

Statement for the Senate Special Committee on Aging on Differences in Quality of  
Health Care in Developed Countries

Submitted by

Arnold M Epstein M.D., M.A.  
John H Foster Professor and Chair,  
Department of Health Policy and Management,  
Harvard School of Public Health

September 30, 2009

Mr Chairman and Distinguished Committee Members:

It is an honor to be part of this morning's hearing which explores differences in cost of health care and quality of health care in developed countries. I have spent many years studying quality of care. I also chaired a group of experts for two years from approximately 20 countries seeking to compare quality of care internationally. The group worked under the auspices of the Organization for Economic Co-operation and Development (OECD). Based on that experience and on the data subsequently collected through the OECD, I want to make three points this morning:

- First, while not comprehensive, we have developed an increasing number of indicators that can be used to measure differences in quality of care across developed countries.
- Second, no country is consistently very high or very low in quality performance across the full range of measures. The United States performs well on some, but poorly on others.
- Third, the variable performance on indicators of quality of care stands in contrast to cost of care where the United States is the most costly by far.

### **The Context for Measuring Quality of Care**

In the United States, reports by the Institute of Medicine and others have prompted awareness that quality of care is often less than optimal. For example the RAND report by Beth McGlynn and colleagues showed that for a broad range of medical services patients get indicated care only 55% of the time. Iatrogenic injury is also a major concern. According to the Institute of Medicine, patient injury during the process of getting health care is the eighth leading cause of death. Iatrogenic injury leads to more deaths than AIDS, breast cancer or motor vehicle accidents. Finally there are dramatic differences in health care across different demographic groups. Racial minorities and patients of lower economic status are less likely to receive important preventive services, they are less likely to see the doctor when ill and even once they get to the doctor they are less likely to get important treatments that can alleviate suffering or prolong life expectancy.

Despite these concerns about quality of care, United States policy makers and clinicians often repeat the refrain that "Quality of Care in the United States is the best of any country in the world." However, there is no evidence to support this belief. In fact, until recently we have lacked the wherewithal to compare quality of care internationally.

### **The OECD Health Care Quality Indicator (HCQI) Project**

The OECD's Health Care Quality Indicator (HCQI) Project began in 2001 and is on going. It now includes a consortium of more than 30 countries. The consortium has taken substantial effort to identify a series of quality indicators that fit three general criteria.

- The first is importance. The quality indicators have a potentially important impact on health in terms of avoiding morbidity or mortality. Policy makers and consumers are generally concerned about the area. There is literature demonstrating that the health care system can meaningfully influence or address the indicator.
- Second is scientific soundness. The quality indicators must have face validity and make sense logically and clinically. If the indicator is a measure of the process of care, there must be evidence that the medical services in question lead to improved outcomes. If the indicator is a measure of the outcomes of care there must be evidence that the improved outcomes are the result of better health care services
- Third, the data to compare the quality indicator must be available from different countries in a comparable format. The limited adoption of information technology means that the detailed clinical information required for many quality indicators is often unavailable. Most often we have been forced to use administrative data for quality measurement, which is helpful, but more limited than ideal.

The current set of quality indicators includes both measures of the process of care and the outcomes of care. Twenty three indicators are featured in the forthcoming OECD publication, “Health at a Glance.” The table below lists the indicators that cover important healthcare needs, major health care services and many common disease areas.

**Exhibit 1: Areas Covered by the Current Set of OECD Indicators**

	<b>Process Measures</b>	<b>Outcome Measures</b>
<b>Care for chronic conditions</b>		Avoidable asthma admission rate Avoidable chronic obstructive pulmonary disease (COPD) admission rate Avoidable diabetes acute complications admission rate Avoidable diabetes lower extremity amputation rate Avoidable congestive heart failure (CHF) admission rate Avoidable hypertension admission rate
<b>Care for acute exacerbations of chronic conditions</b>		Acute Myocardial Infarction (AMI) 30 day case-fatality rate Stroke 30 day case-fatality rate
<b>Care for mental disorders</b>		Unplanned schizophrenia re-admission rate Unplanned bipolar disorder re-admission rate
<b>Cancer care</b>	Cervical cancer screening rate Breast cancer screening rate	Cervical cancer survival rate Cervical cancer mortality rate Breast cancer survival rate Breast cancer mortality rate

		Colorectal cancer survival rate Colorectal cancer mortality rate
<b>Care for communicable diseases</b>	Rate of childhood vaccination for pertussis Rate of childhood vaccination for measles Rate of childhood vaccination for hepatitis B Rate of influenza vaccination for elderly people	Incidence of hepatitis B

Source: OECD Health Care Quality Indicators Data 2009.

