

Understanding differences in health expenditure between the United States and OECD countries

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Key findings

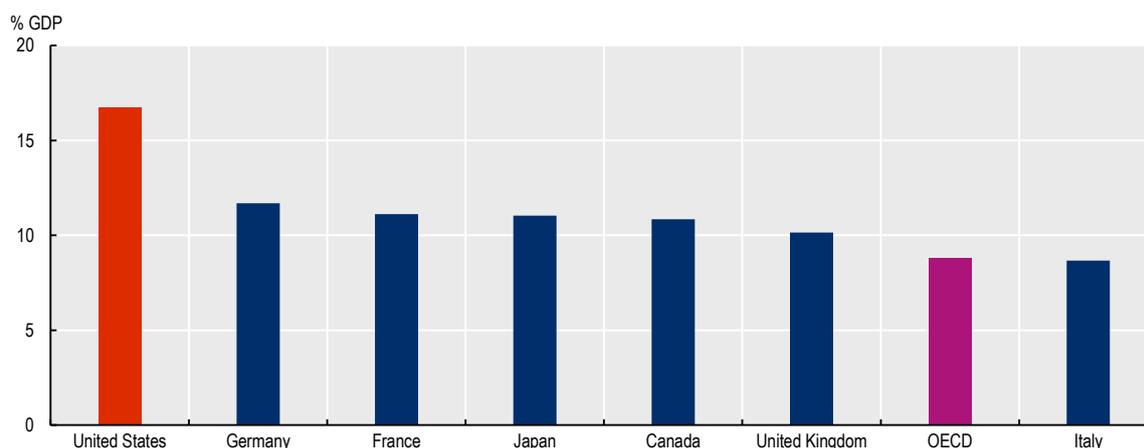
- The United States spends much more on health than other high-income countries – both on a per capita basis and as a share of GDP.
- Prices in the health sector tend to be high in the United States, which helps to explain the high health spending, although the use of certain health goods and services may also be high.
- In terms of value for money, the United States does well on some measures of health care quality, while not so well in others.

The United States spends much more on health care than other OECD countries

In 2019, before the impact of COVID-19 on health spending,¹ the United States spent nearly 17% of its national income (GDP) on health. This was by far the highest in the OECD – a full 8 percentage points above the average, and well above the other G7 countries, which ranged from 8.7% in Italy to 11.7% in Germany (Figure 1). Over time, the share of GDP allocated to health care goods and services in the United States has consistently remained around 60% more than the average of the other G7 countries.

Figure 1. Health spending in the United States sits well above all other OECD countries

Health spending as a share of GDP, 2019



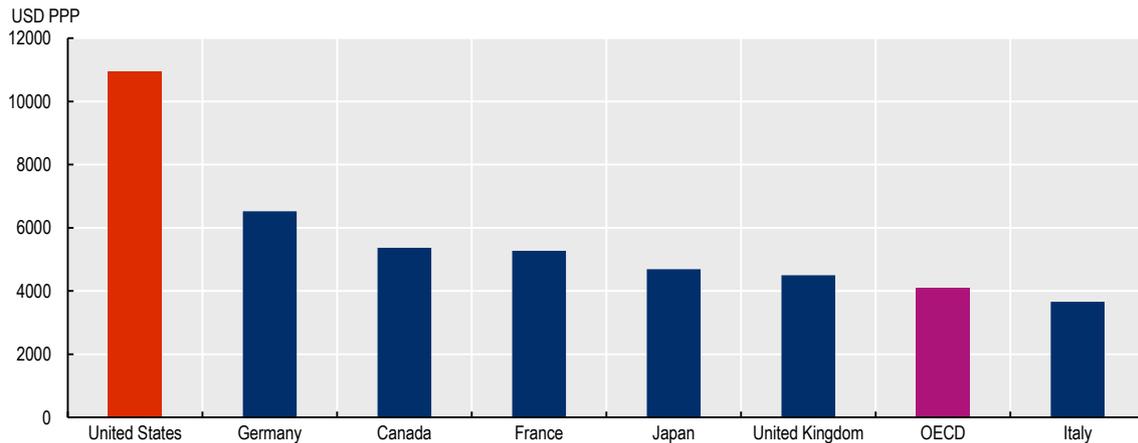
Note: Data refer to health spending in 2019 (or latest available year).
Source: OECD Health Statistics 2021.

