

## Youth vaping: call for evidence

31 May 2023

### Executive Summary:

The increasing popularity of vaping amongst young people is alarming. Despite it being illegal for young people under the age of 18 to purchase and use vapes, it has been reported that 9% of English 11 to 15 year olds and 10% of Scottish S4 students do. Our work with young people and schools has revealed to us the growing concerns that both young people and teachers have, and begins to show the scale of the problem. Our research which demonstrates the consequences of poor health from a young age on future risk of disease and disability illustrates why providing an environment in which the next generation can thrive is so essential. The availability of resources for schools is limited at the moment, there is a PSHE lesson for year 9, and the upcoming OHID resource pack will be welcomed.<sup>1</sup> We would recommend that all resources are co-created with young people, so that the messaging speaks to their values. We are co-producing a resource with our Youth Panel, which will include a VR experience and will be available by the start of the next academic year.

The Department of Health and Social Care in May 2023 announced new steps for government to stop the sale of vapes to children.<sup>1</sup> A key area identified was ‘review the rules on issuing on the spot fines to shops that break the law’. However, to ensure an environment in which our young people have the opportunity to thrive will require additional rules to enforce these fines.

We have a responsibility to act now to ensure we are not complicit in allowing the next generation to start adulthood in less than optimal health.

In the words of young people, they don’t want ***‘to be the experiment’*** for us to learn and understand the health consequences of vaping.

In response to this call for evidence on Youth Vaping by Office for Health Improvement and Disparities, we make the following recommendations:

- Legislate to ban the production of flavoured vapes, with ‘cool’ names that are appealing to children and young people
- Introduce stricter control for selling vapes – require shops to ask for ID and have spot checks and consequences if the law is broken
- Ban advertising/display of vapes (not in shop windows)
- Introduce prescription-only vapes
- Work with young people to produce a messaging plan/education resources to prevent children and young people from taking up vaping

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<sup>1</sup> <https://www.gov.uk/government/news/no-more-free-vapes-for-kids>

- Provide resources for schools and youth organisations which have been co-created with young people to support engagement with young people around vaping
- Develop a communication strategy to increase awareness of the effects of vaping, through schools and social media to reach children and young people
- Introduce 'Vape' bins to encourage thoughtful disposal

**Response authors:**

Our response has been drawn from our first-hand experience (with young people, in schools, scientific research and in clinics), our Youth Panel and our 'What's the problem with vaping?' research project which held focus groups with young people in Southampton between April and May 2023.

[Dr Kath Woods-Townsend](#) is a Principal Research Fellow at the University of Southampton and the [LifeLab](#) Programme Manager. [LifeLab Southampton](#) is an innovative educational intervention which shows adolescents first-hand how their diets and lifestyles lay the foundations for a healthy life, and how their own health is linked to the health of children they may themselves have in the future. Building on NIHR funded research into lifelong effects of the early life environment, it engages students with ongoing investigations in a University Hospital research institute. The context-specific learning experience and direct contact with researchers improve students' science and health literacy. [LifeLab](#) comprises modules of work involving curriculum-linked lessons in school before and after an activity day at LifeLab Southampton. Dr Woods-Townsend is working with Professors [John Holloway](#) and [Graham Roberts](#), and [Lisa Bagust](#) together with partners in Southampton City Council, Thornden School, No Limits, and Testlands Hub on a project entitled "What's the problem with vaping?" that seeks to co-create with young people resources highlighting the negative consequences of vaping, providing materials for schools, youth groups and independent use.

[Lisa Bagust](#) is a LifeLab teacher and Enterprise Fellow. She is the lead for the secondary and college programmes, the Young Health Champions qualification and for the current LifeLab EACH-B Research trial. She delivers training to teachers and researchers and teaches secondary students attending LifeLab day visits. Through developing scientific thinking and reasoning skills with stimulating activities, and connecting young people to the scientific research behind health messages, she focuses on engaging teachers and students in health education, helping to empower young people to make healthy lifestyle choices.

[Professor Graham Roberts](#) is a Professor in Paediatric Allergy and Respiratory Medicine at the University of Southampton and President of the British Society of Allergy and Clinical Immunology. His research focuses on the pathogenesis and natural history of childhood asthma and food allergy together with the development of new strategies to improve the management of asthma. This involves studies in Southampton, at the David Hide Asthma and Allergy Research Centre in the Isle of Wight and in collaboration with colleagues at the Evelina Children's Hospital, St Thomas's Hospital, London. As well as working with Dr Woods-Townsend, Professor Roberts has examined the impact of smoking on the development and progression of asthma.

