



Changes in A & E attendances by children and young people at Bradford Royal Infirmary in April, May and June 2020 compared to the same period in 2019

Date of analysis: July 2020

This report summarises the impact of the COVID-19 response on attendances at Bradford Royal Infirmary (BRI) A&E department by children (aged <16) and young people (16-24) and suggests some of the implications for services.

Figure 1 shows the number of attendances by month between 1st January 2019 and 30th June 2020. In April 2020 there a reduction in A&E attendances of 68% in patients aged <25 compared to April 2019; by May the decrease had attenuated to 52% and by June it was 39% (Table 1). The numbers of children attending remain lower than the previous year compared to young people. In April, 33 attendees were diagnosed with suspected COVID-19, this fell to 29 in May and 19 in June; they are excluded from these analyses.

Figure 1: Number of A&E attendances per month at BRI between 1st January 2019 and 30th June 2020

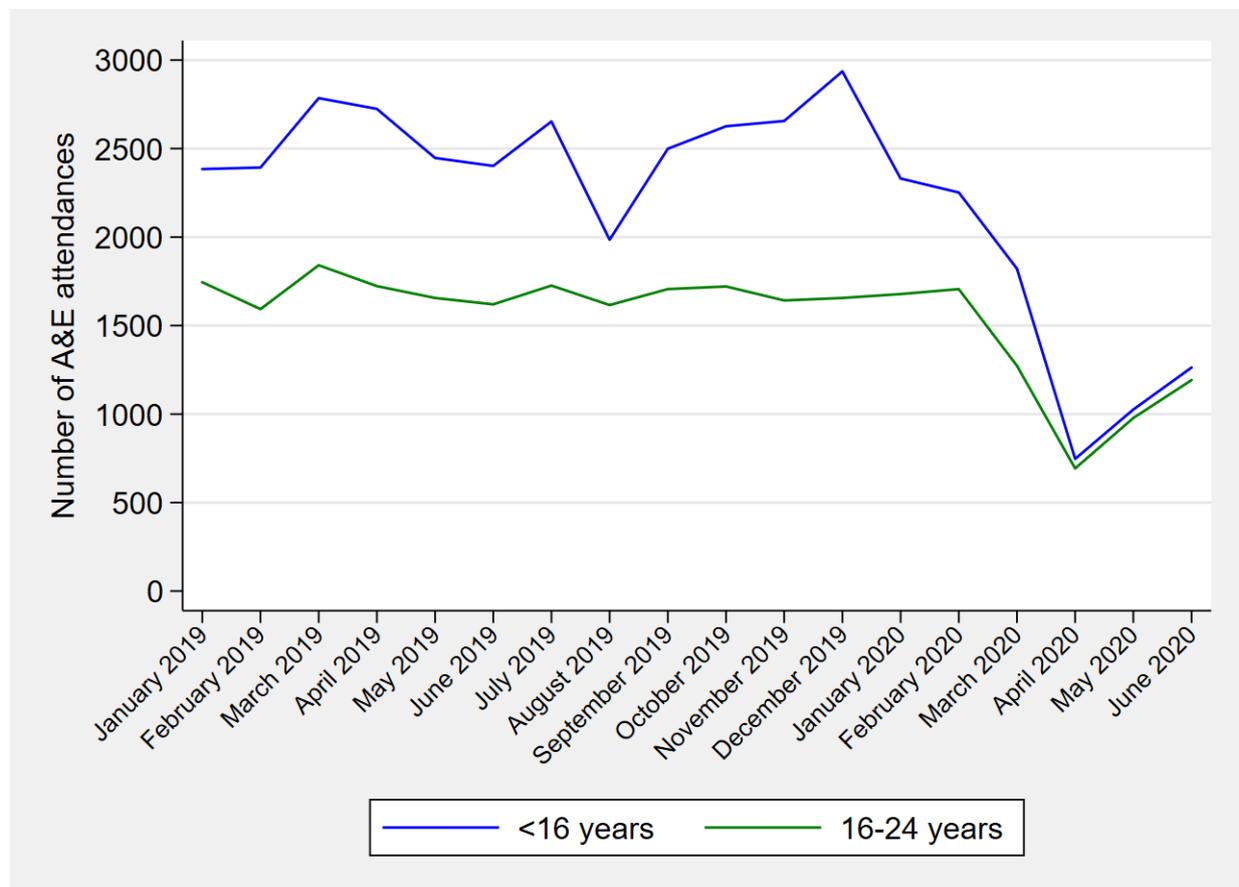


Table 1: Total number of A&E attendances in April 2019 and 2020

Year	April			May			June		
	All	<16	16-24	All	<16	16-24	All	<16	16-24
2019	4447	2724	1723	4103	2447	1656	4022	2402	1620
2020	1407	740	667	1975	1019	956	2436	4589	1180
% change	68.4	72.8	61.3	51.9	58.4	42.3	39.4	47.7	27.2

Diagnosis and reasons for attendance

Tables/figures 2 and 3 summarise the reasons for attending A&E in April 2019 and 2020 (using diagnostic codes assigned in A&E¹) for children and young people respectively and shows the percent change between the two years.

In April there were large percentage reductions in all categories, though several have small numbers and so percentage reductions are not reliable. In categories with higher numbers, the most notable reductions were (a) in patients who received no diagnosis or left before being seen or treated (because patients were seen more quickly) and (b) in respiratory conditions and general symptoms, signs and abnormal clinical or laboratory findings in patients <16. The reduction was smaller for patients attending with mental/behavioural disorders possibly reflecting the increasing incidence and severity of these conditions (though numbers are relatively small), and by June a similar number of children attended for this reason as the previous year. The number of