Cardiovascular Disease and Diabetes:
**Policies for Better Health and Quality of Care**

June 2015

Country Note – United States

The United States has been successful at reducing the mortality due to cardiovascular diseases (CVD) but the burden of CVD and diabetes is increasing rapidly

The CVD mortality has decreased over the past 50 years at a faster pace than the OECD average, reaching 261 per 100 000 population, 14% lower than the OECD average of 299 (Figure 1). However, potential years of life lost, a commonly used measure of premature mortality, at 807 per 100 000 population for diseases of the circulatory system in 2010, is 39% higher than the OECD average of 581 (by using the age limit of 70), suggesting that CVD-related deaths occur earlier in life than in many other OECD countries. The reported prevalence of diabetes is 9.6%, much higher than the OECD average of 6.9% and early onset of diabetes is more prevalent than elsewhere (12.5% for people aged 40-59 and 3.9% for people aged 20-39, compared to an OECD average of 8.9% and 1.7%, respectively). Early onset has important implications for a patient's health status and also for their social and economic status as young survivors of CVD events such as Acute Myocardial Infarction (AMI) and stroke may face serious deterioration in their quality of life, leading to greater social and health care needs over longer periods of time and a reduced ability to work. People living with diabetes for longer periods of time also have higher risk of suffering complications. The number of patients with end-stage kidney failure (ESKF), often caused by diabetes and hypertension, is 192 per 100 000 population, the highest after Japan and much higher than the OECD average of 101.

Figure 1. Mortality rates for cardiovascular diseases and all other causes of death in the United States and OECD countries
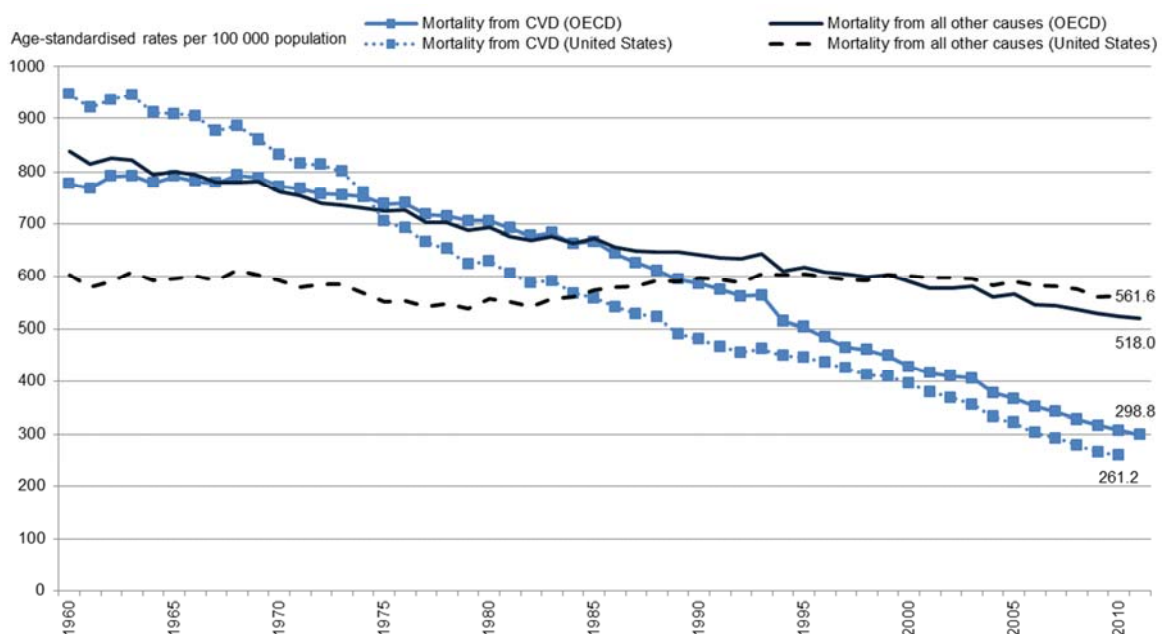

Source: OECD Health Statistics.

