

Vaping – clearing the smoke?

NPRANG

Manchester

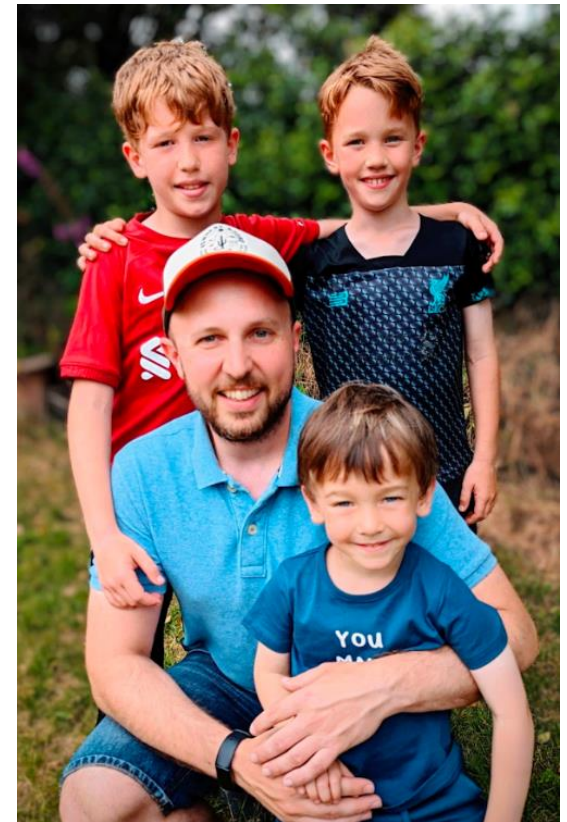
15th Nov 2024

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- Clinical Lead for CURE Liverpool
- Tobacco Control Clinical Lead CMCA



- No relevant disclosures.....



SHOULD YOU BRING
___ TO ___?

	A KNIFE FIGHT	A GUN FIGHT	A WOOD FIRE	AN OIL FIRE
A KNIFE				
A GUN				
WATER				
A LID				

- Should you bring an Adult consultant to NPRANG?
- Should you bring a Liverpool fan to Manchester?



Lies, damn lies + statistics

- Needs of the many outweigh the needs of the few
- Concept of Harm, Harm reduction, Perception of harm
- An Absence of evidence (of harm) \neq evidence of absence (of harm)



Guess you picked the wrong presentation
to quit smoking

No evidence for Parachutes.....



**Parachute use to prevent death and major trauma related to gravitational challenge:
systematic review of randomised controlled trials**

BMJ 2003 ; 327 doi: <https://doi.org/10.1136/bmj.327.7429.1459> (Published 18 December 2003)

Cite this as: *BMJ* 2003;327:1459

- People who parachute jump get injured and some die despite the parachute
- Case reports of people surviving when parachutes fail
- No RCTs to prove they are more effective than not using one.....

Parachute use to prevent death and major trauma when jumping from aircraft: randomized controlled trial

BMJ 2018 ; 363 doi: <https://doi.org/10.1136/bmj.k5094> (Published 13 December 2018)

Cite this as: *BMJ* 2018;363:k5094

- n=23 to jump from plane
- Randomised to Parachute or Backpack (unblinded)
- Parachute use did not significantly reduce death or major injury (0% for parachute v 0% for control; $P > 0.9$)

participants included in the study were on aircraft at significantly:

- lower altitude (mean of 0.6 m for participants v mean of 9146 m for non-participants; $P < 0.001$)
- lower velocity (mean of 0 km/h v mean of 800 km/h; $P < 0.001$).



NPRANG Vaping presentation

- Skip to the end
- Wake up quiz - Guess the condition
- Smoking and vaping
- Mixed messages
- Clearing the smoke



The key points about vaping (e-cigarettes) can be easily summarised.
If you smoke, vaping is much safer; if you don't smoke, don't vape.

Sir Chris Whitty

Guess the condition....

- Genetic and environmental component, family history ++
- Chronic condition – most often starting in paediatric population but relapses and remits throughout life
- Treatment is highly effective although often poor understanding of how to use it properly which effects outcome
- If left untreated can become life-threatening
- Significant cause of morbidity and mortality
- Expert support from appropriately trained staff improves outcomes

What's the Harm (Reduction)

- Is it a problem? How big of a problem?
- Littlies Indirect – second hand exposure
- Bigguns - Direct

- A lot of **BUTs**



Comparison is the thief of joy.....

