

# E-cigarettes and Children, what does the evidence tell us?

Deborah Arnott  
Chief Executive  
Action on Smoking and Health

ASH receives funding from:



CANCER  
RESEARCH  
UK



British Heart  
Foundation

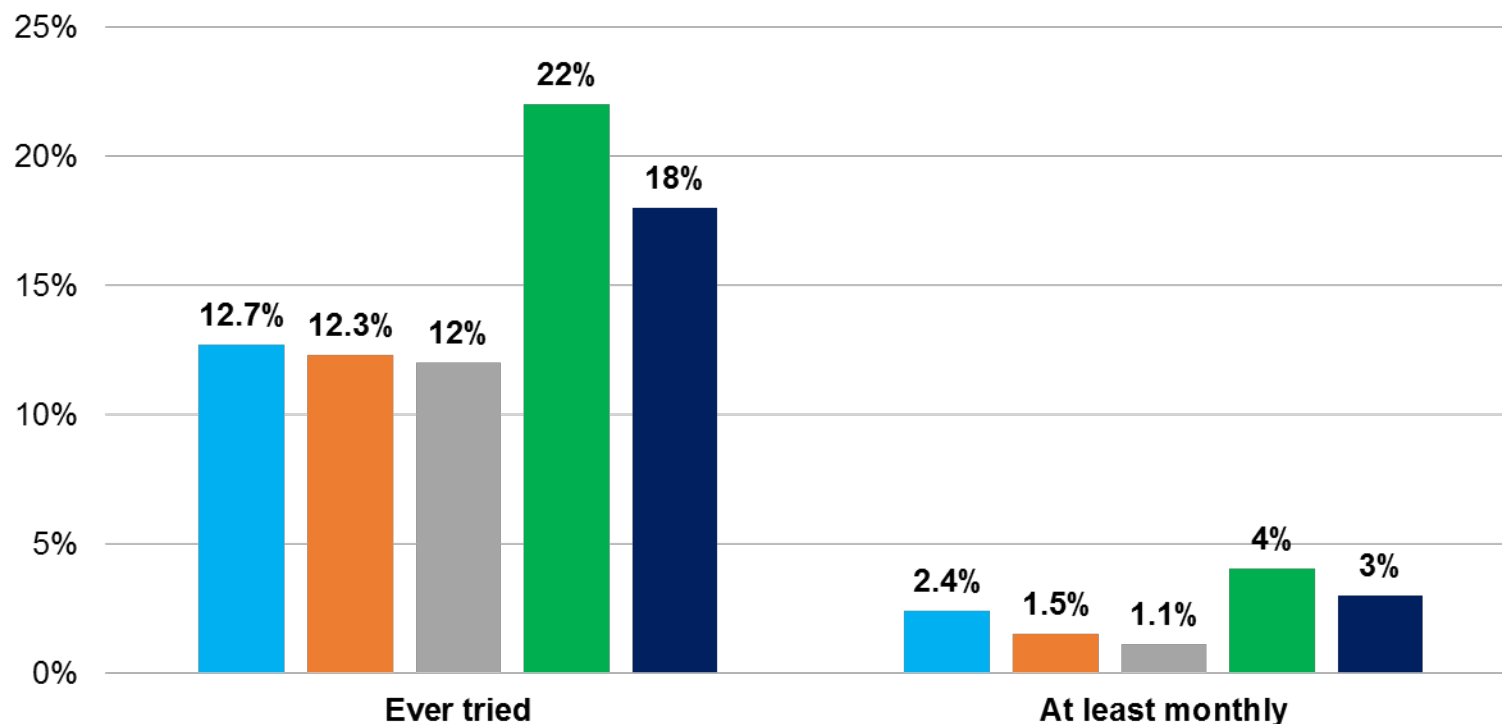
**ash.**  
action on smoking and health

# What would a gateway effect look like?

1. Established use in never smokers
2. Established use across young people
3. Growing use across young people
4. Rising smoking rates

