certainly am not qualified to opine on the optimal allocation, but logic suggests that a significant shift toward preventive care could greatly decrease total outlays.

Some of the comparisons with the rest of the world are quite striking. Note that other wealthy countries spend four times as much on long-term care. Once again, the optimal expenditure level is not at all obvious, but the difference is noteworthy. Similarly, we spend approximately two and one half times as much on administrative costs. In as much as the U.S. is one of the few countries without a national health system, this disparity raises a number of interesting questions regarding the common assertion that single-payer systems are comparatively inefficient and bureaucratic.

Finally, the U.S. spends 62% on in-patient and out-patient care versus 49% for comparable countries. This gap could be a function of differences in the prevalence and severity of illness, attitudes toward the allocation of health resources (for example, end-of-life care), the structure of the delivery system, including the availability of alternative sources of care, and many other factors.

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GROWTH IN SPENDING

For the twenty-year period ending in 2020, growth in per capita spending on healthcare averaged 5% in the U.S. versus 4.5% in other industrialized countries. While that gap does not seem particularly large, the fact that the U.S. started at a much higher base results in the large spread depicted in the graph above. The following table highlights the growth rates in the various expense categories for the period 2008 to 2018, and several of them jump off of the page (Note that the 5% growth rate cited above covers the period 2000-2020 and therefore does not correspond exactly to the figures in this table).

Annual Growth Rates 2008-2018 %

	US	COMPARABLE COUNTRIES
In-patient & Out-patient Care	3.9	3.2
Prescription Drugs	2.7	2.3
Administrative Costs	5.4	2.7
Long-term Care	1.9	5.9
Preventative Medicine	1.9	2.7
Other	4.6	4.1

Source: Peterson-KFF Health System Tracker

First, administrative costs in the U.S. have grown at exactly twice the rate of those in comparable countries. Without further research, I am hesitant to be overly critical of our system, but it is concerning that these costs have grown considerably faster (1.5% per annum) than funds actually devoted to providing care. Second, expenditures on longterm care outside the U.S. have grown at more than three times the rate of those here. This difference may be explained by the fact that many countries have older populations than the U.S. but also could be a function of differing priorities or philosophies regarding elder care.

WHY ARE HEALTH CARE COSTS IN THE U.S. HIGH AND RISING SO RAPIDLY?

Given that knowledgeable experts disagree violently on this topic, I will not attempt to stake out a position but will let them fight it out. Instead, what follows is a list of the most commonly-cited explanations which fall into two broad categories: the system and the fact that Americans are relatively unhealthy. Let's begin with the system.

- Most people do not choose or pay directly for their healthcare because
 it is provided by an employer plan or government program. Therefore,
 they do not engage in normal consumer behavior of shopping for price
 and quality and are more likely to consume additional services.
- Providers are paid for the quantity of services delivered rather than quality or outcomes.
- Patients demand the highest level of care, including the newest technology irrespective of cost. Many, if not most, are indifferent to cost since they do not actually see or pay itemized invoices.
- The system is opaque, making it difficult for consumers to understand their options and the true cost of services.
- Fear of malpractice litigation stimulates ordering large numbers of tests, many of which are probably unnecessary.
- Consolidation of healthcare providers gives them pricing power.

I am sure that those in the healthcare field will bristle at some of these points, so I encourage any reader to provide me with refutations or alternative explanations.

The other major factor is that Americans suffer from a range of chronic illnesses that drive up healthcare costs. Specifically, more than 50% of adults have at least one chronic condition; this group accounts for 85% of total healthcare spending. The sickest 5% of the population consumes 50% of healthcare expenditures, while the healthiest 50% only account for 3%. The sad fact is that many of these conditions are preventable, which harkens back to the statistic cited earlier - that we only spend 3% of the total healthcare budget directly on prevention. This is a nice segue to the next section, which focuses on healthcare outcomes in the U.S. versus the rest of the world.

More than 50% of adults have at least one chronic condition; this group accounts for 85% of total healthcare spending.

