

# Vaping and smoking in England 2019

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# Topics

- Vaping-related lung disease
- Regulation for tobacco and e-cigarettes in England
- Vaping and smoking in adults
- Vaping and smoking in youth
- E-cigarettes and smoking cessation

# Vaping-related lung disease

- Over 10 million vapers in the US
- US has little regulation of vaping devices or marketing
- In the last few months, >1000 cases of illness, 18 deaths
- Reaction: Bans on specific flavours, nicotine e-cigarettes
- Information from patient surveys, liquid samples and biopsies
  - Vast majority vaped THC
  - Bought from illicit sources
  - Vitamin E acetate may be implicated
  - Acute chemical injury
- Very unlikely due to nicotine vaping or vaping of regulated products

## **Vaping Illness Update: FDA Warns Public to Stop Using Tetrahydrocannabinol (THC)-Containing Vaping Products and Any Vaping Products Obtained Off the Street**

*FDA strengthens warning to public to stop using THC-containing vaping products and any vaping products obtained off the street.*

# Regulation for tobacco and e- cigarettes in England

# Tobacco control

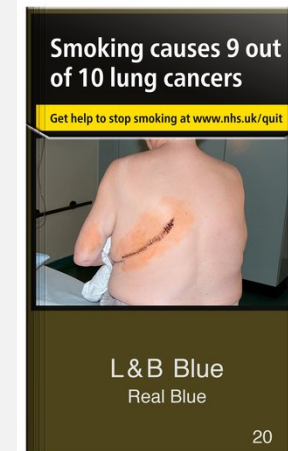
Table 4. 35 European countries ranked by total TCS score in 2016

Ranking 2016 (ranking 2013)		Country	Price (30)	Public place bans (22)	Public info campaign spending (15)	Advertising bans (13)	Health warnings (10)	Treatment (10)	Total (100)
1 (1)	–	<b>UK</b>	26	22	3	12	9	9	<b>81</b>
2 (2)	–	<b>Ireland</b>	20	22	2	13	5	8	<b>70</b>
3 (3)	–	<b>Iceland</b>	20	17	13	13	4	2	<b>69</b>
...									
...									
...									
33 (28)	▼	<b>Lux.</b>	5	15		9	1	7	<b>37</b>
33 (33)	–	<b>Germany</b>	13	11		4	5	4	<b>37</b>
35 (34)	▼	<b>Austria</b>	11	8		7	5	5	<b>36</b>

Since 2010:

Nicotine replacement therapy (patches, gums, lozenges etc) licensed for cessation attempts and harm reduction (use while smoking, cutting down, temporary abstinence)

Every year, smoking causes 78000 deaths in England (1500/week)

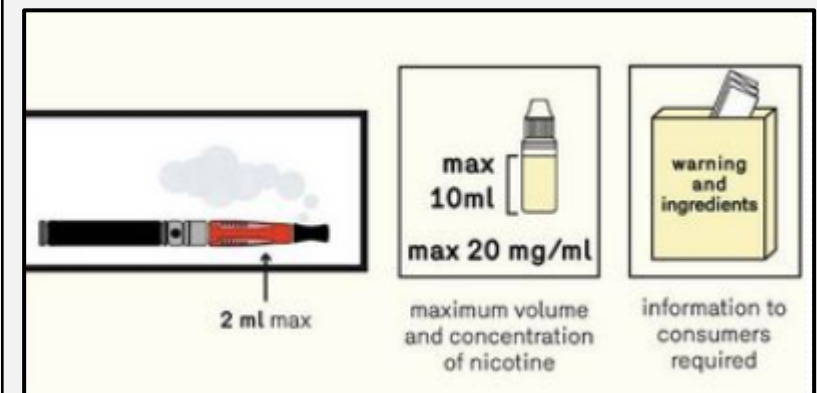


# EC regulation

- England has some of the most comprehensive regulations
- Age of sale law
- Prohibition of proxy purchasing
- EU Tobacco Products Directive translated into UK Tobacco and Related Product Regulations
  - Notification before sale, regulated by MHRA
  - Minimum standards for safety and quality, including ban on colourings, caffeine, vitamins
  - Reporting systems for side effects and safety concerns
  - Standards for information provision