Some risk factors for CVD and diabetes are controlled but the prevalence of obesity is a challenge

Figure 2 shows that for most indicators of prevention and lifestyle, the United States performs better than the OECD average. Due to a series of anti-tobacco policies including a large price increase in recent years, the rate of smoking has decreased to 14.8%, much lower than the OECD average of 20.9% and it is 13.2% for children, also lower than the OECD average of 19.4%. Spending on prevention is 3.3% of the current health expenditure, higher than the OECD average of 2.9%.

Figure 2. Prevention and healthy lifestyle related to CVD and diabetes in the United States, 2011 (or nearest year), OECD average = 100
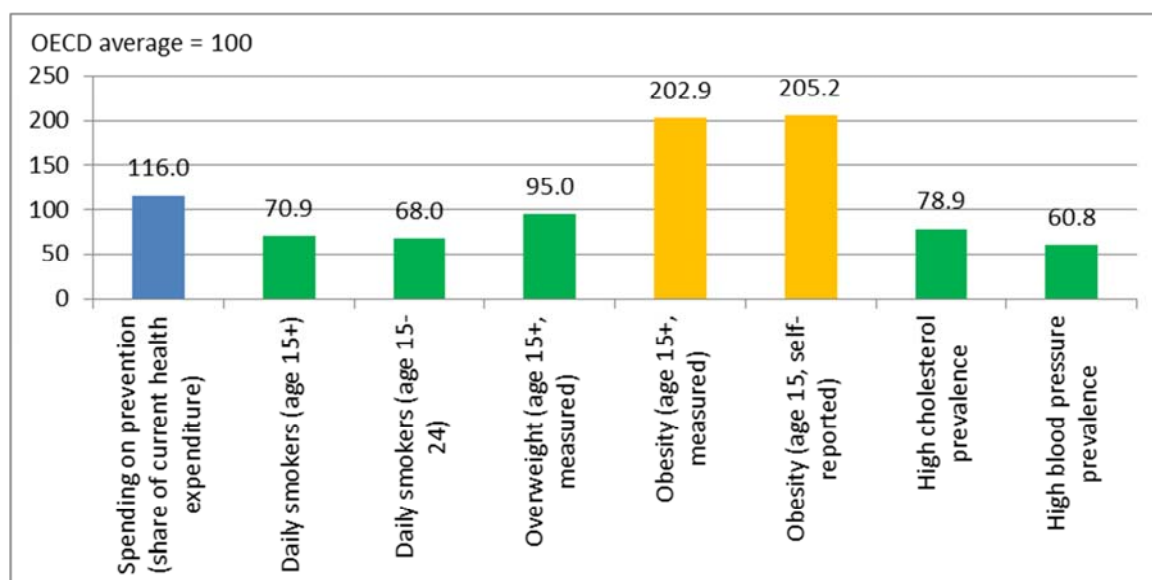
Note: a bar in blue refers to an indicator in which an evaluation needs to be done together with other indicators, a bar in green refers to the value better than the OECD average, and a bar in orange refers to the value worse than the OECD average.
*Source: OECD Health Statistics.*

However, the obesity rate is alarmingly high. Although the prevalence of overweight is 32.9% among adults, still below the OECD average of 34.6%, the obesity rate among both children and adults is the highest in the OECD at 30.5% and 36.5% respectively.

Access to primary care may not be optimal and quality is mixed

Spending on ambulatory care is 2 311 USD PPP per capita in 2011, by far the highest in the OECD, mostly reflecting the higher prices that are paid for services in the United States, and out-of-pocket payment (OOP) is 239 USD PPP per capita, also the highest in the OECD. However, the number of GP per capita, at 0.3 per 1 000 population, is much lower than the OECD average of 1.0. Combined these together, access to primary care may not be optimal for at least some at-risk population groups, although with the recent reforms and additional insurance coverage, the share of patients with chronic conditions who pay high out-of-pocket payment may likely to fall.