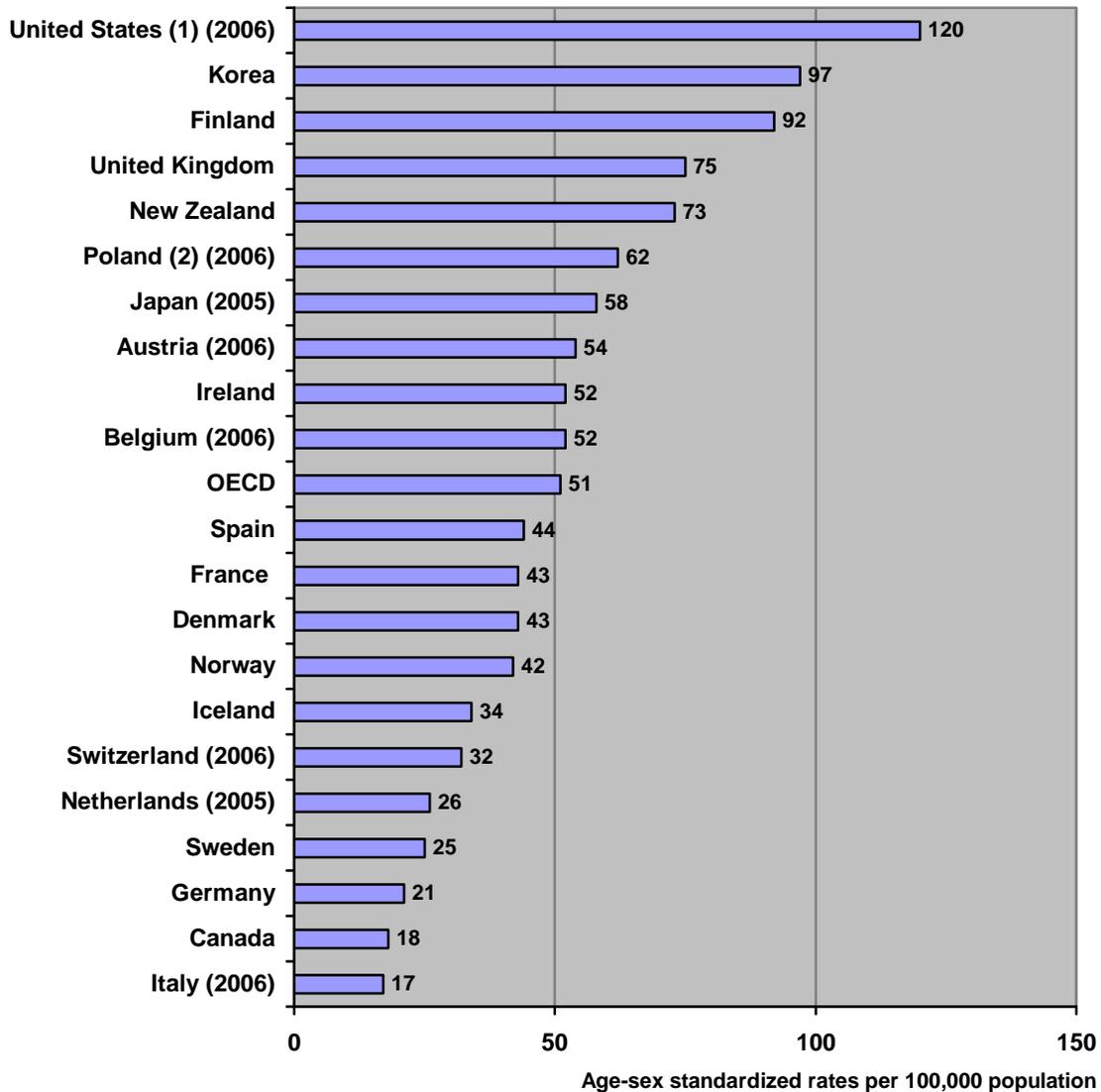
While existing quality measures do not cover all aspects of quality including satisfaction with care, other interpersonal aspects of care, and patient safety, the existing indicators allow us to gauge quality of care and draw inferences about system performance in a number of key clinical areas. Here I have to give the standard caveats about the OECD indicators. Not all countries participating in the project were able to provide data for all of the indicators. And in many instances the data provided by different countries differed slightly in terms of age breakdowns, definitions, or the source. While the comparisons are not perfect they are still generally useful for gauging the differences in quality performance in the different health systems. Below I review data for a selection of representative quality indicators from the forthcoming OECD report.

