

Emergency Department presentations for mental health-related conditions: variations by age group and socioeconomic disadvantage

Findings

Background

Tran et al (2020) reported that the number of children and adolescents seeking help from hospital emergency departments (EDs) for mental health-related concerns doubled between 2004/05 and 2016/17.

Overall

In 2018/19, young people aged 15 to 24 years had the highest rates of presentation to a public hospital ED for a mental health-related condition. Rates for the 25 to 64 and 65 years and over age groups were somewhat lower.

Equity gap

The largest equity gap, shown by the ratio between the rate of presentations for people living in the Most disadvantaged compared to the Least disadvantaged areas, is at ages 25 to 64 years (over two and a half times the rate) and smallest for those aged 65 years and over (although the rate in the Most disadvantaged areas is still 37% above the rate in the Least disadvantaged areas).

In the capital cities, the higher rate in the Most disadvantaged areas:

- is most evident in Adelaide, other than at ages 25 to 64 years (where the gap in Hobart is almost the same); and
- is least evident at ages 65 years and over (where Sydney, Melbourne and Brisbane all have larger gaps, and Hobart has the smallest).

An update to June 2021

More recent data for South Australia, to 30 June 2021, show that:

- Children and young people aged from 12 to 17 years had the highest rate of presentations in 2020/21 for mental health-related conditions.
- They also recorded the second highest rate of growth, an increase of 63% over this four-year period, compared with 33% for the 18 to 24 year age group (the highest rate, recorded for those aged 5 to 11 years, was based on relatively small numbers).
- There was relatively little change between 2019/20 and 2020/21, other than for those aged 12 to 17 years, for whom the rate of presentations increased by 34%, and the number of presentations increased by 1,100, from 2,998 to 4,098 (an increase of 37%).

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Emergency Department presentations for mental health-related conditions: variations by age group

Background

Tran et al (2020) reported that the number of children and adolescents seeking help from hospital emergency departments (EDs) for mental health-related concerns doubled between 2004/05 and 2016/17. Following the identification of the first cases of COVID-19 in Australia in late January 2020, and associated restrictions on movement and gatherings and events of all kinds, an area of growing concern has been mental health-related conditions. Although these concerns related to people of all ages, young people were considered to be at particular risk, and reports of organisations telling of increasing numbers of young people seeking help have been common.

The data

Change in presentations over time, Australia

From mid-2020, there has been widespread recognition as to the growing demand for mental health services, especially the pressure on EDs in public hospitals. AIHW data show that although the number of presentations to EDs for those aged 12 to 17 years in 2019/20 was slightly higher than in 2018/19, the rate of presentations per head of population declined by 1%. However, the rate was up by 18% on 2014/15 levels. For those aged 18 to 24 years, the annual change was an increase of 2% and the five-yearly change was an increase of 14%.

SA Health have provided PHIDU with data for 2020/21, by month, providing a more detailed and up-to-date picture of changes, as shown at the end of this Fact sheet.

Presentations by age and area of socioeconomic disadvantage, Australia

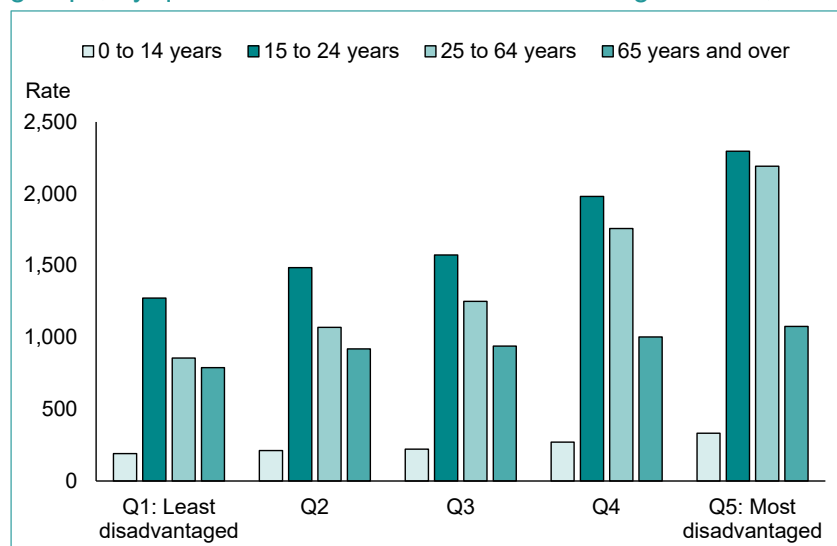
From the following chart we can see that, in 2018/19, young people aged 15 to 24 years (the darkest green columns) had the highest rates of presentation to a public hospital ED for a mental health-related condition; and that those from the most disadvantaged areas were more likely than those from the most advantaged areas to have attended (Figure 1). The overall difference in rates is 80%; in the capital cities there is a 52% higher rate of presentations to an ED for those living in the most disadvantaged areas when compared with those in the least disadvantaged areas, and a rate 73 %higher if living in regional areas (the areas outside of the capital cities).