FACTORS IMPACTING LIFE EXPECTANCY

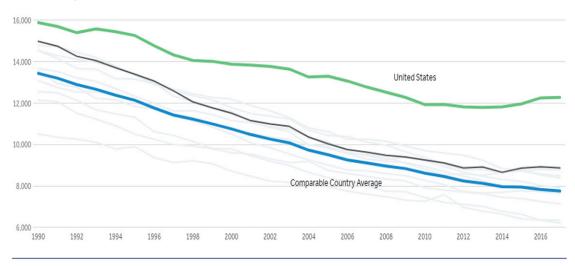
I begin by comparing the U.S. with other countries in terms of the frequency of the primary causes of death that impact life expectancy. As mentioned at the outset, life expectancy is not the only measure of the quality of healthcare; consequently, the next section provides some data on treatment outcomes. Finally, I describe several systemic factors that underlie all of these statistics. To place all of this data in perspective, global mortality from all causes has fallen about 30% and life expectancy increased by 4 years over the past 35 years. So, while the U.S. is under performing in many categories, the overall trajectory for humankind has been wonderful.

- Smoking The U.S. has a 30% greater death rate from smoking-related illness than the average country in Western Europe. However, the good news is that smoking in the U.S. has declined by about 70% since the 1960's. While there is a two- to three-decade lag, the mortality rate from this cause should follow suit by declining toward that of other industrialized countries.
- **Obesity** Seventy percent of American adults are overweight; 36% are considered obese. As a result, the death rate from obesity related illness in the U.S. is roughly 65% greater than countries such as France, Canada, the U.K., and Australia. Our death rate from this cause is five and one half times that of Japan!
- **Homicides** Homicide deaths in the U.S. are 6.3 times more frequent than in the group of comparable countries.
- Opioid Overdoses Perhaps the most shocking statistic of all is that the rate of overdose deaths in America is 11 times that of the comparable universe having increased ten-fold since 1990 (100,000 deaths in the past twelve months). One particularly sad aspect of this statistic is that opioid deaths disproportionately impact younger adults.
- **Suicides** While suicides have decreased over time in most countries, they have increased in most age groups in the U.S. In fact, the overall suicide rate in the U.S. is 20% higher than in the comparable countries. The age category with the highest rate is 50-69 years, where there has been a 30% increase since 2000.

- Road Accidents Deaths from road accidents in the U.S. are two and one half times more frequent than elsewhere.
- Covid-19 The U.S. has the highest cumulative death rate of the large, high-income countries. This sad fact is attributable in part to the prevalence of obesity and other chronic conditions as described above. The other major factor is our track record on vaccinations. Thirty-six percent of our population is not fully vaccinated as compared to 26% in Germany, 23% in France, and only 20% in Canada. More important, 12% of Americans over 65 have not been fully vaccinated and 43% have not received a booster shot.

One way to tie all of this together is to evaluate a statistic known as Potential Years of Life Lost, which is calculated by comparing the age of a deceased person with her life expectancy. So, It captures both the frequency of premature death and the age of decedents.

Overall age-specific potential years of life lost per 100,000 population, 1990-2017



Source: KFF analysis of IHME Global Burden of Disease Study (2017)

Note that the picture has been improving throughout the world, but years lost in the U.S. is about 60% greater than the comparable country average.

TREATMENT OUTCOMES

There is both good and bad news with regard to the quality of care. First, the mortality rate for cancers has been declining in both the U.S. and elsewhere for several decades. Specifically, overall U.S. mortality has declined about 25% since 1990 and is actually now about 6% less than the comparable country average. The U.S. has a very high rate of breast cancer screening, which results in the highest rate of survival. Second, 30-day mortality for heart attacks and strokes is 15-20% lower in the U.S. than the comparable country average. Third, while infant mortality in the U.S. is about 60% higher than in comparable countries, it actually fell 2.9% in 2020 to a record low. Next, the frequency of post-operative sepsis in the U.S. is roughly one fourth that of the U.K., Australia, and the Netherlands. Finally, the U.S. has the second highest (after the U.K.) percentage of flu vaccinations for those over 65. So, there are areas in which the U.S. does achieve particularly favorable outcomes. Now for the bad news.

