**Written Statement to Senate Special Committee on Aging**

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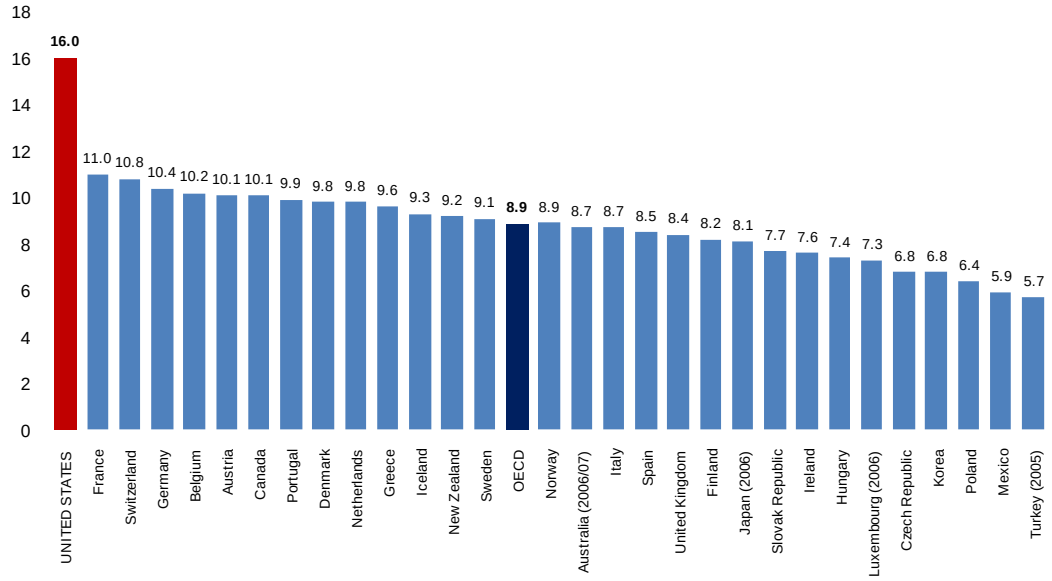
**Disparities in health expenditure across OECD countries:**
**Why does the United States spend so much more than other countries?**

## 1. Health expenditure in the United States is far higher than in other developed countries

***American citizens spend more of their national income on health than anywhere else but the United States has not yet achieved full insurance coverage of its population…***

The United States spent 16% of its national income (GDP) on health in 2007. This is by far the highest share in the OECD and more than seven percentage points higher than the average of 8.9% in OECD countries. Even France, Switzerland and Germany, the countries which, apart from the United States, spend the greatest proportion of national income on health, spent over 5 percentage points of GDP less: respectively 11.0%, 10.8% and 10.4% of their GDP. However, almost all OECD countries, with the exception of the US, and the middle-income countries, Mexico and Turkey, have full insurance coverage of their population.

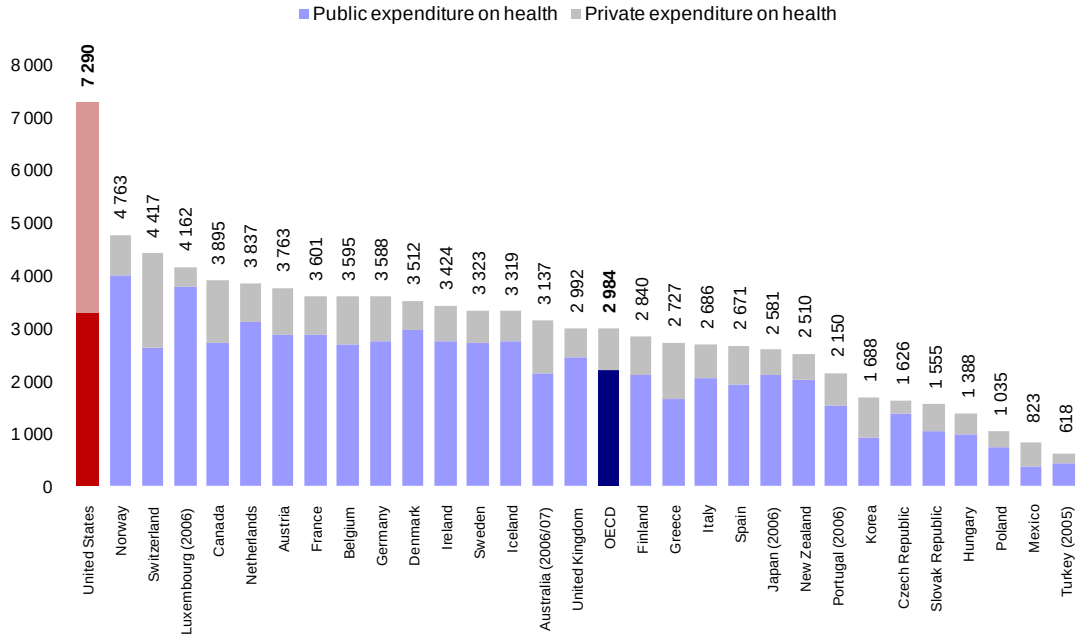
*Chart 1: Health expenditure as a share of GDP, OECD countries, 2007*




Source: OECD Health Data 2009.

Americans consumed $7,290 of health services per person in 2007, almost two-and-a-half times more than the OECD average of just under $3,000 (adjusted for the differences in prices levels in different countries). Norway and Switzerland spent around $4,500 per person. Americans spend more than twice as much as relatively rich European countries such as France, Germany and the United Kingdom.

*Chart 2: Health expenditure per capita US$, 2007*




Source: OECD Health Data 2009. Figures are adjusted to US$ using Purchasing Power Parities - see Annex 2.

