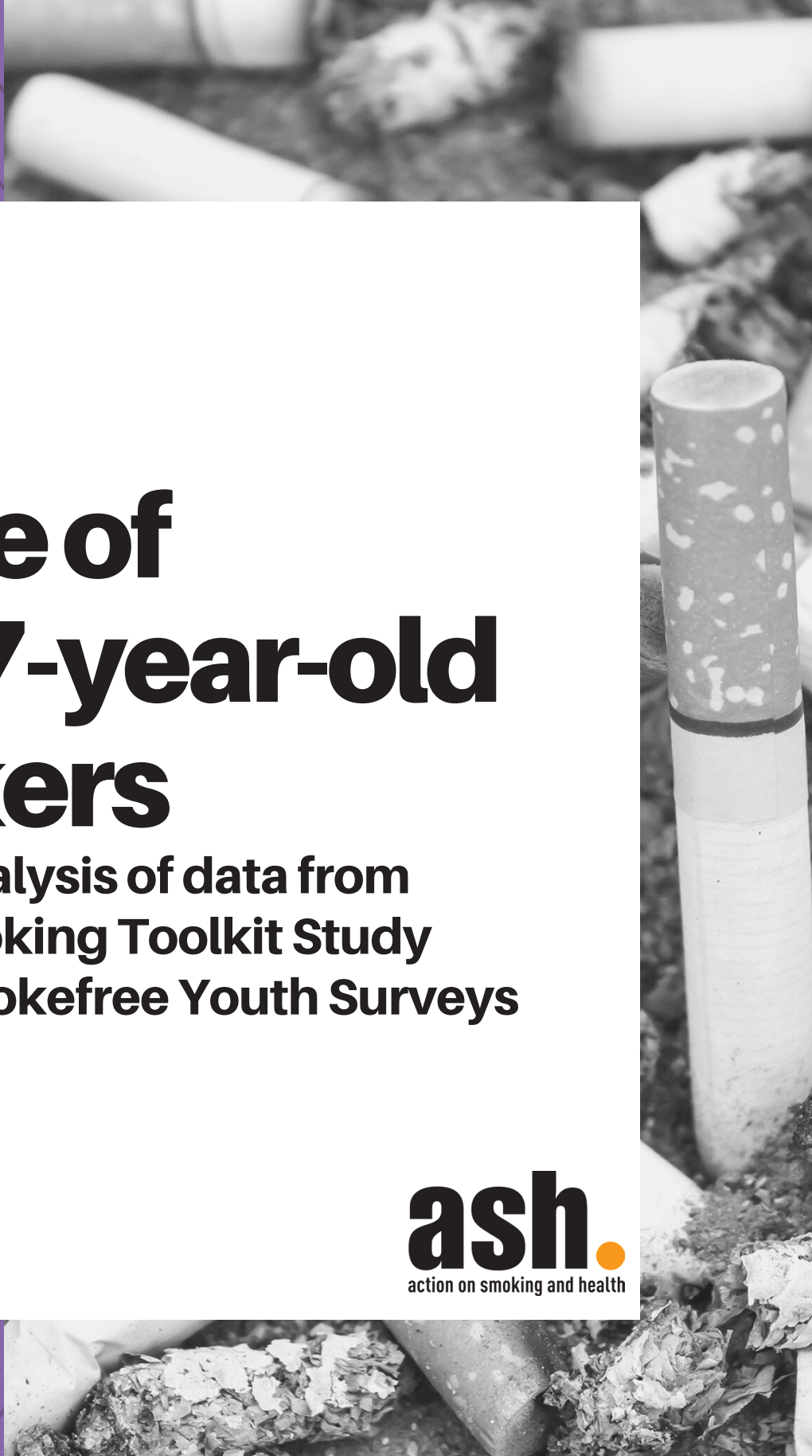


March 2021

# Profile of 16/17-year-old smokers

Based on analysis of data from  
the UCL Smoking Toolkit Study  
and ASH Smokefree Youth Surveys

**ash.**  
action on smoking and health



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# Key points

- » Between 2007 and 2019, smoking prevalence in the 16/17-year-old age group fell from 23.3% to 7.8%. The population of smokers in this age group fell by 66.5% between 2007 and 2019, the biggest decline of any age group.
- » Of all age groups, 16/17-year-old smokers were the most likely to report having made a quit attempt in the previous 12 months. However, the proportion doing so declined from 53% in 2007 to 35% in 2019. In the adult (18+) age group the proportion of smokers making an annual quit attempt fell from 38% in 2007 to 28% in 2020.
- » Between 2007-08 and 2018-19 the absolute inequality in smoking prevalence between the DE and AB social grades in the 16/17-year-old population fell by 11.5 percentage points. In the adult (18+) population, this inequality fell by 3.6 percentage points.
- » The average number of cigarettes smoked per day by 16/17-year-olds fell by 27% between 2008 and 2019. However, the proportion of hand-rolled cigarettes smoked by 16/17-year-olds nearly doubled over this period, from 32.7% to 59.5%. Despite this decline and increase in the use of relatively cheaper products, between 2008 and 2019 average weekly spending on cigarettes by 16/17-year-olds fell by 1.8%, this is most likely attributable to an 148% increase in the price of manufactured cigarettes over the same time period.
- » The most common sources of tobacco for smokers in the 16/17-year-old age group were newsagents/corner shops, who illegally sold cigarettes, and their friends, who gave cigarettes to them more often than selling to them.
- » Smoking by family members is strongly associated with smoking among 16/17-year-olds. Having a mother or female carer who smokes is a strong indicator of risk. In this case 16/17 year olds are four times more likely to be a heavy smoker, (4.33), and three times more likely if a sibling smokes (3.07)
- » In 2020, more than nine in ten 16/17-year-olds (91.3%) lived in a smokefree home, including 79.9% of those who said that a member of their family smoked. For 2016-2020, 16/17 year olds who did not live in a smokefree home were 2.3 times more likely to be current smokers.
- » In 2020, four fifths of 16/17-year-olds (82.9%) reported that they never experienced smoking in cars. For 2016-2020, 16/17 year olds who had experienced smoking in cars were 3.0 times more likely to be current smokers
- » The proportion of 16/17-year-old smokers who thought of themselves as 'social smokers' was 45.8%, similar to the smokers in the 18-24 age group. One in five 16/17-year-old smokers reported that not very much of their smoking, or none of it, occurs in social situations.
- » In 2020, less than a fifth (17%) of 16/17-year-olds had tried an e-cigarette but only 1.9% used them every day. Between 2013-2020 the majority (66.9%) of 16/17-year-old who had tried e-cigarettes were smokers, but few smokers were regular e-cigarette users (only 5.0% of smokers used them every day).

# Methods

Data has been gathered by YouGov and additional analysis undertaken by Action on Smoking and Health. The UCL Smoking Toolkit Study (STS) consists of monthly household surveys of representative samples of the adult population of England aged 16+ years. Each monthly wave involves a new sample of approximately 1700 respondents. Detailed questions are asked of the approximately 300 respondents who report having smoked. The fieldwork is carried out by Ipsos Mori. The STS has been running since November 2006 and has accumulated more than 300,000 respondents of whom approximately 65,000 are 'last-year smokers'. The ASH Smokefree Youth survey is an annual survey of young people in Great Britain aged 11-18. It has been conducted in spring each year since 2013 and asks a range of questions on attitudes and behaviour related to smoking, tobacco and e-cigarette use. The fieldwork is carried out by YouGov.

Although the two surveys have different geographical coverage - England for the UCL STS, Great Britain for the ASH Smokefree Survey - the full datasets for both have been used in this analysis in order to maximize the number of 16/17-year-old cases. Both datasets were weighted to match the demographic profile of their populations. As a result of Covid-19, from March 2020 data collection for 16/17 year olds was suspended. As a consequence, there 16/17 year olds were only surveyed in January and February of 2020 resulting in very small sample (36, 0.18% of the 2020 responders and only 4 of these were smokers). Taking this into account UCL STS 2020 data 16/17 year old data was not included in the current report due to concerns both with appropriate interpretation and reliability of the data for 16/17 year olds in 2020 from the STS survey. Table 1 describes the number of 16/17-year-old respondents per year for the UCL STS and ASH Smokefree Youth surveys by smoking status. The STS data are aggregated from monthly surveys from January 2007.

**Table 1. Number of 16/17-year-old cases per survey per year by smoking status (unweighted)**

Year	UCL STS monthly surveys (England)			ASH Smokefree Youth (GB)		
	Total Respondents	Current Smokers	Ever Smokers (incl. current Smokers)	Total Respondents	Current Smokers	Ever Smokers (incl. current Smokers)
2007	502	117	132	0	0	0
2008	397	64	75	0	0	0
2009	401	70	86	0	0	0
2010	525	88	107	0	0	0
2011	579	104	111	0	0	0
2012	498	78	85	0	0	0
2013	509	79	89	473	55	166
2014	394	47	53	469	47	160
2015	384	48	56	543	63	179
2016	370	42	50	409	41	127
2017	344	31	37	613	83	210
2018	281	27	30	519	52	150
2019	256	20	21	739	81	214
2020	36*	4*	4*	734	97	236
Totals	5,476	819	936	4,499	519	1,442
Totals, excl STS 2020 16-17 data	5,440	815	932	4,499	519	1,442

# Smoking prevalence

According to STS data, the prevalence of current smoking in the 16/17-year-old population in England fell from 23.3% in 2007 to 7.8% in 2019 (Figure 1). The rate of decline was similar to that in young adult (18+) age groups.

The greatest change in prevalence between 2007-2019 was observed in the 16/17 year old age group. As can be seen in Table 2, the population of smokers in the 16/17 year old age group fell by 66.5%, compared to 51.8% in the 18-20 age group, 45.5% in the 21-24 age group and 38.6% in the 25+ age group over the same time period. Due to the disruption to survey methods, demography and also patterns of daily life, there is a level of uncertainty about 2020 data. The impact of Covid-19 will be better understood as we emerge post pandemic.

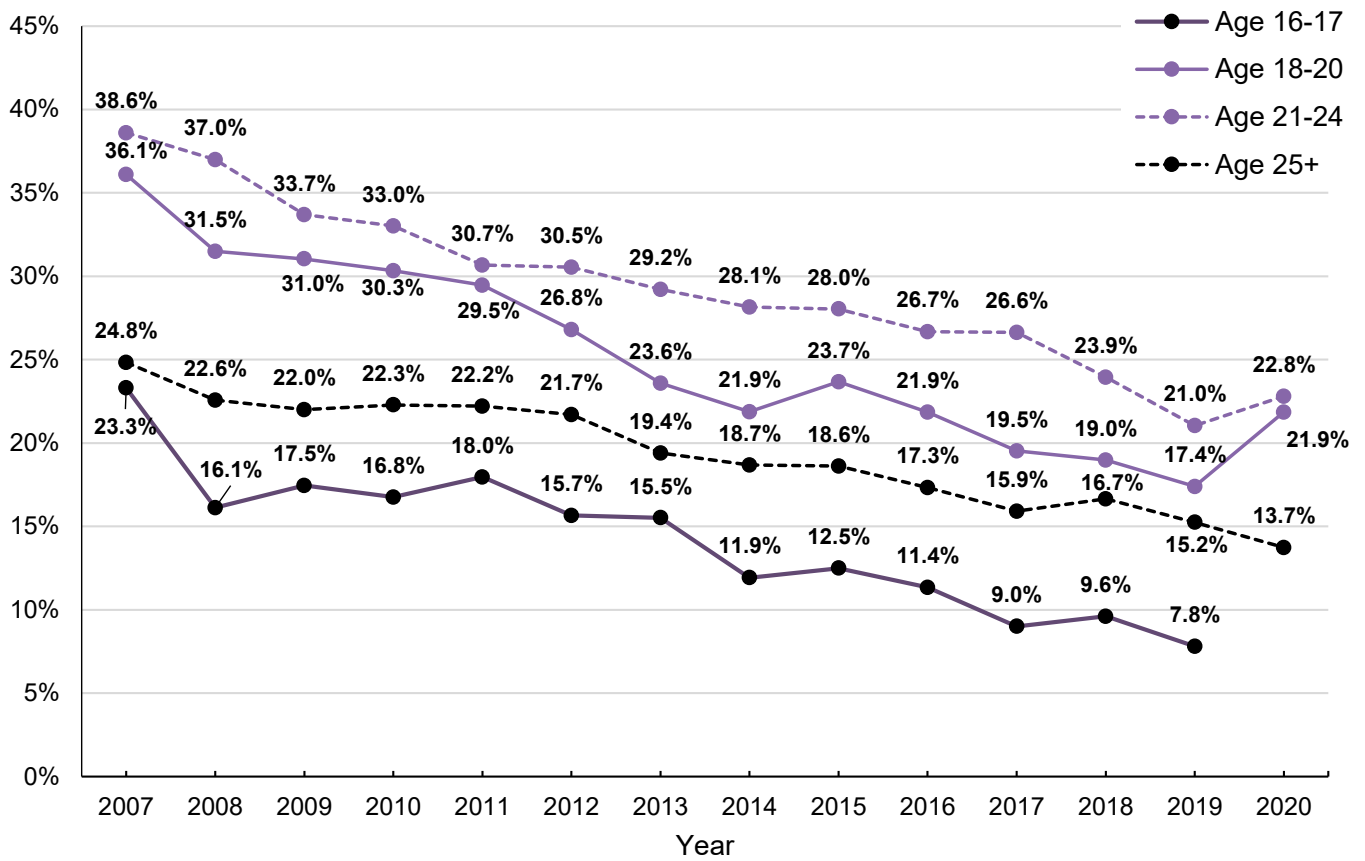
'Current smokers' here includes people who smoke cigarettes, including hand-rolled cigarettes, or other combustible tobacco on either a daily or non-daily basis.

