

The influence of socio-economic conditions on the epidemiology of COVID-19 in Australia

Joanne Flavel¹ , Fran Baum^{1,2} 

Supporting people with COVID-19 should look beyond medical management and take into account their social and economic situation



Coronavirus disease 2019 (COVID-19) has exposed socio-economic inequalities in many countries; people living with disadvantage are more susceptible to infection, hospitalisation, and death.^{1,2} Until recently, COVID-19 infection and death rates in Australia were relatively low, but the ecological study by Roder and colleagues in this issue of the *MJA* suggests that social and economic factors also influenced the distribution of infections here.³ A socio-economic gradient in COVID-19 cases was predicted early in the pandemic.^{4,5} Ecological studies provide some evidence of this gradient, and are vital for informing disease prevention policy and clinical practice.

Roder and colleagues identified socio-economic factors associated with higher local COVID-19 incidence during the 2020 second wave in Victoria. They

found that it was higher in postcodes with larger proportions of people who were unemployed, had no access to paid leave, or spoke a language other than English at home, as well as in areas with lower median ages or larger mean household sizes. The incidence of COVID-19 was more than six times as high in metropolitan as in regional postcodes (418 *v* 62 infections per 100 000 population). In regional areas, incidence increased with mean household size and the proportions of people who experienced mortgage or rental stress, were unemployed, or spoke a language other than English at home.³ These findings are similar to those of ecological studies in other countries.^{1,6,7}

Roder and her co-authors noted that systemic inequalities in job security, access to paid sick leave, and affordable housing and health care disproportionately affect culturally and linguistically diverse communities and younger people. They could report only limited information about COVID-19 incidence among Aboriginal and Torres Strait Islander people, and not at all about its incidence in people with disabilities.³ Precarious conditions of employment, income, housing, and food supply together lead to economic, physical, and informational barriers to obtaining health advice and care, increasing the susceptibility to COVID-19.⁸

The socio-economic factors discussed by Roder and her co-authors are not surprising, and were predicted early in the pandemic.^{4,5} In 2008, the World Health Organization



Commission on the Social Determinants of Health reported that social factors have a powerful impact on health inequities.⁹ The reasons for the associations identified by Roder and colleagues are similar to those underlying other health inequalities, commencing with basic living circumstances and access to healthy housing and employment conditions, including access to sick leave and the ability to remain safe from infection at and during travel to work.

The ability to obtain, understand, and act on government advice about COVID-19 depends on how well people understand English and their level of education, but also on how effectively governments and health authorities communicate with multicultural communities, many of whose members distrust authority because of refugee and other traumatic histories. Another crucial point is that inequalities do not just separate those living in disadvantaged circumstances from other people, but are manifested as a gradient across the entire population.¹⁰

Reducing the impact of socio-economic factors on exposure to COVID-19 requires policies and practices that ensure decent conditions of work, healthy housing, social security at a level that people can live on, and education opportunities, and maximising access to health services and health information for everyone. A report by the Menzies Centre for Health Governance on COVID-19 policies and health inequities noted that some Australian governments responded better to the pandemic than others, but that overall the response could have been much stronger.¹¹ The key lesson is that policy must be designed with equity in mind.

For clinicians, the findings by Roder and colleagues suggest that treating people with or at greater risk of COVID-19 should look beyond their medical management and take into account their social and economic circumstances. Primary health care professionals, especially those in community health centres, have established trust relationships with people in disadvantaged circumstances and are well placed to encourage vaccination and

to advise governments on how their pandemic control can be most effective for their communities.

The ecological analysis by Roder and colleagues provides evidence of associations between socio-economic characteristics at the area- rather than the individual level, but it is an important first step to identifying socio-economic factors in the epidemiology of COVID-19. Their study adds to overseas evidence of social inequalities affecting health, and is a valuable contribution to increasing awareness of their role in Australia.

Competing interests: No relevant disclosures.

Provenance: Commissioned; not externally peer reviewed. ■

© 2022 AMPCo Pty Ltd

- 1 Bamba C, Lynch J, Smith KE. The unequal pandemic: COVID-19 and health inequalities. Bristol: Bristol University Press, 2021.
- 2 Paremoer L, Nandi S, Serag H, Baum F. Covid-19 pandemic and the social determinants of health. *BMJ* 2021; 372: n129.
- 3 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.
- 4 Bamba C, Riordan R, Ford J, Matthews F. The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health* 2020; 74: 964-968.
- 5 Chung RY-N, Dong D, Li MM. Socioeconomic gradient in health and the covid-19 outbreak. *BMJ* 2020; 369: m1329.
- 6 Khanijahani A, Iezadi S, Gholipour K, et al. A systematic review of racial/ethnic and socioeconomic disparities in COVID-19. *Int J Equity Health* 2021; 20: 248.
- 7 Baena-Díez JM, Barroso M, Cordeiro-Coelho SI, et al. Impact of COVID-19 outbreak by income: hitting hardest the most deprived. *J Public Health* 2020; 42: 698-703.
- 8 Permanand G, Kirkby V, McKee M. Take action at all levels of societies to fix the fractures that left so many people vulnerable to the pandemic. In: McKee M, editor. Drawing light from the pandemic: a new strategy for health and sustainable development. A review of the evidence for the Pan-European Commission on Health and Sustainable Development. Geneva: World Health Organization, 2021. <https://apps.who.int/iris/bitstream/handle/10665/345027/9789289051798-eng.pdf?sequence=1&isAllowed=y> (viewed Feb 2022).
- 9 Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health: final report of the Commission on Social Determinants of Health. Geneva: World Health Organization, 2008. https://www.who.int/social_determinants/final_report/csdh_finalreport_2008.pdf (viewed Feb 2022).
- 10 Marmot M, Allen J, Goldblatt P, et al. Build back fairer: the COVID-19 Marmot review. The pandemic, socioeconomic and health inequalities in England. London: Institute of Health Equity, 2020. <https://www.instituteofhealthequity.org/resources-reports/build-back-fairer-the-covid-19-marmot-review/build-back-fairer-the-covid-19-marmot-review-full-report.pdf> (viewed Jan 2022).
- 11 Friel S, Price S, Goldman S, et al. Australian COVID-19 policy responses: a health equity report card. Canberra: Menzies Centre for Health Governance, Australian National University, 2021. <https://regnet.anu.edu.au/sites/default/files/uploads/%5bcurrent-date:custom:Y%5d-%5bcurrent-date:custom:m%5d/MCHGCovidReport2021%20Final.pdf> (viewed Jan 2022). ■