

Vape use reported among non-smokers by children and young people in Derbyshire

The position of nicotine vapour products manufacturers is that their devices are only suitable for and marketed only at current, adult cigarette smokers who may wish to reduce or quit smoking cigarettes¹. Nonetheless, there is a belief among some health care professionals that vapour products may be being used by young non-smokers. Is there any evidence for this practice in the MLMV data sets?

The following question has been included in the last two waves of the MLMV survey:

19. Which statement describes you best for your experience of each of these?

Please tick one answer on each line

	Never tried	Have tried	Used in the past	Use sometimes	Use every week
Smoking tobacco e.g. cigarettes (from a packet or roll-up)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
'Vaping' with e-cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The results for the last two waves are as follows:

Table 1. Proportion of Derbyshire pupils (14-15yo) who have tried/used cigarettes/tobacco and vapour products, by year group and by wave of study

	Year 8 (12-13yo)		Year 9 (13-14yo)		Year 10 (14-15yo)	
	2021	2022	2021	2022	2021	2022
N	2061	1654	2056	1468	1633	594
Tried smoking	7%	6%	11%	13%	22%	21%
Regular smokers	1%	1%	2%	2%	3%	3%
N	2061	1653	2159	1466	1637	594
Tried vaping	14%	18%	22%	32%	34%	44%
Regular vapers	1%	3%	2%	7%	5%	13%

N.B. Different schools took part in the 2021 and 2022 surveys, but looking at just the 7 schools that took part in both waves with large sample sizes, we see a similar increase in trying vapour products: among Year 10 students, 'tried vaping' rose between 2021 and 2022 from 26% to 30%, and 'regular use' rose from 4% to 7%.

Among year 10 students, there were 22% ever-smokers in 2021 and 34% ever-vapers. On the face of it, there are so many more ever-vapers than ever-smokers that there must be substantial experimentation with vapour products unconnected with a history of smoking – at least 12% in this group.

¹ e.g. Calantzopoulos, A, 2020, *Nicotine and Youth*, Philip Morris International, <https://www.pmi.com/smoke-free-life/youth-and-nicotine> accessed 27th Oct 2022.

But perhaps we are not concerned with experimentation so much as regular use, and it is possible that all the current vape users are current or ex-smokers. This position can be tested:

Table 2. Cross-tabulation of Y10 Derbyshire pupils (14-15yo) who have tried/used cigarettes by tried/used vapour products, by wave of study 2021 (N=1629) & 2022 (N=594)

Table figures are percentages of all Y10 students in that wave			Tobacco experience				
			Never tried	Have tried	Used in the past	Use sometimes	Use every week
0% = some cases, but < 0.5%							
. = no cases at all							
2021	Vaping experience	Never tried	65%	1%	0%	0%	0%
		Have tried	10%	7%	0%	0%	0%
		Used in the past	2%	1%	2%	1%	0%
		Use sometimes	1%	1%	1%	2%	1%
		Use every week	0%	1%	0%	1%	2%
2022	Vaping experience	Never tried	56%	0%	.	.	.
		Have tried	16%	3%	0%	.	.
		Used in the past	1%	1%	0%	0%	.
		Use sometimes	4%	2%	2%	1%	.
		Use every week	3%	3%	2%	3%	3%

If vapour products are used exclusively by those wishing to reduce or give up smoking, there should be no students at all reporting that they have tried/used vaping who are not current or ex-smokers – which is to say, the highlighted cells in the table above should be empty. However, a total of 23% of the Y10 sample in 2021 and 33% of the 2022 sample are to be found in these cells. These are students who have never tried smoking, or who may have tried smoking but have never been a smoker. Among current vape users too, we see a significant proportion who have never been cigarette smokers (bold above).

The suggestion that vapour products are used only by current or ex-smokers in this age group is not supported. On the contrary, the vast majority of students who have at least tried vaping have never been cigarette smokers, and indeed the majority of these ever-vapers have never so much as tried smoking cigarettes. (Furthermore, the presence of vaping never-smokers is now common in SHEU's other local authority surveys.)

A similar pattern with an excess of vapers over smokers can be seen in the recent Year 6 survey in Derbyshire:

Table 3 Experience and intentions of vaping and smoking in Y6 pupils (10-11yo) in Derbyshire, 2022

11: Have you tried any of these? % responding 'yes'

Cigarettes (from a packet or roll-up)	1%
'Vaping' with e-cigarettes	5%
N	1936

12: Do you think you will use these in the future? % responding 'yes'

Cigarettes (from a packet or roll-up)	1%
'Vaping' with e-cigarettes	5%
N	1939

Experimentation with vapour products far exceeds experimentation with cigarettes, and it is extremely implausible to suggest that any use of vapour products in this younger age group is motivated by a desire to reduce cigarette consumption.

Some supporting evidence about the disconnection of vaping and smoking can be found from more direct questions used in other recent Year 10 local authority surveys:

Table 4. Figures from other local authority surveys showing vape use unconnected with smoking

If you have smoked e-cigarettes or vaped, why did you do this? (London 2019)	N=964
Experimentation/to see what it was like	69%
Enjoyment	25%
To try to give up smoking cigarettes	2%
Other (please select then write below)	4%
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Did you start regularly smoking tobacco cigarettes before or after first trying e-cigarettes/vaping devices? (South West 2022)	N=706
Started regularly smoking tobacco cigarettes before first trying electronic cigarettes	9%
Started regularly smoking tobacco cigarettes after first trying electronic cigarettes	7%
Neither - never regularly smoked tobacco cigarettes	83%
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(Vapers only²) If you vape, did you smoke cigarettes before vaping? (W Mids 2022)	N=198
No	68%
Yes	14%
(I don't vape)	18%

These figures all support the suggestion that the wish to reduce or quit smoking cigarettes is not always an antecedent of using vapour products, and perhaps is only rarely so in this age group. On the contrary, vapour products may be a 'gateway' to regular cigarette use³.

² The questionnaire had routing to steer non-vapers away from this question, but some non-vapers still answered it.

³ e.g. Hair C, *et al.* (2021), Association between e-cigarette use and future combustible cigarette use: Evidence from a prospective cohort of youth and young adults, 2017–2019, *Addictive Behaviors*, **112**, 106593

<https://doi.org/10.1016/j.addbeh.2020.106593>