**Table 2. Average smoking prevalence by age group, England (UCL STS, n=293,789)**

Year	Age 16-17	Age 18-20	Age 21-24	Age 25+
2007	23.3%	36.1%	38.6%	24.8%
2008	16.1%	31.5%	37.0%	22.6%
2009	17.5%	31.0%	33.7%	22.0%
2010	16.8%	30.3%	33.0%	22.3%
2011	18.0%	29.5%	30.7%	22.2%
2012	15.7%	26.8%	30.5%	21.7%
2013	15.5%	23.6%	29.2%	19.4%
2014	11.9%	21.9%	28.1%	18.7%
2015	12.5%	23.7%	28.0%	18.6%
2016	11.4%	21.9%	26.7%	17.3%
2017	9.0%	19.5%	26.6%	15.9%
2018	9.6%	19.0%	23.9%	16.7%
2019	7.8%	17.4%	21.0%	15.2%
2020	*	21.9%	22.8%	13.7%
Change in prevalence rate 2007 - 2019	-15.5 pp	-18.7 pp	-17.6 pp	-9.6 pp
Change in population of smokers 2007 - 2019	-66.5%	-51.8%	-45.5%	-38.6%

\*2020 figures are not reported for 16/17 year olds as insufficient samples of 16/17 year olds were gathered due to the impact of Covid-19 on the survey design

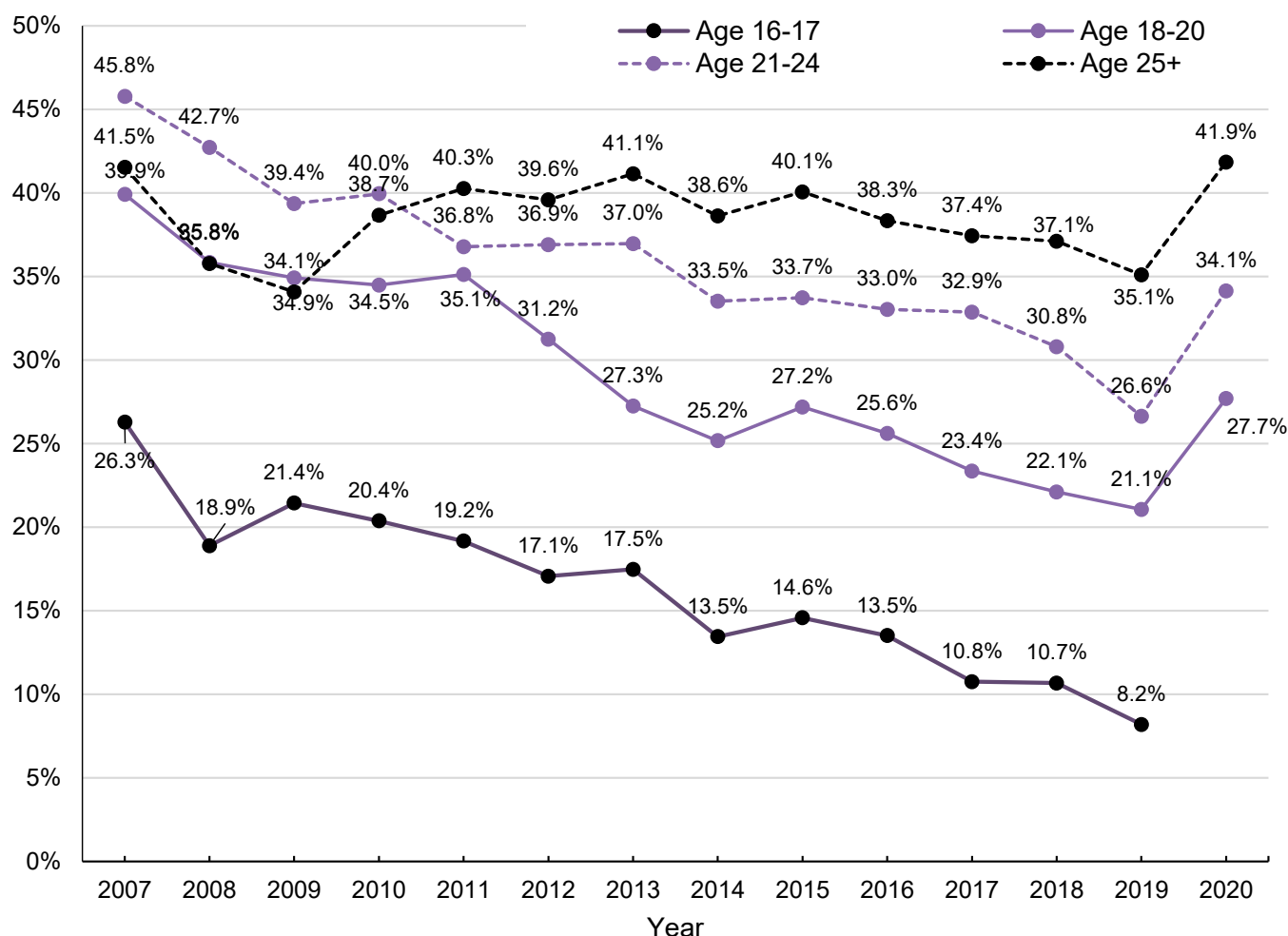
Figure 1. Smoking prevalence by age group, England (UCL STS 2007-2020, n=293,789)



# 'Ever smoking' prevalence and smoking uptake

The number of people who have ever smoked includes all the people in a given age group who started smoking at some point in their lives, regardless of whether or not they subsequently quit. This is a measure of lifetime uptake of smoking. Changes over time in this measure within a given age group principally reflect changes in uptake of smoking within different generations. Between 2007 and 2019 the prevalence of ever-smoking in the 16/17-year-old population fell from 26.3% to 8.2% (Figure 2). The size of the population of 16/17 year olds who had ever tried smoking fell by 68.8% between 2007-2019 (Table 3). As with smoking prevalence, this was a bigger change than in any other age group.

Figure 2. Prevalence of 'ever smoking' prevalence by age group, England (UCL STS, n=293,789)



As can be seen in figure 2 ever smoking rates within 16/17 year olds were considerably lower than all the other age groups across all years. Since 2011, people aged 25+ have had the highest rate of ever-smoking, followed by 21-24 then 18-20. In each age band 18 and above, there was an uptick in ever-smoking in 2020 that is statistically significant (at the 95% confidence level) compared with 2019. However, there was not such a clear increase in reported current smoking in 2020. It is possible that change in survey delivery impacted responses as it moved from being face to face to over the phone.

**Table 3. Average 'ever smoking' prevalence by age group, England (UCL STS, n=293,789)**

Year	Age 16-17	Age 18-20	Age 21-24	Age 25+
2007	26.3%	39.9%	45.8%	41.5%
2008	18.9%	35.8%	42.7%	35.8%
2009	21.4%	34.9%	39.4%	34.1%
2010	20.4%	34.5%	40.0%	38.7%
2011	19.2%	35.1%	36.8%	40.3%
2012	17.1%	31.2%	36.9%	39.6%
2013	17.5%	27.3%	37.0%	41.1%
2014	13.5%	25.2%	33.5%	38.6%
2015	14.6%	27.2%	33.7%	40.1%
2016	13.5%	25.6%	33.0%	38.3%
2017	10.8%	23.4%	32.9%	37.4%
2018	10.7%	22.1%	30.8%	37.1%
2019	8.2%	21.1%	26.6%	35.1%
2020	*	27.7%	34.1%	41.9%
Change in prevalence rate 2007 - 2019	-18.1 pp	-6.2 pp	-10.3 pp	-6.1 pp
Change in population of smokers 2007 - 2019	-68.8%	-47.2%	-41.8%	-15.5%

\*2020 figures are not reported for 16/17 year olds as insufficient samples of 16/17 year olds were gathered due to the impact of Covid-19 on the survey design



# Quit attempts

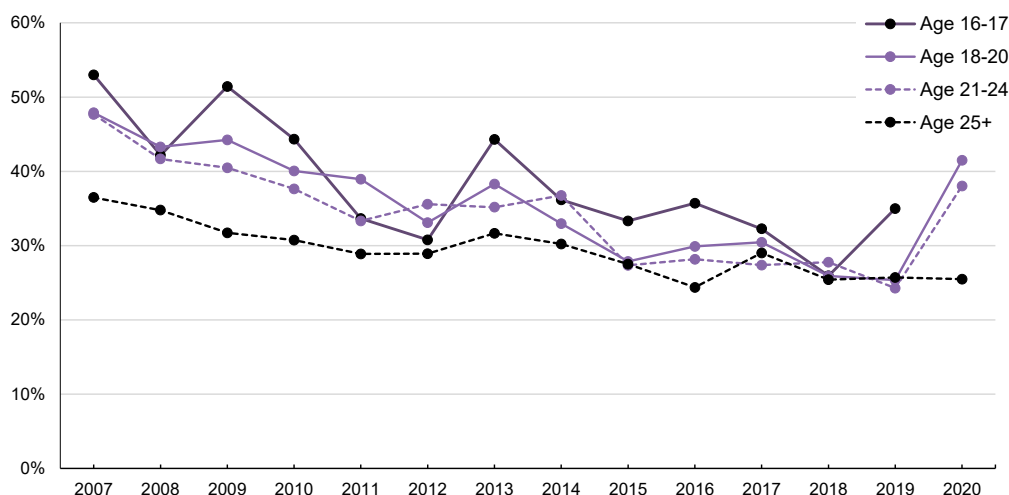
Across all STS waves from 2007 to 2020, 40.5% of the 16/17-year-old smokers surveyed said they had made a quit attempt in the previous 12 months, more than in any other age group. This is in agreement with research findings from the International Tobacco Control Four-Country survey (2002-14) whose international cohort study also reported that young smokers are more likely to attempt to quit.<sup>1</sup> The proportion of smokers who reported that they had made a quit attempt in the last 12 months declined consistently with age (Table 4). Those 16/17-year-olds who tried to quit made an average of two quit attempts in the previous 12 months. In the entire adult (18+) age group over the same period the proportion of smokers making an annual quit attempt was 30.8%.

**Table 4. Average quit attempts in the past 12 months by age group, England (UCL STS current smokers, 2007-2020, n=59,804)**

Age Group	Number of current smokers	Number of current smokers who made at least one quit attempt in the previous 12 months	Percentage of smokers who made at least one quit attempt in the previous 12 months	Average number of quit attempts in the last 12 months (with max 4 individual quit attempts counted per year)		Average number of quit attempts in the last 12 months (with no limit on reported quit attempts per year)	
				Smokers who made a quit attempt	All smokers	Smokers who made a quit attempt	All smokers
16-17	815	330	40.5%	1.84	0.74	1.98	0.80
18-20	3829	1399	36.5%	1.65	0.60	1.88	0.69
21-24	5991	2083	34.8%	1.58	0.55	1.79	0.62
25+	49169	14687	29.9%	1.57	0.47	1.82	0.54

As can be seen in figure 3, there is a clear increase in quit attempts for 16/17 year old smokers in 2019. As referenced in Table 1, there were only four 16-17 year old smokers in the STS survey, and only 36 responses from the age group at all in 2020 (all from Jan and Feb). Due to the sample size and the effect this posed on interpretation 2020 STS data for 16-17 year olds were excluded throughout the report. This pattern is also evident with increased quit attempts for 18-20 and 21-24 age groups. There is no evidence of an increase in quit attempts in 2020 in the 25+ age group.

**Figure 3. Smokers making a quit attempt in the past 12 months by age group (UCL STS 2007-2018 current smokers, 2007-2020, n=59,804)**



# Uptake, quitting and the decline in smoking prevalence

Over the ten years between 2010 to 2019, the proportion of 16/17 year olds who reported current smoking fell from 16.8% to 7.8% (Table 5). The decline in 'ever smoking' prevalence over this period was due to the decline in the number of current smokers. Suggesting that the fall in smoking prevalence in this age group was principally due to declining uptake (both in this age group and in the under 16 age group) rather than increases in quitting behaviour. As the number of quit attempts fell by nine percentage points over this period, from 44.3% to 35%.

**Table 5. Smoking prevalence, past smoking, ever smoking and quit attempts among 16-17 year olds 2007-2020 (UCL STS 16-17 year olds, n=5,440)**

Year	Sample size	A. Current Smoker	B. Past smoker	Ever Smoker (A+B)	16-17 year old smokers who made at least one quit attempt in the last 12 months
2007	502	117 (23.3%)	15 (3.0%)	132 (26.3%)	62 (53.0%)
2008	397	64 (16.1%)	11 (2.8%)	75 (18.9%)	27 (42.2%)
2009	401	70 (17.5%)	16 (4.0%)	86 (21.4%)	36 (51.4%)
2010	525	88 (16.8%)	19 (3.6%)	107 (20.4%)	39 (44.3%)
2011	579	104 (18%)	7 (1.2%)	111 (19.2%)	35 (33.7%)
2012	498	78 (15.7%)	7 (1.4%)	85 (17.1%)	24 (30.8%)
2013	509	79 (15.5%)	10 (2.0%)	89 (17.5%)	35 (44.3%)
2014	394	47 (11.9%)	6 (1.5%)	53 (13.5%)	17 (36.2%)
2015	384	48 (12.5%)	8 (2.1%)	56 (14.6%)	16 (33.3%)
2016	370	42 (11.4%)	8 (2.2%)	50 (13.5%)	15 (35.7%)
2017	344	31 (9%)	6 (1.7%)	37 (10.8%)	10 (32.3%)
2018	281	27 (9.6%)	3 (1.1%)	30 (10.7%)	7 (25.9%)
2019	256	20 (7.8%)	1 (0.4%)	21 (8.2%)	7 (35.0%)

# Socio-economic inequality

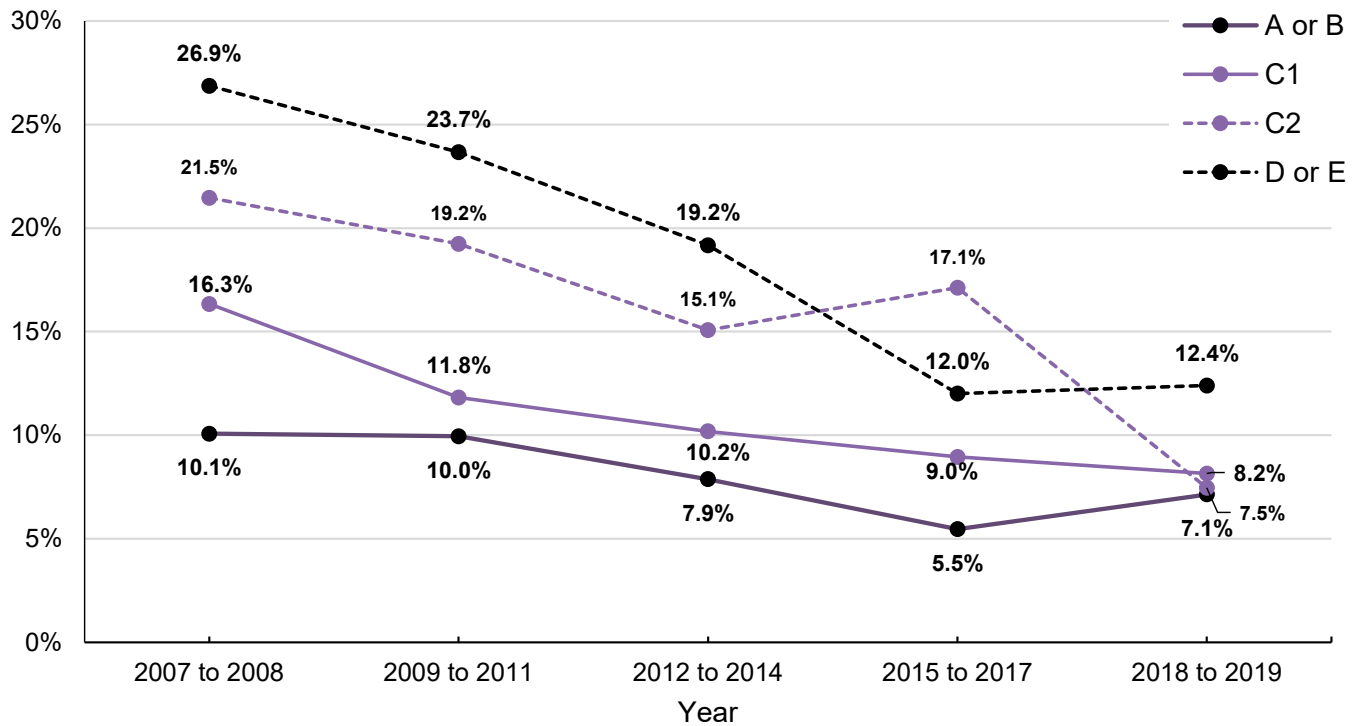
Between 2007-08 and 2018-19 the difference in smoking prevalence between socio-economic groups in the 16/17-year-old population narrowed, principally because of a consistent and pronounced decline in smoking prevalence in the DE socio-economic group (Figure 4). In 2007-08 the difference between smoking prevalence in the DE group and in the AB group within the 16/17-year-old age group was 16.8 percentage points (Table 6). By 2019, this difference was 5.3 percentage points, a fall of 11.5 percentage points between 2007-08 and 2018-19 (Figure 4). The inequality ratio between DE:AB decreased from 2.7 to 1.7 over the same time period.