¹ This note focuses on a comparison of health spending in 2019, prior to the COVID-19 pandemic. Health spending in 2020 and 2021 is estimated to have grown strongly in the United States and many other OECD countries.

This means that, on an average per capita basis, each US citizen consumed nearly USD 11 000-worth of health goods and services in 2019. When adjusted for the differences in price levels across countries, this level equates to more than two-and-a-half times the OECD average of just over USD 4 000, and twice as much as the average per capita spending in the other high-income G7 countries (Figure 2).

Figure 2. US citizens spend double the amount on health than in other high-income countries

Per capita health spending, 2019, adjusted for differences in purchasing power



Note: Data refer to health spending in 2019 (or latest available year).
Source: OECD Health Statistics 2021.

The United States is a rich country, so it is normal that it spends more on health

The richer a country is, the greater the resources it devotes to health care as citizens' demands for more care increases. However, even taking into account the overall wealth of the United States, its spending on health is comparatively high.

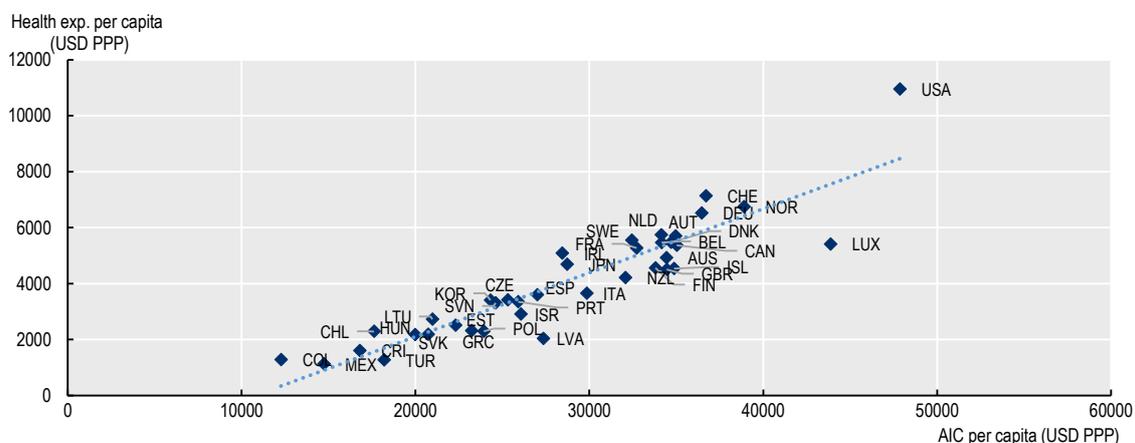
Figure 3 shows the clear relationship between income and health spending.² If per capita income is around USD⁰20 000, a country could be “expected” to spend about USD⁰2 000 per person on health (and indeed this is the case for countries like the Slovak Republic and Hungary). If per capita income doubles to USD⁰40 000, health spending might be expected to increase three-fold, according to this straight-line relationship. Of course, there are a multitude of other factors that impact health spending beyond just income, and countries with the same income levels have very different levels of health spending, and vice versa. However, the relationship to income is a convenient way to consider current health spending levels.

The United States is particularly wealthy, with the highest level of household consumption among OECD countries. However, the United States is also the biggest outlier in health spending, by a wide margin, sitting way above the line of ‘expected’ spending. A country with the income level of the United States might be expected to spend around USD⁰2 500 less per capita than it actually does – equivalent to more than USD⁰800bn per year.