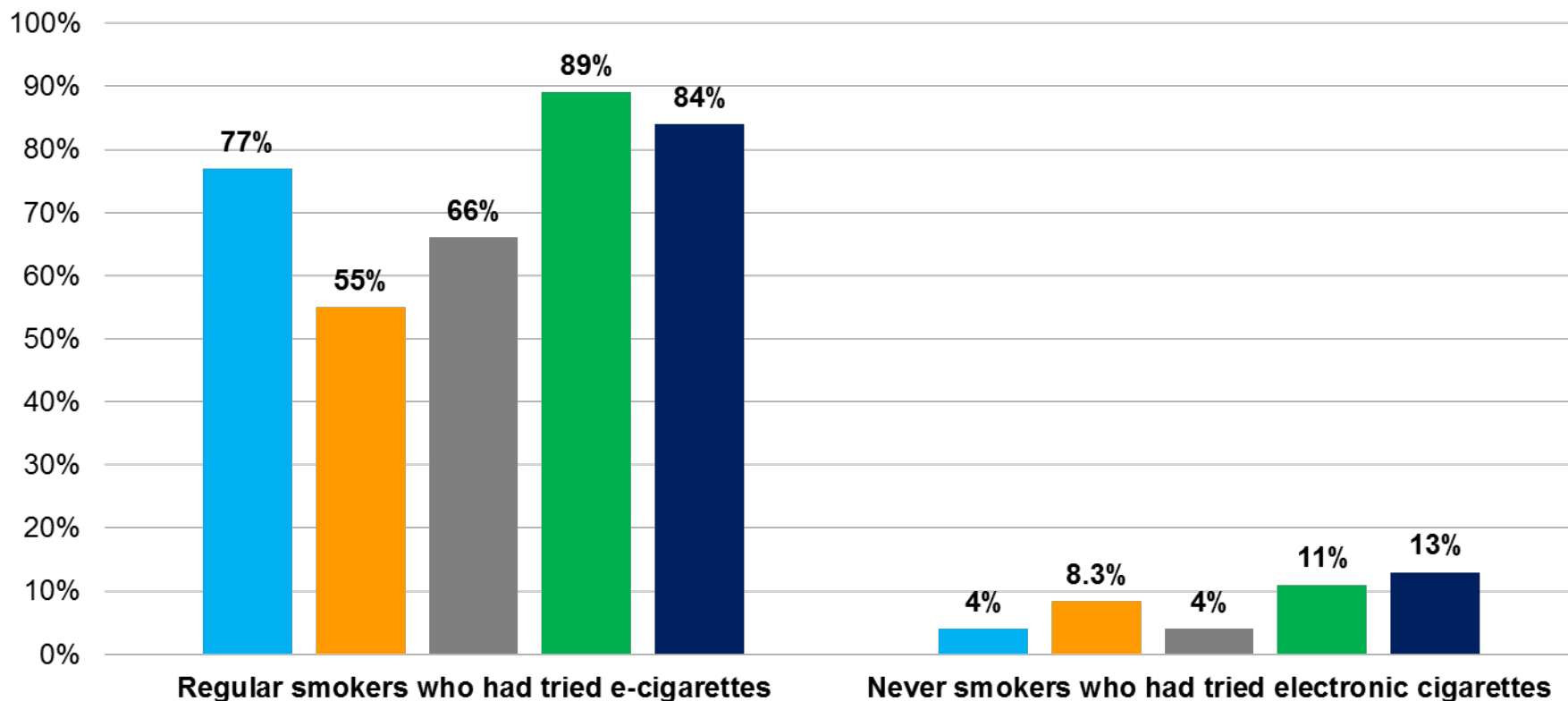
# Data from the UK

## Youth use of electronic cigarettes



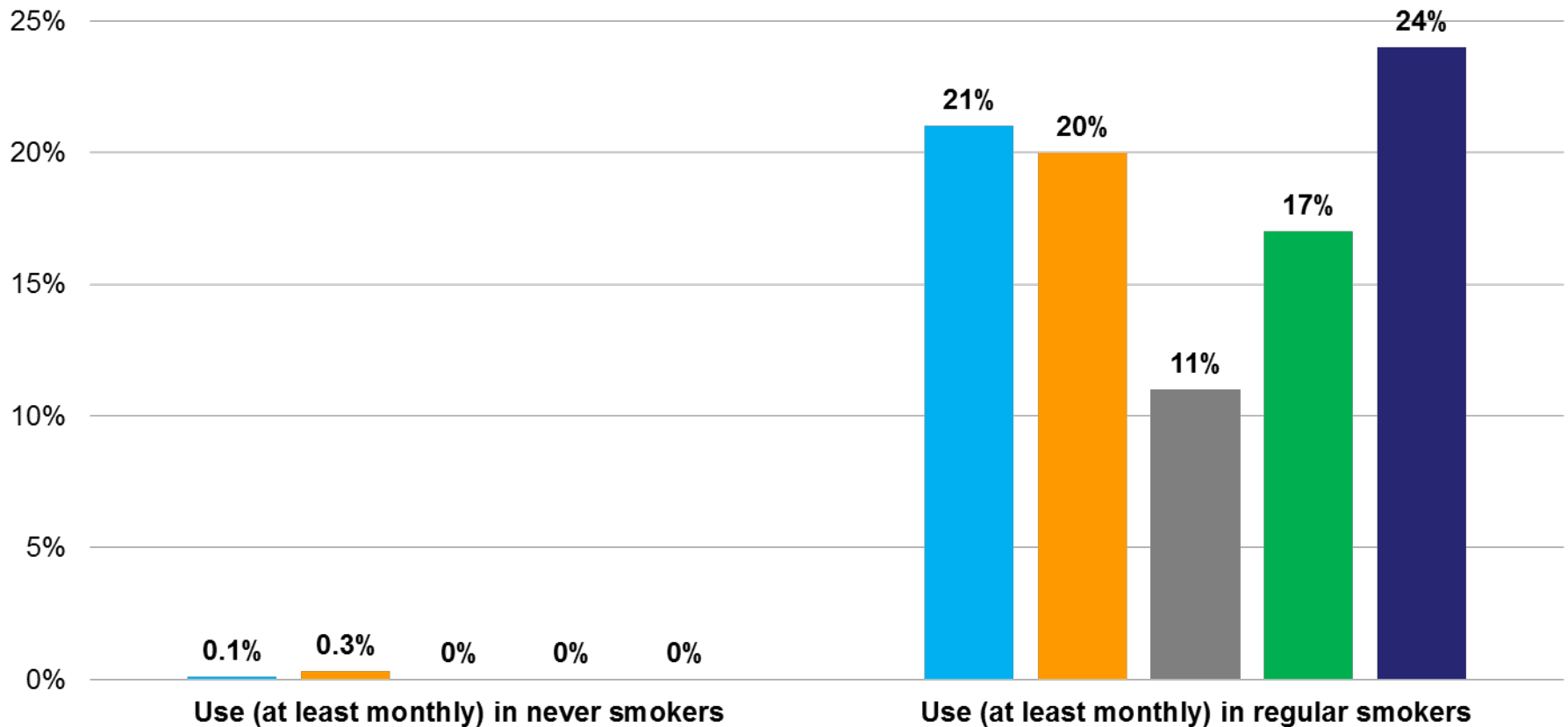
- ASH Smokefree GB youth survey (11-18 years), 2015
- Health Behaviour in School-aged Children, Wales (11-16 years), 2013 - 2014
- SALSUS Scotland survey (15 & 13 year olds), 2013
- The smoking, drinking and drug use survey (11-15 year olds), 2014
- What about YOUTH Survey (15 year olds), 2014

## Ever use of electronic cigarette use by smoking status



- ASH Smokefree GB youth survey (11-18 years), 2015
- Health Behaviour in School-aged Children, Wales (11-16 years), 2013 - 2014
- SALSUS Scotland survey (13 & 15 year olds), 2013
- The smoking, drinking and drug use survey (11-15 year olds), 2014
- What about YOUTH Survey (15 year olds), 2014

## Use at least monthly by smoking status



- ASH Smokefree GB youth survey (11-18 years), 2015
- Health Behaviour in School-aged Children, Wales (11-16 years), 2013 - 2014
- SALSUS Scotland survey (15 & 13 year olds), 2013
- The smoking, drinking and drug use survey (11-15 year olds), 2014
- What about YOUth Survey (15 year olds), 2014