In the adult population (18+) (Figure 5), between 2007-08 and 2018-19 the difference between smoking prevalence in the AB group and in the DE, group fell by 3.6 percentage points. However, the ratio between the groups has risen from 2.5 in 2007-08 to 2.9 in 2018-19. This is because the overall smoking prevalence has fallen significantly in both groups, while the proportional gap between the two groups of adults has not narrowed.

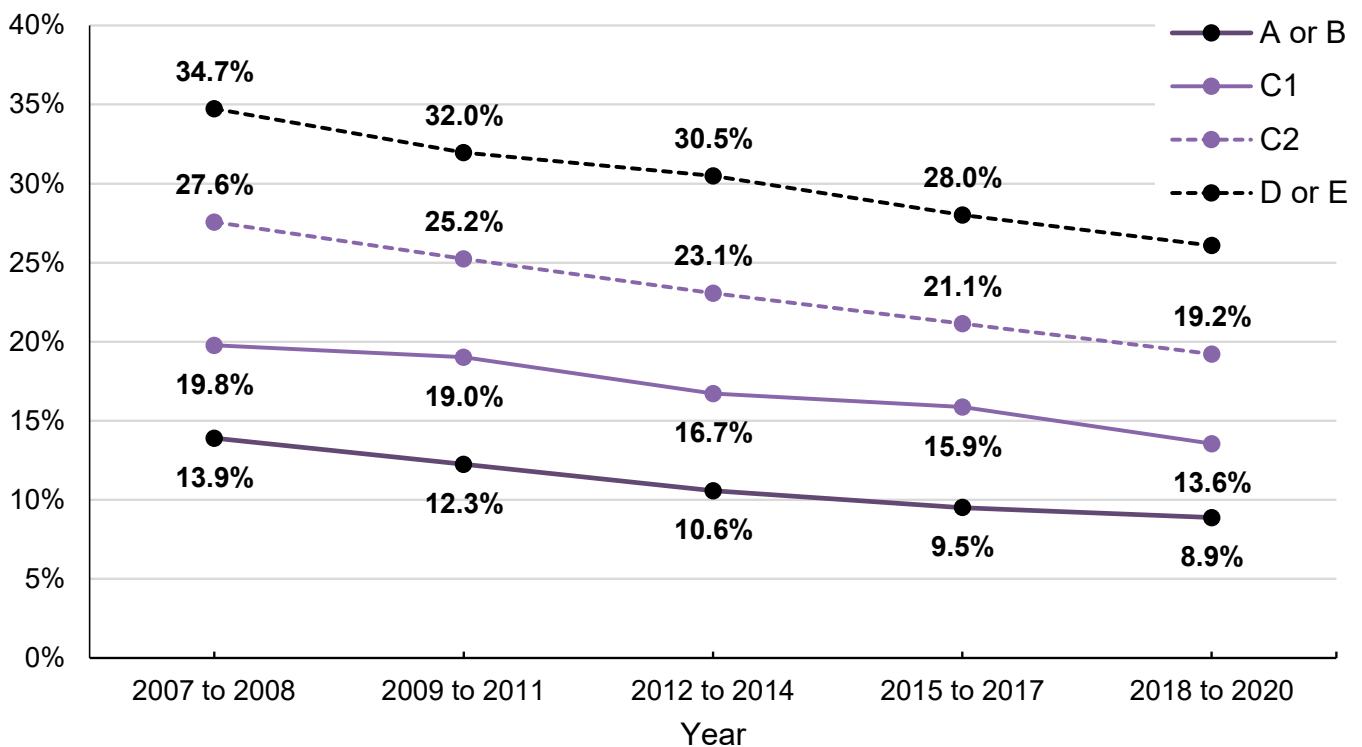
**Table 6. Change in smoking prevalence in 16-17-year old population by socio-economic group, England (UCL STS, n= 5,440)**

Year Band	Overall Number of Cases	Socio-economic group				Inequality	
		AB	C1	C2	DE	Difference DE groups - AB groups	Ratio DE:AB
2007 to 2008	899	10.1%	16.3%	21.5%	26.9%	16.8%	2.7
2009 to 2011	1505	10.0%	11.8%	19.2%	23.7%	13.7%	2.4
2012 to 2014	1401	7.9%	10.2%	15.1%	19.2%	11.3%	2.4
2015 to 2017	1098	5.5%	9.0%	17.1%	12.0%	6.5%	2.2
2018 to 2019	537	7.1%	8.2%	7.5%	12.4%	5.3%	1.7

**Figure 4. Prevalence of current smokers in 16-17-year-old population by socio-economic group, England (UCL STS, A or B n=786, C1 n=1,572, C2 n=1,223, D or E n=1,859, respondents aged 16-17)**



**Figure 5. Prevalence of current smokers in adult (18+) population by socio-economic group, England (UCL STS, A or B n=62,700, C1 n=87354, C2 n=57,658, D or E n=79,957, respondents aged 18 and over)**



# Spending and consumption

According to STS data, average unadjusted weekly spending on cigarettes by 16/17-year-old smokers followed a gradual decline from £16.90 in 2008 to their lowest amount of £9.40 in 2017 (Table 7).

However, since 2017 weekly spend for 16-17 year olds subsequently increased in 2018/19. As can be seen in 2019 weekly spend was £16.60 almost back to 2008 spend amount (Figure 6). In contrast, in the adult 18+ population, smokers' unadjusted weekly spending on cigarettes rose by 16% from £20.91 in 2008 to £24.27 in 2019. However, due to the low numbers within 16/17 year old age group caution must be applied to the interpretation and conclusions drawn. Spending by 25+ year olds has gradually increased from 2008 - 2019, and made a large, statistically significant step up from 2019 to 2020 of about £5 per week 18 - 24 year olds spend significantly less than 25+ year olds, and this has been the case since 2012 (before that, spending on cigarettes was similar). Table 8 reports the average daily number of cigarettes for 16-17 year olds by type of cigarette. From 2008-2010 there has been a gradual decline in the daily number of factory made cigarettes smoked by 16-17 year olds. Since 2011, daily use of hand rolled cigarettes has been higher than that of non-hand rolled.

**Table 7. Average weekly spending on cigarettes or tobacco, England (UCL STS, 16-17 year olds, n=608, adults 18+, n=46,248)**

Year	16 - 17 year olds		Adults 18+	
	Number of smokers (weekly spend of over £0)	Average weekly spend among smokers	Number of smokers (weekly spend of over £0)	Average weekly spend among smokers
2008	63	£16.90	4325	£20.91
2009	37	£16.49	2317	£20.40
2010	48	£20.48	2404	£21.07
2011	103	£17.52	4920	£22.02
2012	78	£15.04	4705	£21.59
2013	75	£14.67	4294	£21.89
2014	45	£15.44	3737	£23.13
2015	48	£13.17	3737	£22.37
2016	39	£12.46	3512	£23.15
2017	25	£9.40	3235	£24.09
2018	27	£12.19	3379	£24.73
2019	20	£16.60	3062	£24.27
2020	*	*	2621	£29.39

\*2020 figures are not reported for 16/17 year olds as insufficient samples of 16/17 year olds were gathered due to the impact of Covid-19 on the survey design. The question about weekly spend was introduced in October 2007 so records are reported from 2008.

**Figure 6. Average weekly spend on tobacco products among smokers (n=1,323) and adult (n=79,646) smokers, England (UCL STS, Age 16–17 n=637, Age 18–20 n=3,056, Age 21–24 n=4,960, Age 25 and over n=39,462)**

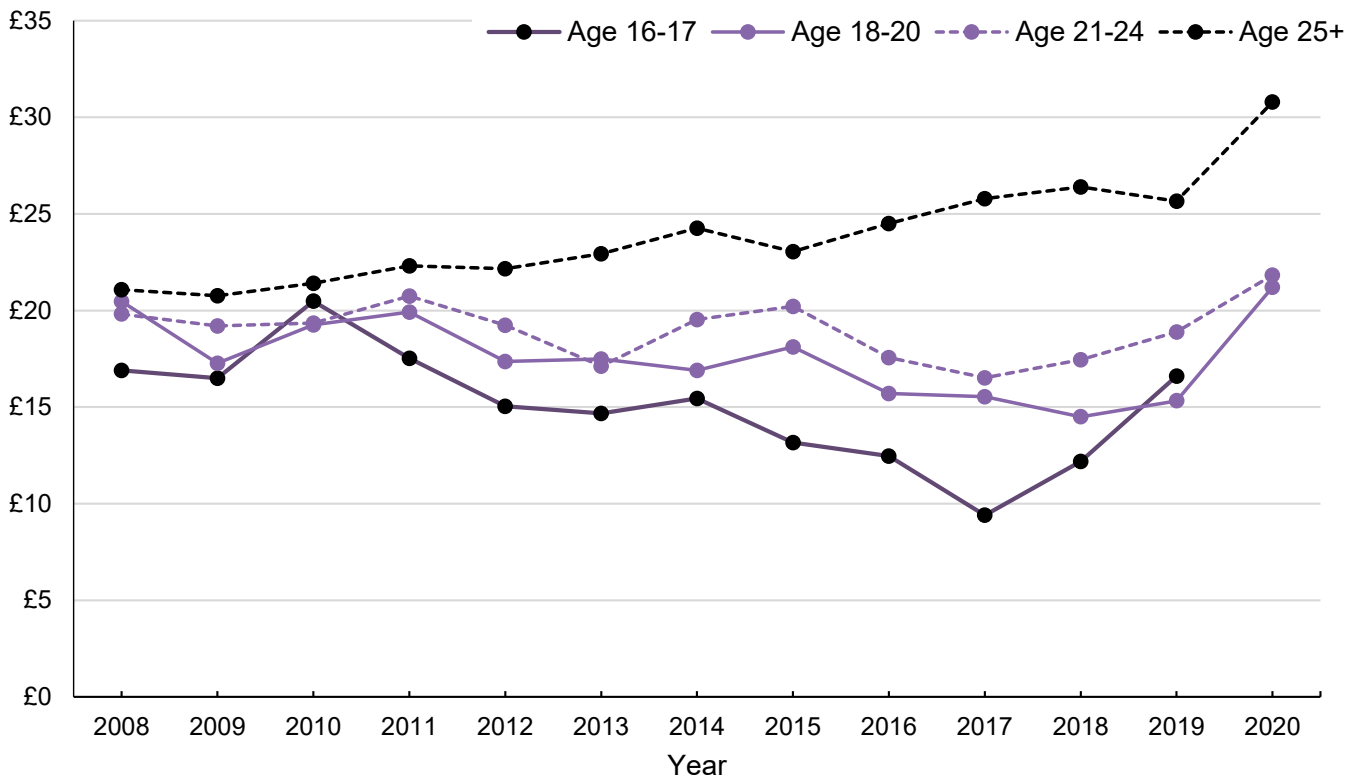


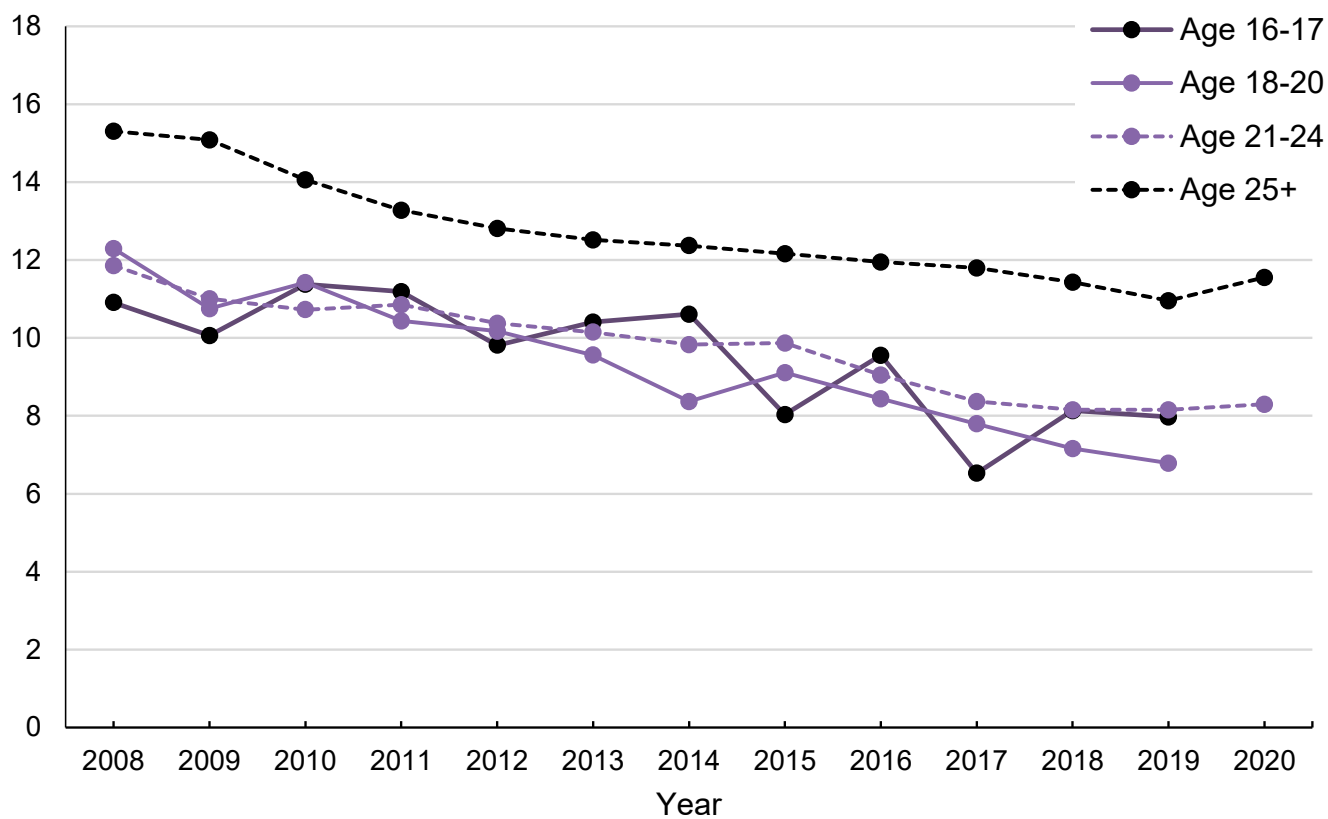
Table 8 describes change in the number of cigarettes smoked per day between 2008 and 2019-20. Over this period, average daily consumption in the 16/17-year-old age group fell from 10.9 to 8.0 cigarettes (including hand-rolled cigarettes). During this period, the UK price of a pack of 20 king size cigarettes increased from £5.31 to £13.30 between 2008 and 2020, a rise of 148%.<sup>2</sup> This would suggest that increases may be largely attributable to increased cost per cigarette. In this age group, the proportion of hand-rolled cigarettes smoked nearly doubled over this period, rising from 32.7% in 2007 to 59.5% in 2019 (Table 8). In the adult population (18+) increases were noted in both the average weekly spending on cigarettes or tobacco and the average number of cigarettes smoked per day (Figure 7). This pattern of increasing use of hand rolled cigarettes and reduction in factory made (FM) cigarettes has previously been shown in research studies.<sup>3,4</sup> Previous research within the area suggests that cost is the main reason smokers choose hand rolled cigarettes over FM cigarettes.<sup>3,4</sup> Hand rolled cigarettes are significantly cheaper than FM cigarettes, providing a more affordable option to 16/17 year olds. Research conducted by UCL into trends and use of roll your own cigarettes in England between 2008-2017 suggested that smokers who use hand rolled cigarettes are typically younger, male and within lower socio-economic groups.<sup>4</sup> For these individuals, this can result in higher consumption of hand rolled cigarettes, stronger dependency and in turn a reduced likelihood of quitting smoking. Cumulatively this is concerning for the 16/17 year old age group both in terms of smoking initiation and cessation.

