IN-HOSPITAL MORTALITY FOLLOWING ACUTE MYOCARDIAL INFARCTION AND STROKE

Ischaemic heart diseases and stroke were the two major causes of death in Asia-Pacific in 2016, accounting for 34.7% and 25.2% of total deaths (WHO, 2018a). Additionally, both are associated with significant health, social and non-financial costs, because of the persistent disabilities suffered by many survivors. Treatment following acute myocardial infarction (AMI) and stroke has advanced greatly over the past decade. Until the 1990s, treatment focused on prevention of complications and rehabilitation. But following the great improvements in AMI survival rates that were achieved with thrombolysis (Gil et al., 1999), clinical trials also demonstrated the benefits of thrombolytic treatment provided within six hours after acute ischemic stroke (O'Rourke et al., 2010; Wardlaw et al., 2014). Dedicated cardiac care and stroke units offering timely and proactive therapy achieve better survival than conservative care (Seenan et al., 2007), although studies have shown that a considerable number of patients fail to receive high-quality, evidence-based care (Eagle et al., 2005).

For both AMI and stroke, the case-fatality rate is a useful measure of acute care quality. It reflects the processes of care, such as effective medical interventions, including early thrombolysis or treatment with aspirin when appropriate, and co-ordinated and timely transport of patients. For AMI, crude and age-sex standardised in-hospital case-fatality rates within 30 days of admission vary widely, with the lowest rates reported in Australia (4%) and New Zealand (4.7%) (Figure 7.4). Japan had the highest reported case-fatality rate at 11.7%. Beyond the quality of care provided in hospitals, differences in hospital transfers, average length of stay, emergency retrieval times and average severity of AMI and stroke may influence reported 30 day-case fatality.

For ischemic stroke, the lowest case-fatality rates were reported in Japan (3.1%) and the Republic of Korea (3.9%), while New Zealand reported the highest rate of 7.7% (Figure 7.5). Fatality rates for haemorrhagic stroke are significantly higher than for ischemic stroke, and countries that achieve better survival for one type of stroke also tend to do well for the other. Again, the lowest case-fatality rates for haemorrhagic stroke were reported in Japan (11.2%) and the Republic of Korea (17.1%), with New Zealand reporting the highest rate of 23.6% (Figure 7.6). Given the initial steps of care for stroke patients are similar, this suggests that system-based factors play a role in explaining the differences across countries.

Data presented here do not take account of patients that are transferred to other hospitals during their care or reflect patients dying out of hospitals within 30 days. Through the use of a unique patient identifier patient data can be linked across hospitals and with death registers to generate more robust indicators for national monitoring and international comparison. Currently, very few countries in Asia-Pacific are able to track patients in this way and hence this form of indicator is not shown here.