***…even the government spends more on health than nearly anywhere else.***

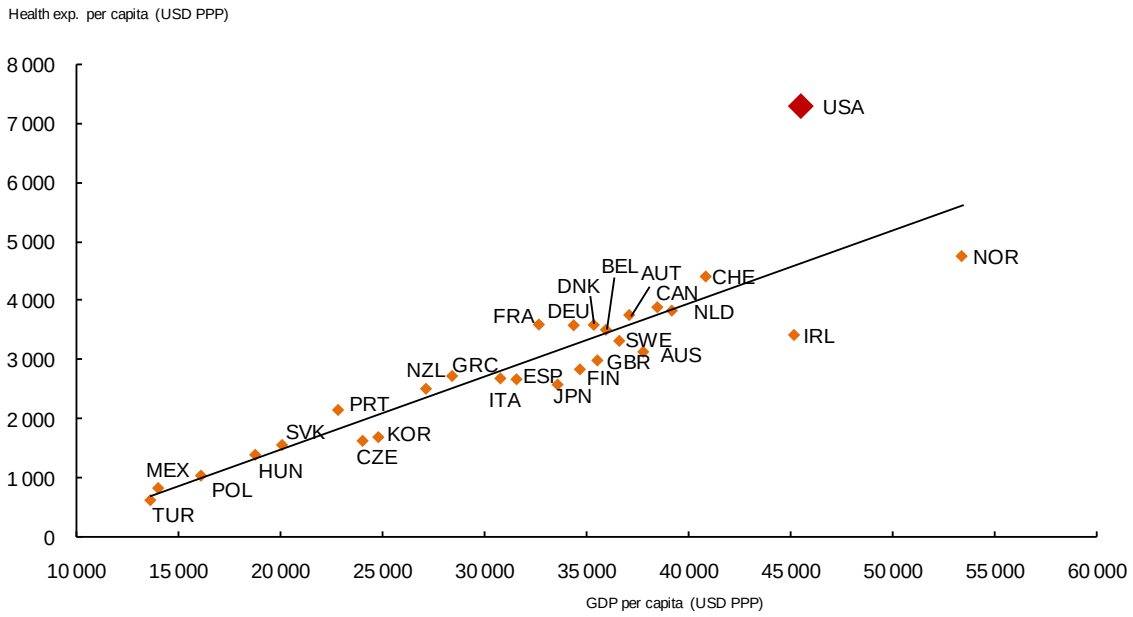
In most countries, health spending is largely financed out of taxes or social security contributions, with private insurance or 'out-of-pocket' payments playing a significant but secondary role. This is not the case in the United States which, other than Mexico, is the OECD country where the government plays the smallest role in financing health spending. However, such is the level of health spending in the United States that public (i.e. government) spending on health per capita in the United States is greater than in all other OECD countries, excepting only Norway and Luxembourg. For this amount of public expenditure in the United States, government provides insurance coverage only for elderly and disabled people (through Medicare) and some of the poor (through Medicaid and the State Children's Health Insurance Program, SCHIP), whereas in most other OECD countries this is enough for government to provide universal primary health insurance. Public spending on health in the United States has been growing more rapidly than private spending since 1990, largely due to expansions in coverage.

***Rich countries spend more than poor countries on health; even so, US spending is high.***

The richer a country is, the greater the amount of money it devotes to its health. Chart 3 shows that this relationship is very strong indeed. If per capita income is around $20,000, a country is 'expected' to spend

about $1,500 per person on health (and indeed this is the case for countries like Slovakia and Hungary), whereas if per capita income is $40,000, health spending of a bit more than $3,500 would be predicted. The relationship is simply an empirical observation: it does not imply that a country *should* ***be*** spending at or near the line, but it is a convenient way of thinking about national health spending levels. There are significant differences across countries: Canada spends a lot more than Australia, for example, though income levels are similar. But the United States is the biggest outlier, by a wide margin. A country with the income level of the United States would be expected to spend around $2,500 less per capita than it actually does – equivalent to $750bn per year.

*Chart 3: Health expenditure per capita and GDP per capita, OECD countries, 2007*




Source: OECD Health Data 2009

### *This level of spending is nothing to do with aging and health status*

One factor which *cannot* explain why the US spends more than other countries is population aging. Many European countries and Japan have been aging much more rapidly than the United States. In Europe, 16.7% of the population is over 65 years old, and 21.5% in Japan compared with just 12.6% in the United States. Population aging can explain part of the *growth* in health expenditure over the past decade in the United States and elsewhere, it cannot explain why the United States spends more than other countries.

Similarly, Americans are not any more likely to be sick than Europeans or Japanese people, though the very high rates of overweight and obesity are already costly and will drive health spending higher in the coming decades (OECD 2009a). Americans have had much lower rates of smoking than most other OECD countries since 1980, and so this should be contributing to better health outcomes. Another reason which might explain high health spending in America might be that the quality of care is better than elsewhere. There is no simple way of saying whether this is true; the Box on quality of care below provides a very short summary of what we

know, which can be reduced to the statement that 'in some areas, US health care is very good; in others it is not.'

The next section describes in which areas the US spends more than other countries, before going on to look at whether this spending is due to medical services *costing* more in the United States, or whether there is simply *more* health care being delivered.

## 2. What areas of health spending are high (and low) in the United States?

Health expenditure can be broken down into different categories of spending: in-patient, out-patient, pharmaceuticals, etc. as well as those services allocated to the whole community, such as public health and administration of healthcare. These categories of spending do not match those often used in the United States, but allow for reliable international comparisons – see the Box 'How comparable is health expenditure data?'.

Chart 8 compares the level of spending in the US and elsewhere; Chart 9 shows trends in spending. In short, they show that:

- *In-patient* spending is higher than in other OECD countries, but not by as much as might be expected, given differences in GDP. This reflects in part a data problem – some spending which would be classified as in-patient care in other countries is classified in out-patient care in the United States. It has been growing somewhat less rapidly than other categories of spending.
- *Out-patient* care spending is also highest in the United States, being more than three-times greater than in France, Germany and Japan, and growing very rapidly indeed. The growth rate is high in other countries as well, but from a lower basis.
- *Administrative costs* are high.
- *Pharmaceutical* spending is higher in the US than in any other country, but it accounts for a smaller share of total health spending than in other countries.
- *Long-term care* spending is a little higher than in other countries, but proportionally accounts for less spending than elsewhere.

**Box: How comparable are health expenditure data?**

Since the publication of the OECD manual *A System of Health Accounts* (OECD, 2000), the majority of countries now produce health spending data according to international definitions. The *System of Health Accounts* states that total health expenditure consists of current health spending and investment. Current health expenditure itself comprises personal health care (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (public health services and health administration). Curative, rehabilitative and long-term care can further be classified by mode of production (in-patient, day care in hospitals, out-patient care outside hospitals and home care.) The System of Health Accounts is currently being revised by OECD, Eurostat (the Statistical Office of the European Commission) and WHO. The draft of the revised manual will be completed by 2010.

The comparability of health expenditure data has improved as countries have modified the way they collect data to match the SHA definitions, particularly at the aggregate level and in areas such as the measurement of long-term care. However, some problems remain. For example, in-patient expenditure does not contain independent billing of physicians' fees for in-patient care in the United States. Also, in some cases, expenditure in hospitals is used as a proxy for in-patient care services, although in many countries hospitals provide out-patient, ancillary, and in some cases drug dispensing services.

