

# ESC Scientific Document Group, European Society of Cardiology: Cardiovascular Disease Statistics 2017

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## **Abstract**

### Aims

The European Society of Cardiology (ESC) Atlas has been compiled by the European Heart Agency to document cardiovascular disease (CVD) statistics of the 56 ESC member countries. A major aim of this 2017 data presentation has been to compare high-income and middle-income ESC member countries to identify inequalities in disease burden, outcomes, and service provision.

### Methods and results

The Atlas utilizes a variety of data sources, including the World Health Organization, the Institute for Health Metrics and Evaluation, and the World Bank to document risk factors, prevalence, and mortality of cardiovascular disease and national economic indicators. It also includes novel ESC-sponsored survey data of health infrastructure and cardiovascular service provision provided by the national societies of the ESC member countries. Data presentation is descriptive with no attempt to attach statistical significance to differences observed in stratified analyses. Important differences were identified between the high-income and middle-income member countries of the ESC with regard to CVD risk factors, disease incidence, and mortality. For both women and men, the age-standardized prevalence of hypertension was lower in high-income countries (18% and 27%) compared with middle-income countries (24% and 30%). Smoking prevalence in men (not women) was also lower (26% vs. 41%) and together these inequalities are likely to have contributed to the higher CVD mortality in middle-income countries. Declines in CVD mortality have seen cancer becoming a more common cause of death in a number of high-income member countries, but in middle-income countries declines in CVD mortality have been less consistent where CVD remains the leading cause of death. Inequalities in CVD mortality are emphasized by the smaller contribution they make to potential years of life lost in high-income countries compared with middle-income countries both for women (13% vs. 23%) and men (20% vs. 27%). The downward mortality trends for CVD may, however, be threatened by the emerging obesity epidemic that is seeing rates of diabetes increasing across all the ESC member countries. Survey data from the National Cardiac Societies showed that rates of cardiac catheterization and coronary artery bypass surgery, as well as the number of specialist centres required to deliver them, were greatest in the high-income member countries of the ESC. The Atlas confirmed that these ESC member countries, where the facilities for the contemporary

treatment of coronary disease were best developed, were often those in which declines in coronary mortality have been most pronounced. Economic resources were not the only driver for delivery of equitable cardiovascular health care, as some middle-income ESC member countries reported rates for interventional procedures and device implantations that matched or exceeded the rates in wealthier member countries.

### Conclusion

In documenting national CVD statistics, the Atlas provides valuable insights into the inequalities in risk factors, health care delivery, and outcomes of CVD across the ESC member countries. The availability of these data will underpin the ESC's ambitious mission 'to reduce the burden of cardiovascular disease' not only in its member countries but also in nation states around the world.

### **Keywords:**

Cardiovascular disease, Statistics, European Society of Cardiology, Health infrastructure, Service provision, Risk factors, Mortality, Morbidity