[Professor John Holloway](#) is Associate Vice President (Interdisciplinary Research) and Professor of Allergy and Respiratory Genetics at the University of Southampton. In addition to the LifeLab vaping project, he is working with colleagues as part of the [RHINESSA](#) consortium seeking to understand the effect of exposure to environmental exposures, especially tobacco smoke and other nicotine-containing products, not only on our own health, but also the health and potential illnesses of our children and grandchildren

**The LifeLab Youth Panel** was established to recognise and value the contribution of young people in the co-production of the LifeLab research, interventions and resources. Young people from schools/colleges primarily in Hampshire, Isle of Wight, Portsmouth and Southampton are employed for 12 weeks at a time (a school term). Meeting weekly for a one-hour online discussion group and following up with two hours of independent work, the LifeLab Youth Panel has co-created a variety of resources to date (a series of animations detailing what Clinical Research is, a series of articles which detail interviews with researchers, and an Exam Wellbeing Resource). More recently, it became apparent that vaping was an area of concern to young people, parents and teachers and the Spring Term 2023 and Summer Term 2023 LifeLab Youth Panels have been focused on understanding the role vaping plays in the lives of young people and co-creating a resource to support schools and youth organisations to engage and educate young people about vaping.

Lifelab Youth Panel members: Jasmine Aburrow (14yrs), Alisha (14yrs), Seb Bannister (14yrs), Clive Cheung (15yrs), Eva (15yrs), Tehya Coak (14yrs), Maria Gbesemete (15yrs).

**The response provides evidence and policy recommendations in relation to the following questions:**

## **1) Building regulatory compliance**

### **What evidence is there about how and where children are accessing vapes?**

What is apparent in our conversations with young people, and their conversations with each other is the ease of access for young people to vapes. Students raised concerns about sale to underage individuals, resale of products outside store environments and the easy availability of products online as enablers to accessing vapes:

- *“a corner shop you almost always see vapes being sold and advertised. This way young people can go and get a vape on the way to school or where ever they are going because there is mostly always a shop open that sell them”*
- *“I’ve seen kids that look quite clearly nowhere near 18 walk into a shop and go, “Boss man, I need a new vape please”, and they’ll just [sell them a vape].....[what types of shops?]..... Corner shops; off licences”*
- *“selling them to underage kids, without any ID and often while wearing school uniform”*

- *"[Do shops ID you] – No, You can walk in there and they tell you to put it straight in your pocket and walk out"*
- *"People bulk-buy vapes and sell them themselves."*
- *"some people will buy and sell vapes over platforms like snapchat, meeting the dealer at/outside of schools"*
- *"many of these students (who are underage), access them from older friends/ siblings"*
- *"buy vapes online, without needing any ID"*
- *"I feel we hear all the kids in the toilets, like the Year 7s: "Please, just let me use your one; I really need it"*

**What evidence is there of the type of products children are accessing?**

Young people tell us that it is the brightly coloured, flavoured vapes which are appealing; they seem like sweets and toys and so aren't perceived to be harmful. Vape devices are also named to resemble confectionary, e.g. 'Elf Bar' (like a new type of chocolate bar to try). Young people will look for the cheapest and most easily sourced vapes (these are also most likely to be least regulated). Young people may purchase vapes online to reduce risk of being asked for ID. Teachers commented on the challenges they are having, as vapes are being designed to look like everyday objects and so are easy to hide in school settings (highlighter pens, fidget spinners, USB sticks):

- *"Children will buy the products that cost the least, so the chemicals in the vapes are likely to be the most damaging"*
- *"vapes such as "elf bars" come in a range of bright colours and flavours that children love so although children are aware of what could happen, they still find vapes really attractive and want to use them because they are this new thing that everyone is using so the consequences do not seem as much of a big deal."*
- *"A lot of the elf bars are advertised as being cheap and this is one of the main reasons that they are popular, most are around £5 per pen."*
- *"the elf bar 600 pens because they are cheaper and as well as this you can get them in a lot of different colours that would attract many young people"*
- *"The way that it's built. I've seen some where the bottom of it has got six or seven lights in it and when you suck on it, it starts flashing these bright coloured lights. No adult wants to walk down the road with a disco light, but kids of course they do."*

**What evidence is there of effective measures to limit children's access to vapes?**

From the youth panel and the focus groups, it is clear that vapes are easily accessible by children and young people. There was a strong feeling that regulating shops, e.g. corner shops or vape shops themselves, so that there was stricter control over how vapes were displayed and who was buying vapes would help. In a similar way to smoking prevention techniques, there was recognition that packaging on vape devices could include warnings or pictures:

- *“Even if it's behind the counter it's normally when the counter is next to the window so you can see them anyway; they are always on show.”*
- *“[They should do what they do with cigarettes] Yeah. They have [them] in the back don't they? I've never walked into a shop and just seen a cigarette unless it's right behind the thing.”*
- *“they should ID you when you go into shops to try and buy one”*
- *“[they should] stop advertising it because they do have adverts and stuff like that for them...[and]... they should stop making them in these colourful flavours and that because realistically people who have been smoking for years I'm guessing they like the flavour of tobacco so you could just keep it as tobacco or fresh mint or something...[because]... if someone tries a tobacco vape they would be like, “Oh no, I don't like that”*
- *“In a 'range' shop, in the queue to the till, there were loads of deals on vapes which were not behind the counter, meaning that the whole time spent in the queue you are being persuaded to get them. Whereas when vapes are hidden behind a counter, you often will not even think of them.”*
- *“teenagers they go out on the weekends, they'll go out to town and go shopping, and at least – you walk into [Name of shopping centre] and there's a vape shop right there and it's got the smells, it's got the lights, it's got all this; you go around the corner, “Oh look, two more vape shops”; you go around the corner, “Oh look, they have this free”; they're everywhere and every shop displays the vapes right at the window.”*
- *“do you know how some areas are no smoking areas, like you can't smoke there, you shouldn't be able to vape around everywhere either”*
- *“you could make them prescriptions for people who do smoke so that it is a tool to make them stop smoking.”*