² Income is measured by AIC (Actual Individual Consumption) which describes the material welfare of households and covers the consumption of all goods and services in the economy, irrespective of whether households or government are paying.

Figure 3. The United States is an outlier on health spending relative to its income

Per capita health spending and overall consumption, 2019



Note: AIC (Actual Individual Consumption) describes the material welfare of households and covers the consumption of all goods and services in the economy.

Source: OECD Health Statistics 2021.

Neither the age structure nor the lifestyle of the US population can properly explain the much higher spending

Since the risk of ill-health generally increases with age, a population with an **older demographic structure** will experience higher mortality rates, greater incidence and prevalence of certain diseases, and higher demands for health care – and therefore, by consequence, higher spending on health. However, many European countries and Japan have been ageing much more rapidly than the United States and have a much older population. In France, Germany, and Italy, 20% or more of the population is over 65 years old, and 28% in Japan, compared with 16% in the United States. Population ageing can explain some of the past *growth* in health expenditure in the United States and elsewhere, but it cannot explain why the United States has a higher *level* of spending. In fact, age-standardising health spending across the OECD actually increases the gap between the United States and most other countries.

Are Americans **more likely to be sick** than Europeans or Japanese people and therefore have more need for health care? It is true that the United States experiences very high rates of overweight and obesity that are already costly and will continue to drive health spending higher in the coming decades (Table 1). However, Americans have much lower rates of smoking than most other OECD countries, and so this should be contributing to better health outcomes.

Table 1. The United States performs better on smoking rates but badly on obesity

	Smoking		Alcohol		Overweight / obese		Ambient air pollution	
	Daily smokers (% population aged 15+)		Litres consumed per capita (population aged 15+)		Population with BMI ≥ 25 (% population aged 15+)		Deaths (per 100 000 population)	
OECD	16.5		8.7		56.4		29	
Canada	10.3	☑	8.0	⊙	59.8	⊙	10	☑
France	24.0	☒	11.4	⊙	49.0	⊙	20	⊙
Germany	18.8	⊙	10.6	⊙	60.0	⊙	32	⊙
Italy	18.6	⊙	7.7	⊙	46.4	⊙	41	⊙
Japan	16.7	⊙	7.1	⊙	27.2	☑	31	⊙
United Kingdom	15.8	⊙	9.7	⊙	64.2	⊙	21	⊙
United States	10.9	☑	8.9	⊙	73.1	☒	15	⊙

Note: ☑ Better than OECD average; ⊙ Close to OECD average; ☒ Worse than OECD average.

Source: OECD Health at a Glance 2021.

Another reason that might explain high health spending in the United States might be that the **quality of care** is better than elsewhere. There is no simple way of saying whether this is true. As seen in Table 2 in some areas, US health care is very good; in others it is not.

Table 2. While cancer outcomes appear favourable, the quality of primary care fares less well

	Effective cancer care		Effective primary care		Effective preventive care		Effective secondary care	
	Breast cancer survival (Age-standardised five-year net survival percentage)		Avoidable diabetes admissions (per 100 000 people, age-sex standardised)		Mammography screening within the past 2 years (% women aged 50-69)		30-day mortality following AMI (per 100 000 admissions, age-sex standardised)	
OECD	84.3		127		61.7		6.6	
Canada	88.6	⊙	96	⊙	62.0	⊙	4.6	☑
France	86.7	⊙	151	⊙	48.8	⊙	5.6	⊙
Germany	86.0	⊙	206	⊙	50.1	⊙	8.3	⊙
Italy	86.0	⊙	41	☑	60.7	⊙	5.4	⊙
Japan	89.4	☑			44.6	☒	9.7	☒
United Kingdom	85.6	⊙	81	⊙	75.1	⊙	6.6	⊙
United States	90.2	☑	226	☒	76.5	⊙	4.9	⊙

Note: ☑ Better than OECD average; ⊙ Close to OECD average; ☒ Worse than OECD average.

Source: OECD Health at a Glance 2021, <https://doi.org/10.1787/ae3016b9-en>.