**Table 8. Average cigarettes smoked by age group, England (UCL STS, 16-17 year olds, n=741, adults 18+, n=59,282)**

Year	16 - 17 year olds			Adults 18+		
	Number of smokers (at least 1 cigarette per month)	Average number of cigarettes smoked per day	% of which are hand-rolled	Number of smokers (at least 1 cigarette per month)	Average number of cigarettes smoked per day	% of which are hand-rolled
2008	74	10.9	32.7%	6523	14.9	26.6%
2009	83	10.1	38.2%	6928	14.6	28.2%
2010	95	11.4	54.6%	6529	13.6	34.3%
2011	105	11.2	47.6%	5009	12.9	39.8%
2012	84	9.8	56.0%	4878	12.4	41.8%
2013	78	10.4	66.3%	4555	12.0	45.4%
2014	49	10.6	57.8%	3983	11.8	43.8%
2015	54	8.0	68.3%	3954	11.7	45.8%
2016	43	9.6	57.3%	3710	11.4	44.8%
2017	30	6.5	66.5%	3478	11.2	46.4%
2018	27	8.1	51.9%	3570	10.8	48.9%
2019	19	8.0	59.5%	3216	10.4	47.1%
2020	*	*	*	2949	11.0	44.7%
pp change in number smoked 2008 - 2019		-2.9			-4.5	
% change in number smoked 2008 - 2019		-27.0%			-30.4%	
				change in number smoked 2008 - 2020	-3.9	
				% change in number smoked 2008 - 2020	-26.1%	

\*2020 figures are not reported for 16/17 year olds as insufficient samples of 16/17 year olds were gathered due to the impact of Covid-19 on the survey design.

Figure 7: Average daily cigarettes smoked among smokers, including hand-rolled (UCL STS, Age 16-17 n=637, Age 18-20 n=3,056, Age 21-24 n=4,960, Age 25 and over n=39,462)

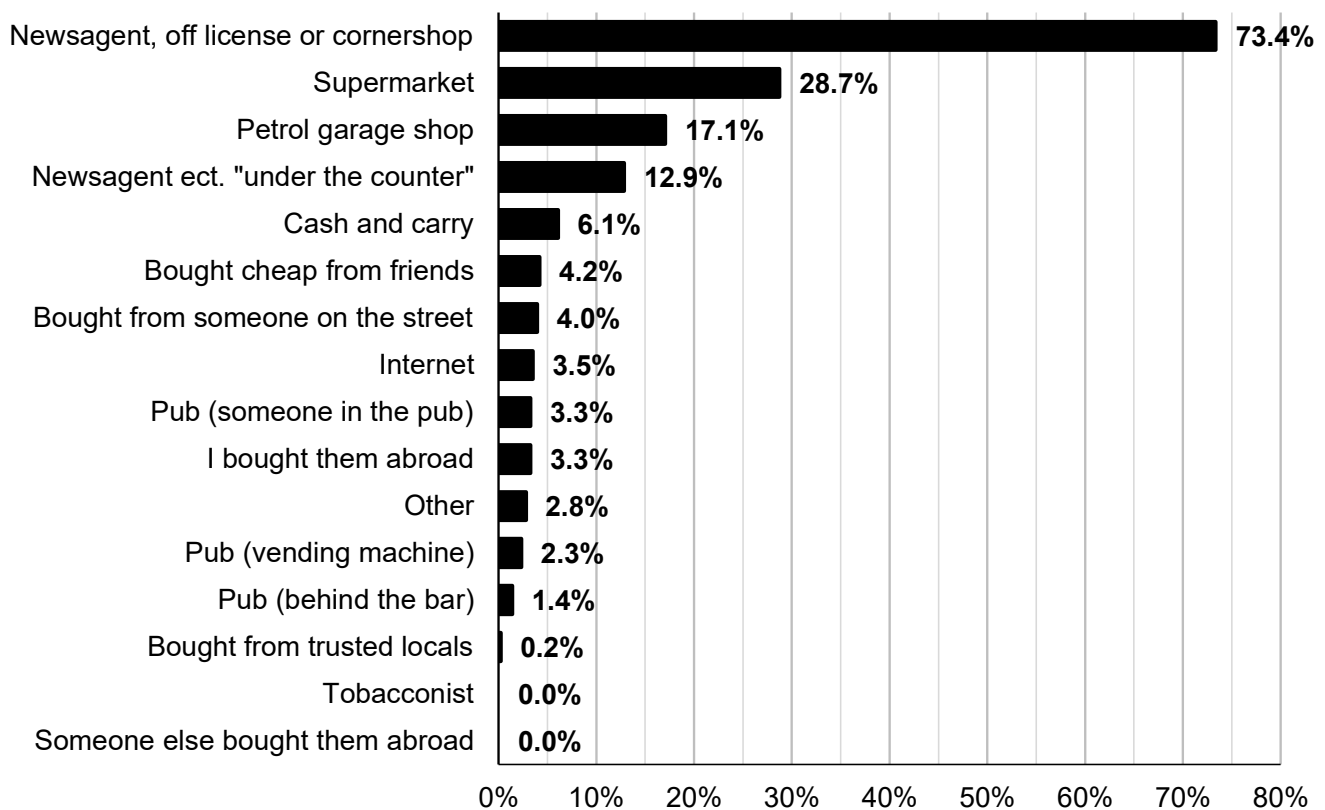




# Where cigarettes are obtained

Figure 8 describes where 16/17-year-old smokers and other age groups buy cigarettes, drawing on data from all STS waves from 2007 to 2020. Despite being illegal, 73.4% of 16/17-year-old smokers reported buying cigarettes from newsagents or corner shops as the most common source. Other less common sources mentioned by 16/17-year-olds or less included cash and carries (6.1%), behind the bar/ vending machine/ in pubs (7%), bringing cigarettes back from abroad (3.3%), and the internet (3.5%). As the STS survey was not designed specifically for children and young people, these results do not fully capture free or informal sources of cigarettes that may be important to 16/17-year-olds.

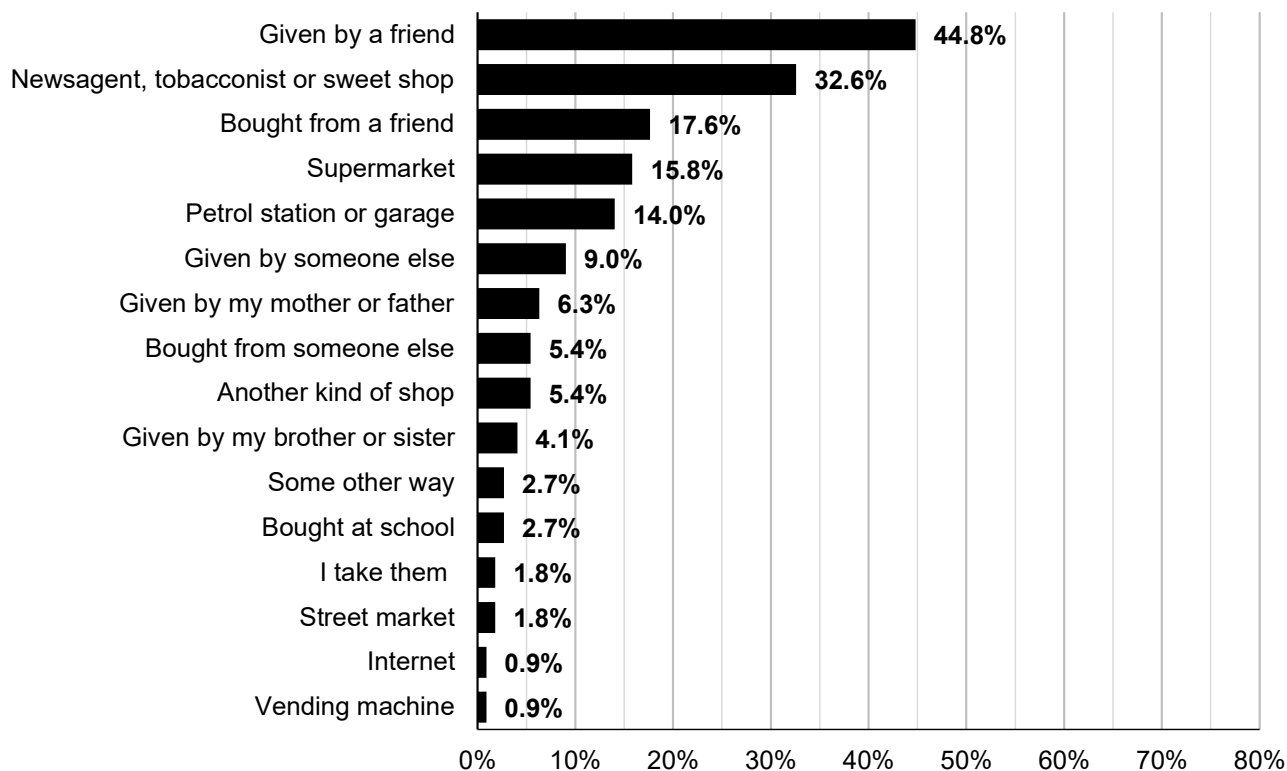
**Figure 8: Source of purchased cigarettes among 16–17 year olds, (UCL STS surveys, 2007 to 2019, n=428)**



The 2018-20 ASH Smokefree Youth Survey included these in a list of possible sources of cigarettes (Figure 9). In total 221 16/17-year-old smokers answered the question but of these:

- 99 (45%) said friends gave cigarettes to them
- 72 (33%) said they bought cigarettes from a newsagent, tobacconist or sweet shop
- 39 (18%) said they bought cigarettes from friends or relatives
- 35 (16%) said they bought cigarettes from a supermarket
- 31 (14%) said they bought cigarettes from a petrol station or garage shop
- 20 (14%) said they were given/bought by someone else
- 14 (9%) said their mother or father gave cigarettes to them
- 9 (4%) said their brother or sister gave cigarettes to them
- 6 (3%) said they bought them at school
- 6 (3%) said got them some other way
- 4 (2%) said got them from street market
- 4 (2%) said they took them
- 2 (1%) said vending machine
- 2 (1%) bought them from the internet

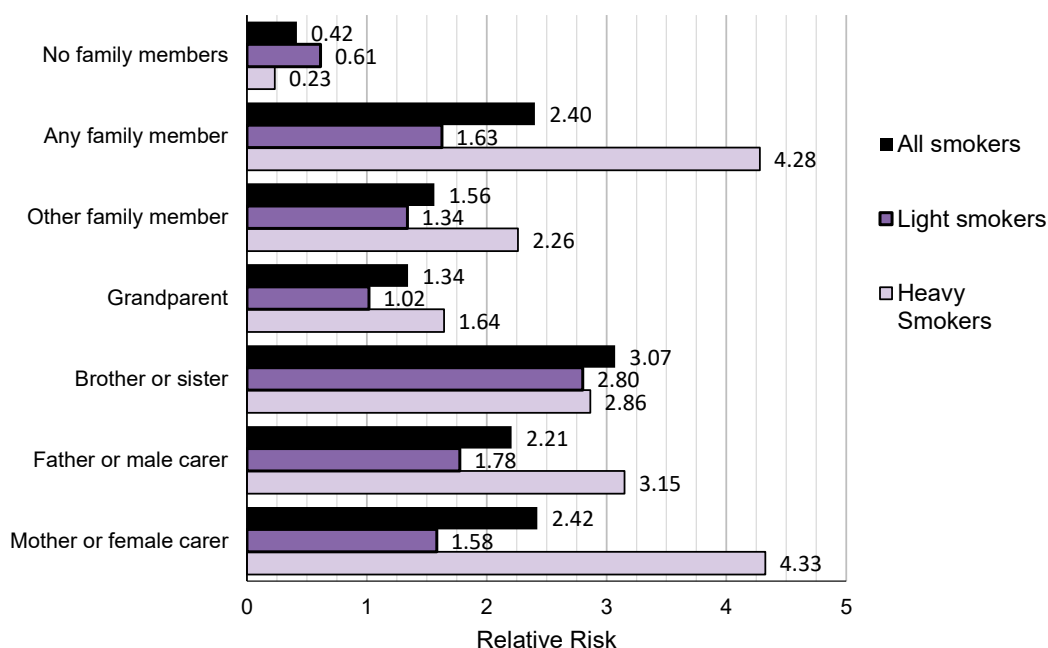
**Figure 8: Source of purchased cigarettes among 16–17 year olds (ASH Smokefree Youth surveys, 2018 to 2020, n=22)**



# Smoking by family members

In the five ASH Smokefree Youth surveys from 2016 to 2020 respondents were asked which of their family members smoked. Overall, across all five years, 42.3% of 16/17-year-olds said that there was someone in their family who smoked (Table 9). Those who reported a smoker in the family were 2.4 times more likely to smoke than those with no smokers in the family (Figure 10). The strongest indicator of a high risk for 16/17 year old being a heavy smoker is if a mother or female carer is a smoker, with a more than four-fold increase in risk (4.33). The risk of being a heavy smoker is over four times higher if any member of their family is a smoker (4.28). The risk of 16/17 year old being any kind of current smoker is about three times higher if a sibling smokes (3.07). If no family members smoke, the risk of a 16/17 year old being any kind of current smoker is more than halved (0.42). Almost two thirds (63.7%) of 16/17-year-old smokers had a family member who currently smoked compared to 36.3% of non-smokers in this age group (Table 9). If no family members smoke, the risk of a 16/17 year old being any kind of current smoker is more than halved (0.42). Collectively this data reiterates the important role of the family environment within the uptake and adoption of smoking behaviours of 16/17 year olds, whereby if a specified family member is a smoker this can significantly increase the likelihood of 16/17 year old becoming a smoker. From a policy perspective this provides strong rational for interventions and actions which target the family environment.