patients attending with injuries in April 2020 decreased by around 60%, but they accounted for a higher proportion in children aged <16, where an increased from 37% in 2019 to 52% in 2020 was observed. There are signs that A&E attendances for most reasons are slowly returning to expected levels, particularly in young people, though attendances for respiratory conditions remain considerably lower than the previous year for both age groups.

¹ A&E data include up to 12 diagnoses, and where a patient has more than one diagnosis code, some may relate to existing health conditions. All patients were categorised using the first code only.

Table 2: A&E attendances by children aged <16 in April, May and June 2020 compared to the same time-period the previous year for specific diagnoses. % change reflects the difference between 2019 and 2020.

Diagnosis/Reason for attending	April			May			June		
	2019	2020	% change	2019	2020	% change	2019	2020	% change
No diagnosis/NAD/Left before being seen or treatment	257 (9.4)	72 (9.7)	-72.0	256 (10.5)	169 (16.6)	-34.0	296 (12.3)	164 (13.1)	-44.6
Infectious and parasitic diseases	254 (9.3)	46 (6.2)	-81.9	225 (9.2)	43 (4.2)	-80.9	197 (8.2)	62 (4.9)	-68.5
Mental and behavioural disorders	13 (0.5)	8 (1.1)	-38.5	16 (0.7)	4 (0.4)	-75.0	9 (0.4)	11 (0.9)	+22.2
Diseases of the nervous system	40 (1.5)	13 (1.8)	-67.5	31 (1.3)	15 (1.5)	-51.6	36 (1.5)	17 (1.4)	-52.8
Diseases of the eye and adnexa	70 (2.6)	6 (0.8)	-91.4	44 (1.8)	12 (1.2)	-72.7	41 (1.7)	24 (1.9)	-41.5
Diseases of the respiratory tract	482 (17.7)	44 (6.0)	-90.9	274 (11.2)	40 (3.9)	-85.4	241 (10.0)	29 (2.3)	-88.0
Diseases of the digestive system	58 (2.1)	12 (1.6)	-79.3	41 (1.7)	24 (2.4)	-41.5	49 (2.0)	27 (2.2)	-44.9
Diseases of the skin and subcutaneous tissue	62 (2.3)	11 (1.5)	-82.3	48 (2.0)	19 (1.9)	-60.4	66 (2.8)	26 (2.1)	-60.6
Diseases of the musculoskeletal system and connective tissue	46 (1.7)	11 (1.5)	-76.1	54 (2.2)	18 (1.8)	-66.7	36 (1.5)	30 (2.4)	-16.7
Diseases of the genitourinary system	58 (2.1)	12 (1.6)	-79.3	44 (1.8)	24 (2.4)	-45.5	40 (1.7)	23 (1.8)	-42.5
Symptoms, signs, and abnormal findings nec	213 (7.8)	36 (4.9)	-83.1	176 (7.2)	53 (5.2)	-69.9	160 (6.7)	52 (4.1)	-67.5
Injuries	1001 (36.8)	381 (51.5)	-61.9	1094 (44.7)	542 (53.2)	-50.5	1072 (44.6)	694 (55.3)	-35.3
Other	170 (6.2)	88 (11.9)	-48.2	144 (5.9)	56 (5.5)	-61.1	159 (6.6)	97 (7.7)	-39.0