## 2) The appeal of vape products

### **What evidence is there about the appeal of vapes to children?**

The conversations we have had with young people highlight how the colours, flavours, names and design of the vapes are all appealing and would seem to be designed specifically with children/young people as a target audience:

- *“No adult wants a pink... light up, start to vape – they don’t – but kids....”*
- *“the names of the flavours, like vapes are called unicorn shake and stuff like that [which sounds cool and appealing].”*
- *“Vape products that have children's cartoons and sweet-like designs are clearly aimed to get younger children to buy the product. For example "fidget spinner vapes"*  
<https://www.dailymail.co.uk/health/article-11193487/How-kids-coaxed-vaping-bright-pink-5-e-cigs-double-FIDGET-SPINNERS.html>
- *Products are made to look appealing in the same way as sweets or children's toys with bright colours, a range of flavours, patterns/designs and deals.”*
- *“Not only do the vapes have flavours, but the actual design of the product, and the packaging is yet again appealing. The designers are using fun colours and ombre patterns, all tactics used in the toy industry, again there is a major correlation between markets aimed at youth and that of vape companies”*
- *“The key appeal in vapes to children is their flavours and the way that the products are designed and advertised. The flavours and package design very commonly reflect that of sweets, A vibrant colour range. This in turn makes them seem much safer than they really are.”*

It was also apparent that young people didn’t feel that there was peer pressure to take up vaping but rather that vaping was simply becoming normalised. As more people, particularly young people, are seen vaping, it just feels like the thing to do and that it’s OK and not dangerous or unhealthy, and looks cool because so many people are doing it. Mistakenly, young people (and older) equate vaping with a way to ‘de-stress’, not recognising the consequences of nicotine on their bodies. In a similar way to smoking, vaping is seen as a way of socialising – if your group of friends is vaping and you aren’t you are left out:

- *I feel like when there are so many older kids doing it the younger kids are doing it more and more. I don't mean, "Younger", younger; even in this school the Year 7s, the Year 8s are.*
- *"kids these days struggle a lot more with their mental health and so a lot of people feel like, "Oh, I feel really stressed out; I'm going to vape"; and then people hear them go, "Oh, I'm really stressed out; I'm going to go and vape", "What? Does that help?" And then they will think, "Maybe I should try that?" and they'll think, "Oh, this is quite a good little stress relief", or they'll see it in shops and it'll be all colourful and everything: "Oh, that looks quite cool; I might get one of them,", or they'll see it in videos and stuff and be like, "Why am I not doing that?"*
- *"For younger kids like our age in order to look cool"*
- **[Youth worker]** *"a young person said to me: "oh, you'll prob just think I'm really sad, but I just started because I thought it looked cool, and now I'm addicted"*
- *"I think it's not so much [peer] pressure, it's more seeing other people doing it and you get encouraged to do it because you're seeing it from others. It's not like [peer] pressure as such like, "Oh, try it; try it; try it", it's more you just see it from everyone and you're like, "Oh, so everyone is doing why am I not doing it?" like you feel left out sort of."*
- *"I believe that children look at vaping as a social activity just like adults have a couple of pints at the pub over a conversation, children will vape in the toilets or on the bus whilst talking about teachers and subjects"*

There was also the normalisation of vaping on social media, and how if there were people you followed vaping or doing cool tricks, it glamourised vaping to their followers:

- *"And I know when I see people on Tik-Tok doing tricks I'm like, "Oh, that's cool"."*
- *"It's like famous people that have a lot of teenagers and young kids following them will post videos just doing tricks and stuff; influencers. They are always posting videos doing tricks and stuff; that to kids looks... they'll see that, they'll see someone they look up to doing that and they'll be like, "Oh wow, that looks cool"."*

**What evidence is there about the appeal of vape flavours to children?**



Young people were very aware of the appeal of vape flavours, commenting that the flavours and names of the flavours make them seem fun and even healthy *“No, there’s nothing [health warning]. It’s just all, “Blueberry; raspberry; come and get it”.* With the release of each new flavour – it’s something fun to go and try out. The flavours and names of the flavours appear to be designed to attract a younger audience; children and young people look upon vapes as a sweet. Even for young people who are more aware of the health risks, the smell of vapes as they walk through clouds of smoke is appealing *“As a child who has smelt the flavours that other children my age have been vaping, the smell is very appealing and will often make me stop and smell more before I realise it is a vape”*

