

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

June 2015

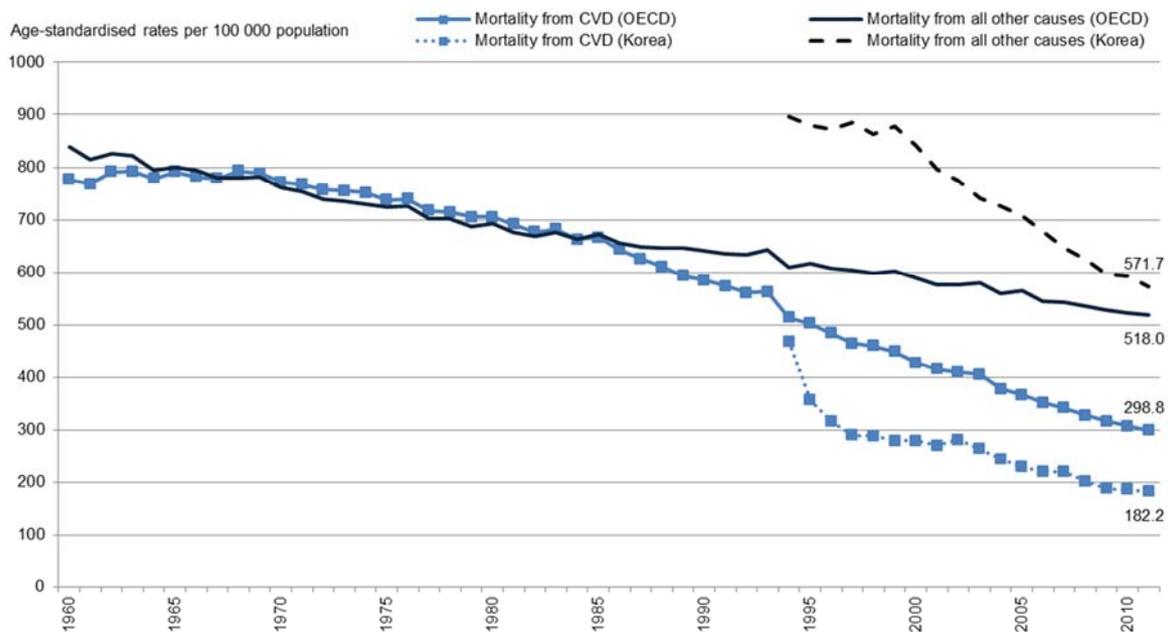


## Country Note – Korea

**Korea has been successful at reducing the mortality due to cardiovascular diseases (CVD) but the burden of diabetes is relatively large**

The mortality from CVD has decreased in recent decades at a faster pace than the OECD average, reaching the lowest in the OECD at 182 per 100 000 population after France and Japan (Figure 1). Likewise, potential years of life lost (PYLL), a commonly used measure of premature mortality, at 334 per 100 000 population for diseases of the circulatory system in 2011, is 43% lower than the OECD average of 581 (by using the age limit of 70). However, the diabetes prevalence is 7.7%, higher than the OECD average of 6.9%, and the number of patients with end-stage kidney failure (ESKF) has increased rapidly in recent years, reaching 127 per 100 000 population, above the OECD average of 101.

**Figure 1. Mortality rates for cardiovascular diseases and all other causes of death in Korea and OECD countries**



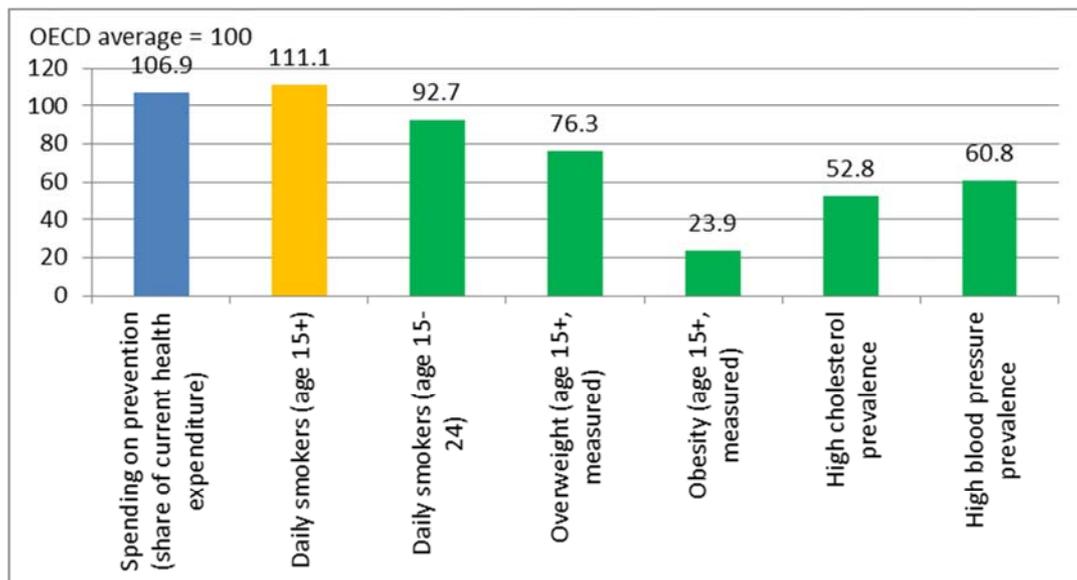
Source: OECD Health Statistics.