Nearly half of health care funding in the United States comes from private sources, especially private health insurance

In most countries, health spending is primarily financed either by government out of its tax revenues, or by health insurance paid for through social security contributions. Taken together, these types of financing schemes fund three-quarters of all health care spending in OECD countries. Among the G7 countries, Canada, Italy and the United Kingdom fund most of their health care through government-financed schemes (Figure 4). On the other hand, Germany, France, Japan each have a system of public health insurance in place. Private insurance and “out-of-pocket” payments play minor, supplementary, roles.

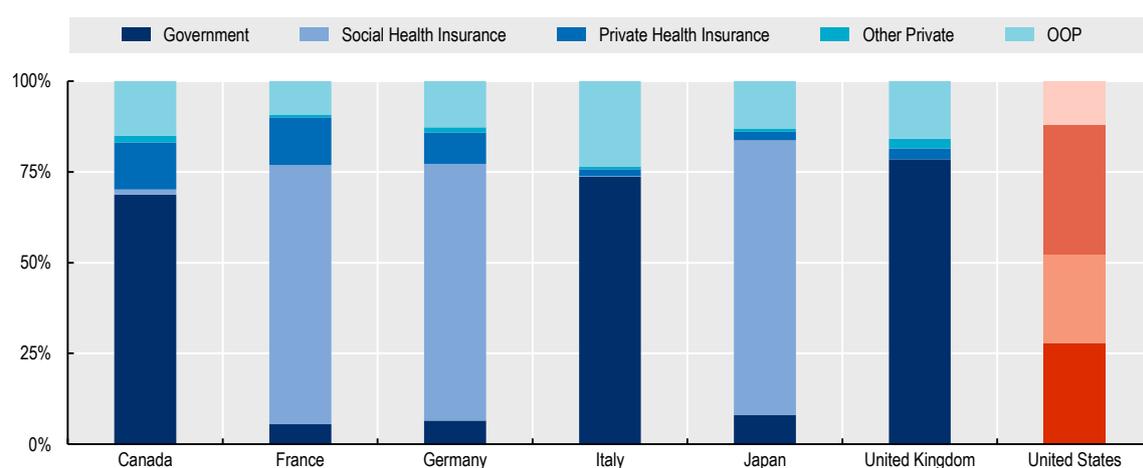
The structure of health financing in the United States is different. Federal and state programmes, such as Medicaid, and public health insurance schemes, such as Medicare, covered around one-quarter of

US health spending each in 2019.³ However, private health insurance accounts for around a third of all spending. In most cases, this cover acts as primary coverage for many US citizens and overall accounts for a much larger share than in other countries.

Spending by households (out-of-pocket spending), both on a fully discretionary basis or as part of some co-payment arrangement, at 11% of health spending (often for things like dentistry, ophthalmic, or over-the-counter drugs) is at a similar level to some of the other high-income countries.

Figure 4. The structure of health financing is more complex in the United States

Health spending by type of financing, percentage of health expenditure, 2019



Note: Data refer to health spending in 2019 (or latest available year).

Source: OECD Health Statistics 2021.

The United States spends more on health than other countries, particularly on ambulatory care and on administering the system

Health expenditure can be broken down into different categories of spending: hospital, long-term care, outpatient, (retail) pharmaceuticals, etc. as well as those services allocated to the whole community, such as public health and administration of the health care system. The categories of spending available for the United States are mainly based on the provider rather than the type of care, so international comparisons are made on this basis.