## I. Care for Chronic Conditions

### Asthma Hospital Admission

Asthma is a disease characterized by hyper-reactivity of the airways and chronic inflammation. Treatment for asthma with bronchodilators and medications to reduce airway inflammations is effective in reducing symptoms, increasing patients' functional capacity and reducing the incidence of exacerbations that warrant hospitalization. High hospital admission rates may therefore be an indication of poor quality of care, and asthma admission rates are included as a quality indicator in the United States Healthcare Quality Report. Below are admission rates for asthma in 21 countries. The United States rate is 20 percent higher than any other country.

**Exhibit 2: Asthma admission rates, population aged 15 and over, 2007**



(1) Does not fully exclude day cases.

(2) Includes transfers from other hospital units, which marginally elevates rates.

Source: OECD Health Care Quality Indicators Data 2009.

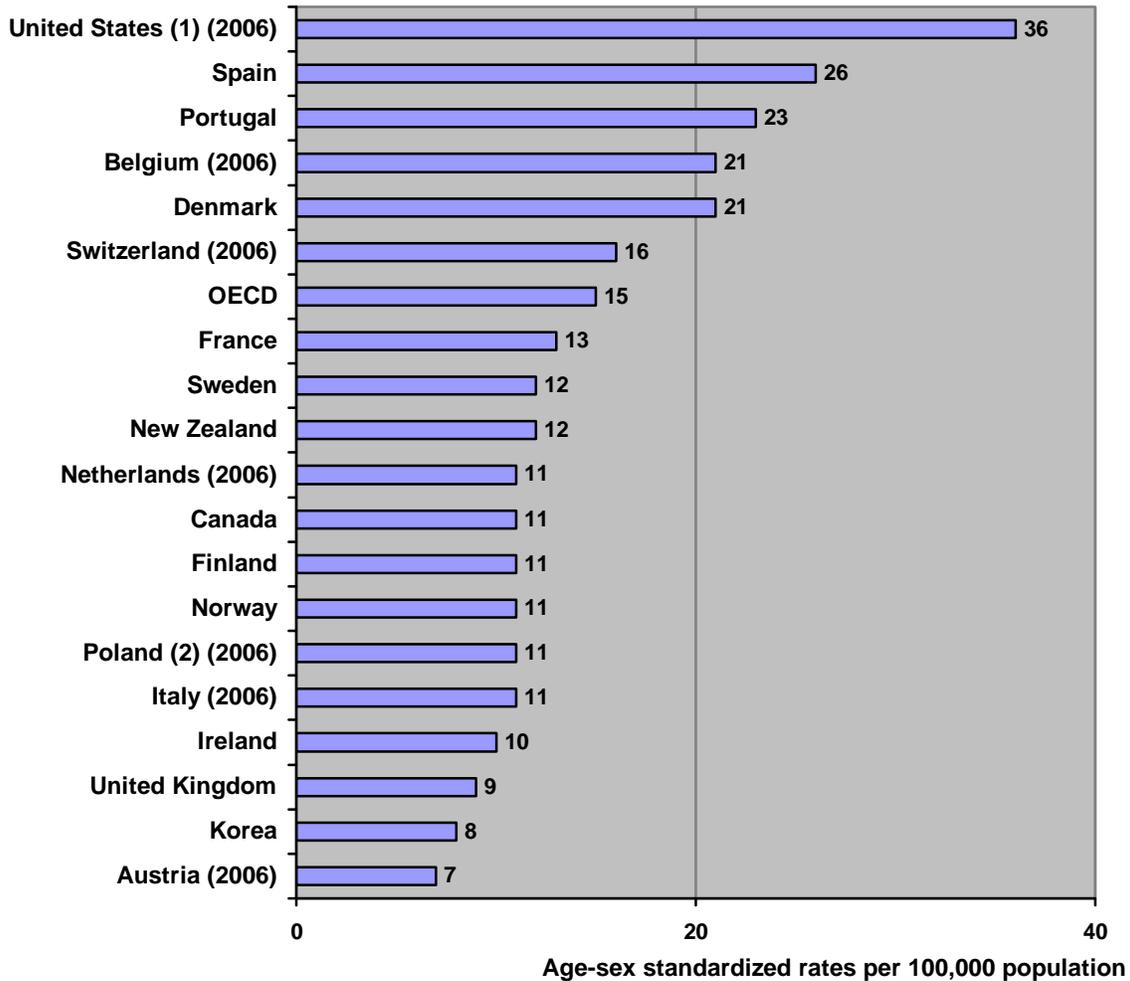
Rates age-sex standardized to 2005 OECD population.