Although kidney transplant is an effective treatment and a viable alternative to dialysis for many ESKF patients, 20% of ESKF patients received a kidney transplant in 2011 while in countries such as Iceland and the Netherlands, the rate was over 60%.

### The Korean population generally has a healthy lifestyle but smoking rate is increasing

Figure 2 shows that for most indicators of prevention and lifestyle, Korea performs better than the OECD average. Prevalence rates of overweight and obesity, risk factors for CVD and diabetes, are 26.4% and 4.3%, the lowest in the OECD after Japan. The reported prevalence of high cholesterol and blood pressure is 9.5% and 15.6%, also kept below the OECD average of 18.0% and 25.6%. Spending on prevention is 3.1% 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 Korea, 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.

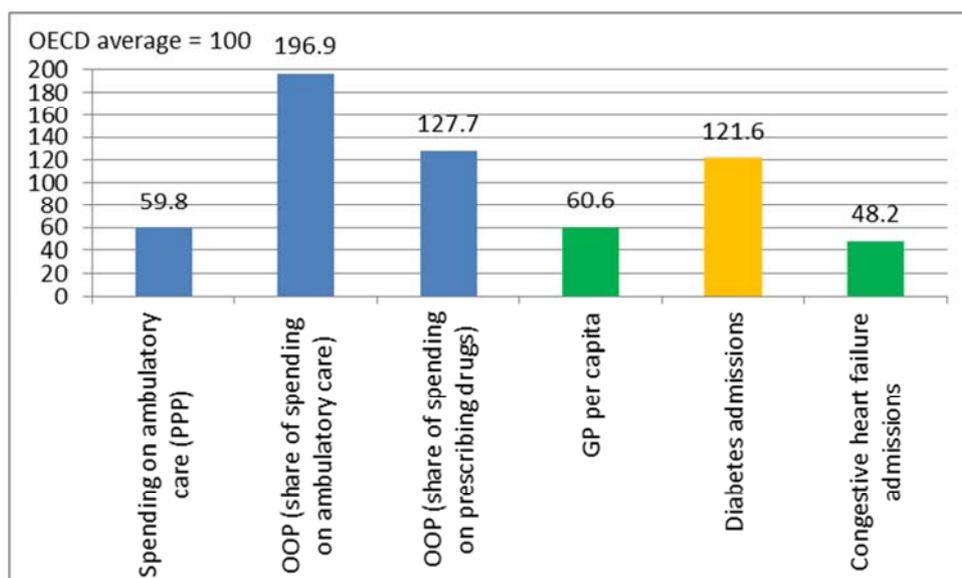
In terms of smoking, however, the rate among adults is 23.2%, higher than the OECD average of 20.9%. Although the male smoking rate has fallen over the last ten years, it is still the highest at 41.6% in the OECD. The smoking rate for female adults is 5.1%, much lower than the OECD average of 16.5% and youth smoking is 18.0%, compared to an OECD average of 19.4%.

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

Access to primary care may not be optimal for at least some population groups in Korea (Figure 3). Although the spending on ambulatory care was 413 USD PPP on a per capita basis, lower than the OECD average of USD PPP 691 in 2011, out-of-pocket payment (OOP), at 157 USD PPP, was much higher than the OECD average of 100 USD PPP. The number of defined daily doses (DDD) of drugs such as antihypertensive and cholesterol lowering medications used for CVD risk factors was lower than the OECD average in 2008, but in 2014, the benefit coverage was expanded for cholesterol lowering drugs. However, although it is increasing, the number of GPs, at 0.6 per 1 000 population, is still lower than the OECD average of 1.0.

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. The rate of hospital admissions with congestive heart failure was 1.1 per 1 000 population in 2011, less than half the OECD average of 2.4. However, about 29.0 per 1 000 diabetics were admitted to hospitals, compare to an OECD average of 23.8, and based on a study using fasting blood glucose tests, the prevalence of undiagnosed diabetes is highest among the few OECD countries which have such data.