Figure 5 compares the structure of spending in the United States and in other G7 countries. The per capita spending in each category in the United States is high, reflecting overall spending level of the United States. In short, they show that:

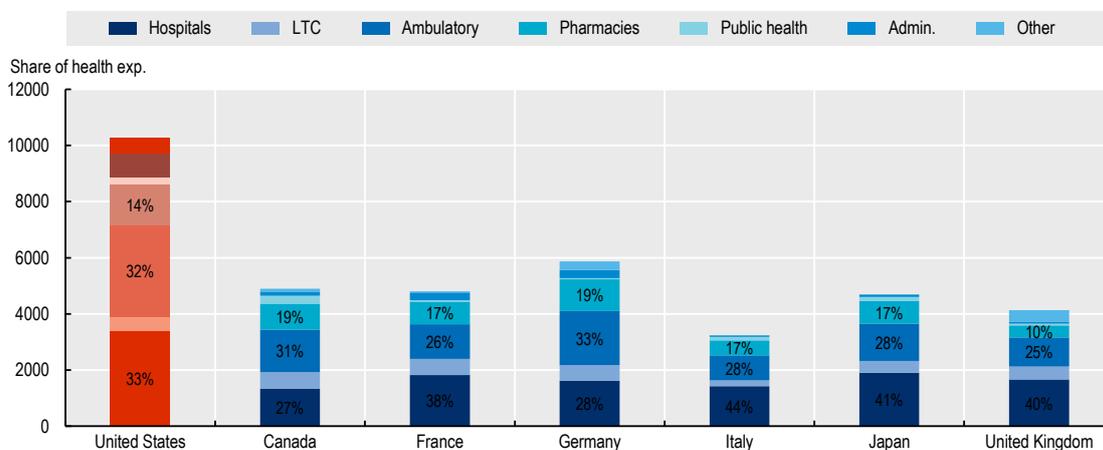
- The share of ambulatory care is relatively high in the United States covering a third of overall spending, and in per capita terms almost two-and-a-half times the average of the other G7 countries.

³ Given the high overall level of spending in the United States, the total of federal and state programmes and insurance still accounts for an equivalent share of GDP compared to the other G7 countries (8-9%), and a higher share of overall government budget (around 22%).

- While per capita spending on pharmaceuticals is higher in the United States than in other countries at nearly USD⁰1 500, the share is relatively low in comparison.
- Administrative costs are high at 8% of health spending. At more than USD⁰800 per person, this is five times the average of the G7 countries.
- Long-term care spending is similar to other countries, but proportionally accounts for less spending than elsewhere. However, no universal long-term services and support benefits have been established in the United States. The current system consists of means-tested coverage through Medicaid and a small private long-term care insurance market. Medicaid provides a safety net for low-income populations, with coverage for approximately 20% of the total population.

Figure 5. The United States spends much more on outpatient care than most countries

Share of health spending by health care provider, 2019



Note: Note: Data refer to 2019 (or latest year). Categories refer to health care provider categories rather than services of care.
Source: OECD Health Statistics 2021.

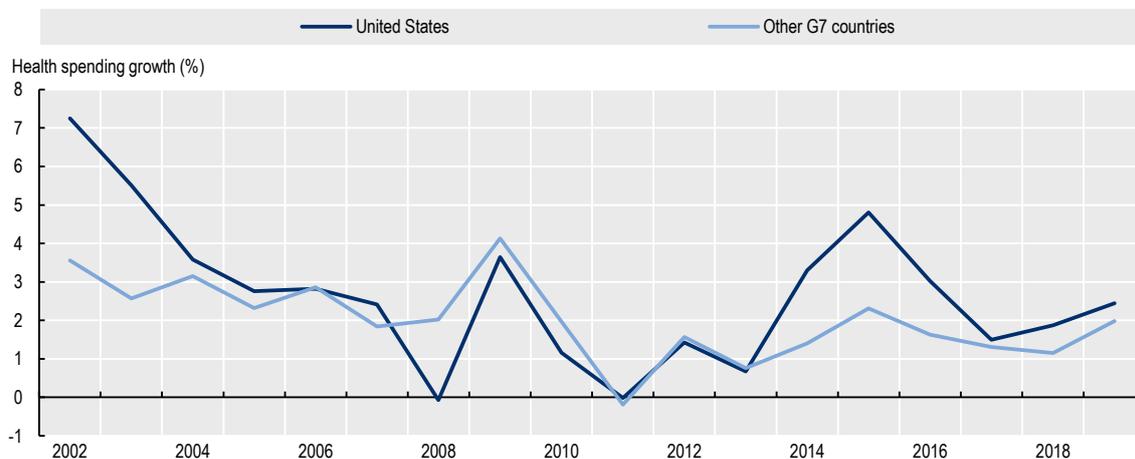
Both the hospital and ambulatory sectors have helped push up health spending in recent years