**Figure 10: Relative risk of a 16/17-year-old being a smoker when a family member smokes (ASH Smokefree Youth surveys, 2016 to 2020, n=2,852)**



**Table 9. Smoking in the families of 16-17 year old smokers and non-smokers. Percentages are of columns, i.e., of non-smokers and smokers (ASH Smokefree Youth surveys 2016-20, n=2,852)**

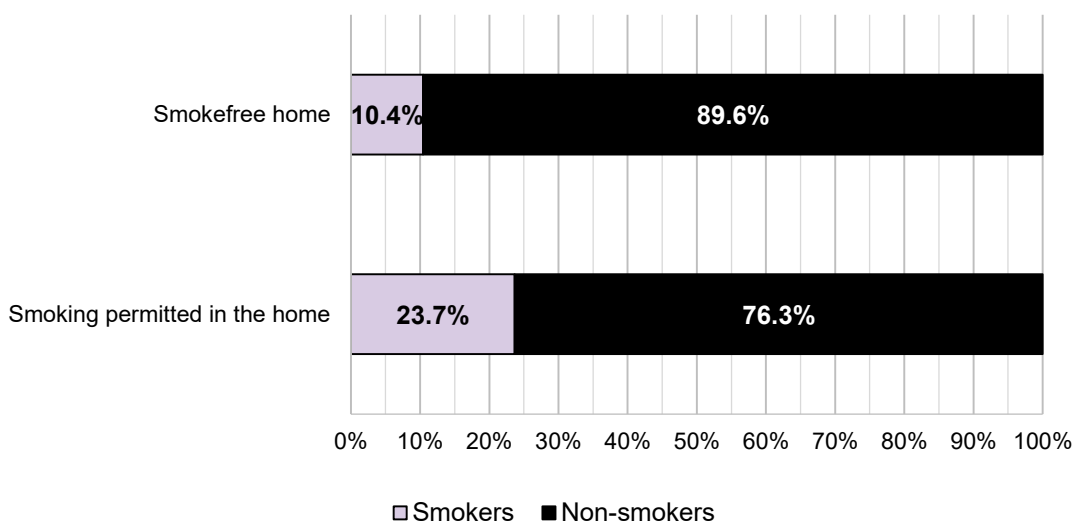
	16-17 year olds		
	Non-smokers	Smokers	All
Smoker in the family	994 (39.4%)	211 (63.7%)	1205 (42.3%)
No smoker in the family	1527 (60.6%)	120 (36.3%)	1647 (57.7%)
Total	2521 (100%)	331 (100%)	2852 (100%)

# Smoking in homes

Every year from 2013 to 2020 the ASH Smokefree Youth survey asked respondents ‘Are people allowed to smoke inside your home/house?’ Over these eight years the proportion of 16/17-year-old respondents reporting that their homes were smokefree rose from 85.6% to 89%, with an average of 90%. Across all years, where smoking was permitted in homes, 16/17-year-old respondents were 2.3 times more likely to be smokers than if they lived in a smokefree home (Figure 11). Nonetheless, because the great majority of homes were reported to be smokefree, far more 16/17-year-old smokers (79.9%) lived in smokefree homes than in homes where smoking was permitted (Table 10).

Smokefree homes were nearly universal among families where no family members smoked: 91.3% of 16/17-year-olds in such families said people were not allowed to smoke in their homes (ASH surveys 2016-2020). However, they were also the majority choice in families where people did smoke: 79.9% of 16/17-year-olds in these families said their homes were smokefree (Figure 11). This choice is strongly associated with lower smoking prevalence in 16/17-year-olds: looking only at those who reported having a family member who smoked, those who lived in homes where people were allowed to smoke were more than twice as likely to smoke as those that lived in smokefree homes (risk ratio = 2.3).

**Figure 11: Prevalence of smoking among 16/17-year-olds by smoking rules within the home (ASH Smokefree Youth surveys, 2013 to 2020, from smokefree homes n=3,877, from homes where smoking is permitted n=436)**



**Table 10. Smoking rules in the houses of 16/17 year old smokers and non-smokers. Percentages are of columns, i.e., of non-smokers and smokers, (ASH Smokefree Youth surveys 2016-20, n=3,841)**

	16-17 year olds		
	Non-smokers	Smokers	All
Smoking permitted in the home	326 (8.7%)	101 (20.1%)	427 (10%)
Smokefree home	3440 (91.3%)	401 (79.9%)	3841 (90.0%)
Total	3766 (100%)	502 (100%)	4268 (100%)

# Smoking in cars

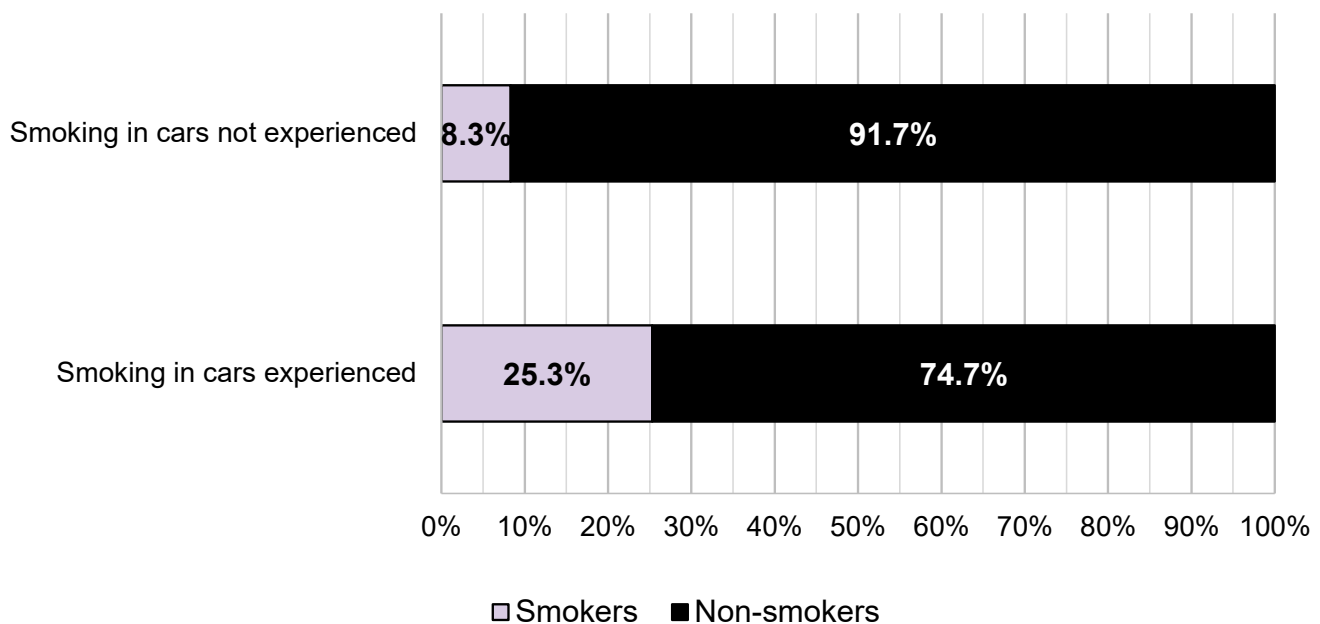
Every year from 2013 to 2020 the ASH Smokefree Youth survey asked respondents 'How often, if at all, do you travel in a car in which someone is smoking? The proportion of 16/17-year-old respondents reporting that they never experienced someone smoking in cars rose from 72.3% to 80.2% between 2013 and 2020 (Figure 12).

Across all years, where 16/17-year-olds reported that they experienced smoking in cars, they were 3 times more likely to be smokers than if they never experienced smoking in cars (Figure 13). Of all 16/17-year-old smokers (43.5%) had experienced smoking in cars compared to only 17.1% of non-smokers in this age group (Table 11).

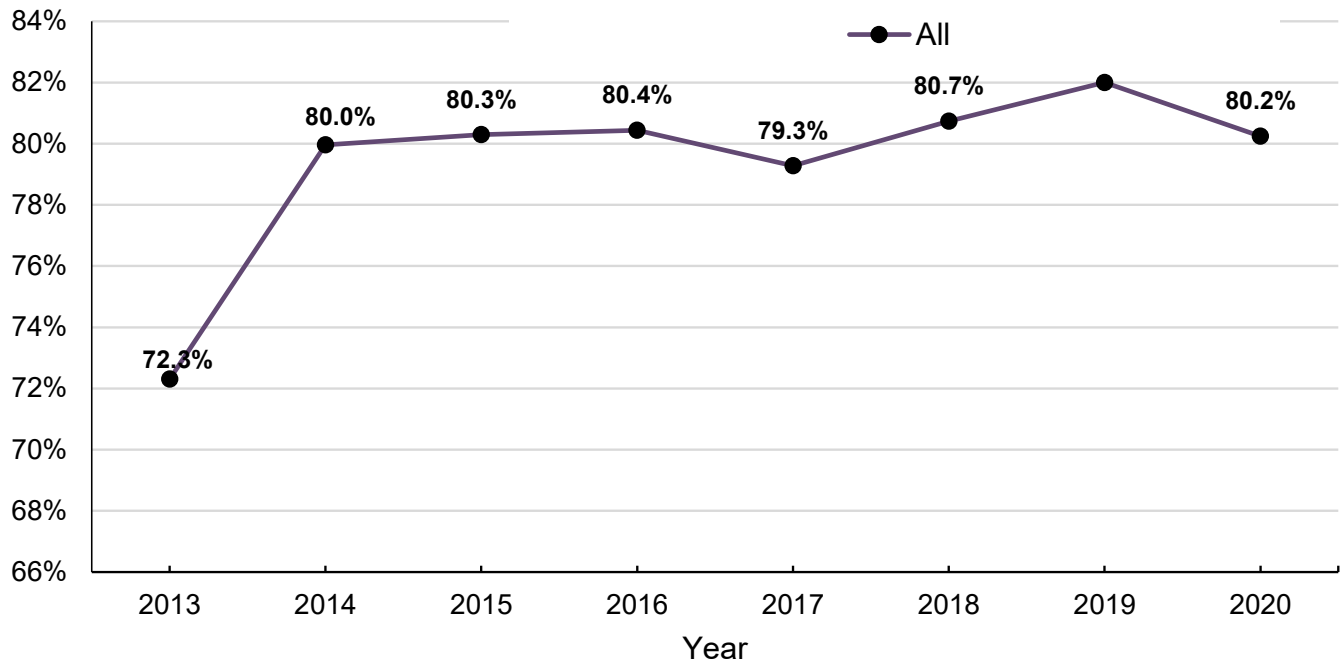
**Table 11. Experience of people smoking in cars by 16-17 year old smokers and non-smokers. Percentages are of columns, i.e., of non-smokers and smokers, (ASH Smokefree Youth surveys 2016-20, n=4,417)**

	16-17 year olds		
	Non-smokers	Smokers	All
Smoking in cars experienced	667 (17.1%)	226 (43.5%)	893 (20.2%)
Smoking in cars not experienced	3231 (82.9%)	293 (56.5%)	3524 (79.8%)
Total	3898 (100%)	519 (100%)	4417 (100%)

**Figure 12: 16-17-year-olds reporting they never experienced smoking in cars (ASH Smokefree Youth surveys 2013 to 2020, n=4,499)**



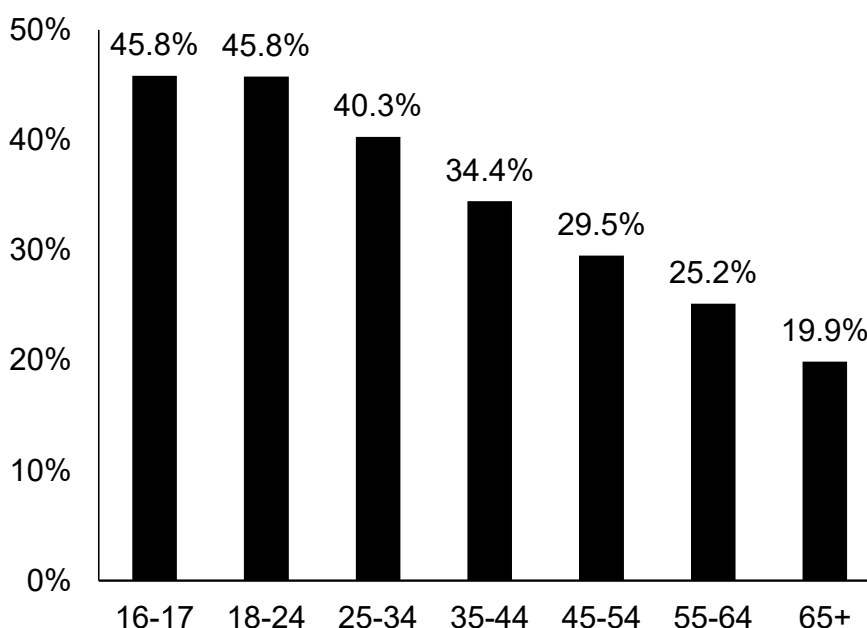
**Figure 13: Prevalence of 16–17 year olds reporting never having experienced smoking in cars (ASH Smokefree Youth surveys 2013 to 2020, n=4,499)**



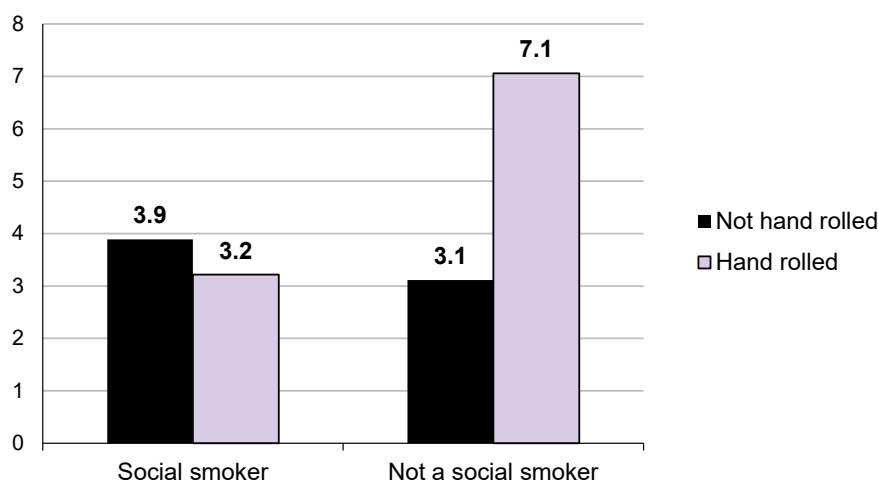
# Smoking in social situations

From February 2014, the STS has asked respondents 'Do you think of yourself as a social smoker?' Among 16/17-year-olds across all five years from 2014-20, 48.9% said they did think of themselves in this way. Nearly half (49%) of 16/17-year-olds said 'most of it', 'almost most of it' or 'all of it'; 30% said 'some of it' and 21% said 'not very much of it' or 'none of it'. Their responses were similar to those of the 18-24 age group (Figure 14).