- *“The different flavours you can get for vapes is in my opinion a big part of the appeal of vapes for children. I have seen in so many shops the selection of flavours that you can have, there is almost everyone that you can think of so they can taste how you want them too. You can get flavours like bubble gum, strawberry, watermelon, mango or banana and these just make them more appealing for young people because they are attractive flavours and they seem like they are going to taste nice and be enjoyable so children are going to buy them. [...] It tastes nice and so would attract children to use them and vape because they have got that fun side to it where you can make it taste how you want and try new flavours.”*
- *“The products also actually become appealing, the fact that not only will the user get nicotine, but also have the tastes such as strawberries, bubble gum and donuts.*
- *The flavours repeatedly reflect those of sweets that children eat, there is most definitely a correlation here. [...] Also the involvement of fruity flavours also portrays the idea that they are safe, maybe even healthy.”*
- *“Having flavours to vapes makes them sound highly innocent for instance what would you rather inhale an e-cigarette or a mango flavoured elf bar.”*

### **What evidence is there of effective measures to limit the appeal of vapes to children?**

Young people cited legislation that has either been used previously for smoking (pictures on cigarette packages, cigarettes locked away at the back of shops, no advertising) or that has been brought in, specifically around vaping, in other countries as examples that could be used here (China, Australia, New Zealand):

- *“An effective measure to limit the appeal of vapes to children is by removing flavours entirely- a device to help quit smoking shouldn't be appealing and has no need for a flavour.”*



- *“New Zealand has brought in legal change to make the packaging of vapes similar to that of cigarettes here, each package has health warnings rather than fun patterns and colours.”*
- *“I think that a measure to reduce this would be to either have vapes prescribed to ex-smokers trying to quit or reduce the nicotine limit. There should be less nicotine than a box of cigarettes, considering they are supposed to help smokers come off nicotine, not get addicted to a different product”*

### 3) Marketing and promotion of vape products

#### **What evidence is there that vapes are being targeted specifically at children?**

Again, young people were very aware about the marketing and promotion of vape products to young people. Young people were particularly cynical about the reasons why they felt companies were marketing to young people:

- *“It’s all about money and I feel like that’s why it’s aimed at kids because as much they might not even want to admit it if they get all the kids addicted to it now they’re going to be buying it forever.”*
- *“Younger people; they could be addicted for the rest of their lives and spend the most money.”*
- *“From here on they’ve got everyone hooked and they’re doing it that because the adults are a bit more... I’m not saying that kids are naïve but adults are more aware of what’s going on and they’re a bit more clued up, so when you’ve got Year 7s vaping wait until they’re in Year 11 they’re still going to be vaping, and when they’re adults they’re still going to be doing it.”*
- *“A lot of the vape companies know exactly what they’re doing making all these fruity flavours like bright colours; they know exactly what they’re doing. It’s literally advertising it to kids because that’s so appealing to kids”*
- *“Vape products that have children's cartoons and sweet-like designs are clearly aimed to get younger children to buy the product”*
- *“I feel like at least once a month there is some new thing being designed like there were the cup ones, then the slush puppy ones, the coffee shop looking ones; they just keep making new designs”*

**What evidence is there of effective measures to limit the marketing and or promotion of vapes to children?**

Young people discussed the need to stop making vaping look attractive, so not only legislation for flavours, colours and design, but also advertising and product placement.

Young people cited legislation that has either been used previously for smoking (pictures on cigarette packages, cigarettes locked away at the back of shops, no advertising) or that has been brought in, specifically around vaping, in other countries as examples that could be used here (China, Australia, New Zealand):

- *“An effective measure to limit the appeal of vapes to children is by removing flavours entirely- a device to help quit smoking shouldn't be appealing and has no need for a flavour.”*
- *“They put it in shop windows all colourful”*
- *“But I think there are definitely things that could stop it like not displaying it in windows to make it cool.”*
- *“There’s nothing really on the boxes too put us off; it’s just like a big, “Spark; breathe in; and it smells nice and tastes nice”.”*
- *“New Zealand has brought in legal change to make the packaging of vapes similar to that of cigarettes here, each package has health warnings rather than fun patterns and colours.”*
- *“I think that a measure to reduce this would be to either have vapes prescribed to ex-smokers trying to quit or reduce the nicotine limit. There should be less nicotine than a box of cigarettes, considering they are supposed to help smokers come off nicotine, not get addicted to a different product”*
- *“I think it is just mainly stopping the way that they are branded to kids”*

[Respondent 2]: *“Because they don’t help the way that they design things, the way that they make it.”*

[Respondent 3]: *“They make it more appealing to kids.”*

[Respondent 2]: *“It is so aimed at kids and they can deny it but it’s true. Because you wouldn’t see my dad walking down the road with something like that thing because I feel like adults they always get those big rechargeable ones.”*

## 4) The role of social media

**What evidence is there that social media influences children’s behaviour relating to vapes?**

In discussion with young people, promotion of vaping on social media was a concern – as they said, they spend a lot of time on social media and see a lot of content

which normalises behaviours and contains misinformation, it is also a space where people can buy vapes and where trends can take off:

- *“Groups of teenagers that vape will often post images or videos on social media platforms like Instagram and Snapchat to show off what they do as it is considered ‘cool’. This will affect many teenager’s behaviours and feelings towards vaping, as when they see people of different ages vaping all across social media, it sparks curiosity and causes them to be very tempted to try it out.*
- *“some people will buy and sell vapes over platforms like snapchat, meeting the dealer at/outside of schools.”*
- *“It’s like famous people that have a lot of teenagers and young kids following them will post videos just doing tricks and stuff; influencers. They are always posting videos doing tricks and stuff; that to kids looks... they’ll see that, they’ll see someone they look up to doing that and they’ll be like, “Oh wow, that looks cool”.”*
- *Influencers have a major impact on the activities of children. They’re most often seen as inspiring and children aspire to be like them. This becomes dangerous if these influencers involve themselves with vape cultures. An example of this is Doja cat at the grammy, who is seen to vape quickly before going up to receive an award.*