### **Diabetic Lower Extremity Amputations**

Diabetes is a major public health challenge, although better glycemic control can reduce organ damage and vascular complications. Lower extremity amputation is considered an indicator of the quality of care for diabetes. Proper foot care can reduce the risk of lower extremity amputation and approximately 80% of amputations can be prevented according

to WHO estimates. The chart below again shows the United States with the highest rates among 19 countries.

**Exhibit 3: Diabetes lower extremity amputation rates, population aged 15 and over, 2007**



(1) Does not fully exclude day cases.

(2) Includes transfers from other hospital units, which marginally elevates rates.

Source: OECD Health Care Quality Indicators Data 2009.

Rates age-sex standardized to 2005 OECD population.

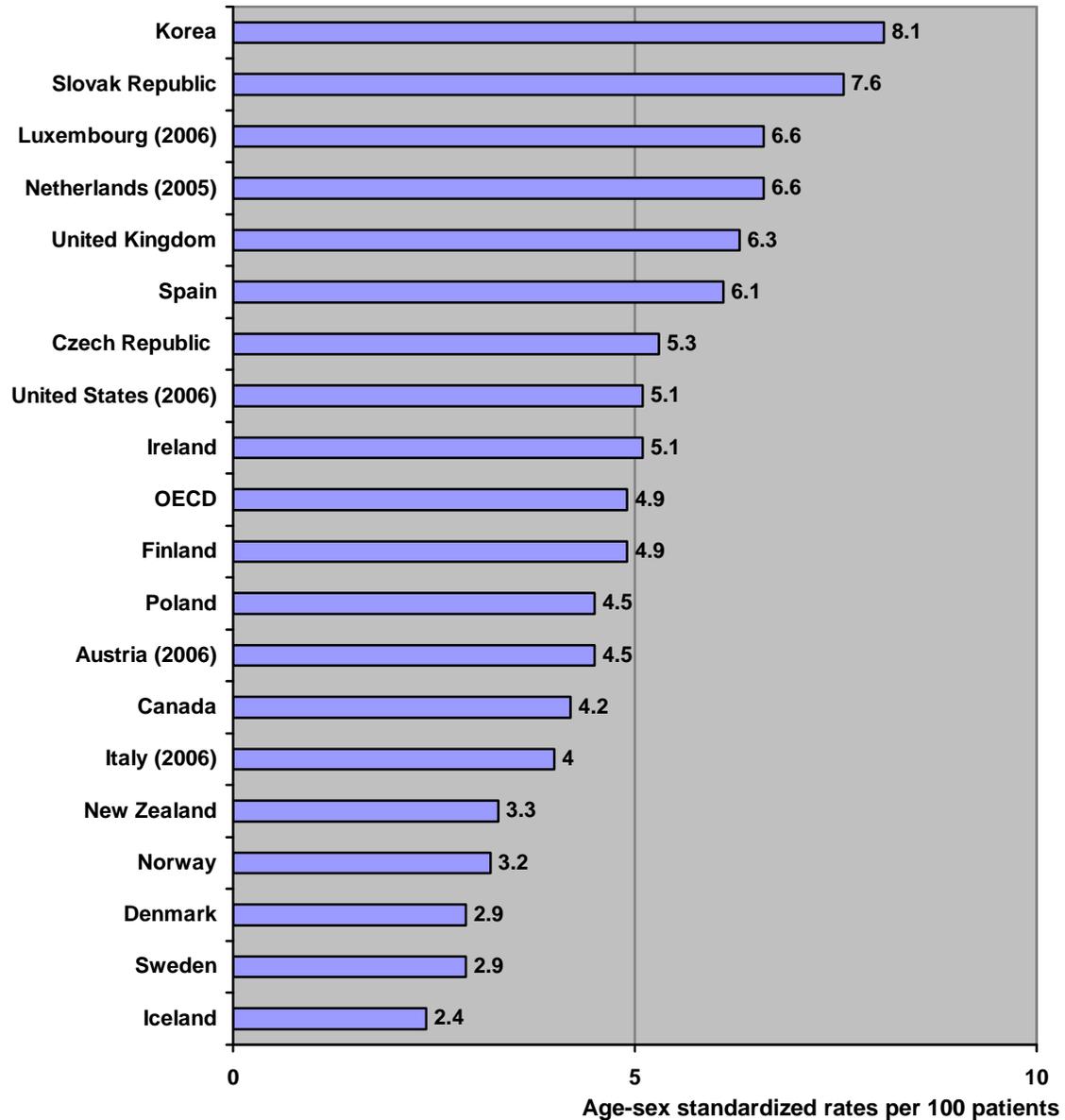
## II. Care for Acute Exacerbation of Chronic Conditions

### Mortality After Acute Myocardial Infarction (AMI)

Mortality rates after acute myocardial infarction (AMI) have declined substantially in the last 30 years. Much of this success is due to better treatment in the acute phase. Evidence

links processes of care such as early treatment with aspirin, beta blockers, thrombolysis and procedures to restore coronary artery blood flow with improved rates of survival after AMI. Thus the 30 day case fatality rate is considered a good marker for the quality of acute care.