# Risky behaviours

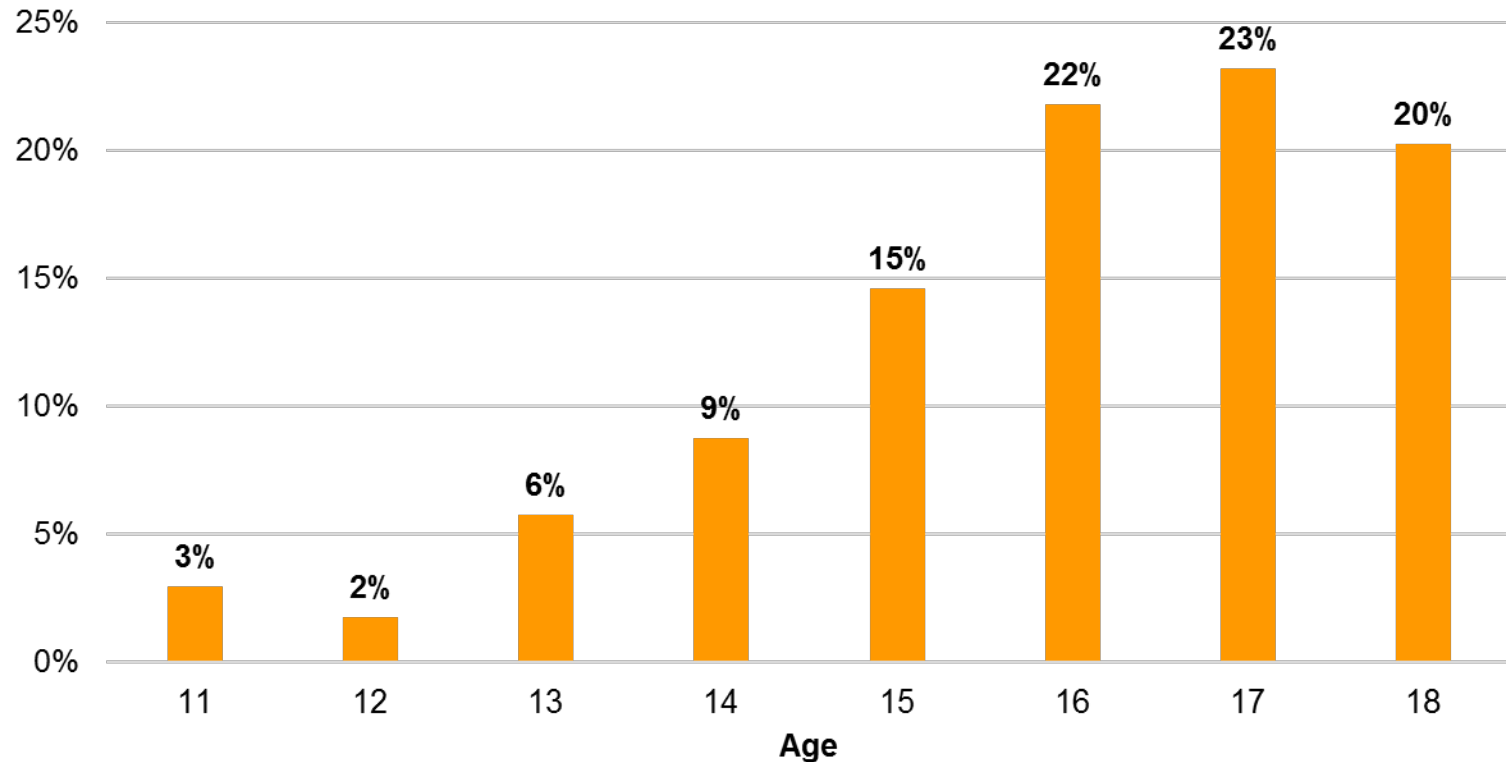
- There is an established strong association between youth smoking and other risky behaviours (including alcohol, drug misuse, truancy etc.)

**Hughes et al. (2015)**

**Associations between e-cigarette access and smoking and drinking behaviours in teenagers** **BMC Public Health**

- E-cigarette access was independently associated with male gender, parental smoking and students' alcohol use.
- Compared with non-drinkers, teenagers that drank alcohol at least weekly and binge drank were more likely to have accessed e-cigarettes, with this association particularly strong among never-smokers.
- Among drinkers, e-cigarette access was related to: drinking to get drunk, alcohol-related violence, consumption of spirits; self-purchase of alcohol from shops or supermarkets; and accessing alcohol by recruiting adult proxy purchasers outside shops.