[Respondent 3]:	<i>“And I know when I see people on Tik-Tok doing tricks I’m like, “Oh, that’s cool”.</i>
[Respondent 1]:	<i>“Oh yeah, that’s another thing: it’s the tricks, isn’t it? Everyone wants to try and do the trick. They don’t even get into it to start vaping; they just want to go –“</i>
[Respondent 3]:	<i>“Yeah. Do the tricks.”</i>
[Facilitator]:	<i>“What are the tricks? Can you share a couple of examples? What are we talking about?”</i>
[Respondent 1]:	<i>“Like ghosting and it’s like going like that and smoke comes out and then you suck it back in really quickly and it looks like a ghost, or dragon’s breath where you go like that.”</i>
[Respondent 3]:	<i>“It goes out your nose and your mouth at the same time.”</i>
[Respondent 1]:	<i>“Oh, there’s jellyfish; that used to be like if you could do a jellyfish you were the coolest person.”</i>

### **What evidence is there of effective measures to ensure vapes are not targeted to children through social media platforms?**

Young people were aware that there were some measures to ensure they are informed correctly, but there didn’t seem to be any other measures which were effectively ensuring vapes were not being targets to young people:

- *But vaping-related posts on social media are largely unregulated, with individual platforms making different decisions about what to allow. For instance, Instagram does not permit vape manufacturers to pay for promoted posts about their products, but these companies can pay influencers to post laudatory content.*
- *Upon searching vape on TikTok, a warning does come up informing me to be informed and aware, but, when I scroll under this there are videos that rate different vapes and their flavours and skits about purchasing them.*

## 5) Effective educational approaches to prevent child use of vapes

**What evidence is there (either directly or by inference from other topic areas) of effective interventions in educational settings that could reduce vaping among children?**

Young people discussed measures that their schools were implementing to educate them about vaping. This was relatively limited and our conversations with teachers and youth organisations show that there is a lack of evidence-based, easily accessible, engaging resources available. Young people had suggestions and ideas for how best to deliver this information, key to this was involving young people in the messaging and making any sessions interactive and not simply fact giving. We know that simply giving information is not sufficient for people to change behaviour and this is particularly true for young people. Young people need experiential learning which is rooted in behaviour change theory. An example of this being done successfully for other contexts is the LifeLab “Science for Health Literacy” programme.<sup>2</sup> Discussions with teachers reveal the growing impact for schools on trying to deal with the increasing numbers of students vaping.

- *“I think the messaging would be better coming from kids. I feel like coming from an adult it’s not quite the same.”*
- *“things that we can actually see, not just words, because we don’t really listen to what we’re being just told; if we actually see examples of what happens later on in life or what could be the damages of it it could be more effective”*
- *This [school] is where the kids are at. This is where we spend most of our lives in here*

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<sup>2</sup> Woods-Townsend K, Hardy-Johnson P, Bagust L, Barker M, Davey H, Griffiths J, Grace M, Lawrence W, Lovelock D, Hanson M, Godfrey KM, Inskip H. A cluster-randomised controlled trial of the LifeLab education intervention to improve health literacy in adolescents. PLoS One. 2021 May 5;16(5):e0250545. doi: 10.1371/journal.pone.0250545. PMID: 33951086; PMCID: PMC8099135.

- *"I don't feel there's enough research on it like what the effects are over a long period of time. Like when we're adults we might be that person on that advert with the whole... like can't speak."*

[Facilitator]: *How useful do you find that [youth organisation coming in to do a talk on vaping]?*

[Respondent 2]: *Not useful.*

[Respondent 2]: *I don't think I took anything away from it.*

[Respondent 4]: *Yeah. I don't think it's enough to make kids stop doing it.*

[Respondent 3]: *They didn't enforce it enough.*

[Respondent 2]: *I think that was quite nice to listen to, nice to know, but no one cared. It was more like they were just reading it off. They weren't letting you know how dangerous it is; they were just kind of reading off the facts.*

[Respondent 2]: *"School and social media would be the best way."*

[Respondent 3]: *"Yeah, I'd say school and social media."*

[Respondent 2]: *"Because no one reads posters; no one reads newsletters; no one wants to listen to someone talk at them for ages about vaping because that would just annoy them and make them want to do it."*

*[What would you like information about?]*

[Respondent 3]: *What those chemicals are to make the flavours.*

[Respondent 2]: *What it actually does later.*

[Respondent 3]: *What's actually in them; like what it contains.*

*[And where would you like that information?]*

[Respondent 4]: *On the packaging?*

Young people clearly get a lot of information from social media, which isn't always evidence-based. In our focus group, there was confusion between the negative consequences of smoking and vaping. If students are having a session which covers both, then it isn't apparent that the distinction between smoking and vaping is being made clearly enough:

- *I see it [vaping resulting in 'popcorn lung'] all over Tik-Tok but then I saw a sign outside a vape shop that said, "Popcorn lung is a myth".*

*[So, there are health issues you think?]*

[Respondent 4]: *Bad for your teeth.*

[Respondent 4]: *Things like... or your gums or something. I think I read about it.*

[Respondent 4]: *It damages your gums.*

### **What evidence is there of schools developing behaviour policies that have been effective in reducing children's use of vapes?**

In our conversations with school senior leaders and teachers, it is clear vaping amongst students is an increasing challenge, with schools trying different

approaches. A number are exploring or in the process of installing vape detectors – this is out of their budget, which is already heavily squeezed and there is cynicism as to whether they will be effective. Young people and teachers talked about various measures that are being implemented in schools (but highlighting the lack of success):

- *“sometimes teachers stand in front of the toilets and do random bag checks for vapes. The teachers have also randomly sat on the bus for the duration of the journey, although this is not often so the people who vape on the bus don’t really worry about this. I still believe that this is nowhere near enough to prevent vaping in school.”*
- **[Teacher]:** *“We have a vape-free policy and students are suspended if caught”*
- **[Teacher]:** *“It’s causing a lot of problems, students are being excluded if caught”*
- *“Apparently there are vape detectors in the toilets but I’ve heard they don’t work”*
- *“Our school has introduced new scanning equipment that detects vapes. Teachers have also been randomly checking students for vapes hidden in their bags. The rule is anyone caught vaping in our school will be suspended; this has definitely alarmed people.”*

**Is there any other evidence on educational approaches to prevent children using vapes that the government should be aware of?**

In the course of our discussions and focus groups and the information the Youth Panel found, there is clearly a growing impact on schools of the increasing numbers of students vaping. This is manifesting in the school - lots of discussion around toilets being the place students vape and knowing which toilet block to avoid (or go to), but also impacts manifesting in class behaviour. From the teachers’ perspective there is a real concern around how to deal with this and a lack of support. If vaping is seen as ‘ok’ by students and parents, and vape devices are designed to be deceptive, how do teachers/senior leaders in schools challenge this behaviour. Teachers are trying to do their job of teaching in class and confronting students over what might be a highlighter pen or might be a vape is disruptive. We’ve seen in the news the schools who are resorting to locking toilets between breaks. This creates more tension and conflict and also doesn’t resolve the underlying issue. There is also an awareness that children and young people aren’t taking up vaping as a tool for smoking cessation and so more thoughtful, considered messaging around this being the sole reason for the existence of vape devices would be helpful. Another interesting area of discussion was the recognition that smoking is a much more involved activity – you have to get up, get your cigarettes, go outside, light up, actively smoke a cigarette and then go back inside and resume your activity, it was recognised that

your vape can be with you all the time and you can do it anywhere. This results in people (children and young people included) inhaling significantly more nicotine than they would if they were smoking.

- **[Teacher]:** *“Thought we’d got smoking nailed, now vaping has gone crazy”*
- **[Teacher]:** *“Staff feel we are up against it”*
- **[Teacher]:** *“Students blatantly vaping in school, even getting them out in lessons”*
- **[Teacher]:** *“It’s so easy to hide, the vapes are disguised and so small”*
- **[Teacher]:** *“There has been an explosion of vaping onsite”*
- **[Teacher]:** *“It’s worse than smoking, it’s a big problem”*
- **[Teacher]:** *“smoking used to be an illicit act of rebellion – students hiding behind the bike shed, but vaping seems to be much more acceptable and students don’t make an effort to hide that they are vaping, the prevailing attitude seems to be that it’s ok to do.”*
- **[Teaching assistant]:** *“At the end of the school day, a student was not on school premises, but was still in school uniform and was vaping. I told her to put it away, or I would confiscate it and she commentated that she wasn’t in school and I couldn’t do that, and anyway, her mum said it was ok. At this point, she proceeded to phone her mum and ask her if it was ok for her to vape. The mum confirmed it was. At this point, I felt I had no place to go to with this. I’m not a senior leader in the school, I didn’t have support there to back me up, the student wasn’t on school premises and the parent clearly knew and was giving approval. I wasn’t about to get into a confrontational situation.”*
- *“Especially where vapes I feel like are different to smoking because to smoke a cigarette you have to roll it, you have to go outside, you’ve got to smoke it, you come back in and you’ll just carry on with your day; but vapes you’ve always got it in your hand, it’s always there, and I feel like people would use it so much more.”*



- |                 |   |
|-----------------|---|
| [Respondent 1]: | <i>[affects of nicotine addiction] Yeah, because they can't concentrate.</i>                                    |
| [Respondent 3]: | <i>There are definitely people in the school who are affected like that.</i>                                    |
| [Respondent 3]: | <i>They're more likely to not focus on lessons and cause more disturbances.</i>                                 |
| [Respondent 2]: | <i>I think there are lot of people in the school who are vaping. You can tell when they've not got one.</i>     |
| [Respondent 4]: | <i>If they haven't got one they'll just get a bit moody with people over little things and be stressed out.</i> |

## 6) The impact of vaping products on the environment

### **What evidence is there of the impact of disposable vapes on the natural environment when they are discarded?**

Children and young people were very aware of vape devices littering the floor, they linked this to a concern around climate change, but also discussed the fire hazard.