**Exhibit 4: In-hospital case-fatality rates within 30 days after admission for AMI, 2007**



Source: OECD Health Care Quality Indicators Data 2009.  
Rates age-sex standardized to 2005 OECD population (45+).

The United States case fatality rate of 5.1% is just above the OECD average and is 9<sup>th</sup> among the 19 countries that submitted data.

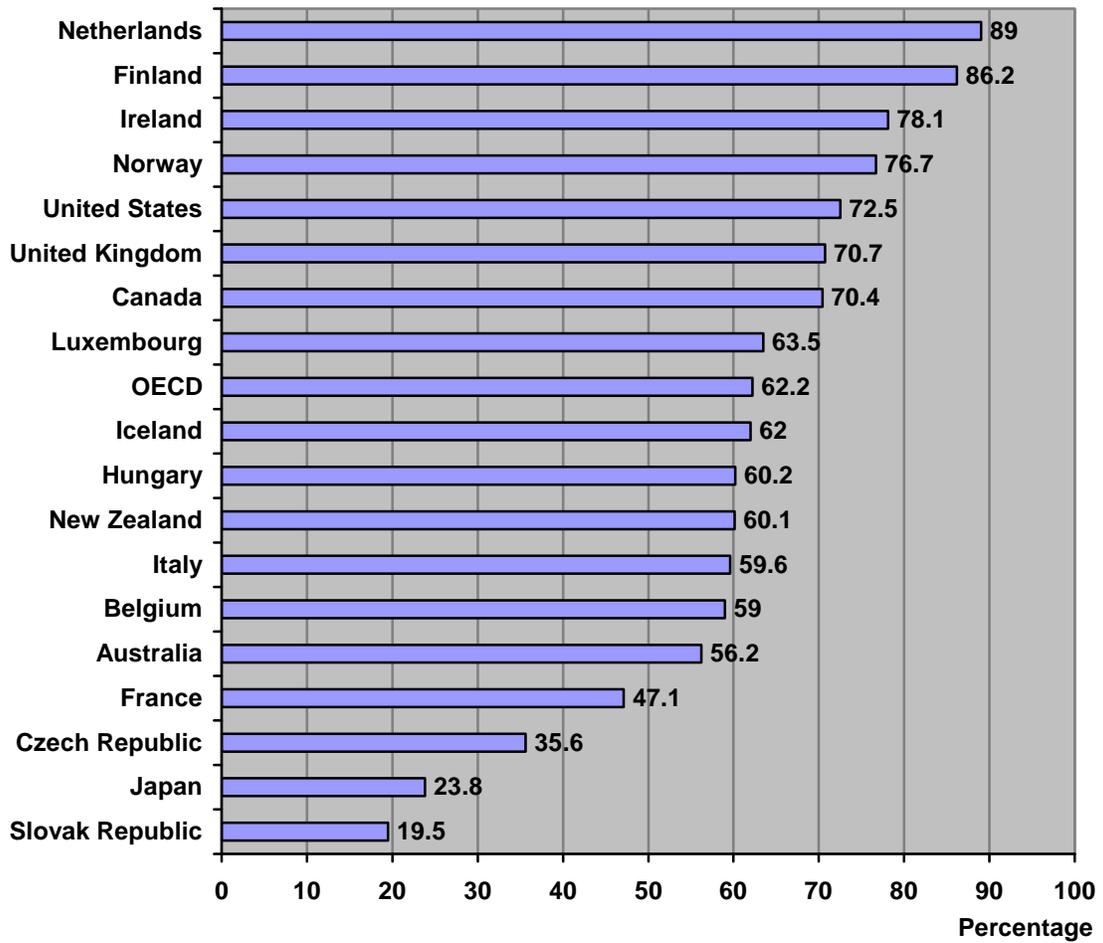
### **III. Cancer Care**

#### **Mammography Screening and Breast Cancer Survival**

Breast cancer is the most common malignancy among women. More than 10% of women develop the disease and one in thirty women dies from it. Increased public awareness, promotion of self examination and screening mammography have all contributed to earlier diagnosis and initiation of therapy when the disease is more treatable.