**Box: How does the quality of care in the United States compare with other OECD countries?**

For all its spending, the US has lower life expectancy than most OECD countries (78.1; average is 79.1), and is below average on a wide range of other measures, including infant mortality, potential years of life lost, amenable mortality, and so on. It is true, however, that these 'aggregate' measures are not good measures of the effects of health *spending* on outcomes, as many other factors determine mortality.

There are many good things to say about the quality of the US health system. It delivers care in a timely manner – waiting lists are unknown, unlike in many OECD countries. There is a good deal of choice in the system, both in health care providers and, to some extent, the package of health insurance. The system delivers new products to consumers more quickly than in any other country. The United States is the major innovator, both in medical products and procedures. However, perhaps the best, but too-often neglected, way of assessing the performance of the system is to look in detail at the quality of care. Which areas of the healthcare system are providing value-for-money and which show opportunities for performance improvement? Quality of care, or the degree to which care is delivered in accordance with established standards and optimal outcomes, is one of the key dimensions of value.

The OECD's Health Care Quality Indicators project (HCQI) is developing a set of quality indicators at the healthcare systems level, and 23 indicators will be presented in the forthcoming edition of *Health at a Glance 2009*. These indicators cover key healthcare needs, all major healthcare services, and most major disease areas. The United States stands out as performing very well in the area of cancer care, achieving higher rates of screening and survival from different types of cancer than most other OECD countries (Charts 4 and 5). The United States does not do well in preventing costly hospital admissions for chronic conditions, such as asthma or complications from diabetes, which should normally be managed through proper primary care (Charts 6 and 7).

**Chart 4: Breast cancer, five-year relative survival rate, latest period**

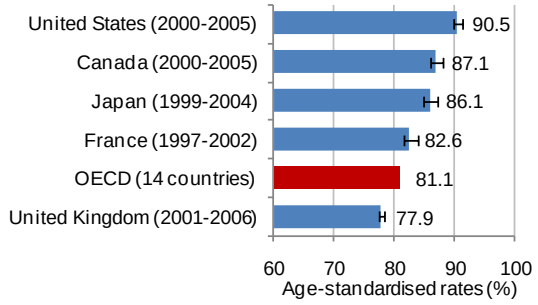



**Chart 5. Colorectal cancer, five-year relative survival rate, latest period**

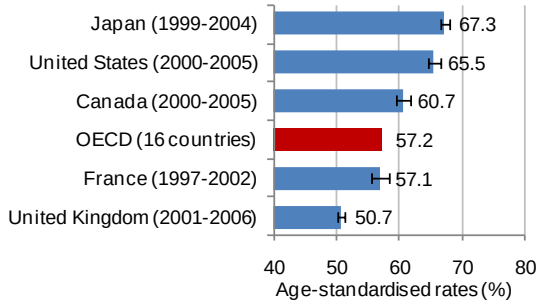



**Chart 6: Asthma admission rates, population aged 15+, latest year**

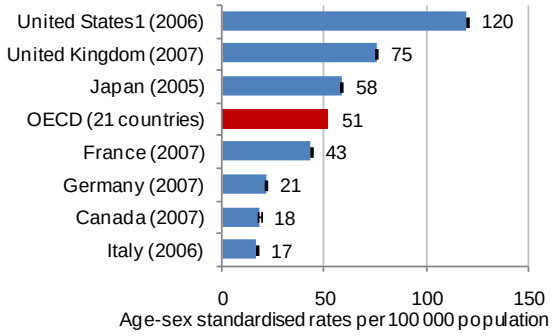
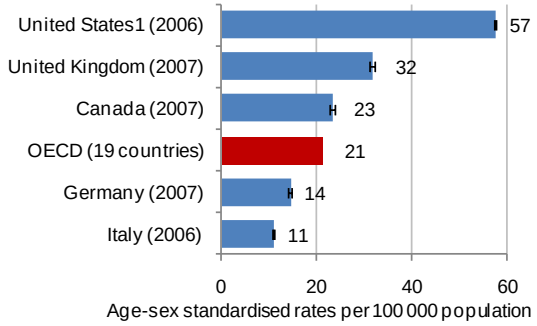



**Chart 7. Diabetes acute complications admission rates, population aged 15+, latest year**




*Note*: 95% confidence intervals are represented by H.
*Source*: OECD Health Care Quality Indicators Data 2009.