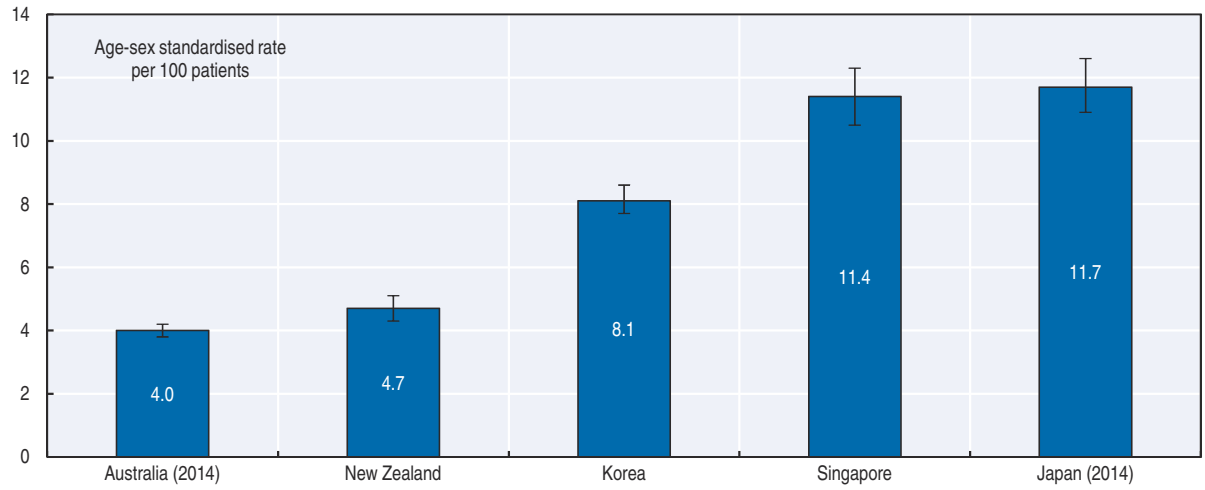
Definitions and comparability

The in-hospital case-fatality rate following AMI, ischemic and haemorrhagic stroke is defined as the number of people who die within 30 days of being admitted (including same day admissions) to hospital. Ideally, rates would be based on individual patients, however not all countries have the ability to track patients in and out of hospital, across hospitals or even within the same hospital because they do not currently use a unique patient identifier. Therefore, since this indicator is based on unique hospital admissions and restricted to mortality within the same hospital, differences in practices in discharging and transferring patients may influence the findings.

Standardised rates adjust for differences in age (45+ years) and sex, and facilitate more meaningful international comparisons.

H represents lower and upper bounds.

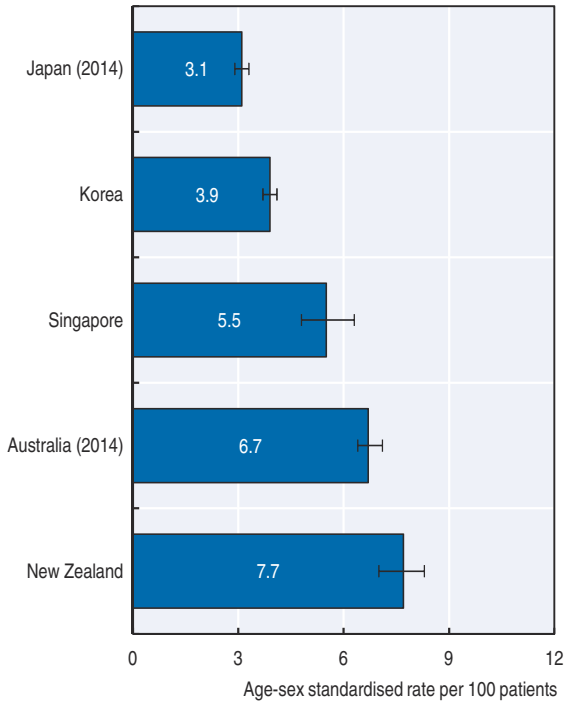
7.4. In-hospital case-fatality rates within 30 days after admission for AMI, patients 45 years old and over, 2015 (or nearest year)



Source: OECD Health Statistics 2018.

StatLink http://dx.doi.org/10.1787/888933869051

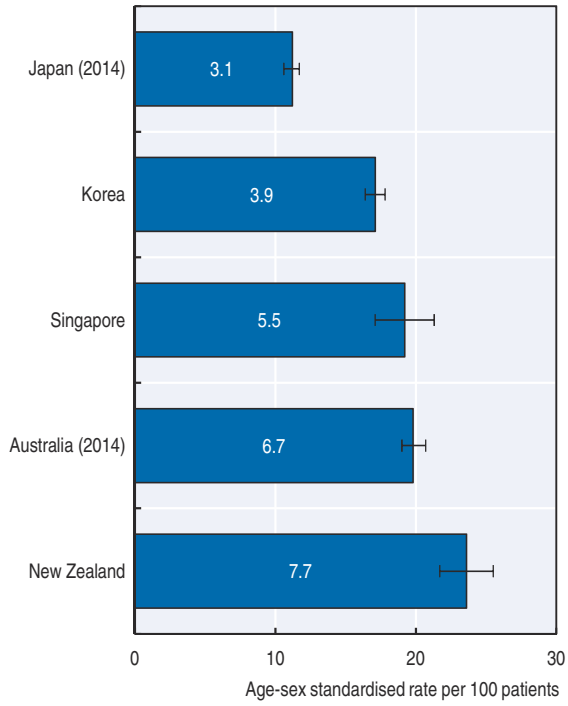
7.5. In-hospital case-fatality rates within 30 days after admission for ischemic stroke, patients 45 years old and over, 2015 (or nearest year)



Source: OECD Health Statistics 2018.

StatLink http://dx.doi.org/10.1787/888933869070

7.6. In-hospital case-fatality rates within 30 days after admission for haemorrhagic stroke, patients 45 years old and over, 2015 (or nearest year)



Source: OECD Health Statistics 2018.

StatLink http://dx.doi.org/10.1787/888933869089