Improvements in care such as increased use of adjuvant chemotherapy have also contributed to increased survival. The table below suggests that the United States does well compared to most other countries The US has the fifth highest rate of mammography screening and the highest five year survival rate among women diagnosed with the disease.

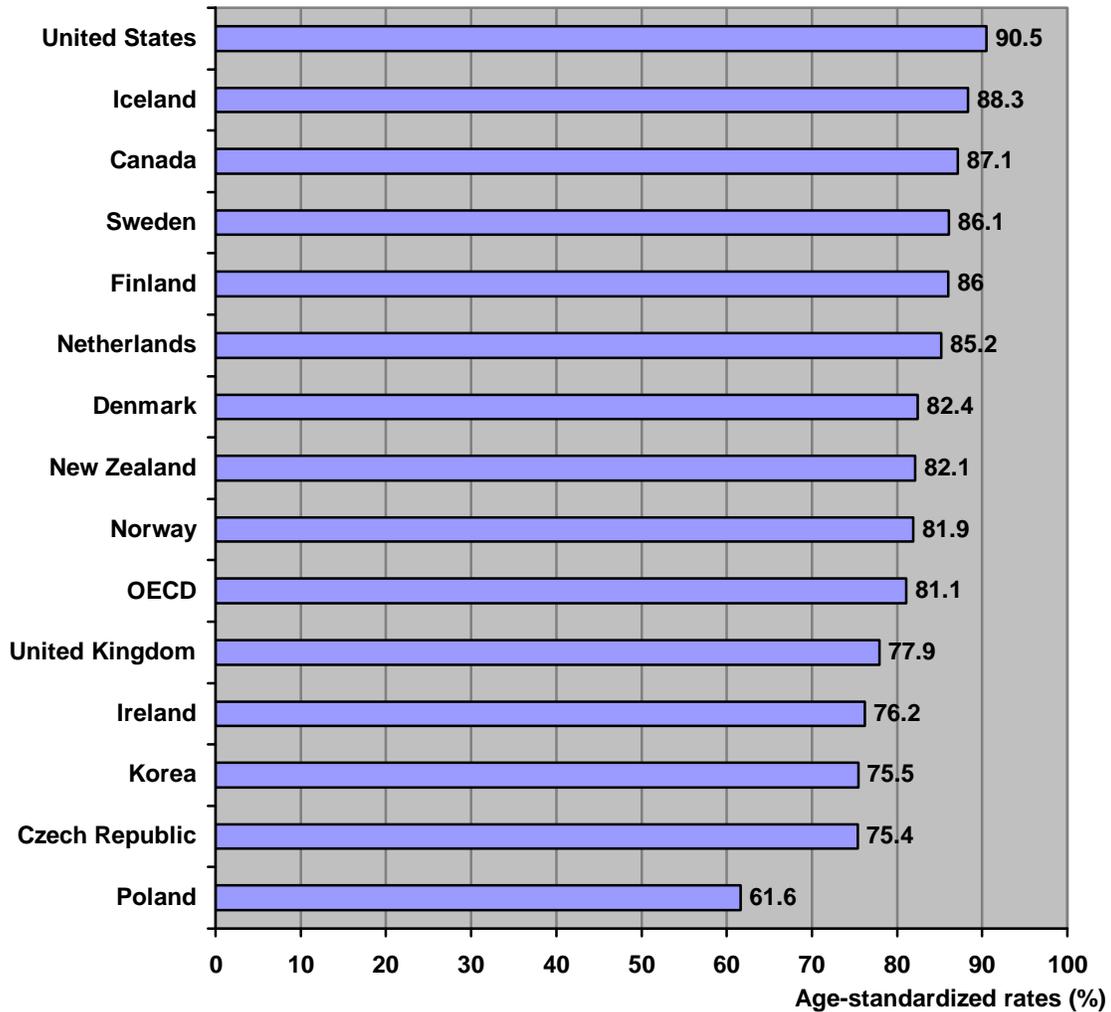
**Exhibit 5: Mammography screening, percentage of women age 50-69 screened, 2006**



Source: OECD Health Care Quality Indicators Data 2009.

Survival rates are age-standardized to the International Cancer Survival Standards population. OECD Health Data 2009 (cancer screening; mortality data extracted from the WHO Mortality Database and age standardized to 1980 OECD population).

**Exhibit 6: Breast cancer five-year relative survival rate, 2002-2007**



Source: OECD Health Care Quality Indicators Data 2009.