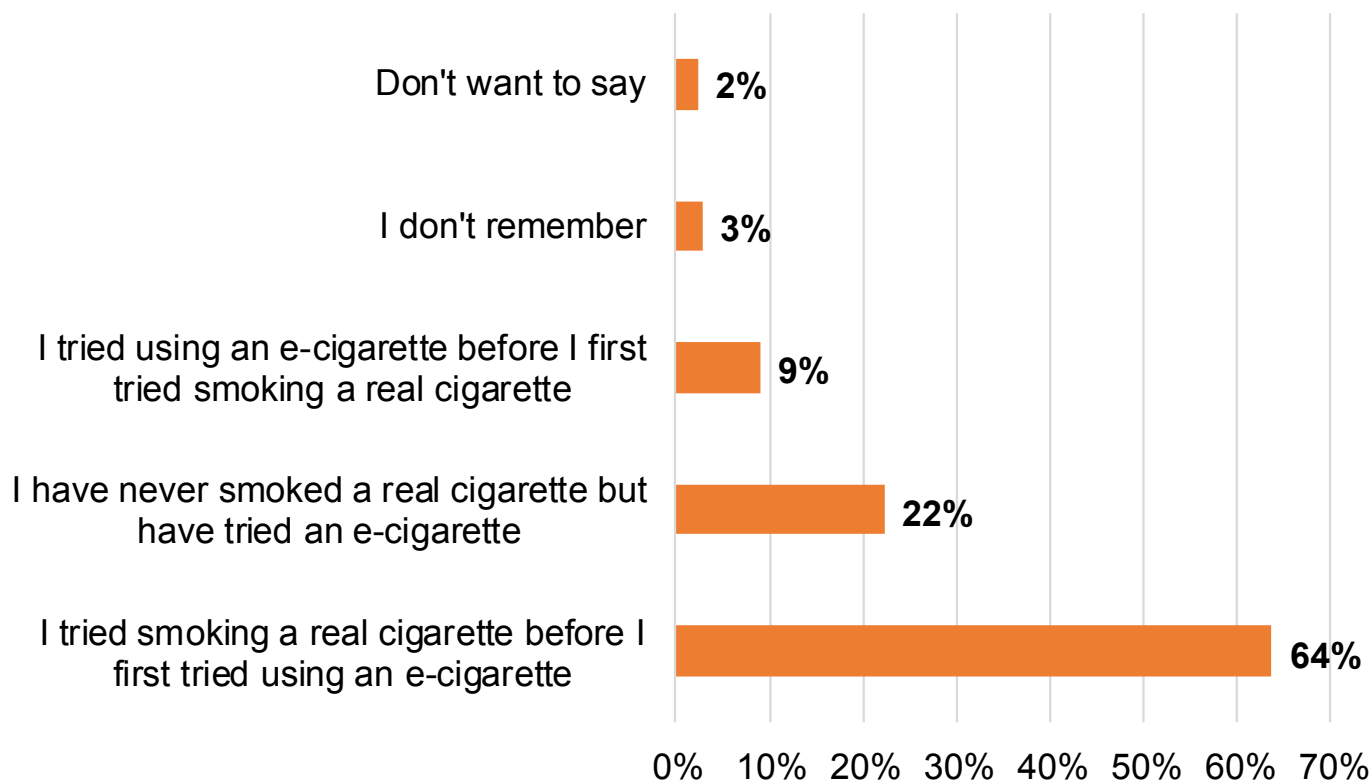
## Ever use of electronic cigarettes by age