Figure 6 shows annual growth rates in health spending from 2002 onwards for the United States and for the other G7 countries combined. This can be broken down into three periods. At the start of the timeframe, the United States experienced stronger growth in health spending compared to the other G7 countries but these growth rates declined to levels similar to other countries by around 2005. Between 2008 and 2011, US health spending growth was consistently lower than the G7 countries, while it again grew faster from 2014 onwards.

In recent years, the increase in US health spending has been driven by growth in both the hospital and outpatient sectors. Across the G7 countries, there has been relatively higher growth in ambulatory care, reflecting the move to shorter stays in inpatient care and the increasing use of treatment in an outpatient setting.

Figure 6. The difference in health spending between the United States and other G7 countries further widened in the years before the pandemic

Average per capita health expenditure growth (in real terms), 2002-19

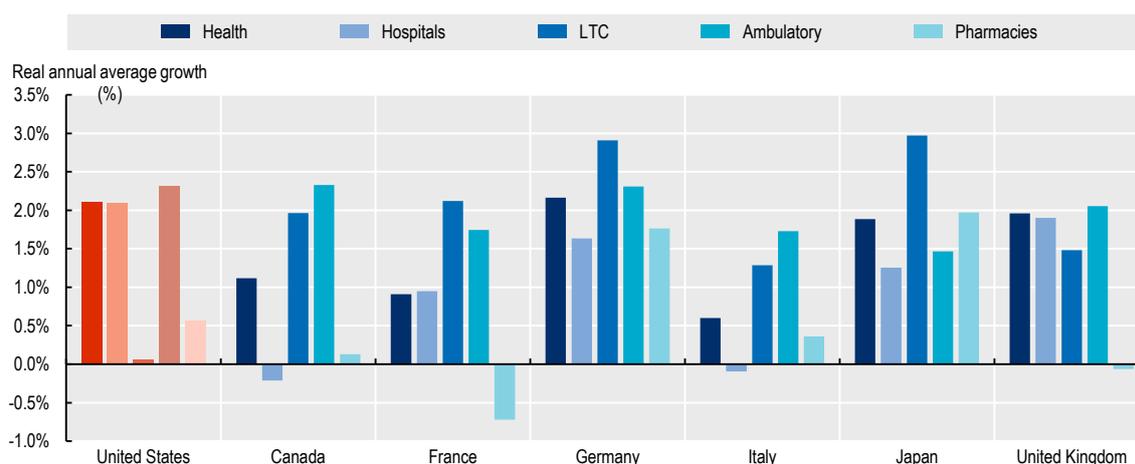


Source: OECD Health Statistics 2021.

Spending on retail pharmaceuticals in the United States has tended to be less of a contributor to recent overall growth compared to previous decades. While pharmaceutical spending has started to increase again, slower growth over the last decade has been due to a mix of cost-control measures: excluding products from reimbursement; cutting manufacturer prices and margins for pharmacists and wholesalers; and introducing or increasing user charges for retail prescription medicines.

In contrast to the other G7 countries, spending on LTC services in the United States has been static. In France, Germany and Japan, annual growth in the LTC sector has been between 2-3%.

Figure 7. Growth in US spending has been driven by both the hospital and outpatient sectors



Note: Data refer to 2010-19 except Italy (2012-19), Japan (2011-18) and the United Kingdom (2013-19).

Source: OECD Health Statistics 2021.

But in terms of the physical and human resources that account for the bulk of health spending across the health sector, the number of hospital beds and physicians that are available to the population in the United States remains below that of some other high-income countries (Table 3).