At other ages the ratio between the rate in the Most disadvantaged compared to the Least disadvantaged areas (the rate ratio) is:

- 73% higher at ages 0 to 14 years (60% in the capital cities and 59% in regional areas);
- over two and a half times higher (a rate ratio of 2.56), at ages 25 to 64 years (2.03 times in the capital cities and 2.33 times in regional areas);
- 37% higher at ages 65 years and over (69% in the capital cities and 27% in regional areas); and
- at all ages, the rate is also over double (a rate ratio of 2.15), with a similar difference in rates in regional areas (a rate ratio of 2.02) and somewhat lower in the capital cities (83% higher in the most disadvantaged areas).

Data for Figure 1 are available [here](#); data for other principal diagnoses at presentation are available [here](#), under [Use and provision of health and welfare services](#).

Figure 1: Emergency department presentations for a mental-health related condition, selected age groups, by quintile of socioeconomic disadvantage of area, Australia, 2018/19

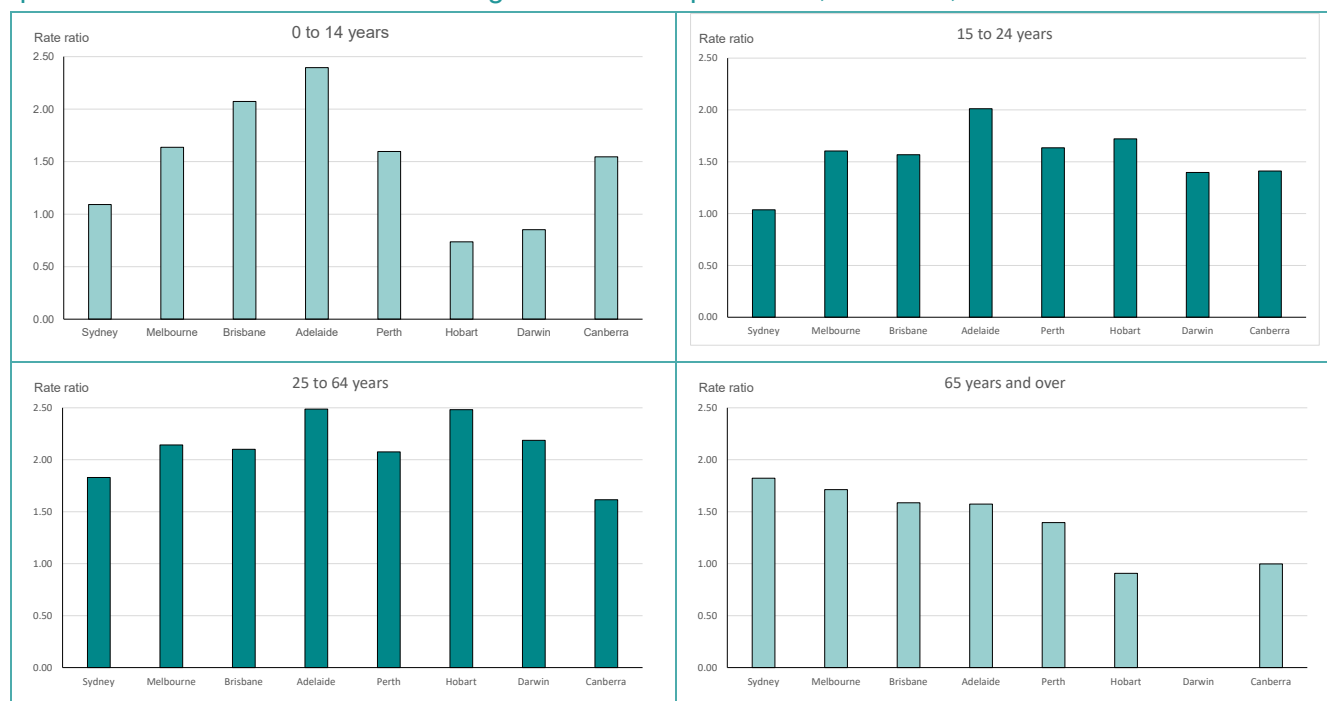


Note: Rate is the age-standardised rate per 100,000 population

Source: PHIDU, available from <https://phidu.torrens.edu.au/social-health-atlases/data#social-health-atlases-of-australia-by-socioeconomic-disadvantage-of-area>; last accessed 27 September 2021

The following charts show the ratio between the rate of presentations for people living in the Most disadvantaged compared to the Least disadvantaged areas in the capital cities¹ (Figure 2). The equity gap, shown by the rate ratio, is most evident in Adelaide, other than at ages 25 to 64 years (where the gap in Hobart is almost the same) and at ages 65 years and over (where Sydney, Melbourne and Brisbane all have larger gaps, and Hobart has the smallest).