**Figure 14: Proportion of smokers who thought of themselves as a social smoker, England. (UCL STS, 2014 to 2020, n=26,170)**



**Figure 15: Average daily cigarettes smoked by 16/17 year old smokers by cigarette type and whether the young person considers themselves a 'social smoker' (UCL STS, Social smokers = 100, Not a social smoker n=117)**



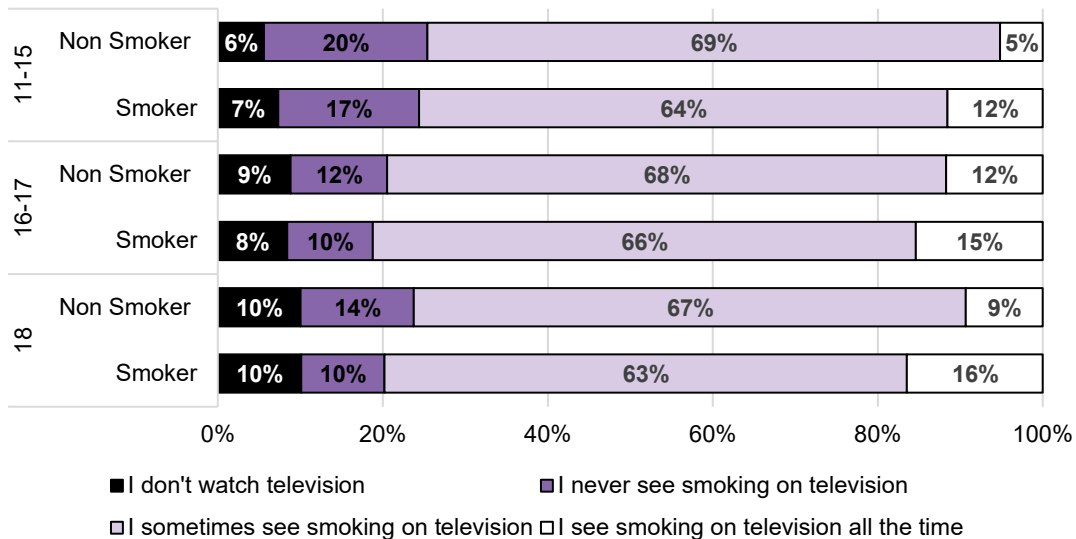
As illustrated in figure 15, 16/17 year olds who don't consider themselves 'social smokers' are likely to consume significantly more hand-rolled cigarettes than social smokers. 16/17 year old social smokers smoke similar numbers of hand rolled and factory made cigarettes, while those who don't consider themselves social smokers consume double the number of hand rolled cigarettes as not hand rolled ones.

# Exposure to media images of smoking

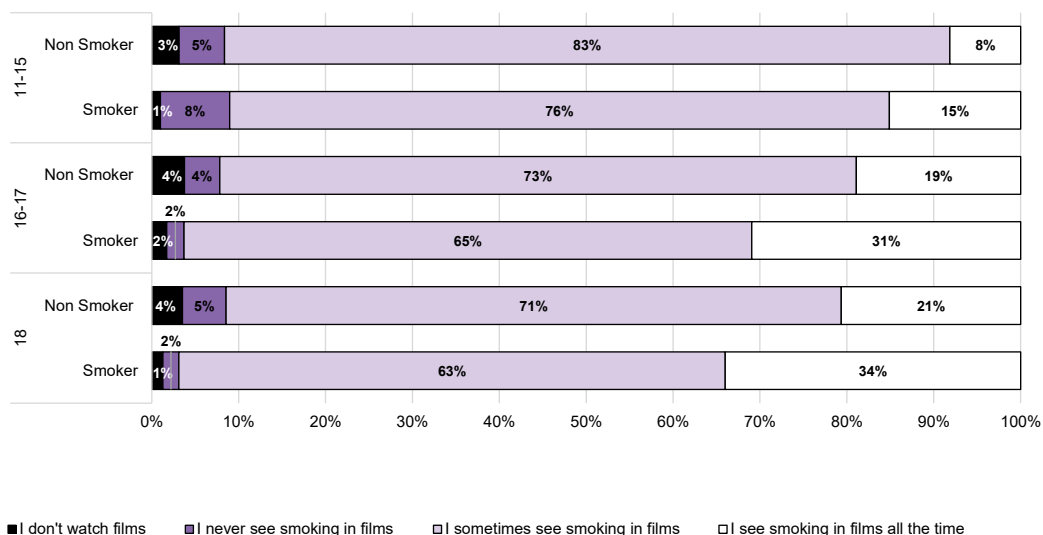
The 2018-19 ASH Smokefree Youth Survey asked respondents how often they saw tobacco smoking on TV and in film, music videos, computer games and online. Figure 16- figure 20 show the results for each media. The findings are presented for three age groups: 11-15-year-olds, 16/17-year-olds, and 18-year-olds by smoking status.

Although some of the subgroup numbers are small, the overall pattern across ages and media is nonetheless striking, especially the differences in how many smokers and non-smokers saw smoking in each media 'all the time' (in grey). For all media and in all age groups, more smokers than non-smokers reported seeing smoking 'all the time'. Taking the findings for seeing smoking 'all the time' as the key indicator, it is generally observed that although exposure begins at age 11-15, it is often strongest at age 16-17. In combining responses "sometimes" and "all the time" (orange and grey) this illustrates the level of exposure to smoking in each media across all age groups.

**Figure 16. How often young people see tobacco smoking in films by age group and smoking status, Great Britain. ((ASH Smokefree Youth Survey 2018-19, (11-15 n=2,573, 16-17 n=1,057, 18=754))**

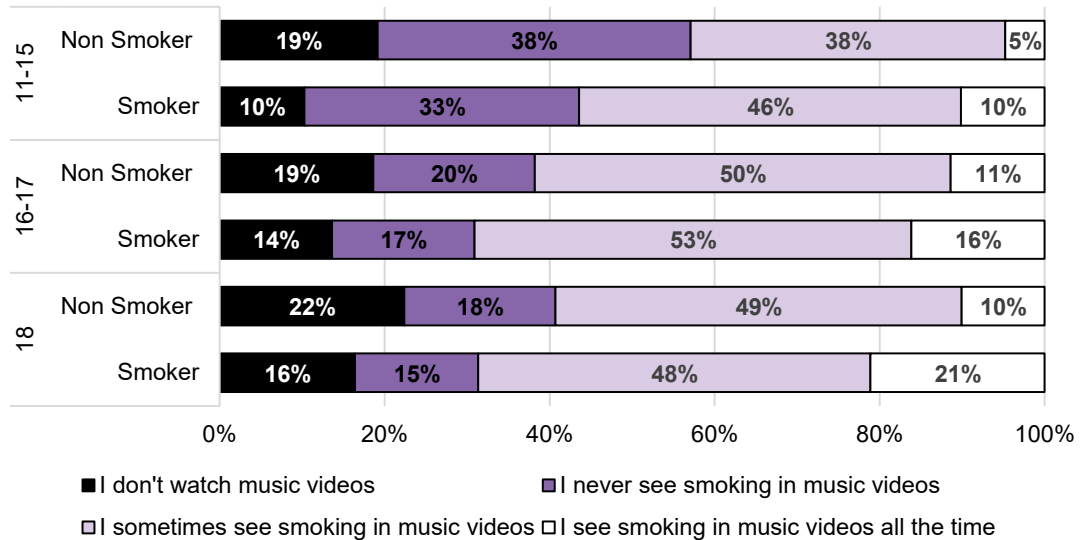


**Figure 17. How often young people see tobacco smoking in films by age group and smoking status, Great Britain ((ASH Smokefree Youth Survey 2018-19, (11-15 n=2,492, 16-17 n=1,526, 18=784))**

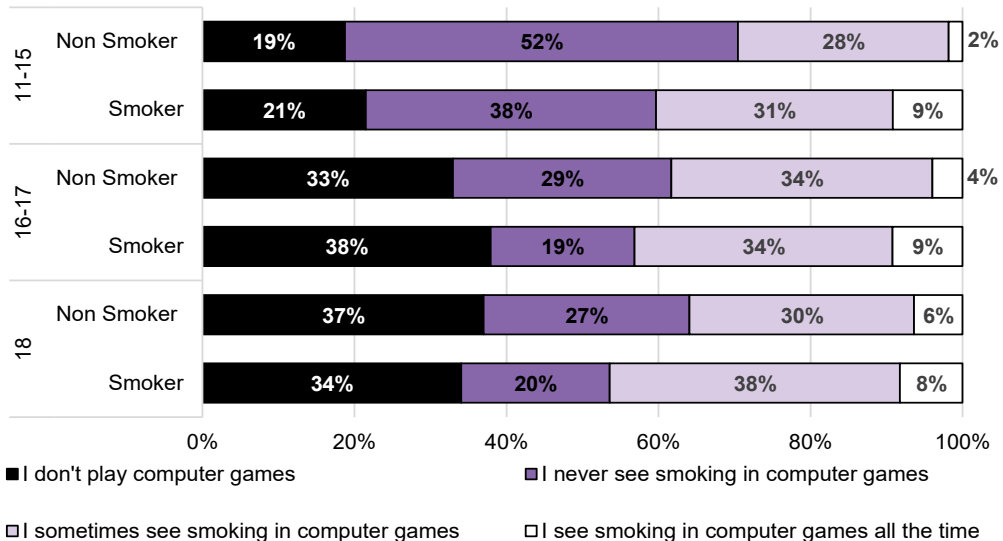




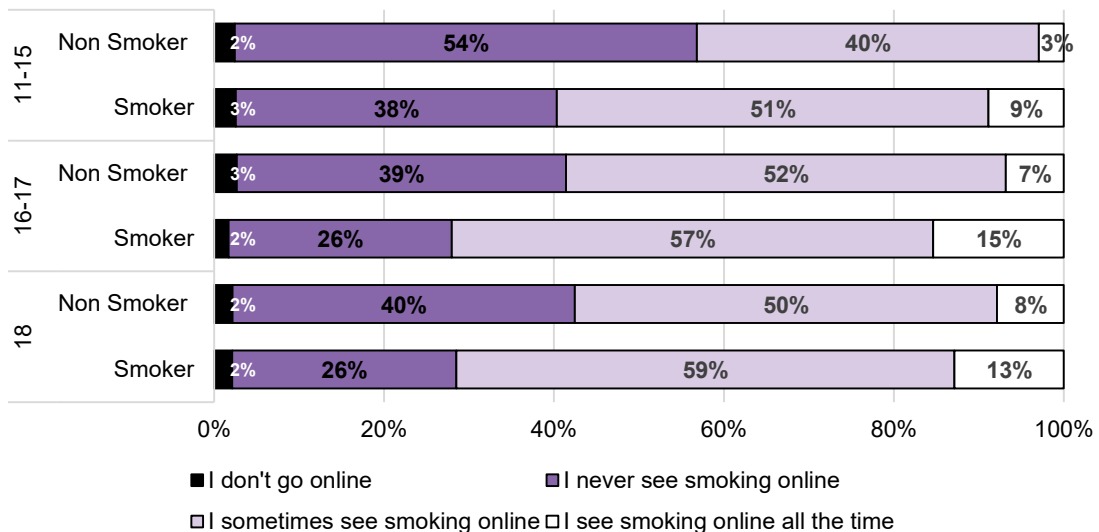
**Figure 18. How often young people see tobacco smoking in films by age group and smoking status, Great Britain. ((ASH Smokefree Youth Survey 2018-19, (11-15 n=2,521, 16-17 n=1,051, 18=743))**



**Figure 19. How often young people see tobacco smoking in films by age group and smoking status, Great Britain ((ASH Smokefree Youth Survey 2018-19, (11-15 n=2,594, 16-17 n=1,060, 18=740))**



**Figure 20. How often young people see tobacco smoking in films by age group and smoking status, Great Britain ((ASH Smokefree Youth Survey 2018-19, (11-15 n=1,114, 16-17 n=431, 18=400))**



# E-cigarette use

The ASH Smokefree Youth surveys have tracked e-cigarette use among young people since 2013. Regular use of e-cigarettes by 16/17-year-olds remains uncommon. In the 2020 survey, less than a fifth (17.1%) of respondents in this age group had tried an e-cigarette but only 2.1% used them every day (Table 12). Overall, between 2013-2020 survey, 14% of 16-17 year olds had tried an e-cigarette but only 1.9% used them either daily or weekly (Table 13). The proportion of 16/17-year-olds who have tried an e-cigarette has grown significantly since 2013 but the rise in regular use is very small by comparison (Figure 21).

From the table we can see that 66.9% of smokers had tried e-cigarettes at some point, but few are regular e-cigarette users (only 5.0% of smokers used them every day). Those who use e-cigarettes less than once a week or have only tried them 'once or twice' are more likely to be smokers.