Table 3. Extra spending may not translate into more resources in the US health system

	Hospital beds		Doctors		Nurses	
	Per 1 000 population		Practising physicians (per 1 000 population)		Practising nurses (per 1 000 population)	
OECD	4.4		3.6		8.8	
Canada	2.5	⬇️	2.7	⬇️	10.0	⬇️
France	5.8	⬇️	3.2	⬇️	11.1	⬇️
Germany	7.9	⬇️	4.4	⬇️	13.9	⬇️
Italy	3.2	⬇️	4.1	⬇️	6.2	⬇️
Japan	12.8	⬇️	2.5	⬇️	11.8	⬇️
United Kingdom	2.5	⬇️	3.0	⬇️	8.2	⬇️
United States	2.8	⬇️	2.6	⬇️	12.0	⬇️

Note: ⬆️ Above OECD average; ⬇️ Close to OECD average; ⬇️ Below OECD average.

Source: OECD Health at a Glance 2021, <https://doi.org/10.1787/ae3016b9-en>.

Is it the prices or the amount of health care consumed that helps explain high US spending?

To put it simply, Expenditure = Price x Quantity. That is, health expenditure equals the amount of health goods and services consumed multiplied by the price of these goods and services. This is true both in general and for each sub-category of expenditure (in-patient, pharmaceuticals, and so on). So, which one explains high US health spending?

Health prices are higher in the United States than elsewhere. The OECD collects information on the prices of health goods and services. In 2017 (the most recent data; new data for 2020 are currently being processed) health price levels in the United States were around 27% higher than the OECD average. In addition, because of some differences in the methodology, the calculated price levels in the United States are likely to be underestimates. Health prices in the other G7 countries tend to be *below* the OECD average. Health prices in France, for example, were 23% below the OECD average.

Some of the factors helping to explain higher health prices in the United States include a more intense use of health-related technologies (Chandra and Skinner, 2012^[1]), decentralised price negotiations for drugs and services (McKellar et al., 2014^[2]), as well as the fragmentation of the system adding to complex levels of administration (Himmelstein et al., 2014^[3]) and greater provider concentration (Cooper et al., 2019^[4]).

And of course, the cost of the workforce is the major component of any health system, and while the density of physicians and nurses may be comparable, data from OECD and the American Medical Association suggest that salary levels of physicians in the United States are particularly high. Comparing remuneration levels of health care professionals across countries is a challenge, but OECD estimates suggest that the annual remuneration of a GP in the United States (USD⁰218 000) is more than 60% above the average of other G7 countries, and 80% more for a specialist (USD⁰316 000).

As a result, unpublished OECD estimates suggest the price of a visit to a family doctor is three times higher in the United States than in other G7 countries, while the price of specialist care – such as an ophthalmologist and a gynaecologist service – is twice the price reported in G7 countries.

Similar calculations suggest the price that Medicare pays to hospitals for a normal delivery is two times the price reported in other G7 countries, and that of a CABG surgery or a hip replacement is 1.5 times the average of the other countries. It is important to note that pricing a service is not quite the same as that of a product. Within the price there may be additional (perhaps unnecessary) tests and treatment that is more intensive, partly due to defensive medicine and tort costs.

Previous work (Papanicolas, Woskie and Jha, 2018^[5]) suggests that, among the G7 countries, the United States had higher prices of pharmaceuticals used for common conditions. For example, the discounted price for *Crestor* (cholesterol) in the United States (at USD⁰86 per month) was listed at more than twice that in Germany, and nearly three times the average of other G7 countries. Similarly, for *Humira* (rheumatoid arthritis) the US discounted price (at USD⁰2⁰505 per month) was more than double the average of the other high-income countries.

