

Welcoming the new *MJA* Editor-in-Chief, and the top ten original research articles in the *MJA* in 2022

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It has been a privilege to lead the Journal through challenging times, but it is time to pass the baton



From 23 January 2023, I hand over responsibility for the *MJA* to the new Editor-in-Chief, Professor Virginia (Ginny) Barbour. Professor Barbour is eminently qualified to lead the *MJA*, having been a Senior Editor at *The Lancet* and one of the founding editors and the first Chief Editor of *PLOS Medicine*. She completed her undergraduate immunology and medical degrees

at Cambridge University, trained in haematology in the United Kingdom (including at University College London and the Royal Free Hospital), and was awarded her DPhil degree by Oxford University for her investigation of human α -globin gene regulation. Open access for all medical journals is the future, and Professor Barbour is an internationally recognised expert in innovative scholarly communication, open access, and research integrity. In 2021, she was an expert advisor with the Australian delegation to the intergovernmental meeting of experts on the UNESCO Open Science Recommendation, and she has been involved in many international initiatives, including as vice-chair of the Declaration on Research Assessment (DORA) steering committee and as a Plan S ambassador. Professor Barbour is based at the Queensland University of Technology, where she is co-lead of the Office for Scholarly Communication and director of Open Access Australasia; she is also a member of the NHMRC Research Quality Steering Committee, and during the COVID-19 pandemic was an editorial advisor to the medRxiv preprint server. I congratulate Professor Barbour on her appointment and wish her and the entire *MJA* team every success in the years to come. I know the Journal will be in very good hands!

Our best original research articles in 2022

Each January I review the top ten original *MJA* research articles of the preceding year, as voted by the *MJA* editorial team. The *MJA* Expert Advisory Group will consider these articles for the annual *MJA* Research Award, independently selecting the winner and runners-up. The winner will be announced at the Australian Medical Association Conference in 2023, to which the lead author will be invited to receive their award, supported by an *MJA* travel grant. I wish those shortlisted all the best.

Past winners of this prestigious national award during my tenure have included articles on the isolation and rapid sharing of the SARS-CoV-2 genome from the first Australian patient,¹ a hugely impactful and highly cited paper. Other outstanding winners have included studies of suicide by young Australians,² human papillomavirus (HPV) testing for cervical screening,³ rheumatic heart disease in Timor-Leste,⁴ an intervention for

reducing medication errors in hospital discharge summaries,⁵ and an early intervention for the treatment of sepsis.⁶

So here are our top ten for 2022! The life expectancy gap between Aboriginal and Torres Strait Islander people and other Australians is a national disgrace. Yuejen Zhao and his colleagues⁷ reported a marked improvement in life expectancy for Northern Territory Indigenous people between 1999 and 2018. Their analysis of Australian Coordinating Registry data and Australian Bureau of Statistics population estimates indicated that life expectancy at birth had increased during this period by 9.0 years for Indigenous men (from 56.6 to 65.6 years) and by 4.9 years for Indigenous women (from 64.8 to 69.7 years). The authors note that, despite significant narrowing of the gap in life expectancy for Indigenous and non-Indigenous Territorians (by 26% for men, 21% for women), closing the remaining 15.4 year gap for both sexes is as yet elusive. In particular, cardiovascular disease mortality did not decline during the study period, highlighting the particular need for attention in terms of prevention and care.

Breast cancer remains a major killer in Australia, and managing long term disease recurrence is problematic. In their New South Wales population-based health record linkage study, Sally Lord and colleagues⁸ investigated the long term risk of distant metastases after breast cancer diagnosis. For 6338 participants diagnosed with localised or regional breast cancer during 2001 or 2002, the 14-year cumulative distant metastasis incidence was 22.2% (95% confidence interval [CI], 21.1–23.2%); the annual hazard was highest during the second year after breast cancer diagnosis. The authors found that the annual risk of distant metastases declined with time from breast cancer diagnosis, to about 1% at five years (localised cancer) and 2% at seven years (regional cancer). The annual risk of dying from breast cancer was 36% during the first year and 14% during the fourth year after metastasis detection.

