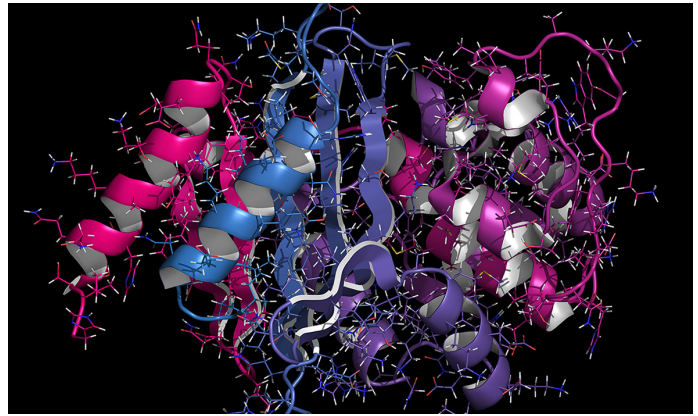


# Responding to the challenges of emerging health threats

A key role of a medical journal is to highlight and document emerging health threats, as we know only too well from the role that journals played — and continue to play — during the COVID-19 pandemic. As the pandemic also demonstrated, despite good knowledge of their pathogenesis generally, infectious diseases remain important causes of morbidity and mortality. This issue of the *MJA* has two examples that span the range of challenges that infectious diseases pose.

Flynn and colleagues discuss the threat to Australian public health of carbapenemase-producing Enterobacterales (CPE) (doi: 10.5694/mja2.52077). These bacteria are not yet endemic in Australia, but they are elsewhere, and where that is the case there are profound medical and financial implications. Although the highest burden is in hospitals, CPE is also a problem outside of health care settings in residential aged care and in the community. As the authors note, “The potential for CPE transmission in the wider community, particularly among vulnerable older people in aged care facilities, is of concern”. They observe that we probably do not know the burden of disease in Australia: “CPE infection is only notifiable in five of the eight states and territories, and consequently, CPE burden is likely underestimated.” In their closing arguments, they urge action now while the burden of disease is still low, and highlight that an “Australian Centre for Disease Control is ideally placed as a national coordinating body to guide a systematic, evidence-based and harmonised approach to CPE surveillance and public health action. Australia now has a unique opportunity to take coordinated national action to prevent the spread of CPE.”

Challenges from another emerging infectious disease are described in an article by Weerasinghe and colleagues (doi: 10.5694/mja2.52076). Mpox emerged as a disease in May 2022 and information about it is still accumulating, with to date just 154 cases reported in Australia. There is a third-generation smallpox vaccine being rolled out to high risk groups, but as the authors describe in two individuals, there is a possibility of breakthrough infection. They conclude that “Clinicians should be aware of the possibility of breakthrough modified [monkeypox virus] infection in patients with epidemiological risk factors and a characteristic vesiculopustular rash, despite a history of vaccination.”



Finally, turning to a non-infectious emerging public health threat — vaping. Gardner and colleagues describe the prevalence, patterns of use, and socio-demographic features of e-cigarette use by Australian adolescents, collected in a survey of students aged 14–17 years from 70 schools in NSW conducted between 1 July and 31 December 2022 (doi: 10.5694/mja2.52075). The findings are startling: “A total of 1094 of 4204 respondents reported ever having used e-cigarettes (26.0%; 95% CI, 24.8–27.4%); mean age at first use was 14.0 years (SD, 1.3 years).” This should be compared with the findings noted in their introduction: “A national survey in 2019 found that 10% of 14–17-year-old Australians had used e-cigarettes”. The authors note that because of their methodology, “extrapolation of our findings to all Australian adolescents should be cautious”. However, they conclude that “Our findings indicate that strategies for preventing the uptake and reducing the use of e-cigarettes by Australian adolescents are needed”.

As for emerging infectious diseases, the *MJA* will continue to report on the public health threat posed by vaping, and the strategies needed to counter it. ■

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