T Roosevelt

Smoking

- Kills more people than all the other preventable diseases **added together** [Alcohol, Drugs, suicide, RTCs, HIV, fires]
- Household smoking increases risk child will become a smoker
- 1.8 million households where children exposed to smoke
- Average age 12 – almost all adult smokers start <18
- No safe level
- Second hand smoking risk factor for Asthma deaths
 - Concerns about 3rd hand smoke exposure
- One of the biggest drivers of childhood poverty in the UK



“There’s always money for cigarettes”

Are eCigs useful to help people quit smoking?

- Yes BUT

Electronic Cigarettes are effective smoking cessation tool

- **Almost double rate of abstinence vs other forms of NRT [18% vs 9.9%] at 1yr**
 - Quick acting form of nicotine replacement that mimics mode of delivery of cigarettes much better than other forms of NRT
- **80% of the Vaping group were still addicted to nicotine at 12months vs 9% long-term NRT use for other forms**
- Subsequent Cochrane review nicotine containing vapes most effective

55% of people who successfully quit smoking in last 5 years used a vape in that quit attempt

GB Adult ex-smokers who quit smoking in the last five years using a vape	Currently vape	Have quit vaping	Can't recall/invalid answer	ALL
%	64%	29%	7%	100%
Approx. number of people*	1.7 million	800K	200K	2.7 million

Average duration of vaping ~1 year

Is Second hand exposure safer?

Using Cotinine concentration as biomarker for nicotine absorption:

- Children exposed to SHS 0.494ug/L
 - Children exposed to SHV 0.081ug/L ↓83.6%
 - Children with no exposure 0.016ug/L ↓96.7%
-
- Given vaping - no side-stream + far fewer/much lower levels of toxicants/carcinogens can extrapolate significant reduction in risk of second hand exposure [if exclusive use of ENDS]

Second hand vape exposure - Asthma

- Second hand ENDS aerosol exposure was associated with higher odds of reporting an asthma attack in the past 12 months, adjusting for covariates (adjusted OR, 1.27; 95% CI, 1.11-1.47) – survey data n=11,830
- People with asthma have reported vape as a trigger. More research is needed for us to know if second-hand vapour is harmful or not.

Childhood Poverty

Average cost per year

- Vaping ~£600-700
- Smoking (20 a day) £4000-4500/yr

Other things to consider

- Very small survey data suggests adults less concerned about vaping around children

What should we say to household smokers who ask about vaping?

- Passive smoking is highly dangerous to developing lungs
- Children exposed to smoking have poorer health outcomes
- Children who live with a smoker are more likely to take up the habit and suffer ill-health throughout their whole lives
- Vaping can be an effective tool to quit smoking but other forms of NRT seem easier to wean off
- Vapes contain much lower levels of harmful substances & less of its released for children to breathe in
- We therefore think there is very little harmful effect from passive exposure to electronic cigarettes (compared to cigarette smoke)
- Please don't vape around children – it can trigger asthma, and risks normalising it
- Vaping generally costs a lot less than using cigarettes

Children and young adults vaping.....

At least
95%
less harmful



Still safer than smoking.....

Comparison of fatality rates of various high-risk sports

Sport	Death per activity	Deaths per 100 000 activities
Base jumping	2317 jumps	43.16
CCR diving	18 750 dives	5.33
Sky diving	101 000 jumps	0.99
Hang gliding	116 000 flights	0.86
Horse riding	175 418 rides	0.57
Scuba diving	200 000 dives	0.50
Smoking	1 in 3 smokers	202

Toxic compound	Conventional cigarette (μg in mainstream smoke) [35]	Electronic cigarette (μg per 15 puffs)	Average ratio (conventional vs. electronic cigarette)
Formaldehyde	1.6-52	0.20-5.61	9
Acetaldehyde	52-140	0.11-1.36	450
Acrolein	2.4-62	0.07-4.19	15
Toluene	8.3-70	0.02-0.63	120
NNN	0.005-0.19	0.00008-0.00043	380
NNK	0.012-0.11	0.00011-0.00283	40

"I'm going to grow a hundred years old!"

...and possibly she may—for the amazing strides of medical science have added years to life expectancy

• It's a fact—a warm and wonderful fact—that this five-year-old child, or your own child, has a life expectancy almost a whole decade longer than was her mother's, and a good 18 to 20 years longer than that of her grandmother. Not only the expectation of a longer life, but of a life by far healthier. Thank medical science for that. Thank your doctor and thousands like him... toiling ceaselessly, often with little or no public recognition... that you and yours may enjoy a longer, better life.



According to a recent Nationwide survey:

More Doctors smoke Camels than any other cigarette!

NOT ONE but three outstanding independent research organizations conducted this survey. And they asked not just a few thousand, but 113,597, doctors from coast to coast to name the cigarette they themselves preferred to smoke.

The answers came in by the thousands... from general physicians, diagnosticians, surgeons—yes, and nose and throat specialists too. The most-named brand was Camel.