**Figure 3. Primary care related to CVD and diabetes in Korea, 2011 (or nearest year), OECD average = 100**



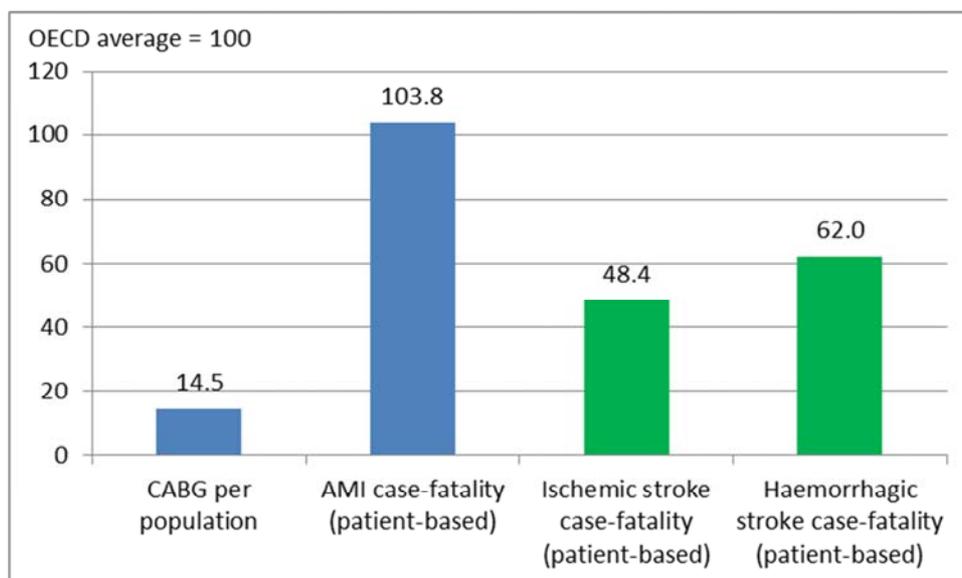
Note: a bar in blue refers to an indicator in which an evaluation needs to be done together with other indicators, a bar in green refers to the value better than the OECD average, and a bar in orange refers to the value worse than the OECD average.

Source: OECD Health Statistics; Diabetes prevalence: IDF (2013), IDF Diabetes Atlas, 6th Edition, International Diabetes Federation, Brussels, [www.idf.org/diabetesatlas/previouseditions](http://www.idf.org/diabetesatlas/previouseditions).

#### Access to acute CVD care can be improved but quality is generally good

Resources in acute CVD care and their access may not be optimal for at least some population groups in Korea. The number of coronary artery bypass graft (CABG) procedures is the lowest after Mexico at 6.3 per 100 000 population (Figure 4). The number of neurologists has increased substantially, reaching 26.4 per 1 million population, but it is still below many OECD countries. Out-of-pocket payment on hospital care was 270 USD PPP per capita in 2011, almost five-times the OECD average of USD PPP 57.

**Figure 4. Acute care related to CVD and diabetes in Korea, 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, and a bar in green refers to the value better than the OECD average.

Source: OECD Health Statistics.

Quality of acute CVD care is generally good. Based on the patient-based data which allow monitoring the status of patients in and out of hospitals, Korea has one of the lowest 30-day case-fatality rates for Ischemic

and Haemorrhagic stroke at 5.4% and 18.5%, compared to an OECD average of 11.1% and 29.8%, respectively. The case-fatality for AMI continues to improve in recent years, reaching 11.2% but it is still slightly higher than the OECD average of 10.8%.

### **Korea has developed the governance of CVD care, supported by health information system but more attention is needed to reduce smoking rates and strengthen primary care**

Korea has implemented a Comprehensive Plan for CVD that encompassed prevention and primary care as well as acute CVD care. One key policy initiative was the creation of regional cardio and cerebrovascular centres throughout the country to enhance specialised services. Under this Plan, Korea also promotes the establishment of prevention and management centres to provide community education for early CVD signs/symptoms and form links with prevention and management programmes in local government.

Korea has developed Health Insurance Review and Assessment Service's Value Incentive Program (VIP) benchmarks the relative improvements in performance of each of Korea's tertiary hospitals based on indicators such as timely reperfusion, adherence to medication recommendations and 30-day case-fatality. A composite indicator score is calculated from these measures and reported publicly. The programme also carries a small financial incentive for high performing hospitals or improving hospitals.

Korea can further develop health information system in primary care. For example, Denmark has made better use of electronic patient records and 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.

Many other OECD countries have successfully reduced smoking prevalence in recent years, and Korea can learn some lessons from them. OECD analyses show that effective prevention strategies are multifaceted and comprehensive, including 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. Australia, New Zealand, Ireland, the United Kingdom and Turkey with a stringent and comprehensive set of anti-tobacco policies have reduced their smoking rates at a faster rate compared to other countries. Australia, for example, has introduced a number of innovative programmes and regulations, including its plain-packaging laws which ban branding and logos on all tobacco product packaging, and tobacco products must be sold in drab dark brown packaging and labelled with updated and expanded health warnings.

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#### **Useful links**

Read the report online, access the press release, country notes, and data at:

<http://www.oecd.org/health/cardiovascular-disease-and-diabetes-policies-for-better-health-and-quality-of-care-9789264233010-en.htm>

OECD Health: [www.oecd.org/health](http://www.oecd.org/health)

OECD Reviews of Health Care Quality: Korea – Raising Standards:

<http://www.oecd.org/els/health-systems/health-care-quality-reviews.htm>