

2018				2019								2020															
Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
CSC services								SEN support				Hospital contacts															
Exposure												Outcomes															

Supplementary Figure 1 Measuring vulnerability (exposure) and hospital contacts (outcomes) for secondary school pupils in years 7 to 11 in 2019/20. SEN = special educational needs; CSC = children's social care. Green shading indicates the 2019/20 academic year. Red line indicates the beginning of the pandemic (23 March 2020). At the time of analysis, the ECHILD Database included data about SEN support up to 31 March 2020 and about CSC services up to 31 March 2019. This means we could identify children who had social care services before the pandemic, but we were not able to identify which children had social care services at the time the pandemic began.

Supplementary Table 1 Prevalence of planned hospital care in 2018 among pupils in school years 7 to 11, by type of statutory support or service.

Outpatient attendances	Number of pupils in years 7 to 11 (N)	Number receiving planned hospital care (n)	% receiving planned hospital care (n/N)
No support/services	2,286,790	516,102	22.6%
Any support/services	588,549	205,114	34.9%
• SEN only	396,765	140,418	35.4%
• CSC only	109,915	27,887	25.4%
• Both SEN and CSC	81,869	36,809	45.0%
Planned admissions			
No support/services	2,286,790	59,458	2.6%
Any support/services	588,549	27,139	4.6%
• SEN only	396,765	17,915	4.5%
• CSC only	109,915	3,227	2.9%
• Both SEN and CSC	81,869	5,997	7.3%

SEN = special educational needs support; CSC = children's social care services. Bold indicates a statistically significant difference from "No support/services" reference group at $p < 0.05$. 2018 was the most recent full calendar year for which information related both SEN support and CSC services was available at the time of analysis.

Supplementary Table 2 Type of scheduled outpatient appointments among pupils in school years 7 to 11 from 23 March to 31 December 2020, by type of statutory support or service.

	Total (N)	In-person		Tele/virtual	
		n	%	n	%
No support/services	1,287,546	990,357	76.9%	297,189	23.1%
Any support/services	729,854	540,287	74.0%	189,567	26.0%
• SEN only	502,107	371,082	73.9%	131,025	26.1%
• CSC only	71,865	54,890	76.4%	16,975	23.6%
• Both SEN and CSC	155,882	114,315	73.3%	41,567	26.7%

SEN = special educational needs support; CSC = children's social care services. Bold indicates a statistically significant difference from the "No support/services" reference group at $p < 0.05$.

Supplementary Table 3 Attendance of scheduled outpatient appointments among pupils in school years 7 to 11 from 23 March to 31 December 2020, by type of statutory support or service and type of appointment.

	All			In-person			Tele/virtual		
	Attended	Scheduled	% attended	Attended	Scheduled	% attended	Attended	Scheduled	% attended
No support/services	1,135,391	1,287,546	88.2%	858,259	990,357	86.7%	277,132	297,189	93.3%
Any support/services	636,498	729,854	87.2%	459,700	540,287	85.1%	176,798	189,567	93.3%
• SEN only	440,910	502,107	87.8%	318,326	371,082	85.8%	122,584	131,025	93.6%
• CSC only	60,457	71,865	84.1%	45,023	54,890	82.0%	15,434	16,975	90.9%
• Both SEN and CSC	135,131	155,882	86.7%	96,351	114,315	84.3%	38,780	41,567	93.3%

SEN = special educational needs support; CSC = children's social care services. Bold indicates a statistically significant difference from the "No support/services" reference group at $p < 0.05$.