Maternal mortality in the U.S. has roughly doubled since 1990 and is almost quadruple that of the comparable country average. Second, hospital admissions for chronic diseases, such as diabetes and congestive heart failure, are materially higher in the U.S. (>50%) - which is generally attributed to a lack of preventative services and inadequate primary care. Finally, the percent of adults who report having experienced medication or treatment errors is 12.6% in the U.S. versus 11.4% in the comparable universe.

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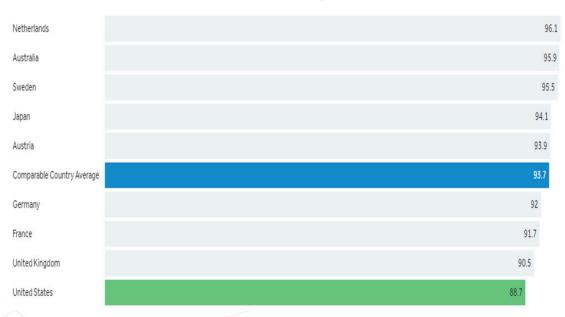
THE BIG PICTURE

Life expectancy, as previously mentioned, is impacted by a variety of factors, including genetics, individual behavior, and the quality of healthcare. One other factor not covered is access to healthcare. According to the U.S. Census Bureau, 91.4% of Americans have some form of health insurance, which represents a significant improvement over 2010 when the rate was 84%. However, that still leaves roughly 30 million people uninsured and compares to 100% coverage in most industrialized countries. Finally, life expectancy is significantly impacted by race, ethnicity, and income level.

Given recent economic trends, income and wealth inequality is likely even more extreme today. Several years ago, I wrote a white paper titled, Considerations on Income Equality. It pointed to the fact that the Gini Coefficient, which is a widely-used measure of income inequality, is higher (worse) in the U.S. than in most industrialized countries, indicating extreme inequality. Given recent economic trends, income and wealth inequality is likely even more extreme today. With respect to health, lower income individuals and racial minorities have a much higher rate of both infant and maternal mortality (2.5x); they are 1.5 to 2 times more likely to suffer from chronic illnesses, including depression and have also been impacted by the opioid crisis. Even before the pandemic, the difference in life expectancy between the poorest and richest 1% was 14.6 years. With regard to race and ethnicity, it appears that life expectancy declined during the pandemic by 2.9 years for African Americans and 3 years for Hispanics as compared to 1.2 years for non-Hispanic Whites.

The best way to tie together all of this data is a statistic known as the Healthcare Quality and Access (HAQ) Index. This index measures both access to and the quality of care by tracking deaths termed "amenable to healthcare." This means that these deaths likely could have been prevented by timely and effective care. As shown below, the U.S. ranks last among the comparable countries with 60% more preventable deaths.

Healthcare quality and access (HAQ) index rating, 2016



Source: KFF analysis of data from: "Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016, "The Lancet, 23 May 2018.

A PARTICULARLY VEXING PROBLEM

I have written papers on a wide variety of serious problems, including income inequality, our crumbling infrastructure, the necessity to retrain a substantial portion of the workforce, and the burden of student debt. However, this is the most difficult and frustrating topic I have undertaken. Our healthcare system is expensive, complex, and opaque without any consensus as to the most fruitful approach to reforming it. We are mis-allocating resources, in that funds are not sufficiently directed toward prevention and wellness. Americans do not take care of themselves, resulting in a large number of preventable conditions that consume the vast majority of our healthcare spending. Income inequality, racial inequality, and lack of access to care are all important contributors to the chronic conditions and mixed outcomes that were discussed above. So the divergence with the rest of the industrialized world that was depicted in the first graph is a result of complex political, economic, and social issues. Since there is no single, overriding answer to the problem, we can only take baby steps toward an ultimate solution. My first step is this paper, designed to increase awareness of the situation. Hopefully, each of us will take the most important step, which is to improve our own health!

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