1. Does not fully exclude day cases

*Chart 8: Current health expenditure per capita by category of care, 2007*

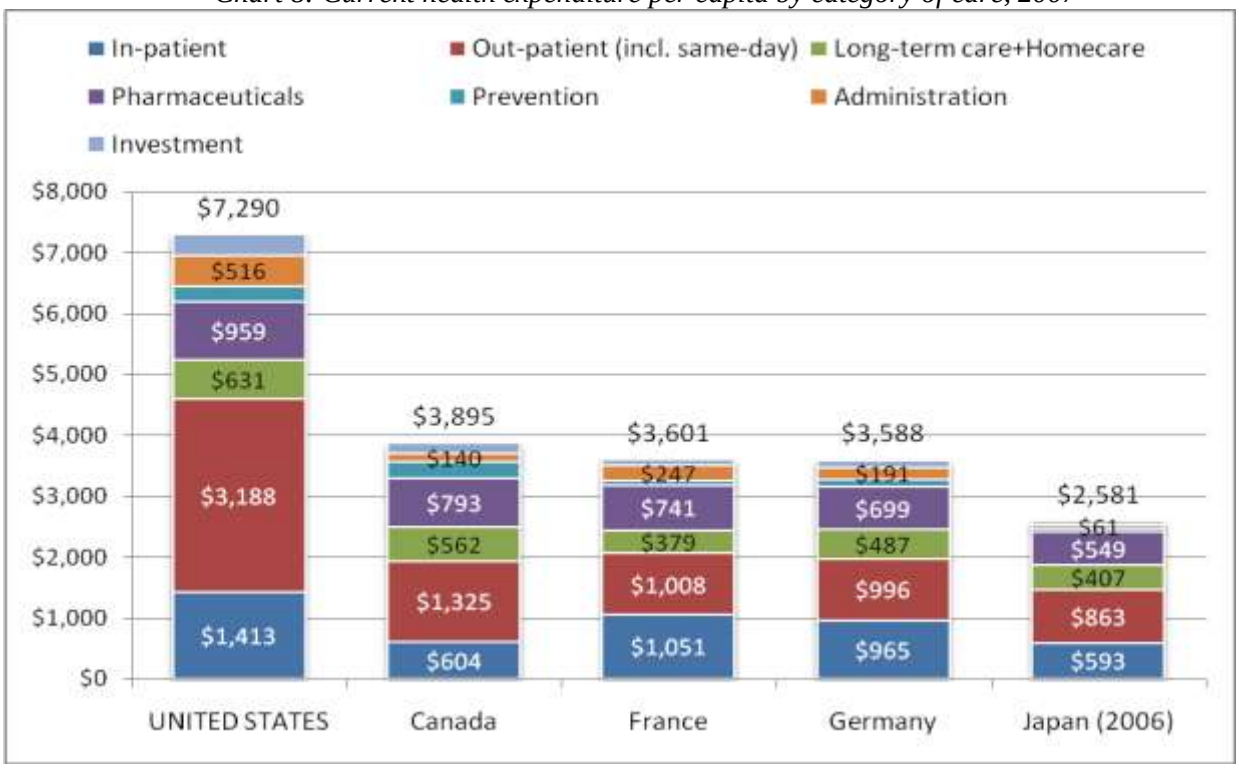
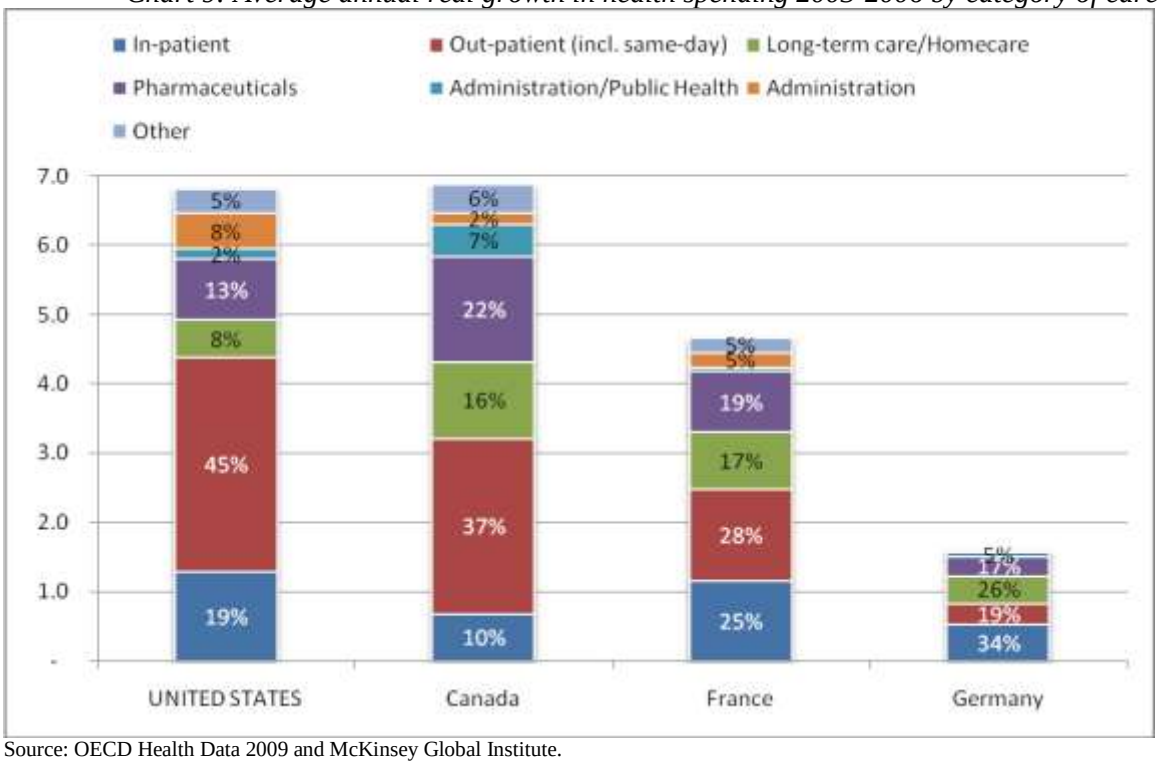



*Chart 9: Average annual real growth in health spending 2003-2006 by category of care.*




Source: OECD Health Data 2009 and McKinsey Global Institute.

***The cost of same-day surgery is high and growing rapidly…***

The stand-out difference in spending in the United States compared with other OECD countries is in elective interventions on a same day basis. These accounted for a quarter of the growth in US health spending between 2003 and 2006, compared with just 4% of the growth in Canadian spending. Such services are an important innovation in health care delivery, often being preferred, when possible, by patients to staying overnight in a hospital. Estimates of spending on same-day surgery performed by independent physicians for 2003 and 2006 suggest that this has been the fastest growing area of health care over this period (Mckinsey Global Institute, 2008).

***…as, to a lesser extent, is spending on pharmaceuticals.***

Pharmaceutical spending per capita is higher in the United States than in other OECD countries. Spending on prescription drugs has grown much more rapidly than total health spending, although the pace has slowed recently. In this, patterns in the United States are similar to those throughout the developed world.

***Administrative costs are high.***

Administration of the US health system is expensive: the 7% share of total spending going on administration is twice the average of OECD countries. This is on a par with a few other systems such as France, Germany and Belgium which also have multipayer systems (even if in some of them there is no or little competition across payers). In comparison, Canada and Japan devote around 2-4% of total health spending on administration.

The pace of growth in administrative spending in the US has slowed in recent years, but is high in part because of lack of investment in health ICTs. New OECD analysis shows that such investments will help – eventually – to reduce costs. Up to now, use of ICT in the US health sector has been little short of woeful in comparison with the best performing countries. Australia, the Netherlands, New Zealand, the UK and the Nordic countries have near-universal use of electronic health records (EHR) by GPs which, along with the potential benefits for quality of care, also reduces administrative costs.

## 3 Expenditure = Price times Quantity: which one explains high US health spending?

Logically, health expenditure must equal the amount of health services multiplied by the price of these services. This is true both in general and for each sub-category of expenditure (in-patient, pharmaceuticals, and so on). If the US spends more on same-day surgery than other countries, this must be either because there is more such surgery, or it is more expensive, or some combination of the two.

***Evidence suggests health* prices *are higher in the United States than elsewhere.***

The OECD collects information on the prices of health goods and services (OECD, 2007). In 2005 (the most recent data; new data for 2008 are currently being processed) health price levels in the United States were around 25% higher than the OECD average. Health prices in Japan, in contrast, were 25% below the average. In itself, after taking into account some other adjustment to reflect general price levels in an economy, this difference in health price levels would explain at least half of the differences in spending

between the United States and the rest of the developed world. However, as will be discussed below, there is good reason to think that prices in the United States are underestimated, and the real difference in prices is even larger.