Meeting the increasing demand for RhD-negative red blood cells in Australia is challenging. The study by Rena Hirani and her colleagues⁹ provided a contemporary snapshot of the distribution of blood types in Australia by retrospectively analysing ABO RhD blood typing results from 2019 for more than 1300000 patients (pathology laboratory testing) and almost half a million blood donors (Red Cross Lifeblood). Blood group prevalence among samples typed by pathology services was O RhD+, 38.4%; O RhD-, 6.5%; A RhD+, 32.0%; A RhD-, 5.6%; B RhD+, 11.8%; B RhD-, 1.5%; AB RhD+, 3.7%; and AB RhD-, 0.5%. The distribution was similar among first time blood donors. By comparing these results with data for first time blood donors in 1993–94 (the most recent available information in Australia), Hirani and colleagues found that the overall proportion of RhD+ first-time donors had risen from 81% in 1993–94 to 83.8% in 2019, reflecting the shifting demographic characteristics of the Australian population. These findings are important for planning blood and blood products supply across the nation.

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has not gone away, and at the time of writing (November 2022) a new wave of infection has started, despite the approach of summer. Concerns were raised early in the coronavirus disease 2019 (COVID-19) pandemic that the burden of this new virus, like so many pathogens, would disproportionately fall on vulnerable communities. In an ecological study, Christine Roder and her colleagues¹⁰ mapped the incidence of SARS-CoV-2 infections in Victoria to postcodes, and found that it was higher in areas with larger proportions of people who were unemployed, without paid leave benefits, or experiencing mortgage or rent stress, in areas with greater population and housing density, and in postcodes including larger proportions of people who spoke languages other than English at home. The social determinants of health cannot be ignored when planning responses to pandemics.

Phoebe Williams and her colleagues¹¹ investigated COVID-19 severity and outcomes in Sydney children during the Delta SARS-CoV-2 variant wave in 2021. Most infections were asymptomatic or mild. For each 100 reported SARS-CoV-2 infections in children, around 1.4 children were admitted to hospital for medical reasons, typically infants, adolescents, and children with other medical conditions. In contrast, about 2.5 per 100 infected children were hospitalised for social or welfare reasons, including carers being hospitalised with COVID-19, highlighting the importance of providing strong support services for children during pandemics.

The SPRINT-SARI (Short Period Incidence Study of Severe Acute Respiratory Infection) project is a prospective, multicentre, observational study of people with COVID-19 admitted to Australian intensive care units (ICUs) since the start of the pandemic. The latest report from the project included data for 2493 people aged 16 years or more admitted with COVID-19 to one of 59 participating Australian ICUs during the three infection waves spanning February 2020 – November 2021. After adjusting for age, illness severity, and other covariates, Husna Begum and her colleagues found that the risk of in-hospital death was similar during the first and second COVID-19 waves, but was 9.60 (95% CI, 3.52–16.7) percentage points higher during the third than the first wave. The demographic characteristics of patients with COVID-19 in ICUs and the treatments they received during the third pandemic wave also differed from those of the first two waves; the median participant age and the proportion with other medical conditions was lowest during the third wave.¹²

In the largest published post-marketing analysis of the safety of the Comirnaty and Vaxzevria vaccines, Lucy Deng and colleagues¹³ analysed data from online AusVaxSafety surveys of more than three million people aged 16 years or more. The authors found that adverse events were more frequently reported by people with underlying medical conditions, including a history of anaphylaxis. The frequency of adverse events was similar for Indigenous people and other Australians. The findings of Deng and her colleagues confirm the safety of Comirnaty and Vaxzevria in population use. AusVaxSafety continues to monitor COVID-19 vaccine safety in Australia, including that of third and future doses as our vaccination program evolves.