**Table 12. E-cigarette use by 16/17-year-olds (ASH Smokefree Youth surveys 2020, n=730)**

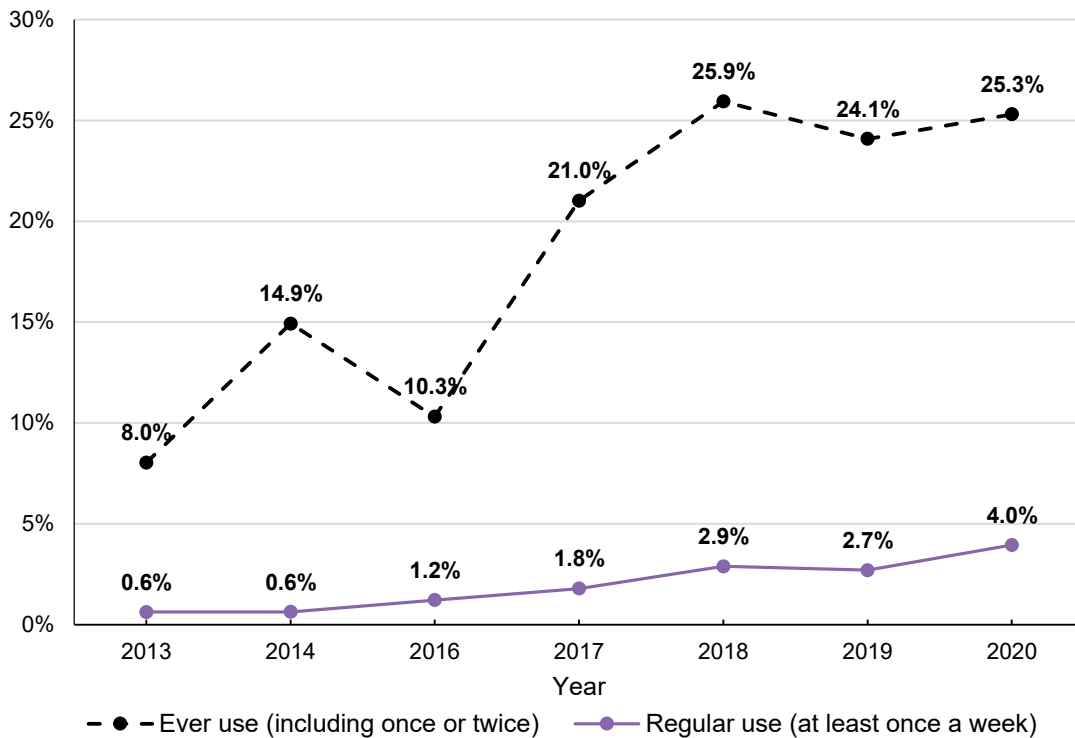
E-cigarette use	16-17 year olds		
	Non-smokers	Current smokers	All
Never used	454 (71.7%)	13 (13.4%)	467 (64.0%)
Only tried once or twice	91 (14.4%)	34 (35.1%)	125 (17.1%)
Use sometimes but no more than once a month	13 (2.1%)	16 (16.5%)	29 (4.0%)
Use more than once a month, but less than once a week	1 (0.2%)	3 (3.1%)	4 (0.5%)
Use more than once a week but not every day	7 (1.1%)	8 (8.2%)	15 (2.1%)
Use every day	6(0.9%)	8 (8.2%)	14 (1.9%)
Used in the past but no longer	20 (3.2%)	11 (11.3%)	31 (4.2%)
Not heard of e-cigarettes	41 (6.5%)	4 (4.1%)	45 (6.2%)
Totals	633 (100%)	97 (100%)	730 (100%)

**Table 13. E-cigarette use by 16/17-year-olds (ASH Smokefree Youth surveys 2013-20, n=4,476)**

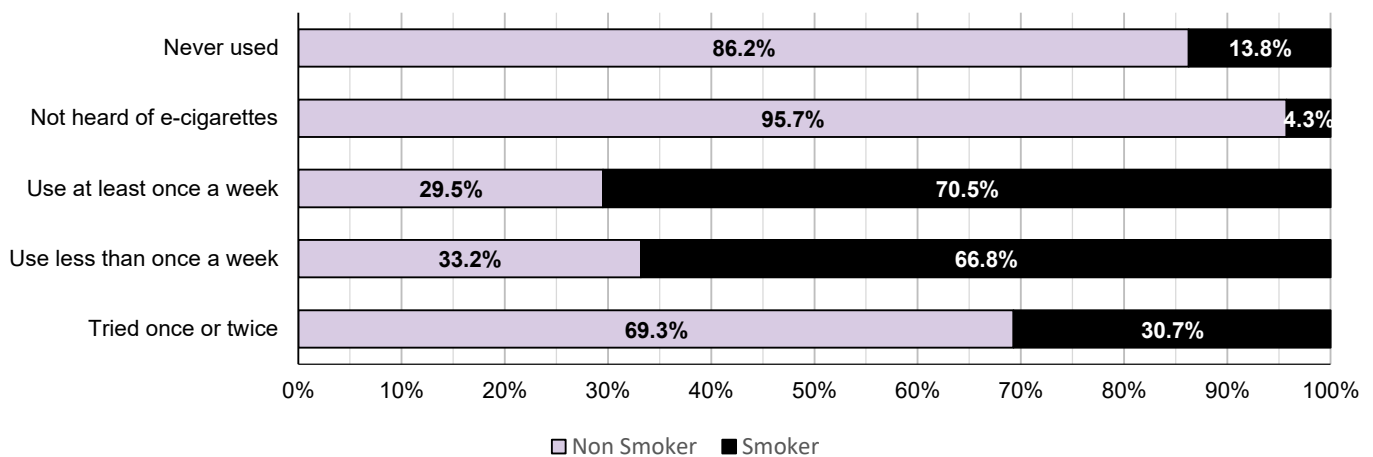
E-cigarette use	16-17 year olds		
	Non-smokers	Current smokers	All
Never used	2868 (72.4%)	128 (24.7%)	2996 (66.9%)
Only tried once or twice	439 (11.1%)	186 (35.8%)	265 (14.0%)
Use sometimes but no more than once a month	58 (1.5%)	49 (9.4%)	107 (2.4%)
Use more than once a month, but less than once a week	18 (0.5%)	28 (5.4%)	46 (1.0%)
Use more than once a week but not every day	21 (0.5%)	24 (4.6%)	45 (1.0%)
Use every day	15 (0.4%)	26 (5.0%)	41 (0.9%)
Used in the past but no longer	46 (1.2%)	29 (5.6%)	75 (1.7%)
Not heard of e-cigarettes	492 (12.4%)	49 (9.4%)	541 (12.1%)
Totals	3,957 (100%)	519 (100%)	4,476 (100%)

Figure 22 illustrates the association between e-cigarette use and smoking, aggregating results from all of the ASH Smokefree Youth surveys from 2013 to 2020. As can be seen in Table 13 even in aggregate, the numbers of cases of 16/17-year-olds who use e-cigarettes weekly (n=45) or less regularly (n=46) are far smaller than the number who have tried them 'once or twice' (n=265).

**Figure 21. Ever use and regular use of e-cigarettes by 16/17-year-olds. (ASH Smokefree Youth surveys 2013 to 2020, n=4,476)**



**Figure 22. Use of e-cigarettes by smoking status. (ASH Smokefree Youth surveys 2013 to 2020, n=4,476)**



# Appendices

## Graphs with error bars

Figure 1. Smoking prevalence by age group, England (UCL STS 2007-2020, n=293,789)

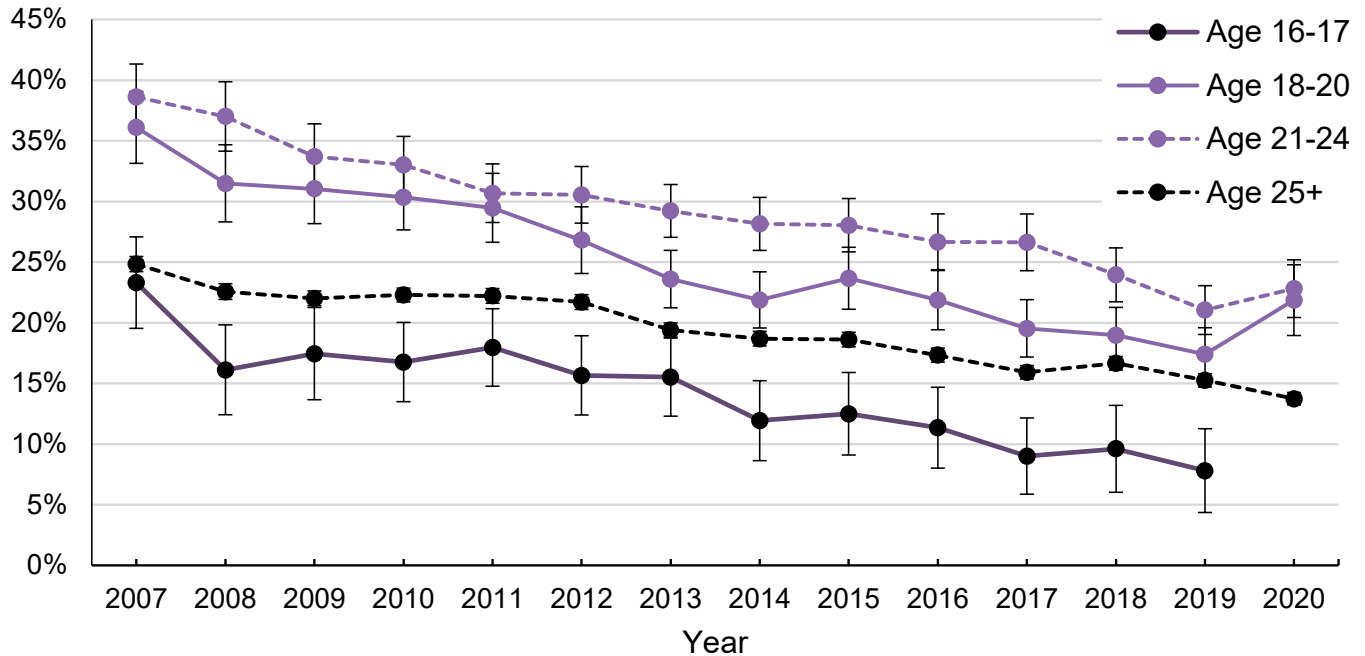


Figure 1 with error bars commentary: Except in 2007, there is a clear separation in every year between 16-17 year olds (the lowest rate of current smoking), 25+ year olds (the middle rate of current smoking) and 18-24 year olds (the highest rate of current smoking). None of the groups have an uptick in current smoking in 2020 above the 95% confidence level. In fact, current smoking among 25+ has continued its slow fall since 2007. From 2019 to 2020 current smoking among 25+ fell by a small but significant amount (at the 95% confidence level).

Figure 2. Prevalence of 'ever smoking' prevalence by age group, England (UCL STS, n=293,789)

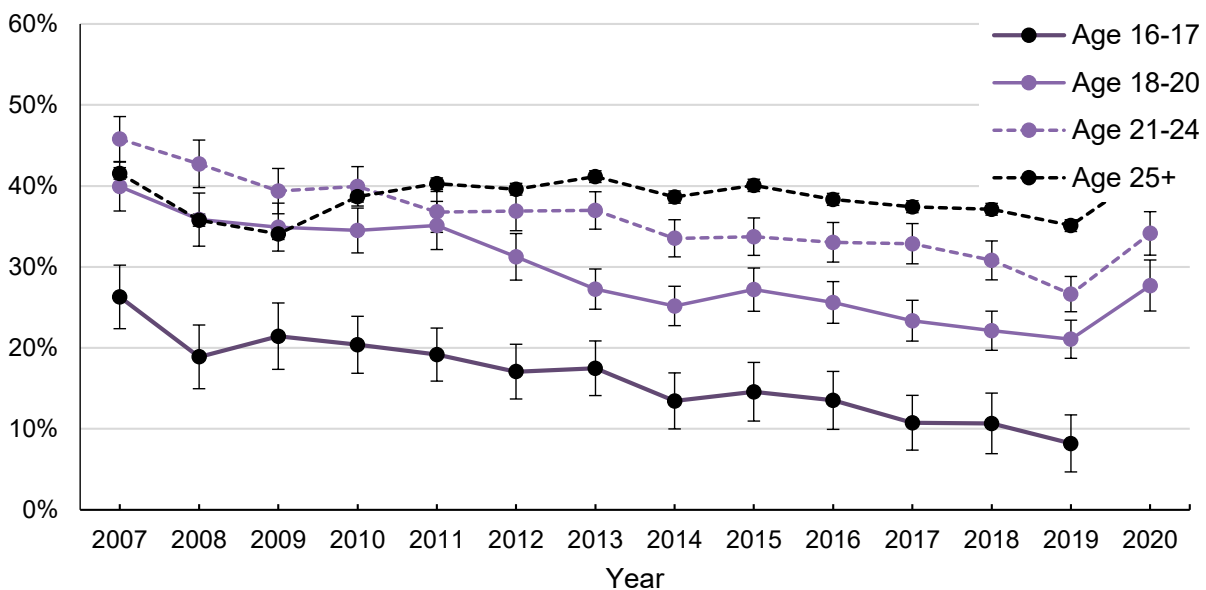


Figure 2 with error bars commentary: the 16-17 year olds were well below all the other age groups in ever-smoking across all years. Since 2011, people aged 25+ have had the highest rate of ever-smoking, followed by 21-24 then 18-20. In each age band 18 and above, there was an uptick in ever-smoking in 2020 that is statistically significant (at the 95% confidence level) compared with 2019. It's curious that ever-smoking has more clearly increased than current smoking. Some possibilities are: increased reporting of low levels of past smoking, under-reporting current smoking in 2020 or more smoking behaviour of briefly taking it up and then quitting in 2020.

**Figure 3. Smokers making a quit attempt in the past 12 months by age group (UCL STS 2007-2018 current smokers, 2007-2020, n=59,804)**

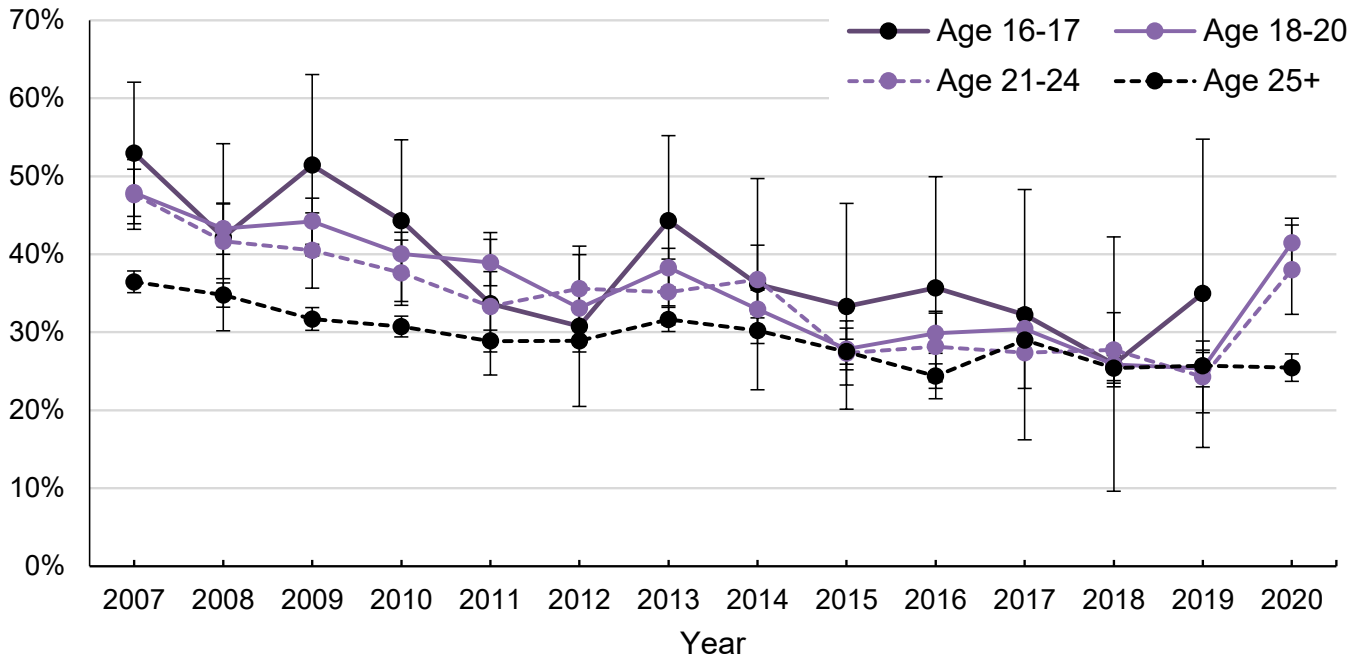


Figure 3 with error bars commentary: There's really nothing we can say with confidence about the quitting behaviour of 16-17 year olds, as there are too few smokers meaning that the standard error is very high. For 18-24 year olds, there was a significant uptick in quit attempts in 2020 compared with 2019 (reached significance at the 95% confidence level). There appears to be no such increase among the 25+ year olds. The pattern of quitting attempts in 2020 is more like those in 2007-2010, than more recent years as younger ages are significantly more likely to make quit attempts than those aged 25+.