***Pharmaceutical prices are 30-50% higher than in the rest of the OECD…***

The average price of 181 pharmaceutical drugs in the United States in 2005 was 30% higher than the average in other OECD. Other studies (e.g. Mckinsey Global Institute, 2008) suggest that this is an underestimate, and the true difference in price is as much as 50%. Most studies find that prices of *generic* drugs were cheaper in the United States (and indeed use of generics is higher in the US than in most countries), so all of this difference in prices between the US and elsewhere is due to very high prices of branded drugs.

***…and hospital services are particularly expensive.***

An OECD study (OECD, 2007) found that prices in US hospitals in 2005 were higher than in other OECD countries. But again, it seems that the real difference in costs was underestimated. A more detailed study is currently underway at the OECD, and preliminary results from this work shows US price levels of hospital services to be nearly twice as high as the average of 12 other countries (the old 2005 study suggested that prices were about 40% higher than in the same 12 countries).

***Physicians are paid significantly more than in other countries.***

The same may be true of the 'price' of physicians. Remuneration of US GPs exceeds those of doctors in other countries (being $25,000 to $40,000 more than in UK, Germany and Canada, and $60,000 more than in France, though the data is old, coming from 2003-5). The gap was even larger for specialists (Fujusawa and Lafortune, 2008). Income levels reflect both fees and activity – physicians are often remunerated on a fee-for-service basis, so the high rates of income of US doctors might reflect both higher fees and higher activity than in other countries. On balance, however, it seems likely that at least some part of the high rates of remuneration are due to high prices rather than to high volume of activity.

***'Prices' are not the <u>whole</u> story, however.***

There is convincing evidence that prices of health goods and services are high in the United States. But high prices are not a sufficient explanation of differences between the United States and the rest of the OECD. The United States has fewer 'inputs' in some areas of health care than in other countries, but more in others (further country details are found in Annex 1 to this note).

***There are fewer doctors and hospital beds than in other countries.***

Fewer people are admitted to hospitals and the average length of stay is lower than the OECD average. There are few hospital beds for acute care (Table 1). All these suggest that the hospital sector is not being overused, at least compared to other OECD countries. Furthermore, the United States has significantly fewer practising physicians in relation to the size of its population than in other countries, and the population is nearly 30% less likely to have a doctor consultation than on average in the OECD.

**Table 1: Where the United States health system does LESS than other countries**

| | *United States* | *Rank compared with OECD countries* | *OECD average* |
|---|---|---|---|
| Practising physicians | 2.4 per 1000 population | 23rd | 3.1 per 1000 population |
| Doctor consultations | 3.8 per capita | 26th | 6.8 per capita |
| Acute care hospital beds | 2.7 per 1000 population | 23rd | 3.8 per 1000 population |
| Hospital discharges | 126.3 per 1000 population | 22nd | 157.8 per1000 population |
| Average length of stay for acute care | 5.5 days | 22nd | 6.5 days |

Source: OECD Health Data 2009.

***There is heavy use of some surgical procedures in the United States…***

However, although there are fewer visits to doctors and fewer people staying in hospitals, once in the medical system there is evidence of higher rates of activity in the United States than elsewhere. Some surgical procedures are more widely used in the United States than elsewhere (Table 2) – caesarean sections are nearly 25% more common, knee replacements 50% more common and revascularisation procedures twice as common as on average.

**Table 2: Where the United States does MORE than other countries**

| | *United States* | *Rank compared with OECD countries* | *OECD average* |
|---|---|---|---|
| Revascularisation procedures | 521.3 per 100,000 population | 3rd | 266.7 per 100,000 population |
| Knee replacements | 183.1 per 100,000 population | 2nd | 117.9 per 1000,000 population |
| Caesarean sections | 31.1 per 100 live births | 4th | 25.7 per 100 live births |
| MRI units | 25.9 per million population | 2nd | 11.0 per million population |
| MRI exams | 91.2 per 1000 population | 1st | 41.3 per 1000 population |
| CT Scanners | 34.3 per million population | 5th | 22.8 per million population |
| CT exams | 227.8 per 1000 population | 1st | 110.7 per 1000 population |

Source: OECD Health Data 2009.

In 2006, the rate of ambulatory surgery procedures in the United States was more than three times greater than the average in OECD countries. For procedures such as tonsillectomy which involve physician judgment, the rate of day surgeries is four times greater than the OECD average (it is two-and-a-half times greater than in Canada and 33% greater than the second highest country, the Netherlands). The United States is also leading by a wide margin all other OECD countries in the rate of cataract surgery performed on a same-day basis in hospitals or in ambulatory centers. Over the past decade, the growing number of day surgeries in the United States was driven mainly by the growth in activity in ambulatory surgery centers. The rate of visits to ambulatory surgery centers tripled between 1996 and 2006, while the rate in hospital-based centers was flat (NCHS, 2009).

***…and of some of the more expensive diagnostic tests.***

Another component of outpatient care costs that has grown rapidly in the United States in recent years is the cost related to diagnostic tests, such as medical resonance imaging (MRI) scans and computed tomography (CT) scans. Billions of dollars are now spent each year on such tests in the United States. Comparable data on the number of MRI and CT exams are available for only 10 other OECD countries beside the United States. Based on these available data, the number of MRI and CT exams per capita are much greater in the United States than in any of these other countries, and are over twice as high as the OECD average. This is linked to a growing supply of this equipment in the United States, which has among the highest number of MRI units and CT scanners after Japan.

Some studies have attempted to assess the medical benefits of the substantial increase in MRI and CT exams in the United States but found no conclusive evidence (Baker et al., 2008). To the extent that there may be financial incentives for doctors to prescribe such exams, this increases the likelihood of over-prescription and overuse. Similarly with the surgical procedures mentioned above: the OECD has no evidence on whether these procedures are necessary or not. The Dartmouth Atlas of Health Care has shown that there are important *regional* variations in surgical procedures such as revascularisation and knee replacement within the United States, and these variations cannot be explained simply by differences in need. This provides indication on the possible overuse of certain interventions in different parts of the country (Dartmouth Atlas of Health care, 2005). In terms of explaining the differences between US health spending and spending in other OECD countries, the central fact remains that extra volume means extra cost.

## 4. Conclusion

The United States spends much more on health than any other OECD country on a per capita basis and as a share of GDP. This higher expenditure can only be partly explained by the high income level of US citizens. The extra $750bn that America spends on health more than expected is not due to greater 'need' due to aging or sickness.