Mental health remains a challenging problem in Australia. Early intervention programs are important, but must be rigorously evaluated and refined. Frank Iorfino and his colleagues¹⁴ found that two-thirds of people aged 12–25 years with emerging mental disorders (1510 participants, 1 June 2008 – 31 July 2018) had not experienced meaningful improvement in psychological function during two years of primary care-based early intervention mental health care when followed up at the Brain and Mind Centre in Sydney. Their functional trajectories were

quite volatile, indicating the need for dynamic service models with multidisciplinary interventions and measurement-based care. The symptoms of two in three young people who attended the early intervention service remained poor or deteriorated and fluctuated across two years of care. Prior mental health care or self-harm and suicidality, physical comorbidity, substance misuse, and social disengagement were each associated with poorer outcomes. These important but disappointing findings suggest that the effectiveness of alternative models of care should be formally tested.

Early stroke intervention saves lives, but in a large population-based NSW study (more than 200 000 people admitted to hospital with stroke; mean age, 73 years), Xia Wang and her colleagues¹⁵ found troubling differences in the pre-hospital management by emergency medical services of women and men admitted to hospital with stroke. Women diagnosed with stroke after admission to hospital were more frequently assessed by paramedics as having anxiety, nausea, headache, or being unconscious, rather than stroke, and paramedics were less likely to diagnose stroke in women than in men under 70 years of age. A larger proportion of women than of men were transported to hospital by ambulance, but they were less likely to receive stroke-specific management in the ambulance. Improving the recognition of stroke symptoms during pre-hospital emergency services care should be a priority.

The controversy regarding the dangers of e-cigarette use refuses to die, as anyone familiar with social media knows, despite a recent Australian expert systematic review finding that vaping is probably a significant health risk.¹⁶ The work of Alexander Larcombe and colleagues¹⁷ has improved our understanding of the chemical composition of e-cigarettes available in Australia and of the need for much better monitoring of the composition of these products. Following on from their 2017 report,¹⁸ in which they identified a number of harmful chemicals in e-liquids and inconsistencies in their labelling, Larcombe and his colleagues investigated the chemical composition of a larger number of e-cigarette liquids and examined whether “fresh” (as sold) or “aged” preparations (after vaping) differed in their composition. They found that several harmful chemicals were detected in both fresh and aged e-liquids, including chemicals of known toxicity (eg, benzaldehyde, menthol, 2-chlorophenol, benzyl alcohol), and many about which our understanding of inhalation toxicity is incomplete (eg, flavouring chemicals, polycyclic aromatic hydrocarbons).

My time as Editor-in-Chief at the *MJA*

It has been an immense privilege to serve as the *MJA* Editor-in-Chief since 2015, joining a distinguished list of predecessors. I have worked with a marvellous team of expert deputy medical, scientific, and structural editors, our social media, news and online editor, and our senior publishing coordinator. We have successfully overseen major changes at the Journal during my tenure, including the end to its costly and wasteful publication in print, moving solely online. We’ve been paving the way for Open Access; while retaining free access to original research on the *MJA* website, we’ve worked with Wiley to support the introduction of the Council of Australian University Libraries (CAUL) agreement that allows most researchers with university affiliations to publish open access articles of most types without incurring any publication charges.¹⁹ We moved rapidly in the pandemic to establish a facility for preprints, regular early online publication, and to the ultrarapid publication of selected articles. We introduced global journal partnerships in climate change and

health, including simultaneous publication of editorials across the globe in leading journals,^{20,21} and a partnership with *The Lancet*, now more than five years old, on national climate change metric reporting (Australia was the first country to introduce it), for which I must thank Richard Horton, editor-in-chief of *The Lancet*.²²

I have enjoyed total editorial independence, but the buck stops with the editor-in-chief, and it can be a lonely responsibility, so I thank all the staff at the Journal for their expert advice, support, and assistance. The Australasian Medical Publishing Company (AMP Co) board, chaired by Richard Allely and subsequently by Damian Smith, the AMP Co executive general manager, Delores D'Costa, the head of publishing operations, Ben Dawe, and the presidents of the Australian Medical Association have all provided unqualified support, for which I thank them. The non-editorial team at AMP Co have been integral to the successful publication of 22 *MJA* issues each year, and I also thank Simon Goudie, senior journal publishing manager, and his team at Wiley, who have worked with us very effectively and collegially since 2018. Finally, I deeply appreciate the AMP Co board appointing me Emeritus Editor-in-Chief for the next two years, a rare honour.