Concerningly, young people discussed how they saw children and young people picking up discarded vapes and trying them themselves.

- *"Walking in most public spaces, you will see a lot of the litter is disposable vapes"*
- *"Disposable Vapes contain lithium batteries which are damaging to the environment, so if it is sent to landfill or littered, it will damage and pollute wildlife. The plastic case will also not decompose."*
- *"every disposable vape has a battery which contains 0.15g of lithium, a material vital for the green transition. This means at least 10 tonnes of lithium end up wasted each year through discarded vapes; enough to power 1200 electric car batteries."*
- *"The Marine Conservation Society have reported that disposable vapes are being found littered on beaches around the UK. Because these products are made up of potentially hazardous materials, they pose a threat to marine life when littered."*
- *"They just chuck them on the floor."*
- *"I have a friend who when she found some on the floor she used to just too pick it up and, you know, "Just don't do it"."*
- *"I've seen year 6s pick them up off the ground and put their mouths on them."*

### **What evidence is there of effective measures to reduce the environmental impact of disposable vapes?**

In our discussions, there was no evidence of existing measures, but suggestions around measures which have been used for other recycling/disposal issues:

- *Retailers providing in-store collection points for all used vape devices brought in for disposal (not just those products purchased from their store) and encourage people to use them. In-store collection points with no obligations for those dropping off devices to buy more.*
- *Manufacturers offering incentives to customers for recycling used devices.*
- *Public information advertising campaigns to normalise recycling of vapes so that there is social shame and peer pressure in throwing them away.*
- *Packaging better highlighting to consumers that vape devices must be recycled, through the use of words such as 'Recycle Me'.*
- *The industry should look at more environmentally-friendly power sources than lithium batteries.*
- *"You know the battery boxes you've got in the shops? Can you put them in there?"*

## **7) Understanding the vape market**

**What evidence is there on whether price makes vapes appealing to children?**

[Respondent 3]:	<i>The price; they made it really affordable for young kids.</i>
[Respondent 4]:	<i>Yeah.</i>
[Respondent 1]:	<i>Yeah, it's like £5 for a vape.</i>
[Respondent 3]:	<i>If a Year 7 goes to their mum and asks for £5 they can just go and get a vape.</i>

## **8) Further evidence on vaping**

**Is there any further evidence on themes not included above that the government should consider when developing policies around children and vapes?**

Emerging research suggests that exposures occurring years before conception are important determinants of the health of future offspring and subsequent

generations.<sup>3</sup> Environmental exposures of both the father and mother, may influence germline cells and thereby cause a cascade of health outcomes in multiple subsequent generations. There is now increasing evidence generated from both the RHINESSA study and other studies that respiratory health is influenced by parental exposures that occur long before conception. The strongest evidence relates adolescent tobacco smoking in future fathers to increased asthma and lower lung function in their offspring.<sup>4,5</sup> Although this literature is still sparse, the epidemiological analyses reveal strong effects that are consistent across studies with different designs and methodologies. The results are strengthened by mechanistic research from animal models and (scarce) human studies that have identified molecular mechanisms that can explain the epidemiological findings, suggesting transfer of epigenetic signals through germline cells, with key susceptibility windows in utero (both male and female line) and prepuberty (male line).<sup>6</sup> While there have been no studies directly of vaping (as an exposure it is too recent to be able to study across multiple generations in humans), studies of other nicotine containing products such as snuss (oral moist tobacco commonly used in Scandinavia), and studies in animal models<sup>7</sup> suggest that nicotine may, in part, cause some of the transgenerational effects observed with tobacco smoke. Very recent data using fruit flies has also shown that e-Nicotine exposure of both fathers and mothers before mating results in profound effects on growth and airway development in offspring. This, combined with the evidence that early adolescence (<15 years) is a key susceptibility window in future father's to influence their offspring's health, and the increasing use of nicotine-containing vaping products by youth in the UK raises significant concerns as to the potential for the health of the population in future decades.