As to the quality of primary care for CVD and diabetes, this appears mixed. Hospital admissions for chronic conditions such as diabetes and congestive heart failure can be avoided if high-quality primary care is provided. Hospital admissions for diabetic were 21.1 per 1 000 patients in 2010, lower than the OECD average of 23.8 in 2011. However, about 40% of diabetic patients are reportedly undiagnosed based on a study using oral glucose tolerance tests, although the share is one of the lowest among the few OECD countries which have such data. Admissions for congestive heart failure, at 3.8 per 1 000 population, is much higher than the OECD average of 2.4.

**Figure 3. Primary care related to CVD and diabetes in the United States,
2011 (or nearest year), OECD average = 100**
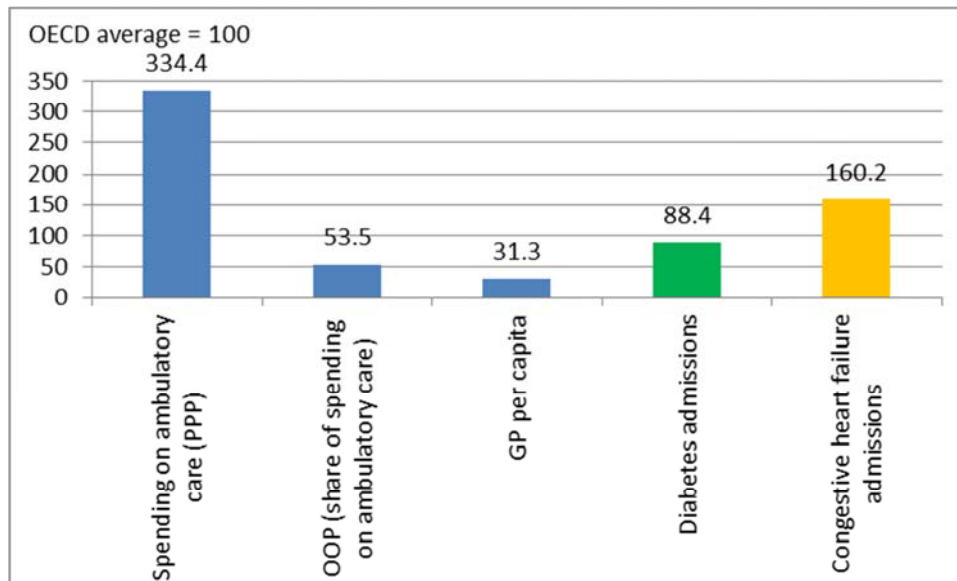
Note: a bar in blue refers to an indicator in which an evaluation needs to be done together with other indicators, a bar in green refers to the value better than the OECD average, and a bar in orange refers to the value worse than the OECD average.
Source: OECD Health Statistics; Diabetes prevalence: IDF (2013), IDF Diabetes Atlas, 6th Edition, International Diabetes Federation, Brussels,
www.idf.org/diabetesatlas/previouseditions.

Quality of acute CVD care is good but access is not well known

Quality of acute care for CVD is good in the United States (Figure 4). The 30-day case-fatality rates for patients admitted to hospitals with AMI and Ischemic stroke are 5.5% and 4.3%, much lower than the OECD average of 7.9% and 8.4%, respectively. The case-fatality rate for Haemorrhagic stroke, at 22.3%, is also lower than the OECD average of 22.6%.