I often turn to Sir Winston Churchill when in need an inspiring quote to summarise it all, and here is my take on the *MJA* after the past several years: "Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning".²³

The future? Bright!²⁴

Competing interests: A complete list of disclosures is available at <https://www.mja.com.au/journal/staff/editor-chief-professor-nick-talley>. ■

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- 1 Caly L, Druce J, Roberts J, et al. Isolation and rapid sharing of the 2019 novel coronavirus (SARS-CoV-2) from the first patient diagnosed with COVID-19 in Australia. *Med J Aust* 2020; 212: 459-462. <https://www.mja.com.au/journal/2020/212/10/isolation-and-rapid-sharing-2019-novel-coronavirus-sars-cov-2-first-patient>
- 2 Hill NTM, Witt K, Rajaram G, et al. Suicide by young Australians, 2006-2015: a cross-sectional analysis of national coronial data. *Med J Aust* 2021; 214: 133-139. <https://www.mja.com.au/journal/2021/214/3/suicide-young-australians-2006-2015-cross-sectional-analysis-national-coronial>
- 3 Machalek DA, Roberts JM, Garland SM, et al. Routine cervical screening by primary HPV testing: early findings in the renewed National Cervical Screening Program. *Med J Aust* 2019; 211: 113-119. <https://www.mja.com.au/journal/2019/211/3/routine-cervical-screening-primary-hpv-testing-early-findings-renewed-national>
- 4 Davis K, Remenyi B, Draper ADK, et al. Rheumatic heart disease in Timor-Leste school students: an echocardiography-based prevalence study. *Med J Aust* 2018; 208: 303-307. <https://www.mja.com.au/journal/2018/208/7/rheumatic-heart-disease-timor-leste-school-students-echocardiography-based>
- 5 Tong EY, Roman CP, Mitra B, et al. Reducing medication errors in hospital discharge summaries: a randomised controlled trial. *Med J Aust* 2017; 206: 36-39. <https://www.mja.com.au/journal/2017/206/1/reducing-medication-errors-hospital-discharge-summaries-randomised-controlled>
- 6 Burrell AR, McLaws ML, Fullick M, et al. SEPSIS KILLS: early intervention saves lives. *Med J Aust* 2016; 204: 73. <https://www.mja.com.au/journal/2016/204/2/sepsis-kills-early-intervention-saves-lives>
- 7 Zhao Y, Li SQ, Wilson T, Burgess CP. Improved life expectancy for Indigenous and non-Indigenous people in the Northern Territory, 1999-2018: overall and by underlying cause of death. *Med J Aust* 2022; 217: 30-35. <https://www.mja.com.au/journal/2022/217/1/improved-life-expectancy-indigenous-and-non-indigenous-people-northern-territory>
- 8 Lord SJ, Daniels B, Kiely BE, et al. Long term risk of distant metastasis in women with non-metastatic breast cancer and survival after metastasis detection: a population-based linked health records study. *Med J Aust* 2022; 217: 402-409. <https://www.mja.com.au/journal/2022/217/8/long-term-risk-distant-metastasis-women-non-metastatic-breast-cancer-and>
- 9 Hirani R, Weinert N, Irving DO. The distribution of ABO RhD blood groups in Australia, based on blood donor and blood sample pathology data. *Med J Aust* 2022; 216: 291-295. <https://www.mja.com.au/journal/2022/216/6/distribution-abo-rhd-blood-groups-australia-based-blood-donor-and-blood-sample>
- 10 Roder C, Maggs C, McNamara BJ, et al. Area-level social and economic factors and the local incidence of SARS-CoV-2 infections in Victoria during 2020. *Med J Aust* 2022; 216: 349-356. <https://www.mja.com.au/journal/2022/216/7/area-level-social-and-economic-factors-and-local-incidence-sars-cov-2-infections>