Survival rates are age-standardized to the International Cancer Survival Standards population. OECD Health Data 2009 (cancer screening; mortality data extracted from the WHO Mortality Database and age standardized to 1980 OECD population).

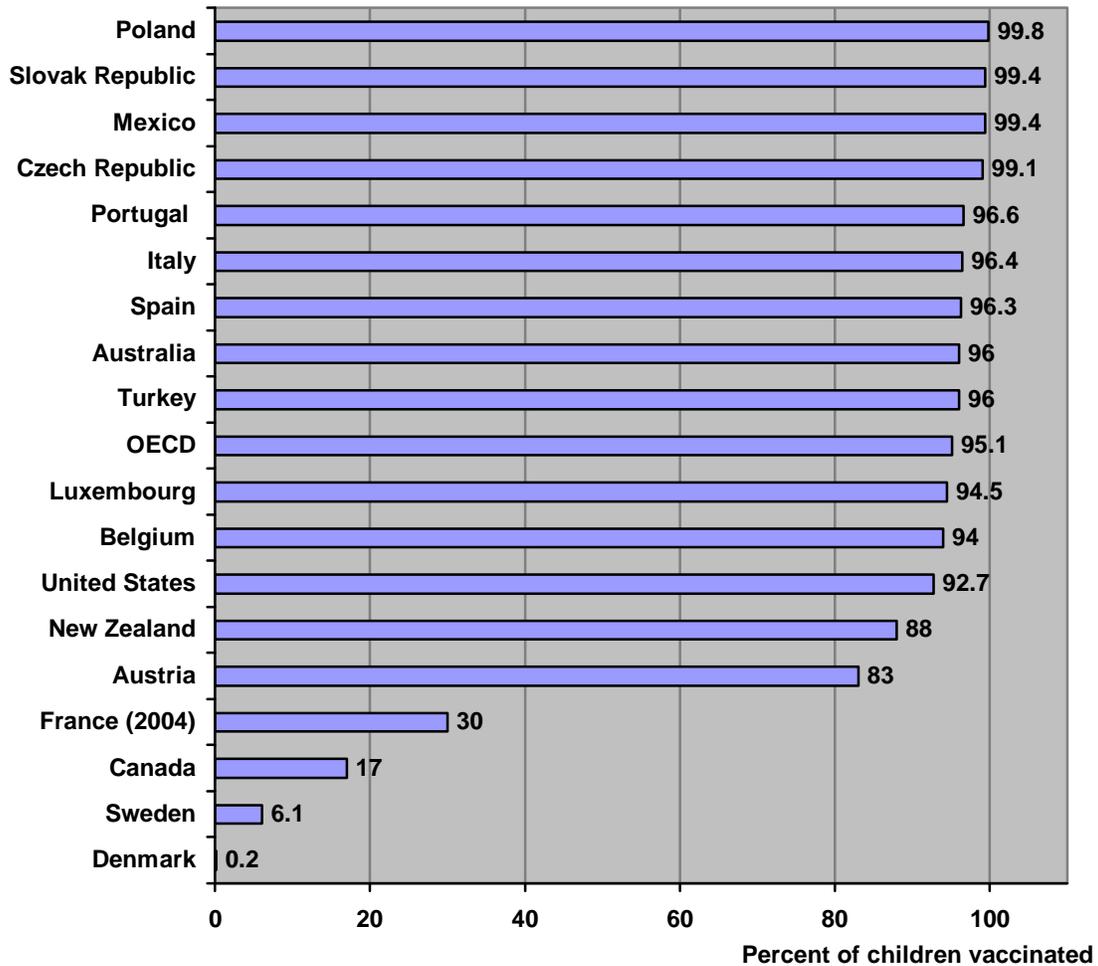
#### IV. Care for Communicable Diseases

##### Hepatitis B Vaccination

Child hood vaccination continues to be one of the most cost-effective health policy interventions. Vaccine for hepatitis B has been available for more than 20 years. It is estimated to be 95% effective in protecting against infection. The chart below shows the

vaccination rate for hepatitis B among children, aged 2. While the United States has vaccinated more than 90% of the eligible cohort, it still lags behind a number of other countries.

