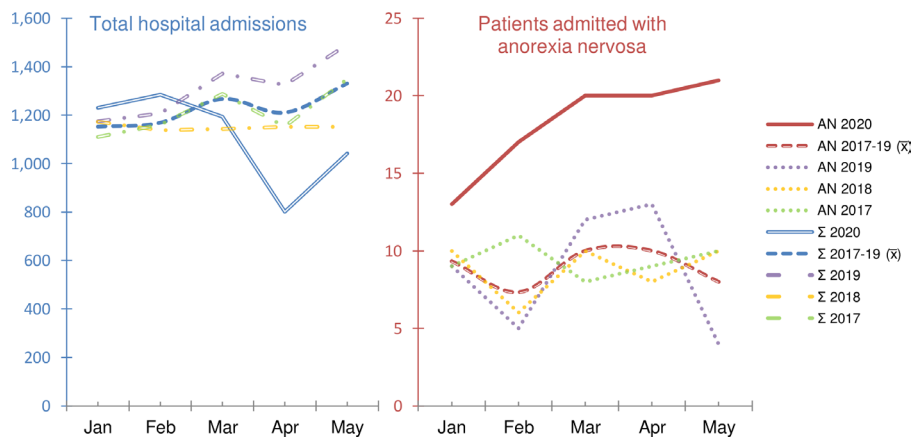


## Outbreak of anorexia nervosa admissions during the COVID-19 pandemic

The COVID-19 pandemic has had broad social implications for children around the world. While the initial government response has focused on public health strategies to contain the spread of the virus and the creation of sufficient capacity within hospitals to manage patients with acute medical complications, it was recognised that the social, economic and mental health consequences of COVID-19 would follow. In Western Australia (WA), we have had relatively few COVID-19 cases in the general population and even fewer in children. Similar to paediatric hospitals internationally,<sup>1</sup> our emergency department presentations and overall hospital admissions have fallen significantly in 2020 (figure 1). However, since the commencement of the COVID-19 pandemic in Australia, we have observed a 104% increase (95% CI +56% to +166%,  $p < 0.001$ ) in children with anorexia nervosa (AN) requiring admission to the hospital for nutritional rehabilitation compared with the three previous years (online supplementary table 1).

Perth Children's Hospital is the sole tertiary paediatric hospital within WA and admits all children aged less than 16 years with AN requiring medical stabilisation. Children are admitted for medical stabilisation based on criteria including severe malnourishment (body mass index z-score  $\leq -3$  for age) and/or evidence of significant cardiovascular compromise. The first Australian case of COVID-19 was detected on 25 January 2020, and from mid-March, social restrictions to reduce the spread of the virus were implemented.

Several factors associated with these restrictions may have contributed to the increase in the number of children with AN requiring admission to hospital. We hypothesise that a combination of social isolation and school closures has disconnected patients from protective factors.<sup>2</sup> The reduction of extracurricular activities, school routine and peer relationships have created room for eating disorder cognitions to intensify without the usual distractions. Many children with AN have comorbid mental health issues, including depression, anxiety and obsessive compulsive disorder, which may be exacerbated by the increased focus on hand hygiene and fear of contracting COVID-19.<sup>3</sup>



**Figure 1** Total hospital and AN admissions, aged <16 years, Perth Children's Hospital, January–May 2017–2020. Σ, total hospital;  $\bar{x}$ , mean; AN, anorexia nervosa.

Furthermore, COVID-19 has forced us to adapt our service delivery for children with AN,<sup>4</sup> with the temporary cessation of face-to-face appointments and temporary closure of our day programme. Monitoring and ensuring physical health safety remain a priority. While telehealth has been embraced, it has been more challenging to create a virtual service that can deliver the same depth of support as a day programme.

Our report provides empirical evidence to support an increase in admissions for children with AN in WA, associated with the COVID-19 pandemic. We urgently need to understand the key factors driving the increase in admissions, so we can implement strategies to better support young people with AN as we transition to our 'new normal'.

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### REFERENCES

- Scaramuzza A, Tagliaferri F, Bonetti L, *et al.* Changing admission patterns in paediatric emergency departments during the COVID-19 pandemic. *Arch Dis Child* 2020;105:704.2–6.
- Touyz S, Lacey H, Hay P. Eating disorders in the time of COVID-19. *J Eat Disord* 2020;8:19.
- Walsh O, McNicholas F. Assessment and management of anorexia nervosa during COVID-19. *Ir J Psychol Med* 2020:1–8.
- Davis C, Ng KC, Oh JY, *et al.* Caring for children and adolescents with eating disorders in the current coronavirus 19 pandemic: a Singapore perspective. *J Adolesc Health* 2020;67:131–4.