- 11 Williams P, Koirala A, Saravanos GL, et al. COVID-19 in New South Wales children during 2021: severity and clinical spectrum. *Med J Aust* 2022; 217: 303-310. <https://www.mja.com.au/journal/2022/217/6/covid-19-new-south-wales-children-during-2021-severity-and-clinical-spectrum>
- 12 Begum H, Neto AS, Alliegro P, et al. People in intensive care with COVID-19: demographic and clinical features during the first, second, and third pandemic waves in Australia. *Med J Aust* 2022; 217: 352-360. <https://www.mja.com.au/journal/2022/217/7/people-intensive-care-covid-19-demographic-and-clinical-features-during-first>
- 13 Deng L, Clover C, Dymock M, et al. The short term safety of COVID-19 vaccines in Australia: AusVaxSafety active surveillance, February - August 2021. *Med J Aust* 2022; 217: 195-202. <https://www.mja.com.au/journal/2022/217/4/short-term-safety-covid-19-vaccines-australia-ausvaxsafety-active-surveillance>
- 14 Iorffino F, Carpenter JS, Cross SPM, et al. Social and occupational outcomes for young people who attend early intervention mental health services: a longitudinal study. *Med J Aust* 2022; 216: 87-93. <https://www.mja.com.au/journal/2022/216/2/social-and-occupational-outcomes-young-people-who-attend-early-intervention>
- 15 Wang X, Carcel C, Hsu B, et al. Differences in the pre-hospital management of women and men with stroke by emergency medical services in New South Wales. *Med J Aust* 2022; 217: 143-148. <https://www.mja.com.au/journal/2022/217/3/differences-pre-hospital-management-women-and-men-stroke-emergency-medical>
- 16 Banks E, Yazidjoglou A, Brown S, et al. Electronic cigarettes and health outcomes: systematic review of global evidence. Report for the Australian Department of Health. Apr 2022. Canberra: National Centre for Epidemiology and Population Health. https://openresearch-repository.anu.edu.au/bitstream/1885/262914/1/Electronic%20cigarettes%20health%20outcomes%20review_2022_WCAG.pdf (viewed Nov 2022).
- 17 Larcombe A, Allard S, Pringle P, et al. Chemical analysis of fresh and aged Australian e-cigarette liquids. *Med J Aust* 2022; 216: 27-32. <https://www.mja.com.au/journal/2022/216/1/chemical-analysis-fresh-and-aged-australian-e-cigarette-liquids>
- 18 Chlvers E, Janka M, Franklin P, et al. Nicotine and other potentially harmful compounds in "nicotine-free" e-cigarette liquids in Australia. *Med J Aust* 2019; 210: 127-128. <https://www.mja.com.au/journal/2019/210/3/nicotine-and-other-potentially-harmful-compounds-nicotine-free-e-cigarette>
- 19 Talley NJ. The impact of the *MJA* continues its rise. *Med J Aust* 2022; 217: 187-188. <https://www.mja.com.au/journal/2022/217/4/impact-mja-continues-its-rise>
- 20 Atwoli L, Baqui AH, Benfield T, et al. Call for emergency action to limit global temperature increases, restore biodiversity, and protect health. *Lancet* 2021; 398: 939-941.
- 21 Atwoli L, Erhabor GE, Gbakima AA, et al. COP27 Climate Change Conference: urgent action needed for Africa and the world. *Med J Aust* 2022; 217: 482-483.
- 22 Zhang Y, Beggs PJ. The *Lancet* Countdown down under: tracking progress on health and climate change in Australia. *Med J Aust* 2018; 208: 285-286. <https://www.mja.com.au/journal/2018/208/7/lancet-countdown-down-under-tracking-progress-health-and-climate-change>
- 23 Churchill W. The end of the beginning: war speeches (ed. C Eade). London: Cassell and Company, 1943; p. 214.
- 24 Guest C. Welcoming the new Editor-in-Chief. *Med J Aust* 2015; 203: 419. <https://www.mja.com.au/journal/2015/203/11/welcoming-new-editor-chief> ■