The biggest difference in spending by category is in out-patient care. Within this, it is day surgery that has seen the most rapid growth in spending. But although out-patient spending is a particularly striking difference between the United States and other OECD countries, health spending per capita on in-patient care, administration, medical goods (including pharmaceuticals) and investment is also higher than in any other country, and spending per capita on long-term care and prevention policies is high.

Higher spending than in other countries is due either to higher prices for medical goods and services or to higher service use. Unfortunately, existing comparisons of health prices across countries are of poor quality. Nevertheless, all evidence suggests that prices of health goods and services are significantly higher in the United States than in most OECD countries, and that this is the main cause of high overall health spending. Health service use is high in some areas, particularly those which are funded on a fee-for-service basis, including some advanced diagnostic techniques and elective surgery. But it is notable that where there are payment structures that encourage cost-consciousness, the United States has a very efficient system: there are few physicians and hospital beds, and average length of stay in hospital is low. This is a sign that the structure of the health system determines expenditures.

Overall, health outcomes are below average in the United States, but this is due, at least in part, to factors outside the health system. The United States stands out as performing very well in the area of cancer care, achieving higher rates of screening and survival from different types of cancer than most other OECD countries. At the same time, many other countries, such as the United Kingdom and Canada, are doing much better than the United States in providing good primary care to their population, thereby reducing the need for costly hospital care for chronic conditions such as asthma or complications from diabetes which should normally be managed outside hospitals.

The US has an exceptionally complex system. It is a system which introduces new technology rapidly – at a price. It delivers (in some areas at least) high quality of care, together with greater innovation and choice than in most other OECD systems. But it is not a system set up to bend the cost curve, unlike many other OECD countries. This is one of the major reasons why costs are high: the US system leaves patients largely indifferent to the price eventually charged for a medical good or service. Those who have insurance know that their costs will be covered. Physicians know this, and furthermore have an incentive to offer services as they are, largely, paid on a fee-for-service. In addition, 'defensive medicine' due to the threat of litigation, gives a further reason why physicians might suggest an additional diagnostic test, even if the medical benefits are likely to be limited, and the costs of malpractice insurance pushes up the prices that doctors charge. Because of the high degree of choice, it is difficult to constrain costs because people can opt-out of the more regulated system.

The US has the highest rate of use of many new technologies such as CT scans and MRIs of any OECD country. New technology is likely to be more expensive than cheaper – almost uniquely, throughout all sectors of the economy – because no person or body is concerned with the overall cost level. Combined with other reasons, including the administrative costs inevitable in a multi-stakeholder system, far more complex than existing in any other OECD country, and the result is high prices, high volumes of some activities, and high expenditures.

All other OECD countries have more mechanisms built into their health systems to restrict expenditures than is the case in the United States, even though most if not all people in these other countries are covered by health insurance. This is done either by regulating quantities or prices or both, including the dissemination of new technologies, or by requiring a greater proportion of costs out of pocket (as is the case in the United States for long-term care spending, an area where, no doubt as a result, total spending is relatively low). Regulating the price of inputs – doctors' fees, hospital payments, pharmaceutical prices and so on – is one way of constraining prices. Controlling volume often requires measures that restrict choice; occasionally limit access to care which someone insured under a typical US health plan would be able to access, or expose people to the risk of catastrophically high out-of-pocket payments unless a safety net is in place. By paying such a price, the result is that other countries are able to afford universal health care access at a lower cost than in the United States.

# Bibliography

Dartmouth Atlas of Health Care (2005), *Studies of Surgical Variation, Cardiac Surgery Report*, www.dartmouthatlas.org/index.shtm.

Fujisawa, R. and Lafortune, G. (2008) 'The Remuneration of General Practitioners and Specialists in 14 OECD countries: What are the factors explaining variations across countries?' OECD Health Working Paper no. 41.

Mckinsey Global Institute (2008), *Accounting for the cost of US health care: A new look at why Americans spend more*, December 2008.

NCHS (2009), *Ambulatory Surgery in the United States, 2006*, National Health Statistics Reports, No. 11, January 28, 2009.

OECD (2000), A *System of Health Accounts.* OECD, Paris. See www.oecd.org/health/sha.

OECD (2007): *PPPs and Real Expenditures, 2005 Benchmark Year (2007 Edition)*, OECD, Paris.

OECD (2008), *Pharmaceutical Pricing Policies in a Global Market*, OECD, Paris.

OECD (2009), *OECD Health Data 2009 – Statistics and Indicators for 30 countries*, online and on CD-Rom, Paris. See www.oecd.org/health/healthdata.

OECD (2009a), *Health at a Glance 200 – OECD Indicators*, Paris. See www.oecd.org/health/healthataglance.

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# Annex: Additional Data

**Annex Table 1. Health care capacity and utilisation**
**Examples of United States below OECD average (2007 or latest year available)**

| | Practicing physicians<br><br>per 1 000 population | Doctor consultations<br><br>per capita | Hospital beds for acute care<br>per 1 000 population | Hospital discharges<br><br>per 1 000 population | ALOS for acute care<br><br>Days |
|---|---|---|---|---|---|
| Australia | 2.8 | 6.3 | 3.5 | 162.4 | 5.9 |
| Austria | 3.8 | 6.7 | 6.1 | 277.7 | 5.7 |
| Belgium | 4.0 | 7.6 | 4.3 | 173.7 | 7.2 |
| Canada | 2.2 | 5.8 | 2.7 | 84.3 | 7.3 |
| Czech Republic | 3.6 | 12.6 | 5.2 | 203.1 | 7.7 |
| Denmark | 3.2 | 7.5 | 2.9 | 169.8 | 3.5 |
| Finland | 3.0 | 4.2 | 3.7 | 190.1 | 4.6 |
| France | 3.4 | 6.3 | 3.6 | 273.8 | 5.3 |
| Germany | 3.5 | 7.5 | 5.7 | 226.9 | 7.8 |
| Greece | 5.4 | .. | 3.9 | 187.9 | 5.6 |
| Hungary | 2.8 | 10.8 | 4.1 | 189.2 | 6.0 |
| Iceland | 3.7 | 6.5 | .. | 156.2 | 5.5 |
| Ireland | 3.0 | .. | 2.7 | 138.0 | 5.9 |
| Italy | 3.7 | 7.0 | 3.1 | 138.9 | 6.7 |
| Japan | 2.1 | 13.6 | 8.2 | 105.5 | 19.0 |
| Korea | 1.7 | 11.8 | 7.1 | 132.2 | .. |
| Luxembourg | 2.9 | 6.1 | 4.4 | 166.0 | 7.3 |
| Mexico | 2.0 | 2.5 | 1.0 | 55.3 | 3.9 |
| Netherlands | 3.9 | 5.7 | 3.0 | 109.3 | 6.6 |
| New Zealand | 2.3 | 4.7 | .. | 134.8 | 5.9 |
| Norway | 3.9 | .. | 2.9 | 172.4 | 5.0 |
| Poland | 2.2 | 6.8 | 4.6 | 194.3 | 5.9 |
| Portugal | 3.5 | 4.1 | 2.8 | 108.0 | 6.8 |
| Slovak Republic | 3.1 | 11.2 | 4.9 | 190.9 | 7.0 |
| Spain | 3.7 | 8.1 | 2.5 | 106.6 | 6.6 |
| Sweden | 3.6 | 2.8 | 2.1 | 164.8 | 4.5 |
| Switzerland | 3.9 | 4.0 | 3.5 | 166.4 | 7.8 |
| Turkey | 1.5 | 5.6 | 2.7 | 104.9 | 4.4 |
| United Kingdom | 2.5 | 5.0 | 2.6 | 125.5 | 7.2 |
| **United States** | **2.4** | **3.8** | **2.7** | **126.3** | **5.5** |
| **OECD average** | **3.1** | **6.8** | **3.8** | **157.8** | **6.5** |