If you are not now smoking Camels, try them. Compare them critically. See how the full, rich flavor of Camel's costlier tobaccos suits your taste. See how the cool mildness of a Camel suits your throat. Let your "T-Zone" tell you (see right).

CAMELS *Costlier Tobaccos*



THE "T-ZONE" TEST WILL TELL YOU



The "T-Zone"—T for taste and T for throat—is your own proving ground for any cigarette. Only your taste and throat can decide which cigarette tastes best to you... how it affects your throat. On the basis of the experience of many, many millions of smokers, we believe Camels will suit your "T-Zone" to a "T!"

R. J. REYNOLDS TOBACCO CO. Winston-Salem, N. C.

FACE THE FACTS!

When tempted to over-indulge

"Reach for a Lucky instead"



Be moderate—be moderate in all things, even in smoking. Avoid that luster shadow* by avoiding over-indulgence, if you would maintain that medium, ever-pleasant figure. "Reach for a Lucky instead."



Lucky Strike, the finest Cigarette you ever smoked, made of the finest tobacco—The Cream of the Crop—"IT'S TOASTED." **Lucky Strike** has an extra, secret heating process. Everyone knows that heat purifies and so 20,679 physicians say that **Lucky** are less irritating to your throat.

"It's toasted"

Your Throat Protection — against irritation — against cough.

*We do not say smoking **Lucky** reduces flesh. We do say when tempted to over-indulge, "Reach for a **Lucky** instead."

Dr. Batty's



For Your Health
ASTHMA CIGARETTES

SINCE 1882

*For the temporary relief of
paroxysms of asthma*

EFFECTIVELY TREATS:

ASTHMA, HAY FEVER, FOUL BREATH
ALL DISEASES OF THE THROAT,
HEAD COLDS, CANKER SORES
BRONCHIAL IRRITATIONS

NOT RECOMMENDED FOR CHILDREN UNDER 6.

NEWS

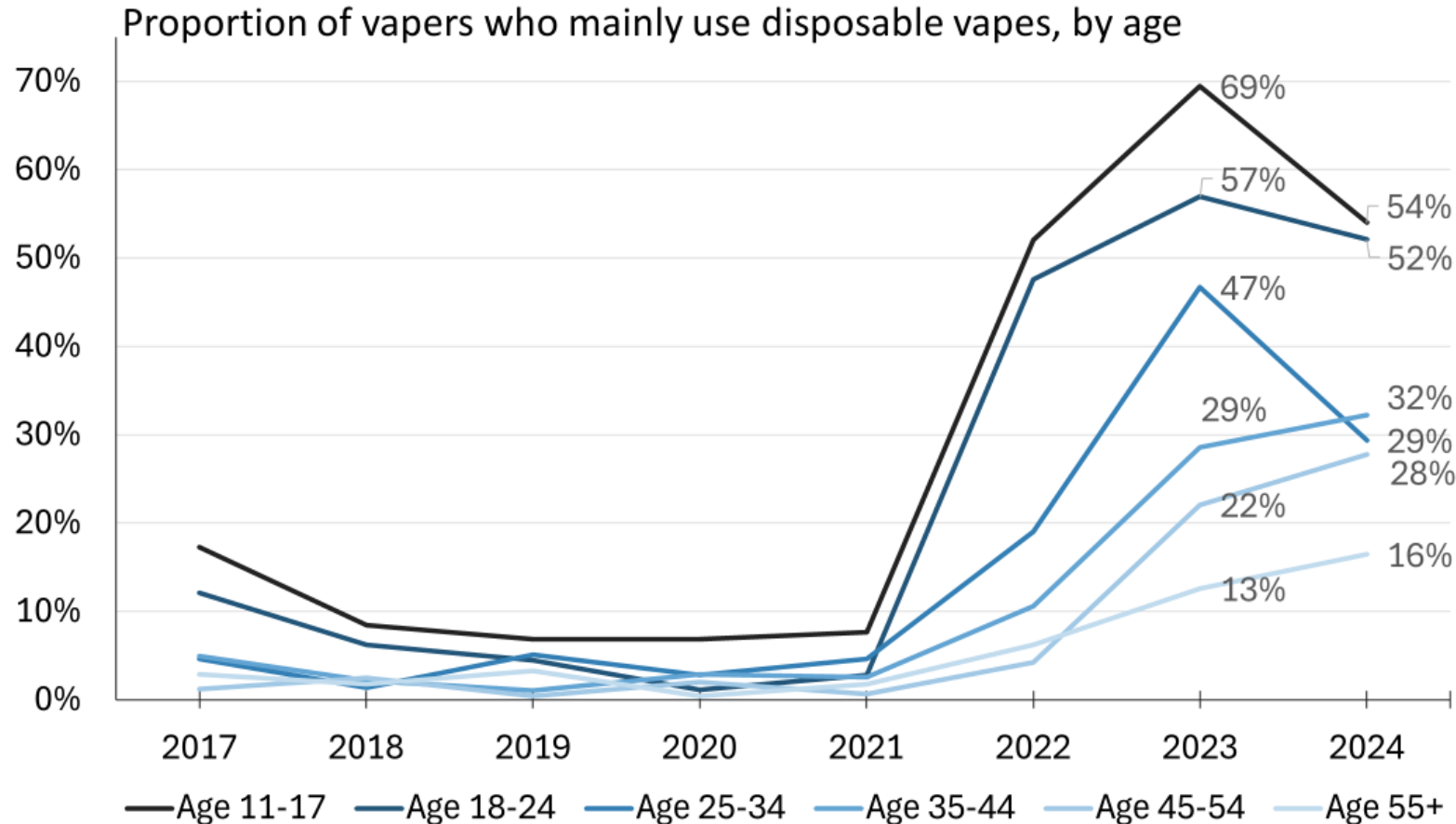
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Vapes '95% safer' than cigarettes messaging backfired