**ASH Smokefree GB Youth survey, 2015**

***Unweighted base: All 11-18 year olds (2291)***

## Which products are young people using first? (11 – 18 year olds)



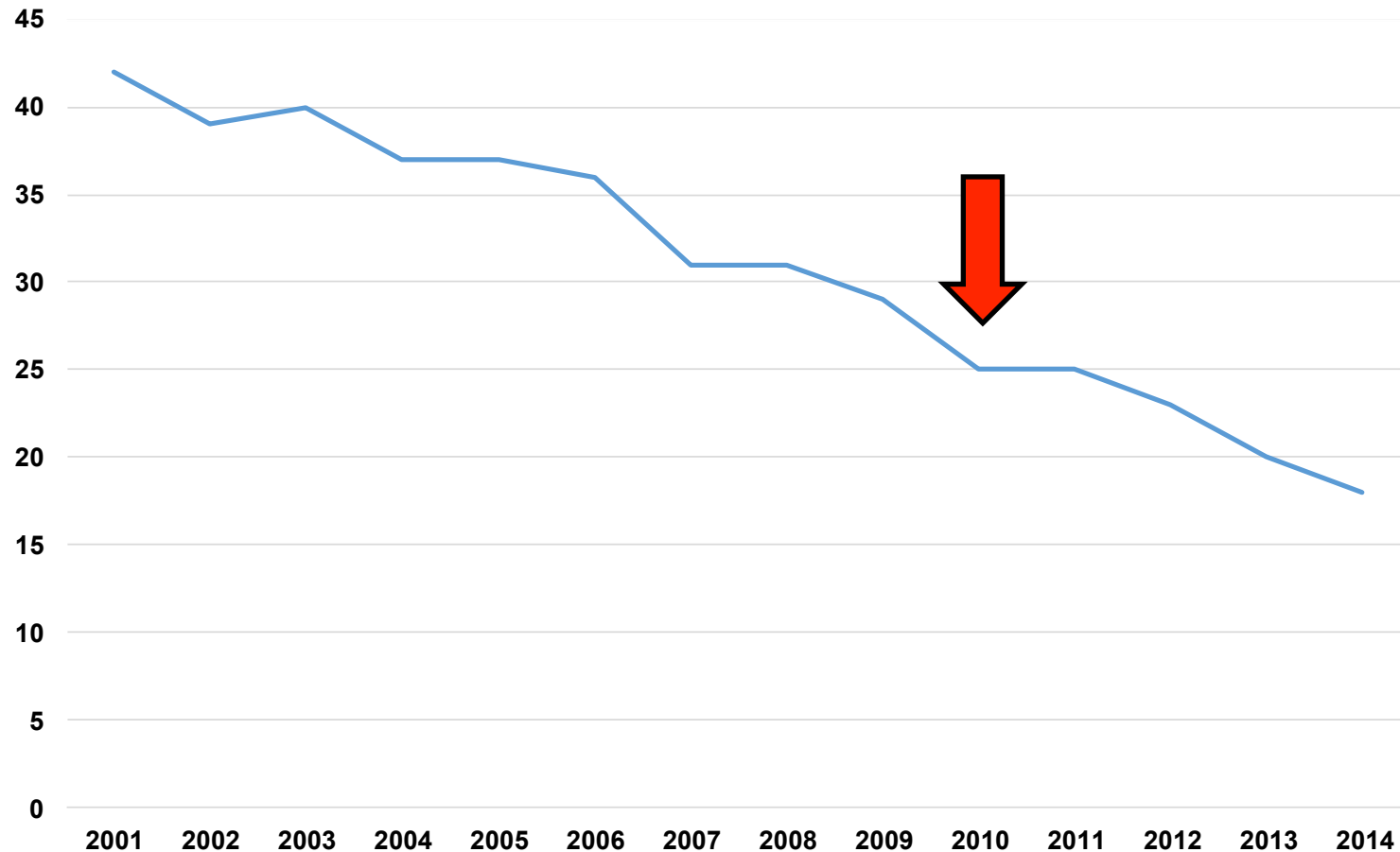
**ASH Smokefree GB Youth survey, 2015**

***Unweighted base: (301)***



# Youth smoking in England

11-15 year old ever smoked



# Data from other countries

- Rapidly growing body of research on the prevalence of EC use in young people at the country level.
- Common pattern worldwide = very high awareness of EC and an increase in trial of these products among young people.
- Estimates of prevalence of current use of EC vary widely. Most estimates indicate less than 3% of young people currently or recently used EC but highest in Poland (30%).
- **However** comparison is difficult due to factors including “inconsistent measurements of use... and different age ranges involved” (PHE, 2015).
- In addition, many studies have been poorly reported.