Source: *OECD Health Data 2009*.

**Annex Table 2. Health care capacity and utilisation**
**Examples of United States above OECD average (2007 or latest year available)**

| | Diagnostic procedures | | | | Surgical procedures | | |
|---|---|---|---|---|---|---|---|
| | MRI units per million population | MRI exams per 1 000 population | CT Scanners per million population | CT exams per 1 000 population | Revascularisation proc. (CABG+PTCA) per 100 000 population | Knee replacement per 100 000 population | Caesarean section per 100 live births |
| Australia | 5.1 [a] | 20.2 [d] | 56.0 | 88.6 [d] | 242.0 | 148.8 | 30.3 |
| Austria | 17.7 | .. | 29.8 | .. | .. | 187.0 | 24.4 |
| Belgium | 7.5 | 48.0 | 41.6 | 167.7 | 570.5 | 159.2 | 17.8 |
| Canada | 6.7 | 31.2 | 12.7 | 103.5 | 208.6 | 139.5 | 26.3 |
| Czech R | 4.4 | 24.5 | 12.9 | 75.1 | 308.5 | .. | 19.6 |
| Denmark | 10.2 | .. | 17.4 | .. | 260.9 | 105.8 | 21.4 |
| Finland | 15.3 | .. | 16.4 | .. | 194.3 | 171.1 | 16.0 |
| France | 5.7 [b] | 21.8 [d] | 10.3 [b] | 45.1 [d] | 224.2 | 113.2 | 20.8 |
| Germany | 8.2 [b] | .. | 16.3 [b] | .. | 682.1 | 194.0 | 28.5 |
| Greece | 13.2 | .. | 25.8 | .. | .. | .. | .. |
| Hungary | 2.8 | 27.9 | 7.3 | 58.8 | 191.7 | 41.9 | 30.8 |
| Iceland | 19.3 | 64.7 | 32.1 | 144.8 | 272.3 | 106.6 | 16.9 |
| Ireland | 8.5 | .. | 14.3 | .. | 127.5 | 44.2 | 24.6 |
| Italy | 18.6 | .. | 30.3 | .. | 455.9 | 89.6 | 39.7 |
| Japan | 40.1 | .. | 92.6 | .. | .. | .. | .. |
| Korea | 16.0 | .. | 37.1 | .. | .. | 78.9 | 32.0 |
| Lux. | 10.5 | 63.3 | 27.3 | 176.9 | 205.8 | 156.0 | 29.2 |
| Mexico | 1.5 | .. | 4.0 | .. | 5.0 | 3.2 | 39.9 |
| Neth. | 6.6 [c] | .. | 8.4 [c] | .. | 198.5 | 119.4 | 14.0 |
| NZ | 8.8 | .. | 12.3 | .. | 185.4 | 96.9 | 22.8 |
| Norway | .. | .. | .. | .. | 330.9 | .. | 15.9 |
| Poland | 2.7 | .. | 9.7 | .. | 282.4 | .. | 20.6 |
| Portugal | 8.9 | .. | 26.0 | .. | 143.4 | 46.4 | 31.2 |
| Slovak R | 5.7 | .. | 13.7 | .. | .. | .. | 23.5 |
| Spain | 9.3 [b] | 32.9 | 14.6 [b] | 70.2 | 282.2 | 101.8 | 26.0 |
| Sweden | .. | .. | .. | .. | 226.5 | 110.1 | .. |
| Switz | 14.4 | .. | 18.7 | .. | 144.1 | 178.2 | 30.0 |
| Turkey | 5.6 | .. | 8.1 | .. | .. | .. | 36.0 |
| UK | 8.2 | 28.8 | 7.6 | 59.1 | 136.2 | 136.8 | 25.8 |
| **US** | **25.9** | **91.2** | **34.3** | **227.8** | **521.3** | **183.1** | **31.1** |
| **average** | **11.0** | **41.3** | **22.8** | **110.7** | **266.7** | **117.9** | **25.7** |

*Source: OECD Health Data 2009.*

*Notes:*

a. Only MRI units eligible for reimbursement under Medicare.

b. Only include equipment in hospitals (and a small number of equipment outside hospitals in France).

c. Only include the number of hospitals reporting to have at least one item of equipment.

d. Only include exams for out-patients and private in-patients (excluding exams in public hospitals).

Annex Table 3: **Expenditure per capita on different health care aggregates in US$PPPs**