NAD=nothing abnormal detected. NEC=not elsewhere classified

Table 3: A&E attendances by young people aged 16-24 in April, May and June 2020 compared to the same time-period the previous year for specific diagnoses. % change reflects the difference between 2019 and 2020.

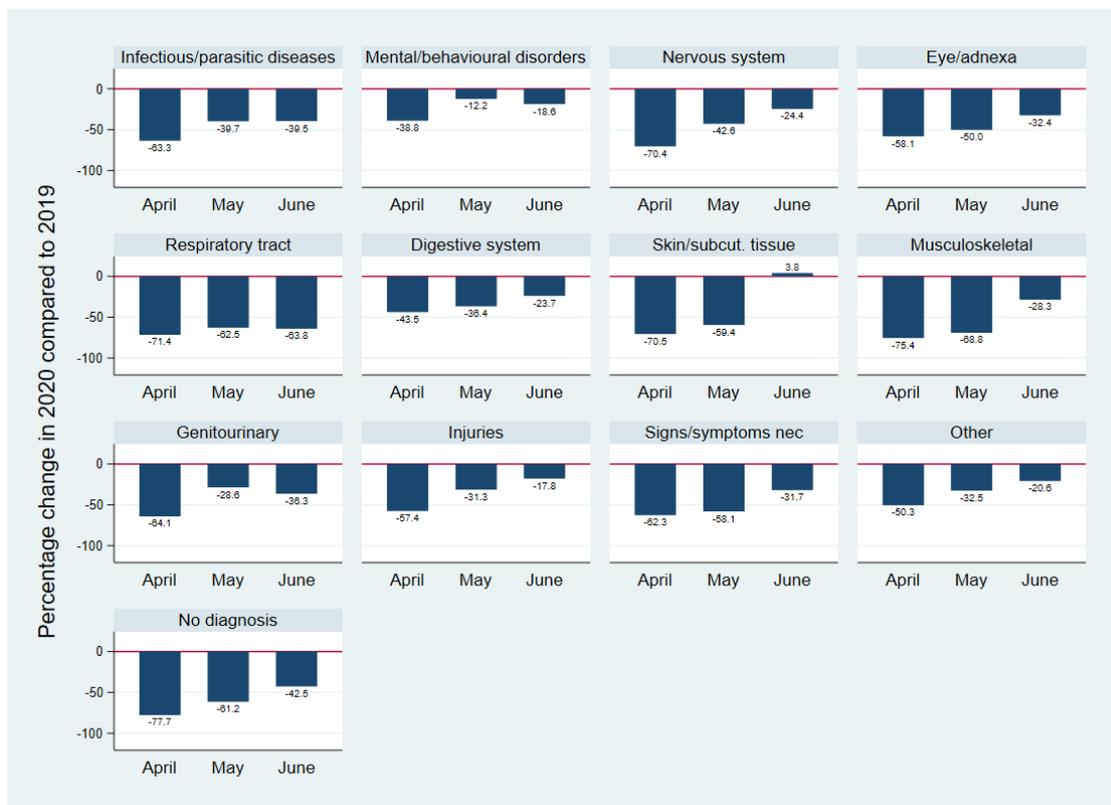
Diagnosis/Reason for attending	April			May			June		
	2019	2020	% change	2019	2020	% change	2019	2020	% change
No diagnosis/NAD/Left before being seen or treatment	224 (13.0)	50 (7.5)	-77.7	224 (13.5)	87 (9.1)	-61.2	247 (15.3)	142 (12.0)	-42.5
Infectious and parasitic diseases	79 (4.6)	29 (4.4)	-63.3	63 (3.8)	38 (4.0)	-39.7	76 (4.7)	46 (3.9)	-39.5
Mental and behavioural disorders	49 (2.8)	30 (4.5)	-38.8	49 (3.0)	43 (4.5)	-12.2	59 (3.6)	48 (4.1)	-18.6
Diseases of the nervous system	54 (3.1)	16 ((2.4)	-70.4	47 (2.8)	27 (2.8)	-42.6	45 (2.8)	34 (2.9)	-24.4
Diseases of the eye and adnexa	31 (1.8)	13 (2.0)	-58.1	24 (1.5)	12 (1.3)	-50.0	34 (2.1)	23 (2.0)	-32.4
Diseases of the respiratory tract	77 (4.5)	22 (3.3)	-71.4	64 (3.9)	24 (2.5)	-62.5	47 (2.9)	17 (1.4)	-63.8
Diseases of the digestive system	62 (3.6)	35 (5.3)	-43.5	66 (4.0)	42 (4.4)	-36.4	59 (3.5)	45 (3.8)	-23.7
Diseases of the skin and subcutaneous tissue	44 (2.6)	13 (2.0)	-70.5	32 (1.9)	13 (1.4)	-59.4	26 (1.6)	27 (2.3)	+3.8
Diseases of the musculoskeletal system and connective tissue	69 (4.0)	17 (2.6)	-75.4	77 (4.7)	24 (2.5)	-68.8	60 (3.7)	43 (3.6)	-28.3
Diseases of the genitourinary system	78 (4.5)	28 (4.2)	-64.1	77 (4.7)	55 (5.8)	-28.6	80 (4.9)	51 (4.3)	-36.3
Symptoms, signs, and abnormal findings nec	154 (8.9)	58 (8.7)	-62.3	179 (10.8)	75 (7.9)	-58.1	145 (9.0)	99 (8.4)	-31.7
Injuries	605 (35.1)	258 (38.7)	-57.4	563 (34.0)	387 (40.5)	-31.3	562 (34.7)	462 (39.2)	-17.8
Other	197 (11.4)	98 (14.7)	-50.3	191 (11.5)	129 (13.5)	-32.5	180 (11.1)	143 (12.1)	-20.6