- the 95% safe messaging was "a very unwise thing to have done and it's opened the door to significant chaos".
- The "switch to vape" message has had an unintended consequence of driving children to take up e-cigs, he says.

Rapid rise in youth vaping 2021-23 associated with growth in use of disposable vapes

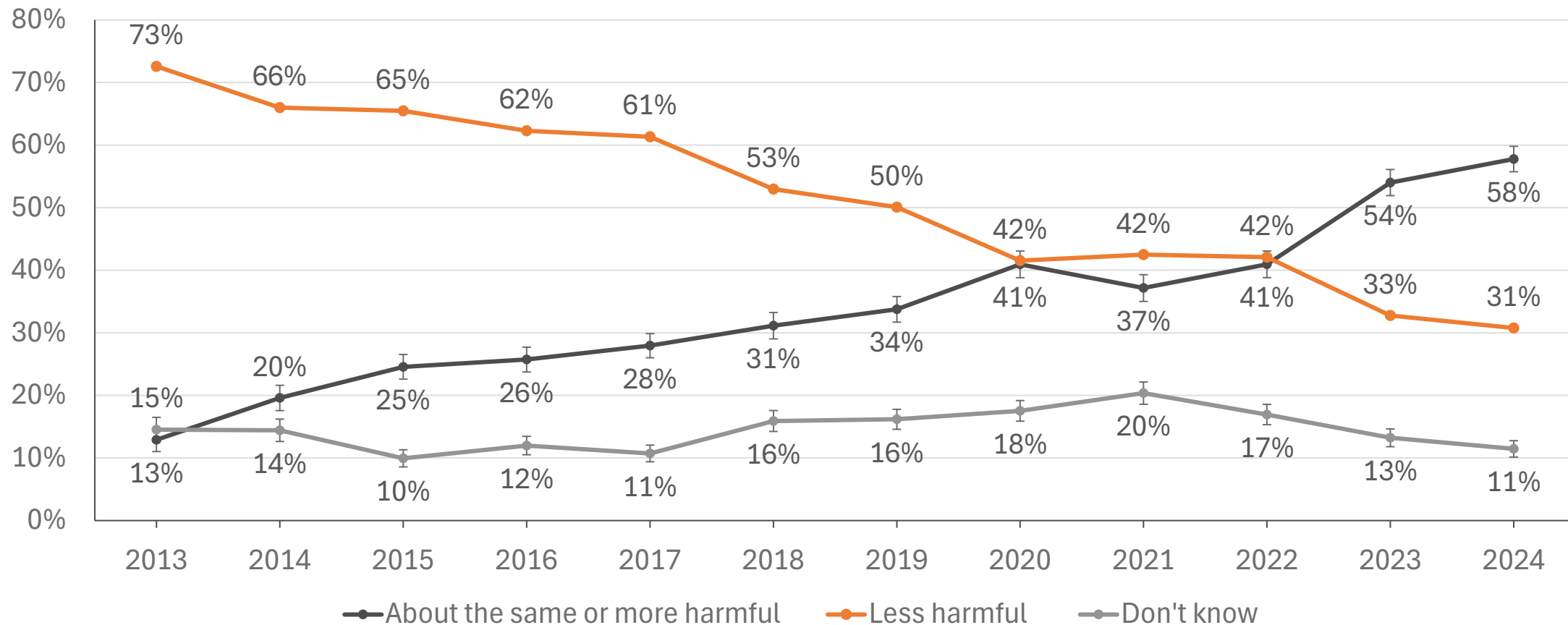


- Disposable vapes are most popular with young adult vapers 18-24 (52%) and youth vapers 11-17 (54%)
- Age gradient so only 16% of 55+ vapers mainly use disposable vapes
- All age groups show a significant increase in disposable use from 2021 to 2023
- That rise seems to have peaked

