

## Recognition and management of acute kidney injury: a multinational cross-sectional study

Epidemiological data for acute kidney injury are scarce, especially in low- and lower-middle-income countries. A multinational cross-sectional study assessed regional differences in acute kidney injury recognition, management and outcomes (Mehta et al, 2016).

A total of 322 physicians from 289 centres in 72 countries collected prospective data for paediatric and adult patients with confirmed acute kidney injury in hospital and non-hospital settings who met criteria for acute kidney injury. Signs and symptoms at presentation, comorbidities, risk factors for acute kidney injury, and process-of-care data were obtained at the start of acute kidney injury, and need for dialysis, renal recovery, and mortality recorded at 7 days, and at hospital discharge or death, whichever came earlier. Countries were classified as high-income countries, upper-middle-income countries, and combined low- and lower-middle-income countries according to their 2014 gross national income per person.

Data were collected from 4018 patients. Dehydration was the most frequent cause of acute kidney injury in low- and lower-



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middle-income countries and hypotension the most frequent cause in high-income countries. Mortality at 7 days was higher in low- and lower-middle-income countries than in high-income countries and upper-middle-income countries.

Commenting on the findings, Dr Ravindra L Mehta from the University of California, San Diego, said: 'Our study shows that the risk factors and causes

of acute kidney injury are similar worldwide, however, there are differences in recognition, management and outcomes of acute kidney injury in different health settings for both community and hospital-acquired acute kidney injury that are influenced by the economic conditions in the different countries. A concerted effort is needed to raise awareness of acute kidney injury worldwide and implement strategies to eliminate preventable deaths from this devastating disease.'

Mehta RL, Burdmann EA, Cerdá J et al (2016) Recognition and management of acute kidney injury in the International Society of Nephrology 0by25 Global Snapshot: a multinational cross-sectional study. *Lancet* **387**(10032): 2017–25 (doi: 10.1016/S0140-6736(16)30240-9)

## Blood pressure positively associated with risk of developing vascular dementia

To assess age-specific associations between blood pressure and risk of vascular dementia, researchers related blood pressure to time to physician-diagnosed vascular dementia (Emdin et al, 2016) in 4.28 million people who were free of known vascular disease and dementia, identified from electronic primary care health records. They also looked at links between blood pressure and dementia in a prospective population-based group of patients who had had incident transient ischaemic attack and stroke.

For a median follow-up of 7.0 years, 11 114 initial presentations of vascular dementia were seen in the primary care cohort after exclusion of the first 4 years of follow-up. The association

between usual systolic blood pressure and risk of vascular dementia decreased with age. In the population-based cohort, prior systolic blood pressure predicted 5-year risk of dementia with no evidence of negative association at older ages.

The team concluded that blood pressure is positively associated with risk of vascular dementia, irrespective of preceding transient ischaemic attack or stroke.

Emdin CA, Rothwell PM, Salimi-Khorshidi G et al (2016) Blood pressure and risk of vascular dementia: evidence from a primary care registry and a cohort study of transient ischaemic attack and stroke. *Stroke* **47**: 1429–35 (doi: 10.1161/STROKEAHA.116.012658)

## Pertussis vaccination in pregnancy is safe

Researchers analysed health outcomes of 1759 births and compared 1109 cases in which the mother was immunized with the tetanus-diphtheria-acellular pertussis vaccine to 650 where the mother was not vaccinated with this vaccine. They concluded that the vaccine is safe for both mothers and infants (doi: 10.1080/21645515.2016.1157241).

## Medical error is the third leading cause of death in the USA

A new analysis has found that medical error is the third leading cause of death in the USA after heart disease and cancer (doi: 10.1136/bmj.i2139). The authors say that death certificates in the USA have no facility for acknowledging medical error, and call for better reporting to help understand the scale of the problem and how to tackle it.

## Failure to publish radiotherapy trial results

Although the publication of results of clinical trials carried out in the USA within 12 months of completion has been mandatory since 2007, a high number of phase III radiotherapy trials did not do so, according to research presented at the ESTRO 35 conference. An analysis of 802 trials with a primary completion date of before 1 January 2013 showed that 655, or 81.7%, did not publish even a summary result.