| 2007 | In-patient care | Out-patient[a] care | LTC/ Home-care | Medical[b] goods | Prevention and Public Health | Admin & Insurance | Investment | Total expenditure on health |
|---|---|---|---|---|---|---|---|---|
| Australia | 1092 | 1176 | 16[c] | 535 | 51 | 86 | 181 | 3137 |
| Austria | 1276 | 986 | 474 | 643 | 69 | 133 | 182 | 3763 |
| Belgium | 969 | 811 | 639 | 609 | 140 | 294 | 133 | 3595 |
| Canada | 604 | 1325 | 562 | 793 | 270 | 140 | 201 | 3895 |
| Czech R. | 486 | 501 | 64 | 408 | 36 | 53 | 79 | 1626 |
| Denmark | 1007 | 1103 | 718 | 445 | 49 | 41 | 150 | 3512 |
| Finland | 756 | 883 | 343 | 476 | 154 | 62 | 164 | 2840 |
| France | 1051 | 1008 | 379 | 741 | 70 | 247 | 105 | 3601 |
| Germany | 965 | 996 | 487 | 699 | 127 | 191 | 125 | 3588 |
| Hungary | 372 | 355 | 44 | 485 | 56 | 17 | 59 | 1388 |
| Iceland | 842 | 1186 | 654 | 517 | 54 | 65 | -[d] | 3319 |
| Japan (2006) | 593 | 863 | 407 | 549 | 60 | 61 | 49 | 2581 |
| Korea | 444 | 572 | 28 | 446 | 32 | 63 | 104 | 1688 |
| Lux (2006) | 1147 | 1234 | 706 | 438 | 44 | 381 | 70 | 4021 |
| New Zealand | 651 | 823 | 418 | 303 | 124 | 191 | -[d] | 2510 |
| Norway | 1244 | 1324 | 1184 | 584 | 90 | 38 | 300 | 4763 |
| Poland | 306 | 263 | 77 | 280 | 23 | 20 | 65 | 1035 |
| Portugal (2006) | 431 | 983 | 71 | 508 | 39 | 25 | 94 | 2150 |
| Slovak R | 332 | 453 | 8 | 556 | 73 | 57 | 76 | 1555 |
| Spain | 582 | 999 | 230 | 620 | 62 | 86 | 92 | 2671 |
| Sweden | 857 | 1319 | 267 | 545 | 115 | 52 | 169 | 3323 |
| Switzerland | 1268 | 1431 | 857 | 540 | 102 | 220 | -[d] | 4417 |
| **US** | **1413** | **3188** | **631** | **959** | **249** | **516** | **334** | **7290** |
| **OECD (22)** | **813** | **1034** | **420** | **551** | **91** | **132** | **137** | **3142**[e] |

[a] Out-patient care covers both hospital and non-hospital settings. Also includes same-day care and ancillary services.
[b] Covers pharmaceuticals (and other non-durables) and durable goods.
[c] Australia uses a narrower definition of LTC.
[d] No separate estimates of investment are available.
[e] It is not possible to include the breakdown of expenditures for 8 OECD countries, so the average of these 22 countries is different from that quoted in the text for all 30 OECD countries.

*Source: OECD Health Data 2009*

## Annex 2: A brief explanatory note on PPPs

International comparisons of expenditure on health use *economy-wide* (GDP) Purchasing Power Parities (PPPs) to compare spending across countries. The more expensive are general prices in a country, the less is the real value of what they spend, so the lower is the dollar value of their health spending, and this is what is shown in charts 1-3 and 8 and 9. Such comparisons can be interpreted as showing what else you could buy, if you did not spend the money on health. To calculate PPPs, information on the prices in different countries of a huge range of goods and services are collected, including in the area of health.

Chart A1 compares the price levels for health and GDP across a selected number of countries for 2005 (latest data available). If a bar goes to the left of the middle line, prices are cheaper than the OECD average, and more expensive if they go to the right. This chart shows that health price levels in United States are 25% higher than the OECD average. Across the economy as a whole, prices are cheaper in the United States than in the OECD. In contrast, economy-wide prices in Japan are high, but prices of health goods and services are particularly low. As noted in the text, there is reason to think that these estimates are not as reliable as they should be, and further work is underway to improve them. Using them for analysis therefore must come with a large public health warning. However, they do illustrate the importance of differences in prices in explaining different levels of health spending.

If, for whatever reason, the price of health services is either higher or lower (relative to other countries) than the level of economy-wide prices, this can 'explain' differences in the proportion of total income which is devoted to health. For example, although Japan only spends 8.1% of GDP on health, this buys a lot of health services because they are very cheap, relative to other goods and services. In contrast, the United States spends nearly twice as much as a percentage of GDP, but health prices are particularly high relative to other goods and services. If these prices differences are taken into account, much of the differences in health spending across countries are explained – see the Box below. For more details, see OECD (2007).

**Box: Using PPPs to explain expenditure differences across countries**

On average the US spent $7290 per person on healthcare in 2007, while France spent €3279 per person. The PPP work shows that 0.91 euros were equivalent to a dollar, so French spending was $3601 per person, as shown in chart 2.

However, French health prices were 76% of those in the United States in 2005. The exchange rate was 0.8 euros per dollar, so only 76% of 0.8 euros (=0.61 euros) were necessary to buy the same basket of health goods and services in France that $1 would buy in the United States. Therefore, if French patients had paid the same healthcare prices as in the US, each French resident would actually have spent €3279/0.61 = $5365.
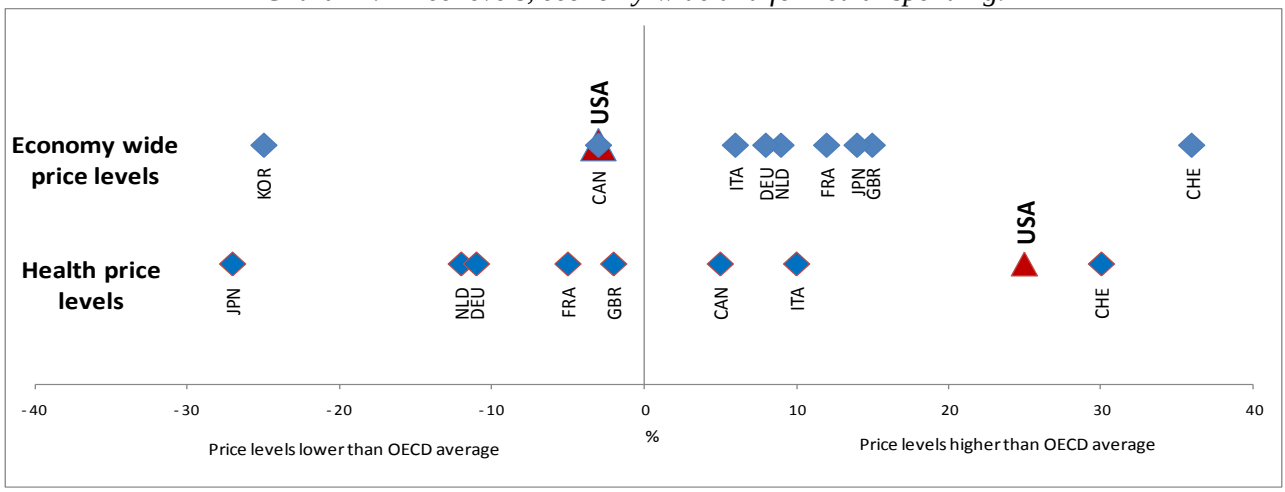
*Chart A1: Price levels, economy-wide and for health spending.*