Figure 2: Equity gap in emergency department presentations for a mental-health related condition, by quintile of socioeconomic disadvantage of area in capital cities, Australia, 2018/19



Note: Rate ratio is the age-standardised rate per 100,000 population in the Most disadvantaged areas cf. Least disadvantaged

Source: PHIDU, available from <https://phidu.torrens.edu.au/social-health-atlases/data#social-health-atlases-of-australia-by-socioeconomic-disadvantage-of-area>; last accessed 27 September 2021

¹ As a majority of public hospitals providing emergency department services are located in capital cities, they allow the most reliable comparison: the calculation was not made for Darwin, as the small number of presentations of people living in Darwin's Least advantaged areas was suppressed.

An update from South Australia

Equity charts for these and other age groups for each capital city are available [here](#).

The following brief note uses data supplied by the South Australian Department of Health and Wellbeing that show the increases that have occurred over recent years, and the change, month-on-month, in ED presentations for mental health-related conditions, to June 2021.

The data

Children and young people aged from 12 to 17 years had the highest rate of presentations for mental health-related conditions in 2020/21 (Table 1). They also recorded the second highest rate of growth, an increase of 63% over the four-year period from 2016/17, compared with 33% for the 18 to 24 year group: prior to 2020/21, this age group had a higher rate of presentations for mental health-related conditions. Of note is the 71% increase in the rate of presentations among those aged 5 to 11 years; however, although being the highest rate, the numbers are quite small (257 presentations in 2016/17 and 451 in 2020/21).

There was relatively little change between 2019/20 and 2020/21, other than for those aged 12 to 17 years, for whom the rate of presentations increased by 34%, and for those aged 65 years and over, for whom the rate in 2020/21 is below that in 2019/20: these are concerning developments, with implications for the mental health of these population groups².

Table 1: Emergency department presentations for a mental-health related condition, selected age groups, South Australia, 2016/17 to 2020/21

Period	Age (years)						
	0-4	5-11	12-17	18-24	25-64	65+	All ages
Number							
2016/17	91	257	2,409	3,572	12,191	1,265	19,785
2019/20	19	413	2,998	4,370	14,256	1,595	23,651
2020/21	51	451	4,098	4,742	14,312	1,544	25,198
Rate per 10,000 population							
2016/17	8.9	17.8	202.6	225.3	137.5	41.2	115.1
2019/20	1.9	27.8	246.2	274.7	158.2	47.8	134.2
2020/21	5.1	30.3	330.8	300.1	158.8	45.3	142.1
Rate ratio ¹							
2020/21:2016/17	0.58	1.71	1.63	1.33	1.16	1.10	1.23
2020/21:2019/20	2.66	1.09	1.34	1.09	1.00	0.95	1.06

¹Rate ratio is the ratio of the rates in the years shown

Note: Details of coverage, etc. are [here](#)

