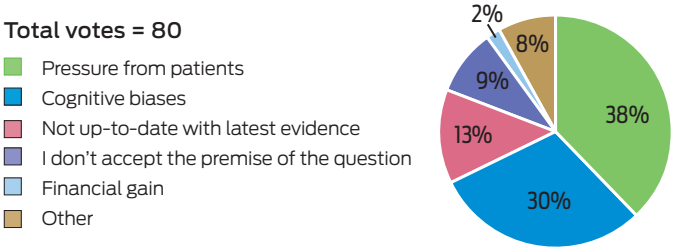
A demonstrator holds a placard during a rally before the visit of Speaker of the United States House of Representatives Paul Ryan at the Success Academy 1 charter school in Harlem, New York. Congress passed a Bill to repeal and replace the Affordable Care Act (Obamacare) on 4 May. The Senate is in the process of revising and redrafting the Bill.

Picture: Shannon Stapleton/Reuters

MJA InSight Poll

What is the number one reason why doctors provide treatments known to be of low value?

Total votes = 80



Take part in next week's poll on: www.mja.com.au/insight

MJA Podcasts

Professor Flavia Cicuttini is Head of the Musculoskeletal Unit at Monash University. She talks about the evidence for and against hip arthroscopy for femoroacetabular impingement, to accompany her co-authored perspective in this issue.

Dr Catherine Yelland is a practising geriatrician and President of the Royal Australasian College of Physicians. She discusses avoidable deaths in nursing homes, to accompany her editorial in this issue.

Professor Bronwyn Kingwell is an integrative physiologist and Head of the Metabolic and Vascular Physiology Laboratory at the Baker Heart and Diabetes Institute. She talks about her co-authored short report in this issue comparing the composition of sugars in popular soft drinks in Australia, the United States and Europe.

Podcasts are available at www.mja.com.au/multimedia/podcasts and from iTunes. Also available as videos at www.mja.com.au/multimedia

Antiretroviral therapy gives patients with HIV infection 10 more years

Life expectancy of 20-year-old patients starting treatment for HIV has increased by about a decade in the European Union and North America since the introduction of antiretroviral therapy in the mid-1990s, according to research published in *The Lancet HIV*. The authors, from the University of Bristol, proposed that their findings could reduce stigmatisation and help people with HIV infection gain employment and obtain medical insurance, as well as encouraging diagnosed patients to start treatment as soon as possible. Their projections indicate that the life expectancy of a typical 20-year-old patient who began treatment since 2008 and had a low viral load after a year of treatment may approach that of the general population (about 78 years). The study analysed data from 18 EU and North American studies for 88 504 people with HIV infection who started antiretroviral treatment between 1996 and 2010. It tracked how many people died during the first 3 years of their treatment, their cause of death, HIV viral load, immune cell (CD4) count and whether they were infected through injecting drugs. Fewer people who started treatment between 2008 and 2010 died during the first 3 years of treatment than those who started treatment between 1996 and 2007. The number of deaths during treatment directly attributable to AIDS declined between 1996 and 2010, probably the result of newer drugs being more effective in restoring immune function. Measures of HIV also improved, with the average CD4 cell count after a year of treatment increasing from 370 cells per microlitre of blood in 1996–1999 to 430 cells per microlitre in 2008–2010, while the proportion of people with a low HIV viral load increased from 71% to 93%. Between 1996 and 2013, the life expectancy of 20-year-old patients treated for HIV infection increased by 9 years for women and 10 years for men in the EU and North America. Projections based on death rates in the second and third year of treatment for Europeans and North Americans estimated that 20-year-old men and women starting therapy between 2008 and 2010 who survived the first year of treatment would live to 73 and 76 years respectively.

http://dx.doi.org/10.1016/S2352-3018(17)30086-3

Most read *MJA* articles online

1. *Research*: Physical comorbidities of post-traumatic stress disorder in Australian Vietnam War veterans
McLeay et al; doi: 10.5694/mja16.00935
2. *Perspective*: Euthanasia and physician-assisted suicide: focus on the data
Emanuel; doi: 10.5694/mja16.00132
3. *Editorial*: Death from an untreatable infection may signal the start of the post-antibiotic era
Jones, Davis and Looke; doi: 10.5694/mja17.00077
4. *Research*: Trends in the prevalence of hepatitis B infection among women giving birth in New South Wales
Deng et al; doi: 10.5694/mja16.00823
5. *Research*: Hot water immersion *v* icepacks for treating the pain of *Chironex fleckeri* stings: a randomised controlled trial
Isbister et al; doi: 10.5694/mja16.00990

Most read *MJA* InSight articles

1. *Views*: Flaws in the system are killing young doctors
Barker; https://www.doctorportal.com.au/mjainsight/2017/14/flaws-in-the-system-are-killing-young-doctors/
2. *News*: Euthanasia debate: is there such a thing as "good" suicide?
MacKee; https://www.doctorportal.com.au/mjainsight/2017/15/euthanasia-debate/
3. *Views*: Mandatory reporting: is it killing doctors?
Le Cong; https://www.doctorportal.com.au/mjainsight/2017/15/mandatory-reporting-the-cure-is-deadlier-than-the-illness/
4. *News*: The stroke patients slipping through the cracks
Wilcken; https://www.doctorportal.com.au/mjainsight/2017/16/the-stroke-patients-slipping-through-the-cracks/
5. *News*: The thinking that drives low value care
Wilcken; https://www.doctorportal.com.au/mjainsight/2017/17/the-thinking-that-drives-low-value-care/

Untethered proteins found in MKD

Researchers from the Garvan Institute of Medical Research in Sydney have shown that a family of untethered proteins builds up in the cells of children with a rare genetic condition, mevalonate kinase deficiency (MKD). Individuals with MKD experience repeated and frequent inflammatory febrile episodes that last for days and are accompanied by hepatosplenomegaly, lymphadenopathy, arthralgia, and skin rash. These febrile crises are similar to those associated with hyperimmunoglobulinemia D and periodic fever syndrome. The attacks usually begin in infancy and continue throughout life, although they are most frequent in children. In blood cells from people with MKD, the investigators found that several intracellular proteins from the same family (Rab proteins) had no isoprenoid tail. Much like a child holding the string of a balloon, an isoprenoid tail is thought to act as a molecular tether for the protein to which it is attached. The isoprenoid tails on Rab proteins keep them close to the cell membrane; without their tethers, the Rab proteins, and other related proteins, are free to move into other parts of the cell. It is thought that this could initiate the disease process in MKD, triggering inflammation. The researchers found that untethered Rab proteins are found only in people in MKD, and not other rare diseases that have similar clinical symptoms (the periodic fever syndromes) or in the parents of children with MKD. These findings, published in the *Journal of Allergy and Clinical Immunology*, pinpoint a key feature of MKD that could be used to fast-track diagnosis of the disease, a process that is often difficult and protracted.

http://dx.doi.org/10.1016/j.jaci.2017.02.033

Cate Swannell doi: 10.5694/mja17.n0506