**Figure 4. Smoking prevalence in 16-17 year olds by socio-economic group (UCL STS, A, B or C1 n=2,358, C2, D or E n=3,082, respondents aged 16-17)**

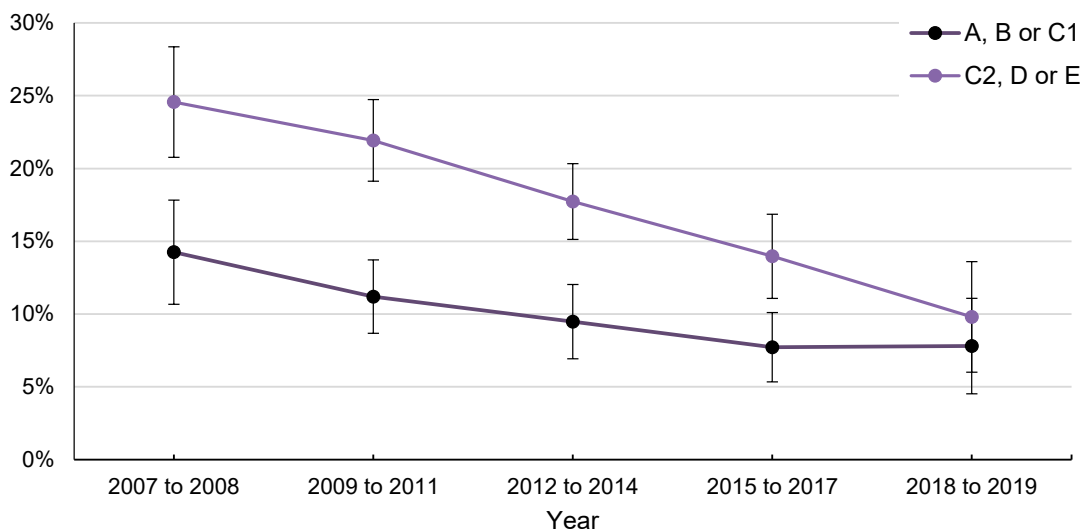


Figure 4 with only 2 SES groups: much clearer. The gap appears to have narrowed from 2007-2008 to 2018-2019.

**Figure 5. Prevalence of current smokers in adult (18+) population by socio-economic group, England (UCL STS, A or B n=62,700, C1 n=87354, C2 n=57,658, D or E n=79,957, respondents aged 18 and over)**

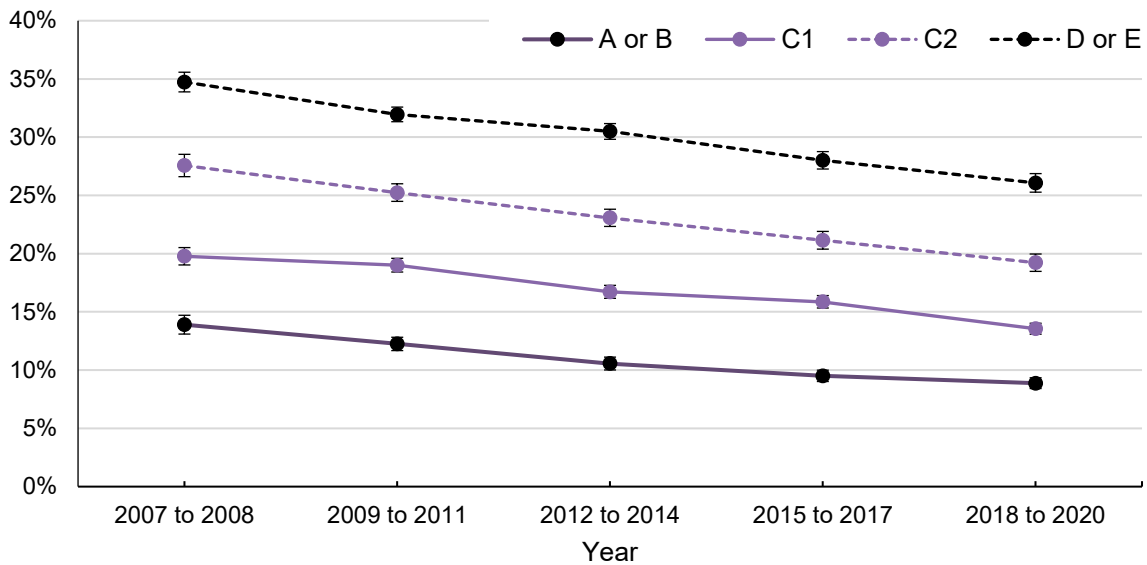


Figure 5 with error bars commentary: Decline in all SES groups from 2007-2008 to 2018-2020 is very clear and reliable. Separation between each SES group is very clear and reliable (where higher SES groups have a much lower rate of smoking)

**Figure 6. Average weekly spend on tobacco products among smokers (n=1,323) and adult (n=79,646) smokers, England (UCL STS, Age 16-17 n=637, Age 18-20 n=3,056, Age 21-24 n=4,960, Age 25 and over n=39,462)**

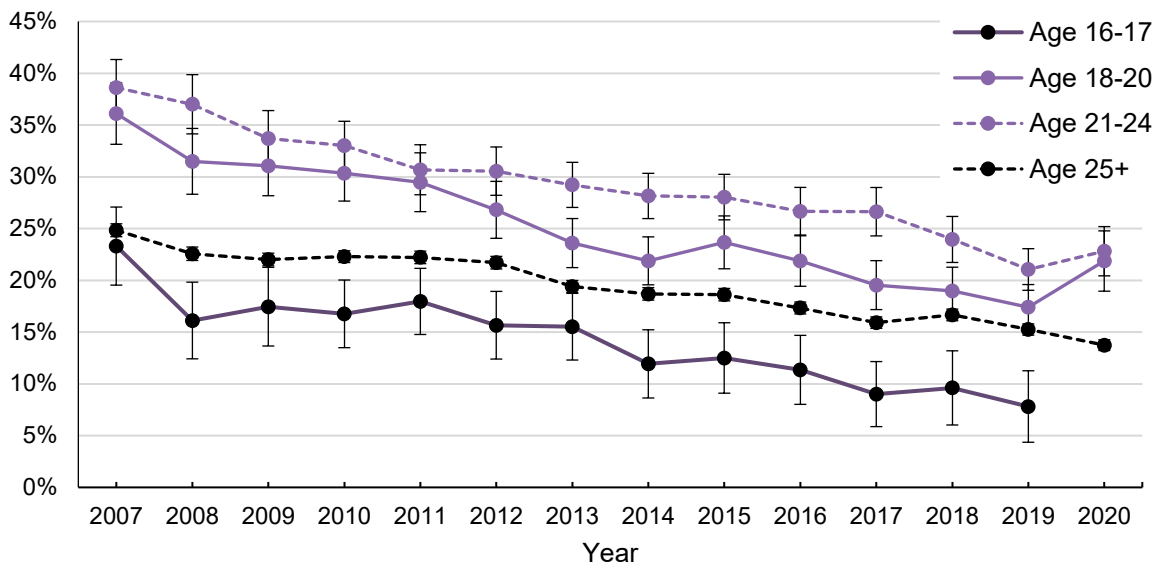
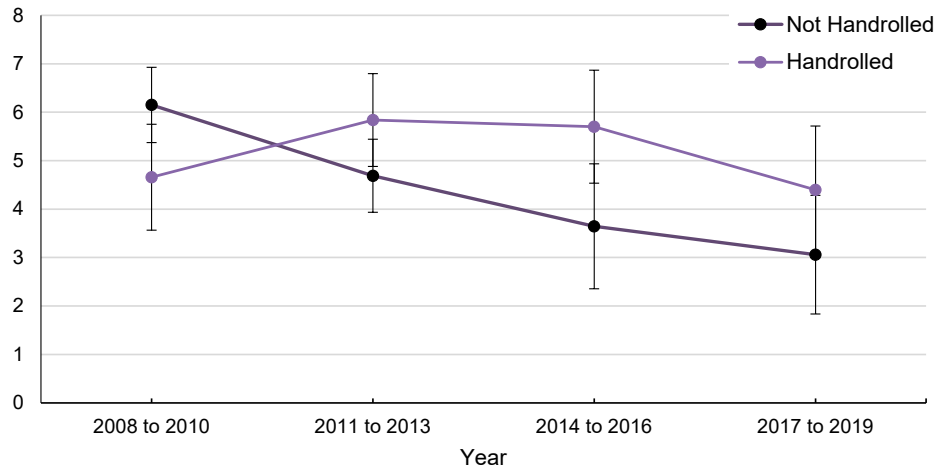
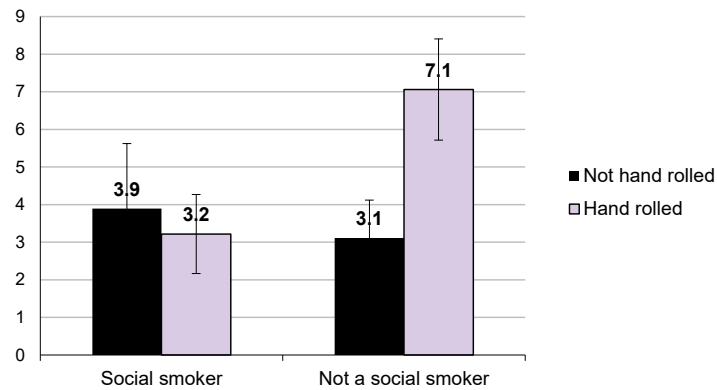


Figure 6 with error bars commentary: Again, not much to be said about 16-17 year olds here as error bars are too tall to have much confidence in the shape of the 16-17 year olds line. Spending by 25+ year olds has gradually increased from 2008 - 2019, and made a large, statistically significant step up from 2019 to 2020 of about £5 per week (significant at the 95% confidence interval). 18 - 24 year olds spend significantly less than 25+ year olds, and this has been the case since 2012 (before that, spending on cigarettes was similar).

**Figure 7.1: Average daily number of hand-rolled and not-handrolled cigarettes smoked daily by 16-17 year old smokers (UCL STS, n=741)**

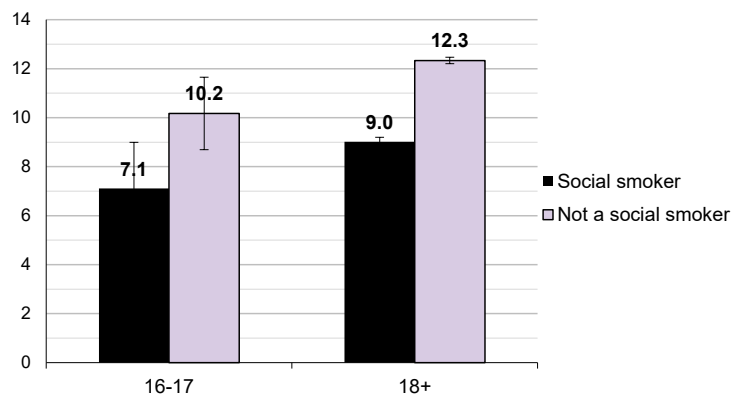


**Figure 14.1: Average daily cigarettes smoked by 16-17 year old smokers by cigarette type and whether the young person considers themselves a 'social smoker' (UCL STS, Social smokers = 100, Not a social smoker n=117)**

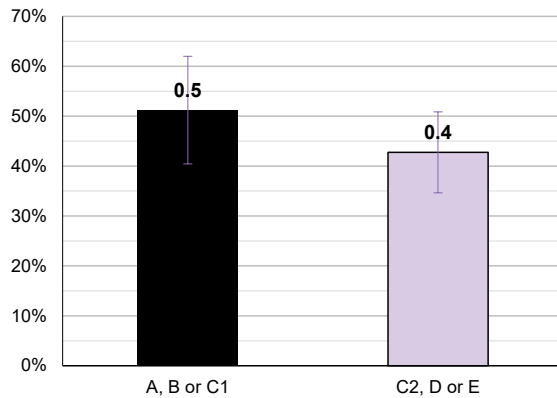


As illustrated in figure 14.1, 16-17 year olds who don't consider themselves 'social smokers' are likely to consume significantly more hand-rolled cigarettes than social smokers. 16-17 year old social smokers smoke similar numbers of hand rolled and premade cigarettes, while those who don't consider themselves social smokers consume double the number of hand rolled cigarettes as not hand rolled ones.

**Figure 14.2: Average daily number of cigarettes smoked by adults and 16-17 year olds considering themselves a "social smoker" and "not a social smoker" (UCL STS, Age 16-17 social smokers, n=100, Age 16-17 not social smokers n=117, Adult social smokers, n=8,036, Adult not social smokers, n=16,098)**



**Figure 14.3: Proportion of 16-17 year olds who consider themselves social smokers, by SES (UCL STS, 2014 to 2020, n=227)**



**Figure 14.4: Proportion of 18-24 year olds who consider themselves social smokers, by SES (UCL STS, 2014 to 2020, n=4539)**

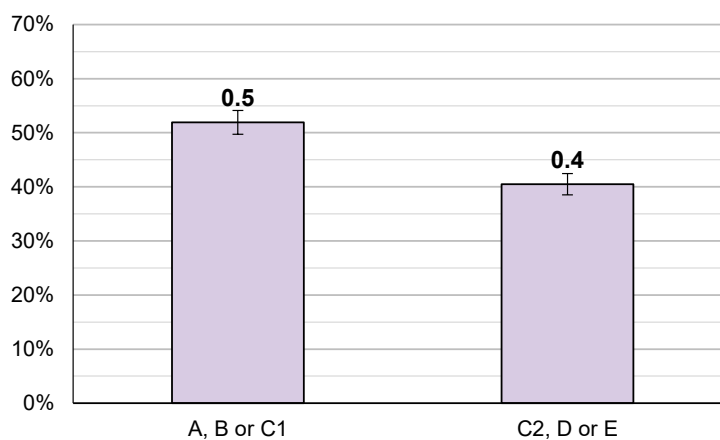


Figure 14.4 commentary: the 18-24 age band gives us > 95% confidence in the apparent difference between the proportion of smokers who consider themselves 'social smokers' in high SES and low SES groups.

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