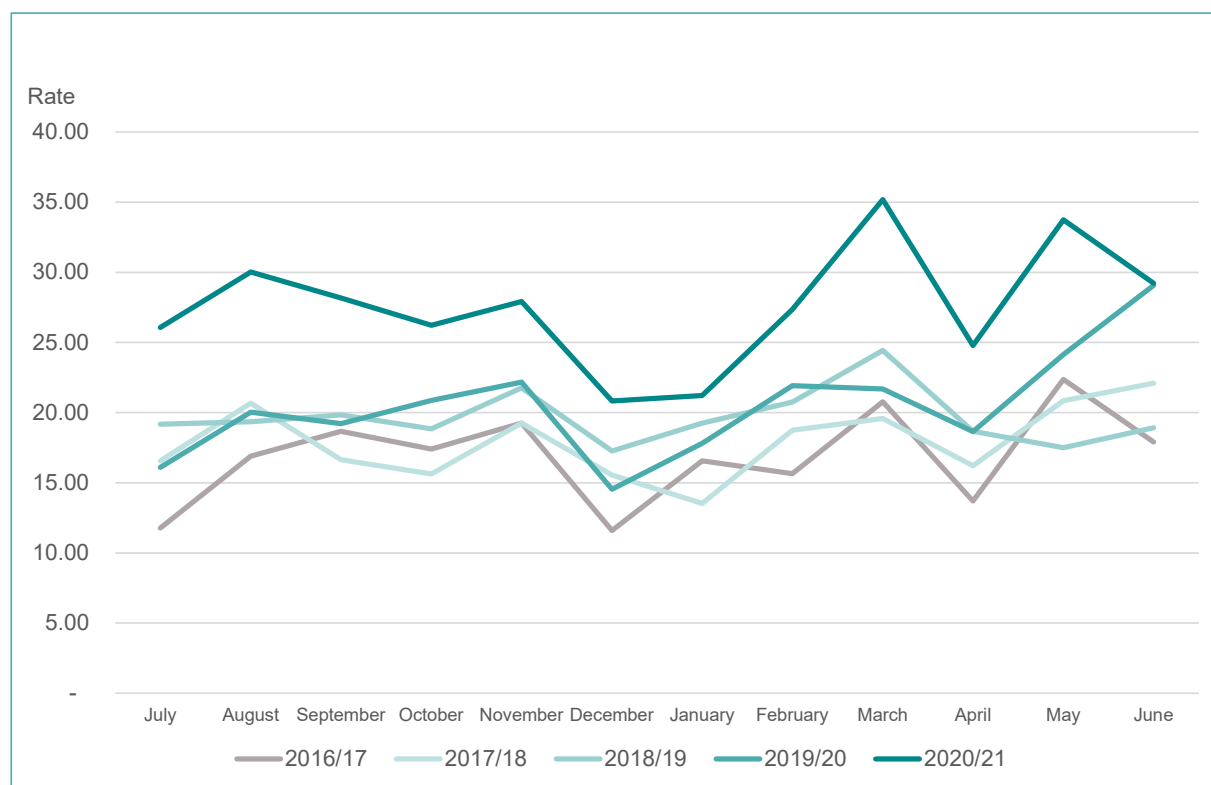
Source: Department of Health and Wellbeing, South Australia

The growth from 2016/17 to 2020/21 is clearly evident from Figure 3, by comparing the grey line (for 2016/17) and the dark green line (for 2020/21). As to the monthly data for the 12 to 17 year age group, there was a marked increase in presentations for the 12 to 17 age group in May and June 2020, leading into higher rates in each month in 2020/21, when compared with the previous year (Figure 3). These data cannot reveal the real extent of concerns facing this age group, nor what outcomes might eventuate. Notably, presentations at these ages were consistently lower in December and April of each year.

Similar charts for this and other age groups, including the number of presentations and the rates, are available [here](#).

² Although there was a very large increase over this period for those aged 0 to 4 years, the numbers are very small, and variable between years.

Figure 3: Change by month in ED presentations at ages 12 to 17 for mental health-related conditions: 2016/17 to 2020/21, South Australia



Note: Details of coverage, etc. are [here](#)

Source: Department of Health and Wellbeing, South Australia

References

Tran, N.Q., Lambeth, L.G., Sanderson, K., de Graaff, B., Breslin, B., Tran, V., Huckerby, E.J., and Neil, E.J 2019. Emergency department presentations with a mental health-related diagnosis in Australia, by jurisdiction and by sex, 2004–05 to 2016–17, Emergency Medicine Australasia. Volume 32. Issue 3 June 2020

Supporting information

Notes re Emergency Department data for Table 1 and Figure 3

- > ICD-10-10th Edition
- > Period - 2016 to 2021 Calendar Year
- > ED Hospitals reported:
 - Major Metro Hospital - WCH-paed, FMC, RAH, LMH, TQEH, Modbury, Noarlunga
 - Big Country Hospital: Gawler, Riverland, Mt Barker, Mt Gambier, Murray Bridge, Pt Pirie, Pt Lincoln, Pt Augusta, South Coast, Whyalla
- > Mental Health flag is derived in line with the national definition as follows: Diagnosis BETWEEN 'F20' AND 'F69999' OR Diagnosis BETWEEN 'F80' AND 'F99999' OR Diagnosis BETWEEN 'X60' AND 'X84999' OR Diagnosis = 'R4581'
- > Number of Presentations include all presentations to ED except DOA no resuscitation
- > Extracted from Emergency Department views in CDW on 20/09/2021, business sub-setting rules applied

Populations used to calculate rates

Data are from the Australian Bureau of Statistic (ABS): 2016 to 2019 from 3101.0 Australian Demographic Statistics; 2020 from ABS.StatBETA: Quarterly Population Estimates, by State/Territory, Sex and Age; and for 2021 from ABS.StatBETA: Population projections, By age and sex, South Australia - Series A