ASH Smokefree GB Adult Surveys 2017-2024, ASH Smokefree GB Youth Surveys 2017-2024. Unweighted base: Adult and Youth (11-17) current vapers, excluding only tried once or twice and don't know freq. of use

11-17 perceptions of harm worsened

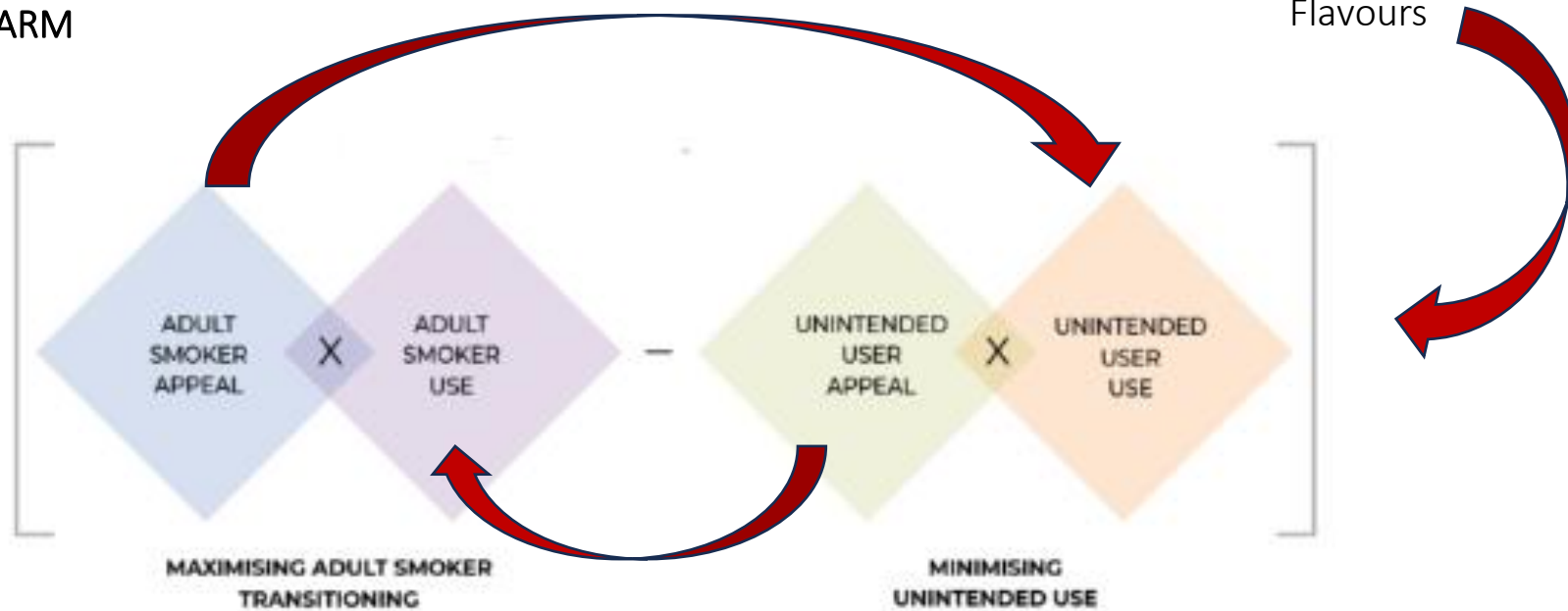
Compared to cigarettes, do you think vapes (e-cigarettes) are more or less harmful to the person using them, or is there no difference? GB youth (11-17) 2024



Short vs Medium vs Long



PERCEPTION OF HARM



The Evolution of E-Cigarette, or Vaping, Products



1st

GENERATION

Disposable
e-cigarettes



2nd

GENERATION

E-cigarette
with prefilled
or refillable
cartridge



3rd

GENERATION

Tanks or Mods
(refillable)



4th

GENERATION

Pod Mods
(prefilled
or refillable)