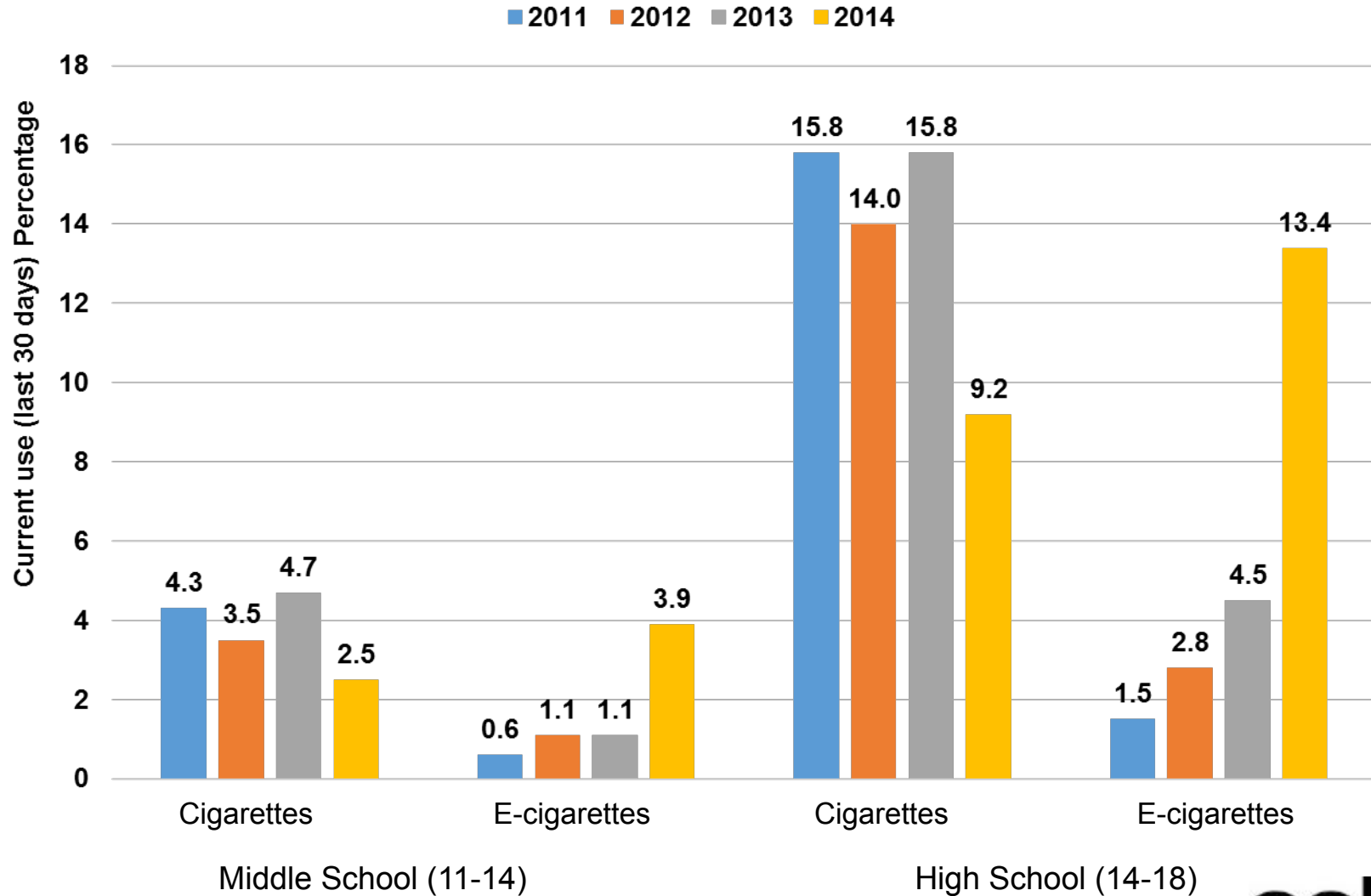
# United States

## CDC - National Youth Tobacco Survey (2014)

- Found that past 30-day use of EC had increased among middle and high school students.
- However, press release didn't mention cigarette smoking had continued to decline during this period and was now at a **22 year low in the US**.
- PHE 2015 Evidence Update: *“These findings strongly suggest that EC use is not encouraging uptake of cigarette smoking.”*



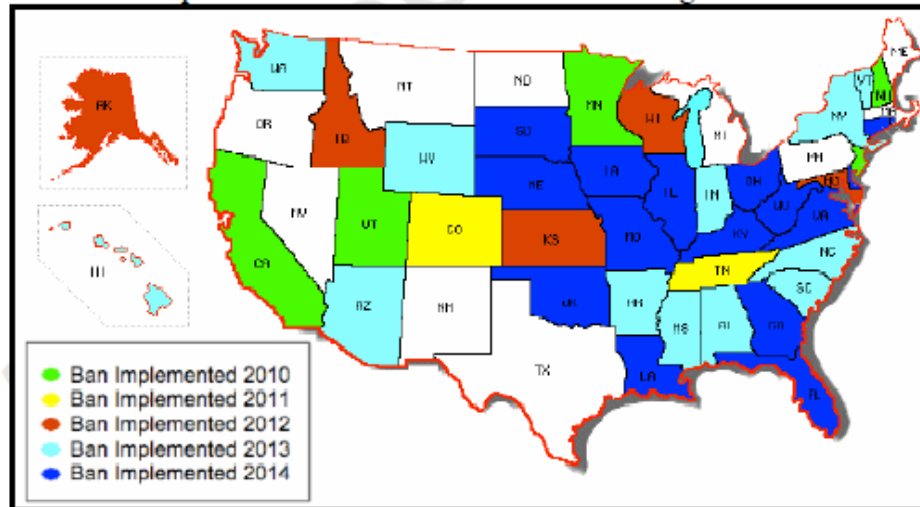
# CDC - National Youth Tobacco Survey (2014)



# Possible unintended consequences: US

Study compared changing smoking rates in US states with and without bans on e-cigarette sales to minors.