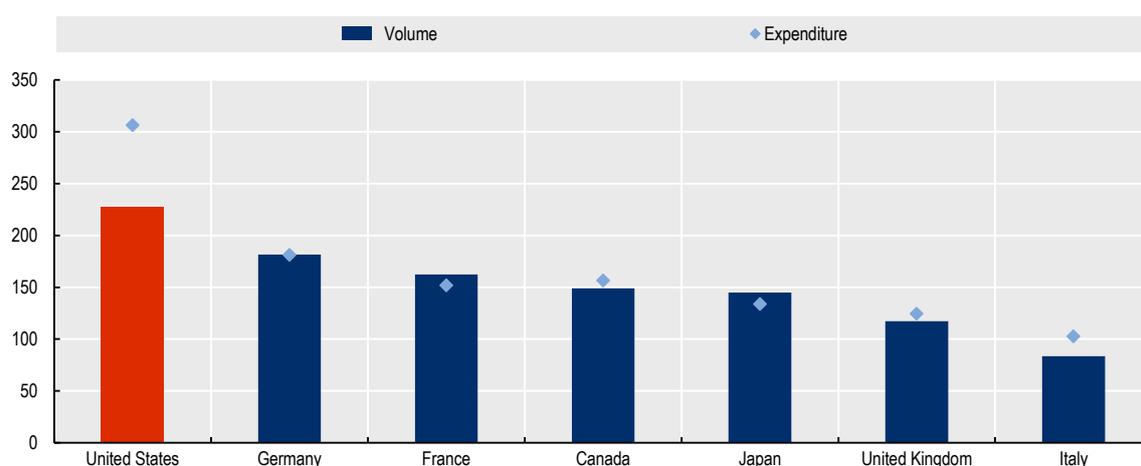
Adjusting for these differences in overall health prices between countries gives a measure of the amount of health goods and services consumed by the population (“the volume of care”). Comparing relative levels of health expenditures per capita with relative levels of volume per capita provides another way to look at relative contributions of volumes and prices in health expenditures. It also shows that volume measures are a useful addition to comparisons of spending in the analysis of health care use.

The volume of health goods and services across G7 countries varies less than the variation in health expenditure (Figure 8). While the United States is the highest spender on health at nearly 2.2 times the other G7 countries average, after taking into account the conservative estimates of US health prices, the difference between the United States and the other G7 countries in volume terms remains at around 1.6 times.

While it may be difficult to see this translating into a much higher level of overall hospital admissions or doctor consultations, there is some evidence to suggest that the United States has an elevated number of diagnostic examinations (MRI and CT scans) compared with the other countries, as well as increased levels of some elective surgeries (e.g. knee replacements).

Figure 8. The volume of health care goods and services across G7 countries varies less than health spending

Health care volumes per capita compared to health expenditure per capita, 2017, OECD average = 100



Note: Volumes are calculated using the PPPs for health. Expenditures are calculated using the PPPs for Actual Individual Consumption.
Source: OECD Health Statistics 2021.

In summary...

The United States spends much more on health than other high-income countries – both on a per capita basis and as a share of GDP. While rich countries *do* spend more on health care, the high-income level of US citizens is unlikely to explain all of this difference. In addition, while the United States has some concerning risk factors, such as obesity, the underlying health status and age of the population should not lead to greater health needs compared to other countries.

The United States spends more across the board on health care (except on long-term care), but the gap is particularly pronounced in the area of out-patient care, which has been a strong contributor to overall health spending growth in recent years. The other striking difference to other G7 countries is the share of health spending going on the administration of the health system, which can in part be attributed to the complex financing and organisational structure of care in the United States.

Higher spending can be due either to higher prices for medical goods and services or to their higher consumption. Recent evidence suggests that prices of health goods and services are much higher in the United States than in other G7 countries, and that this is a major cause of high overall health spending. But even when differences in prices are taken into account, the volume of health goods and services may also be high, particularly those goods and services involving higher resource intensity and technology.

Does the United States get value for what it spends? The answer is not clear. The United States does better on some international measures of health care quality, while not so well in others. In terms of outcomes, some mortality and morbidity measures are below average in the United States, although this can be due, to an extent, to factors outside the health system's control.

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