Electronic Cigarettes today



Breeze Pro

EB Design

Puff Bar

Hyde



Box Mod



NOVO



Suorin Drop



Suorin Air



Vape Juice



JUUL



Vuse Vibe/Alto



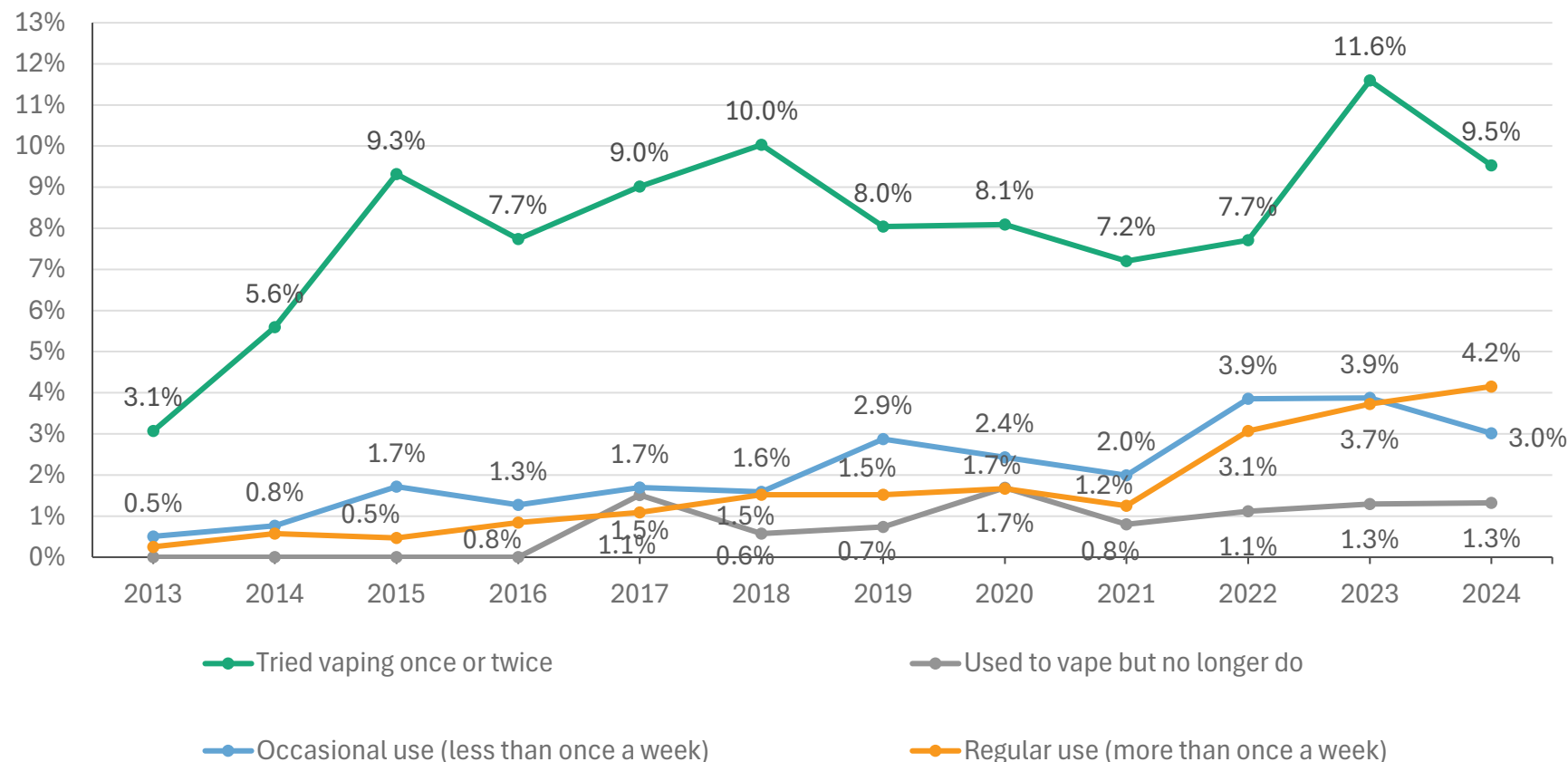
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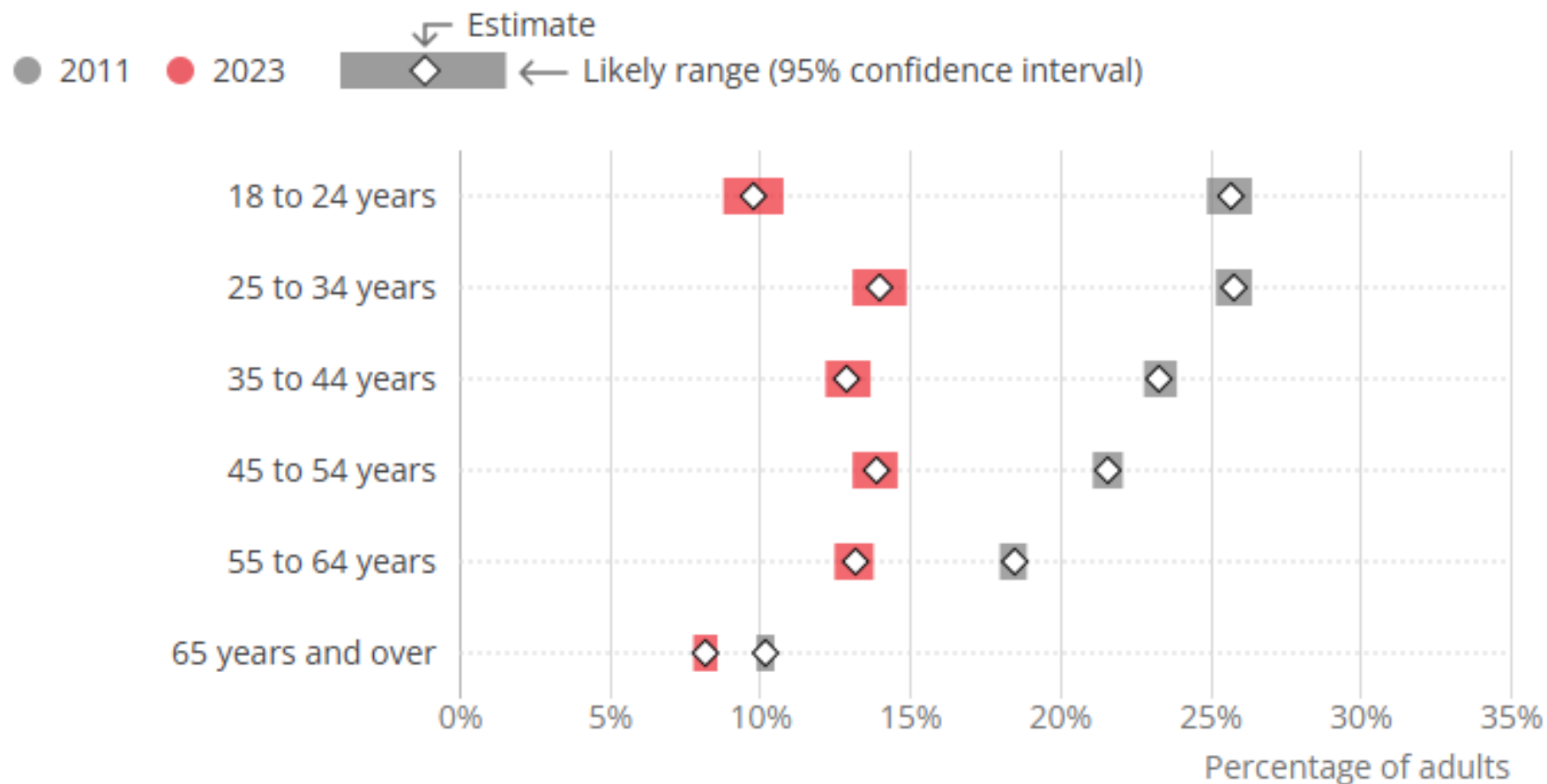
Changes in patterns of youth vaping