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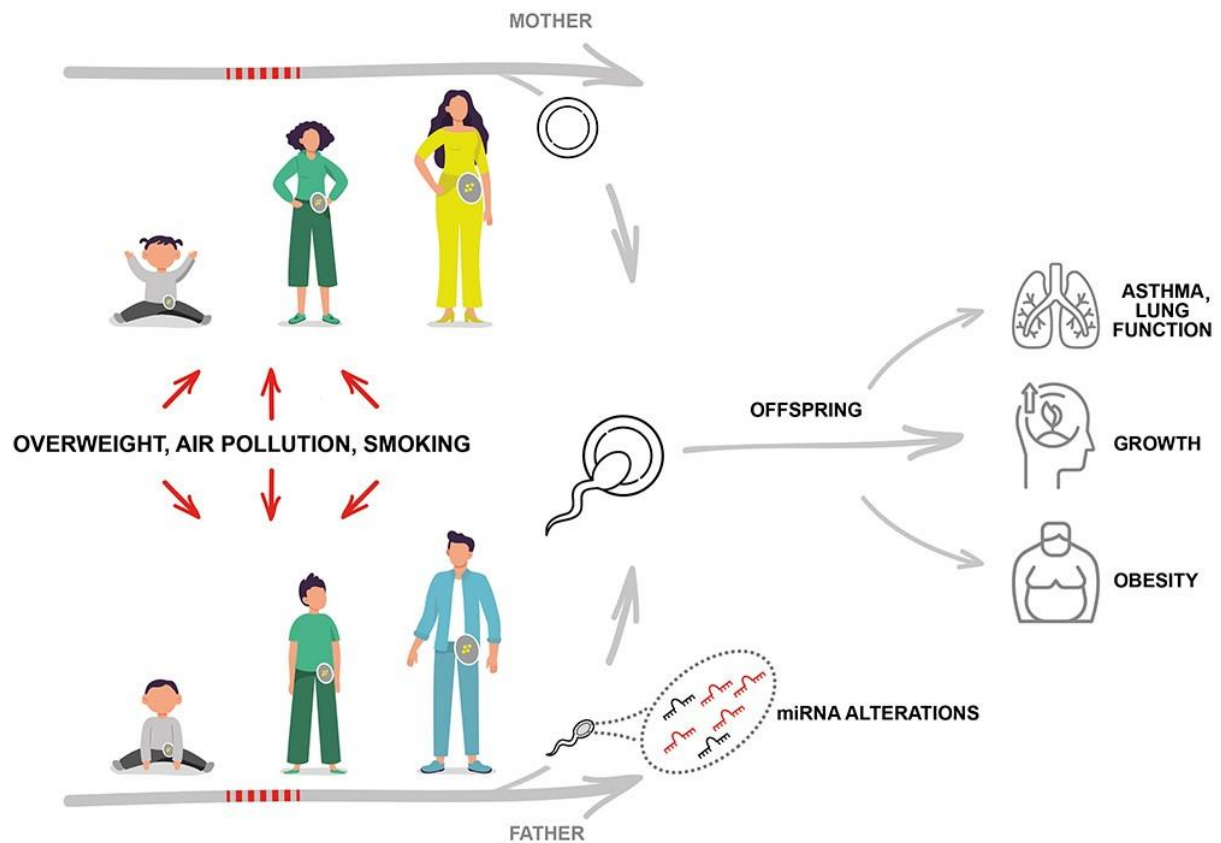
<sup>3</sup> Svanes C, Holloway JW, Krauss-Etschmann S, Preconception origins of asthma, allergies and lung function: The influence of previous generations on the respiratory health of our children. Volume 293, Issue 5, May 2023, Pages 531-549

<sup>4</sup> Accordini S, Calciano L, Johannessen A, Benediktsdóttir B, Bertelsen RJ, Bråbäck L, Dharmage SC, Forsberg B, Gómez Real F, Holloway JW, Holm M, Janson C, Jøgi NO, Jøgi R, Malinowski A, Marcon A, Martínez-Moratalla Rovira J, Sánchez-Ramos JL, Schlünssen V, Torén K, Jarvis D, Svanes C. Prenatal and prepubertal exposures to tobacco smoke in men may cause lower lung function in future offspring: a three-generation study using a causal modelling approach. *Eur Respir J.* 2021;58(4):2002791. doi: 10.1183/13993003.02791-2020.

<sup>5</sup> Liu J, Bowatte G, Pham J, Perret JL, Holloway JW, Lowe AJ, Burgess JA, Svanes C, Thomas P, Russell MA, Erbas B, Lodge CJ, Martino D, Mishra GD, Abramson MJ, Walters EH, Dharmage SC, Bui DS. Pre-pubertal smoke exposure of fathers and increased risk of offspring asthma: a possible transgenerational effect. *Eur Respir J.* 2022;60(4):2200257. doi: 10.1183/13993003.00257-2022.

<sup>6</sup> Svanes C, Bertelsen RJ, Accordini S, Holloway JW, Júlíusson P, Boateng E, Krauss-Etschmann S, Schlünssen V, Gómez-Real F, Skulstad SM. Exposures during the prepuberty period and future offspring's health: evidence from human cohort studies. *Biol Reprod.* 2021;105(3):667-680. doi: 10.1093/biolre/ioab158.

<sup>7</sup> Rehan VK, Liu J, Sakurai R, Torday JS. Perinatal nicotine-induced transgenerational asthma. *Am J Physiol Lung Cell Mol Physiol.* 2013;305(7):L501-7. doi: 10.1152/ajplung.00078.2013



Exposures such as overweight and smoking may influence individuals as well as their germ cells, during any life stage from early life and through reproductive life. The germ cells may transfer a “fingerprint” of exposure effects that may influence offspring phenotype. Prepuberty may be a time window of particular susceptibility. (Reproduced from Svanes C et al. 2021).

The concept that our lifestyles and behaviours may influence the health of our future children represents a new paradigm. This raises concerns for future health in decades to come with respect to harmful exposures but may also open for radical rethinking of preventive strategies that may improve health in multiple generations, reverse the imprint of our parents and forefathers, and underpin strategies that can break the vicious circle of propagation of health inequalities across generations.