NAD=nothing abnormal detected. NEC=not elsewhere classified

Figure 2: Percentage change in A&E attendances by diagnosis in children aged <16 in April, May and June 2020 compared to the same period in 2019.



Figure 3: Percentage change in A&E attendances by diagnosis in young people aged 16-24 in April, May and June 2020 compared to the same period in 2019.



Implications

- Reductions in attendances for respiratory conditions, particularly in children, are concerning as patients who experienced symptoms (and not assessed and treated) may be at raised risk of a further event and poor outcomes. Conversely, these reductions may reflect factors such as social distancing reducing transmission of respiratory viruses, and lower incidence of exacerbations due to cleaner air. We should monitor to see if this is reflected in an increase in GP from these causes. Efforts to maintain lower levels of pollution are an important part of recovery.
- The smaller reduction in attendances seen for mental and behavioural disorders likely reflects the overall increase in prevalence and severity of these conditions in the population, reported in several studies of the impact of the pandemic and social isolation on mental health. The return to the previous year's levels of attendances for mental and behavioural disorders has been faster than that of other diagnoses. We need to continue to monitor presentations in A&E and referrals to mental health services and increase efforts to encourage people to seek timely help for their mental health.
- Some reduction in A&E visits reflects 'unnecessary' attendance, but again the percentage reduction is decreasing. We should experiment with ways of preventing rates returning to previous levels early in the recovery period.