SURVEY ~2000 11-17 yr old GB use of vapes



- 1 in 5 (18%) tried
- >1 in 3 by 18
- 2004 first year that the rate of regular use is higher than occasional use

Smoking rates are falling fastest in younger cohort



Source: Annual Population Survey from the Office for National Statistics

Compare

- Most adults that vape are using ENDS instead/reduce smoking
- Most children just trying it (main reason curiosity/peer pressure)

Mixed messages.....safer not safe – good if you do, bad if you don't

Message to smokers.....

- Although nicotine is addictive, it is relatively harmless to health
- Nicotine itself does not cause cancer, lung disease, heart disease or stroke and has been used safely for many years in medicines to help people stop smoking

Pregnancy



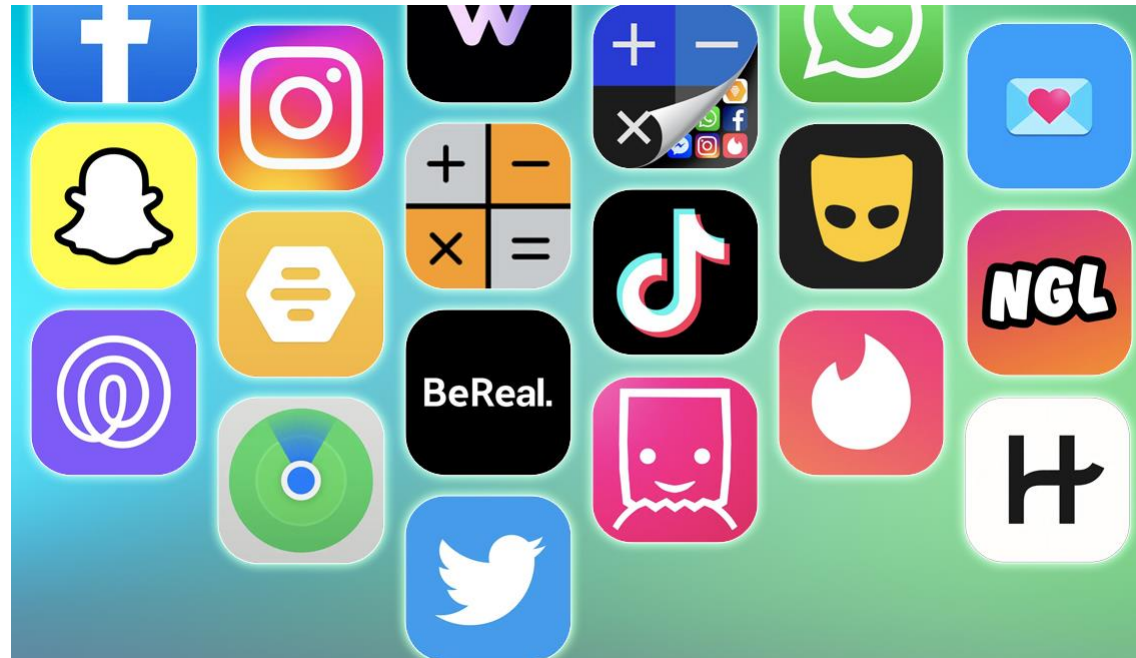
- Detrimental effects of smoking on the developing infant are established - premature, low birth weight, birth defects, SIDs, future risk of bronchitis, pneumonia, asthma
- SATOD 2023 -24 - 7.4% (aim is <6%)
- No different in abstinence with Ecigs vs NRT patches in pregnancy + no major difference in observed birth outcomes
 - ↑ low birthweight in NRT group [14.8% vs 9.6% RR 0.65 p 0.01]
 - Mean birthweight both groups = 3.1kg

NHS advice:

- The vapour from an e-cigarette does contain some of the potentially harmful chemicals found in cigarette smoke, but at much lower levels.
- If using an e-cigarette helps you to stop smoking, it is much safer for you and your baby than continuing to smoke

Message to young people

- Nicotine damages brain development
 - Concerns from smoking during adolescence – anxiety, depression, reward pathways (addictive behaviour).....attention span.....



Consider.....

- Nicotine acts centrally in the brain but the (insufficient) evidence in humans is not clear
- NRT is licensed from 12yrs old – **BUT** never intended to be used long-term

Talking to young people about vaping

- Vaping is substantially less harmful than smoking but that does not mean it is harmless.
- Vaping is a way to stop smoking – not something for non-smokers, especially children and young people
- Vaping might trigger your asthma
- Vaping exposes users to some toxins, and we do not yet know what the risks might be in the longer term.
- Most vapes contain nicotine, which is an addictive substance that can be hard to stop using once you have started.
- Nicotine is more risky for young people than for adults, as evidence suggests the developing brain is more sensitive to its addictive effects.
- In the UK, it is against the law to sell nicotine vaping products to under-18s or for adults to buy them on their behalf.
- Some disposable vapes on sale are illegal and do not meet UK safety regulations. They can contain high levels of harmful substances.

Advice

- Experimenting with Vaping is common – we need to discuss this
- We need to have tailored conversations with Adult smokers caring for children (?separately) + children about smoking and vaping
- Address misconceptions – we don't want people to smoke instead
- Acknowledge gaps in evidence but focus on what we know – particularly how dangerous smoking is
- Do you have a pathway for smoking cessation?

Choofing a shatter – *Nic* names

- Atty: Short for "atomizer", a key component of an e-cigarette that converts e-liquid to vapor
- Mods: A modification of a standard vape that's larger and heavier, designed for a more powerful vaping experience
- Dabbing Pens: A common term for cannabis and THC vapor products
- Carts: Short for "cartridges", a common term for cannabis and THC vapor products
- Pods: Small vaping devices that can be refilled with e-liquid or are pre-filled
- Blanks: A slang term for empty disposable vapes
- Batt: Short for "battery"
- Cloud: Vapor produced by a vape
- Sauce – slang for e-juice
- Zero/Stealth – inhaling without releasing



The key points about vaping (e-cigarettes) can be easily summarised.
If you smoke, vaping is much safer; if you don't smoke, don't vape.

Sir Chris Whitty



**Understand the assignment:
If you smoke, vaping hits different; if you don't smoke, vaping is
sticky.**

Sir Skibidi Rizz