**Figure 4. Acute care related to CVD and diabetes in the United States,
2011 (or nearest year), OECD average = 100**
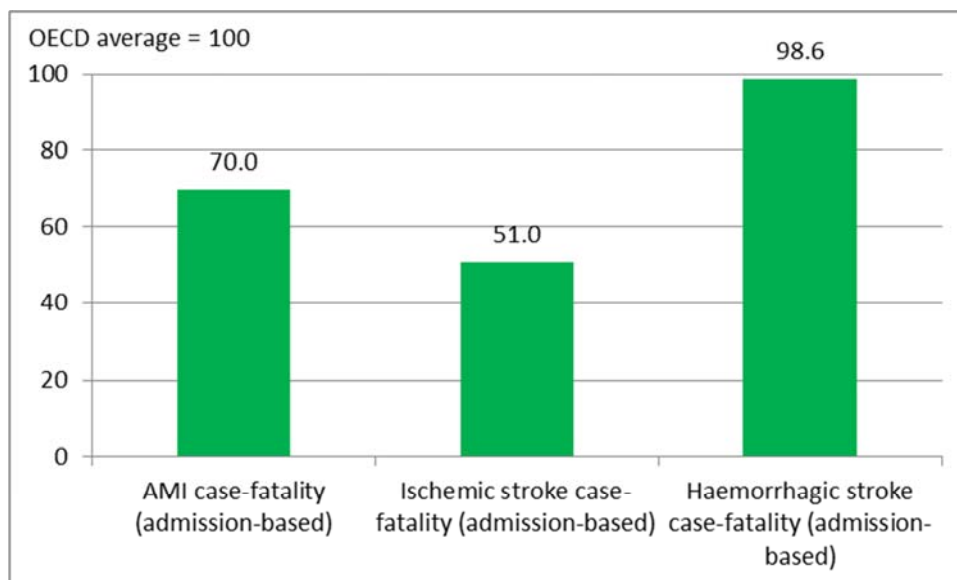
Note: a bar in green refers to the value better than the OECD average.
Source: OECD Health Statistics.

Resources in acute care in relation to CVD and diabetes are not well known. Data on hospital spending on CVD and diabetes, the volume of procedures such as percutaneous transluminal coronary angioplasty (PTCA) and

coronary artery bypass graft (CABG) and the number of specialists such as cardiologists and neurologists are not available for international comparisons.

Reducing obesity and strengthening primary care are key to combat CVD and diabetes in the United States

In order to reduce the burden of CVD and diabetes particularly obesity, the United States could introduce multifaceted and comprehensive strategies that include both population-wide measures and measures for high-risk individuals by using all available tools such as regulations, education, incentives, as well as health care programmes and services to work in unison and strengthen their effectiveness. Strong advocacy and stakeholder engagement is also needed to develop support for making healthy lifestyle choices easier and less costly. The introduction of the nationally-coordinated programme called "Let's Move" in 2010 is a good start to increase physical activity and combat obesity. Recently, Denmark, Finland, France, Hungary, Mexico, also introduced taxes on unhealthy food and/or sugar-sweetened non-alcoholic beverages. OECD analyses show that combining these single interventions in comprehensive strategies results in a more effective and efficient approach because it increases the coverage of groups at risks and exploits potential synergies across the different interventions.

The United States can further strengthen primary care to deliver prevention, early diagnosis and management of CVD and diabetes. The United States has introduced structured patient education programmes, aiming to reduce the risk of chronic diseases and improve patient compliance, with financial incentives in Medicare to encourage health professionals to promote self-care. Besides self-management, benchmarking and monitoring are becoming more common place as are pay-for-performance systems in primary care across OECD countries. For example, Denmark has made better use of electronic patient records and has shown notable improvements in primary care quality. The system includes data on diagnoses, procedures, prescribed drugs and laboratory results and automatically derives information that can be used to benchmark GP practice against other practices and to improve patient care as it enables the identification of patients treated sub-optimally.

Emergency medical services are important in improving survival of patients with cardiac attack and stroke and a national policy framework can help the measurement, benchmarking and continuous quality improvement of emergency services. The United States has initiated "Door-to-Balloon (D2B) Alliance" and "Target: Stroke" initiative, contributing to the substantial reduction of treatment times in participating hospitals and it also has an emergency care model in Seattle and King County in Washington State with the highest reported survival rates in the world for out-of-hospital cardiac arrest. These important initiatives could be applied nationwide to further improve the quality of pre-hospital and acute care and reduce regional variations in providing timely care.