**Exhibit 7: Vaccination rates for hepatitis B, children aged 2, 2007**



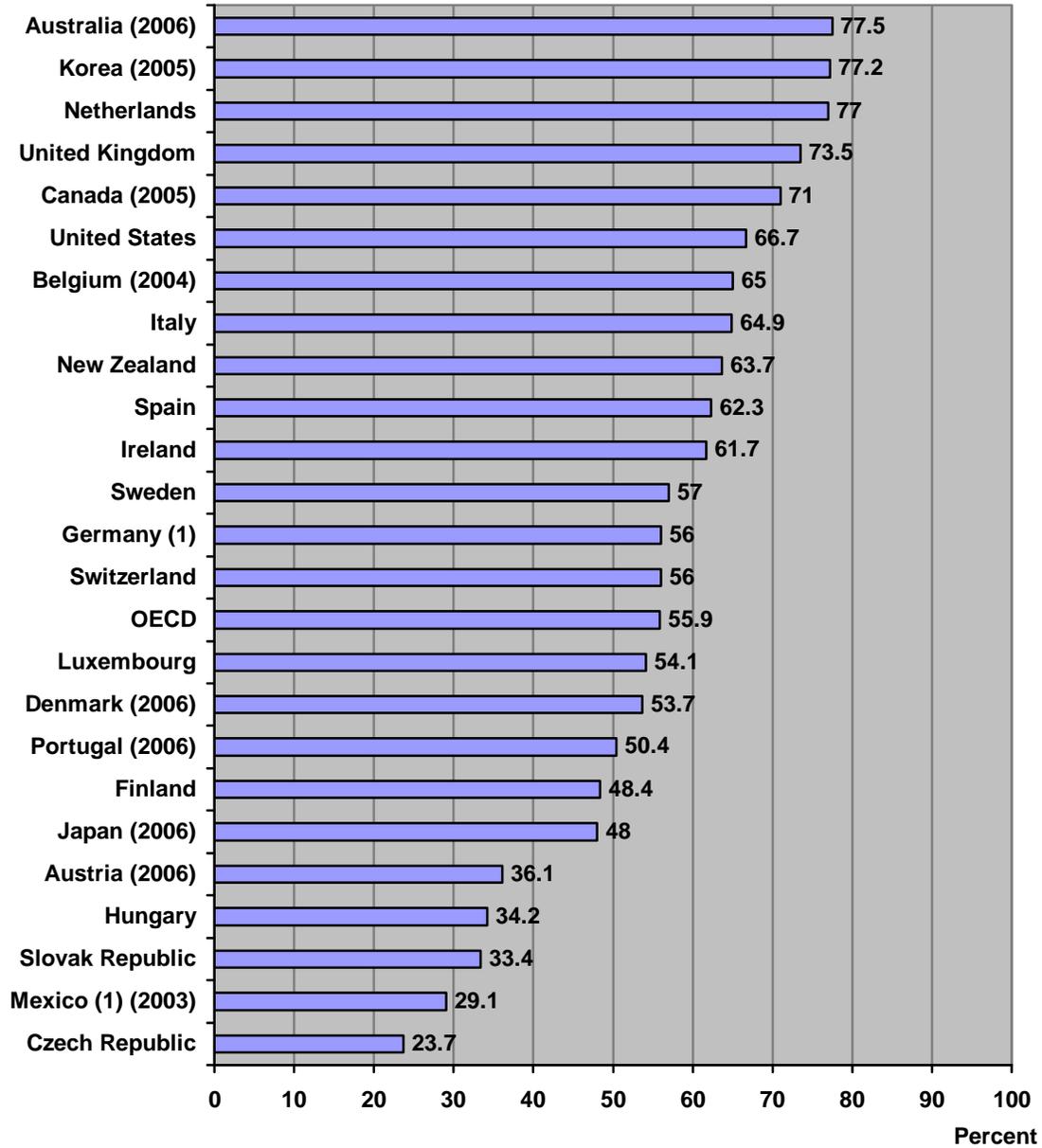
Note: OECD average only includes countries with required or routine immunization.  
Source: OECD Health Care Quality Indicators Data 2009.

### **Influenza Vaccination**

Even when we are not facing an outbreak of H1N1, influenza is a very common and important infectious disease. Usually the disease causes a higher incidence of complications and mortality among the elderly and those with chronic medical conditions. Nevertheless influenza takes a large toll on the employed population as well

and accounts for substantial absence from work and lost productivity. The United States rate of vaccination, 66% was sixth of twenty three countries.

**Exhibit 8: Influenza vaccination coverage, population aged 65 and older, 2007**



1. Population aged 60 and over.  
 Source: OECD Health Care Quality Indicators Data 2009.

## **Conclusion**

The OECD health care quality indicators project is still evolving, but now includes a number of quality indicators for important medical services and clinical conditions. Quality performance in the United States seems comparable to that of many other developed countries but does not clearly justify the claim that the quality of care here is the best in the world. We have, however, the most expensive care in the world, raising clear and important questions about the value we are receiving for our money.