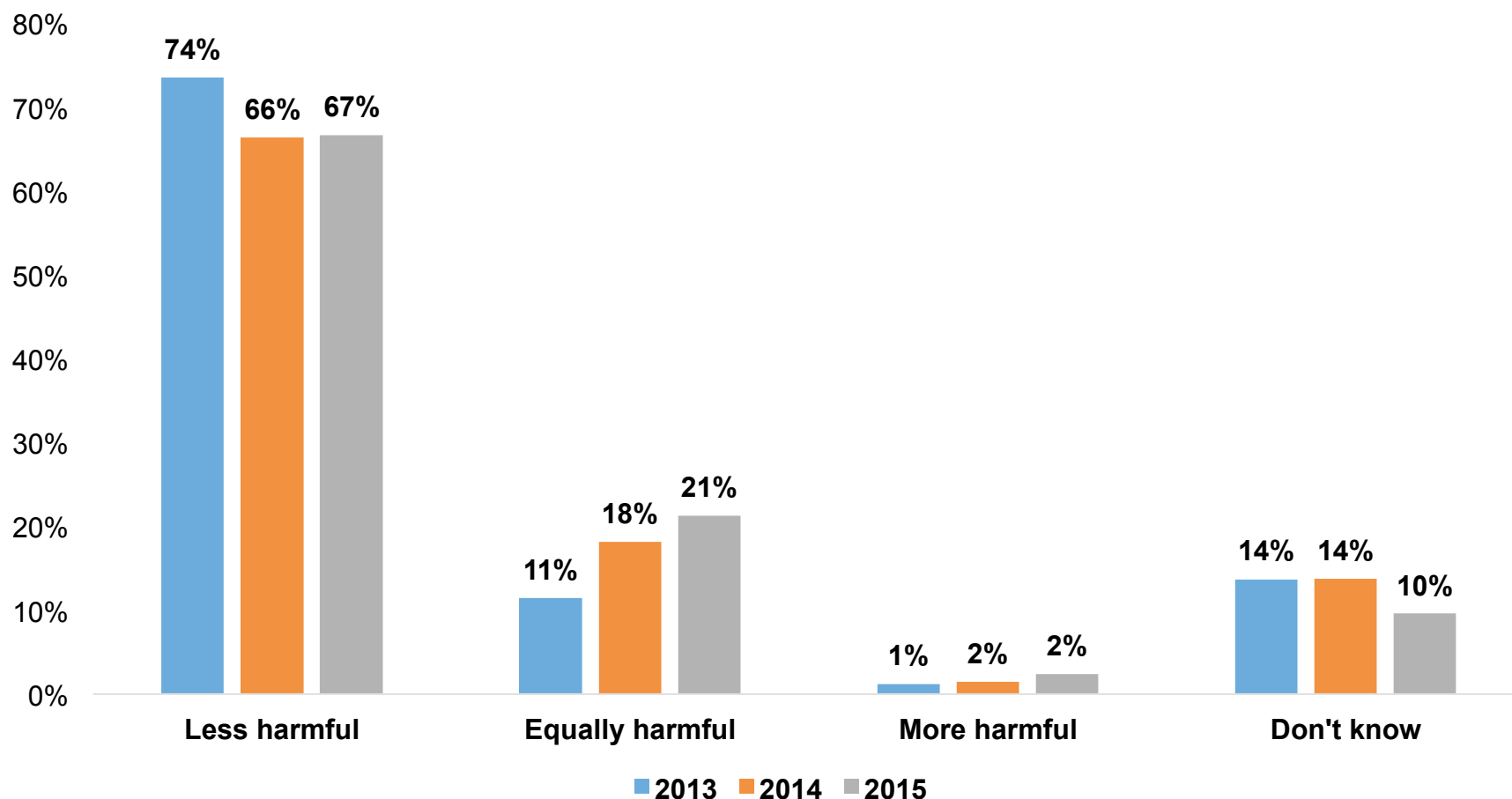
Figure 1: State Implementation of Bans on Electronic Cigarette Sales to Minors



## Findings:

- Smoking rates increased in the 12-17-year-old age group in states where bans on selling e-cigarettes to under-18s are in place.
- Bans yield a statistically significant 0.9 percentage point increase in recent smoking in this age group, relative to states without such bans.

## Perceptions of relative harmfulness of electronic cigarettes in comparison with tobacco cigarettes



ASH Smokefree GB Youth surveys, 2013, 2014 & 2015

# Conclusions

- No evidence of a gateway effect in the UK
- Limited evidence in other jurisdictions
- Possibility that over-regulation of electronic cigarettes can have negative impact on youth smoking uptake
- Ongoing monitoring and surveillance essential