Medicines &  
Healthcare products  
Regulatory Agency



# EC regulation

- Advertising regulations
  - No cross-border advertising, no print, no online
  - Allowed on buses, billboards, in cinema if
    - Socially responsible (not for ex-smokers or non-smokers)
    - Doesn't target, feature, appeal to children
    - Doesn't confuse with tobacco products
    - Doesn't make medicinal claims, careful with health claims
    - Doesn't mislead about ingredients
    - Doesn't mislead about where can be used
- Medicinal licensing route, but none yet marketed



Medicines &  
Healthcare products  
Regulatory Agency



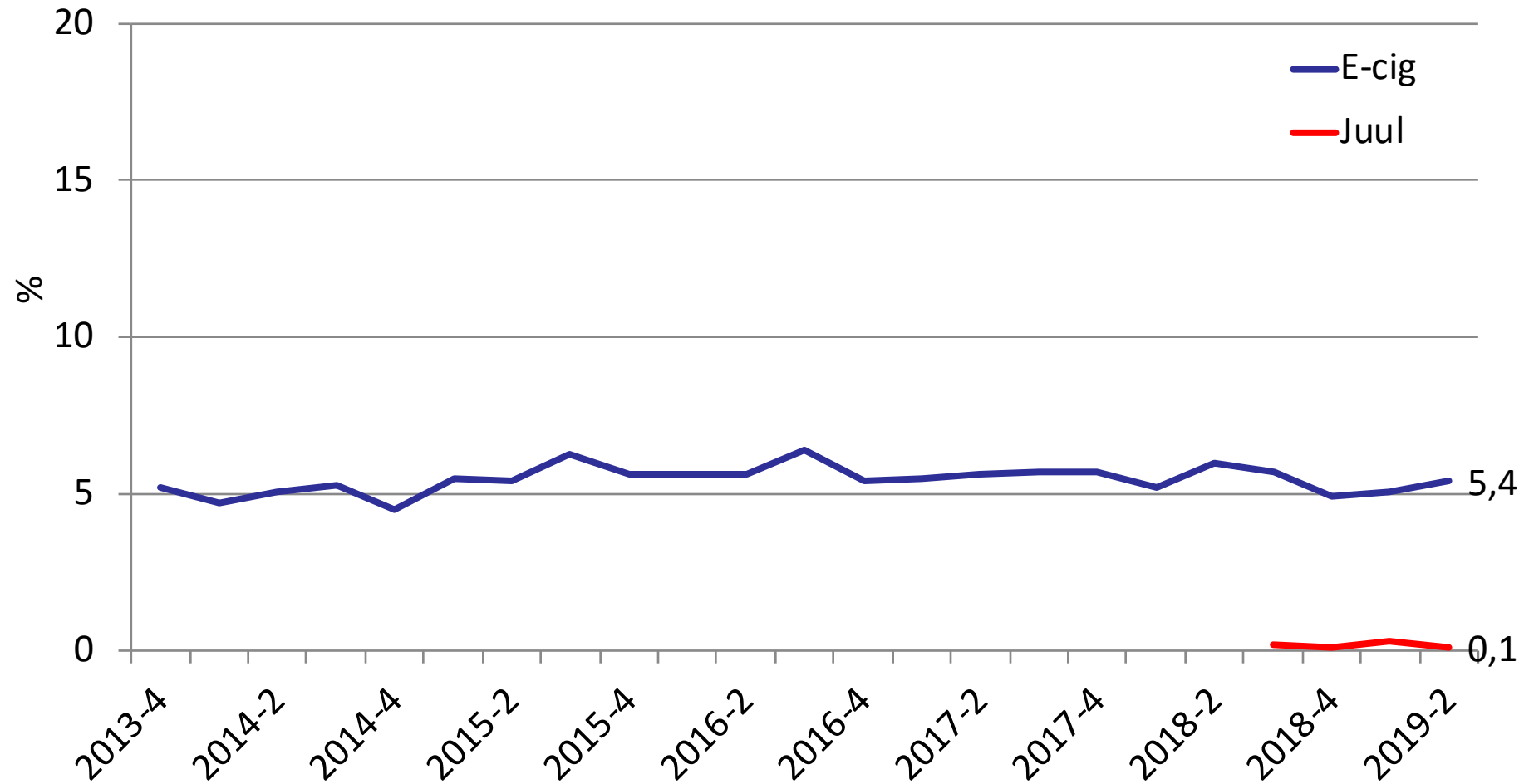
Adults (16+)

# Adult surveys



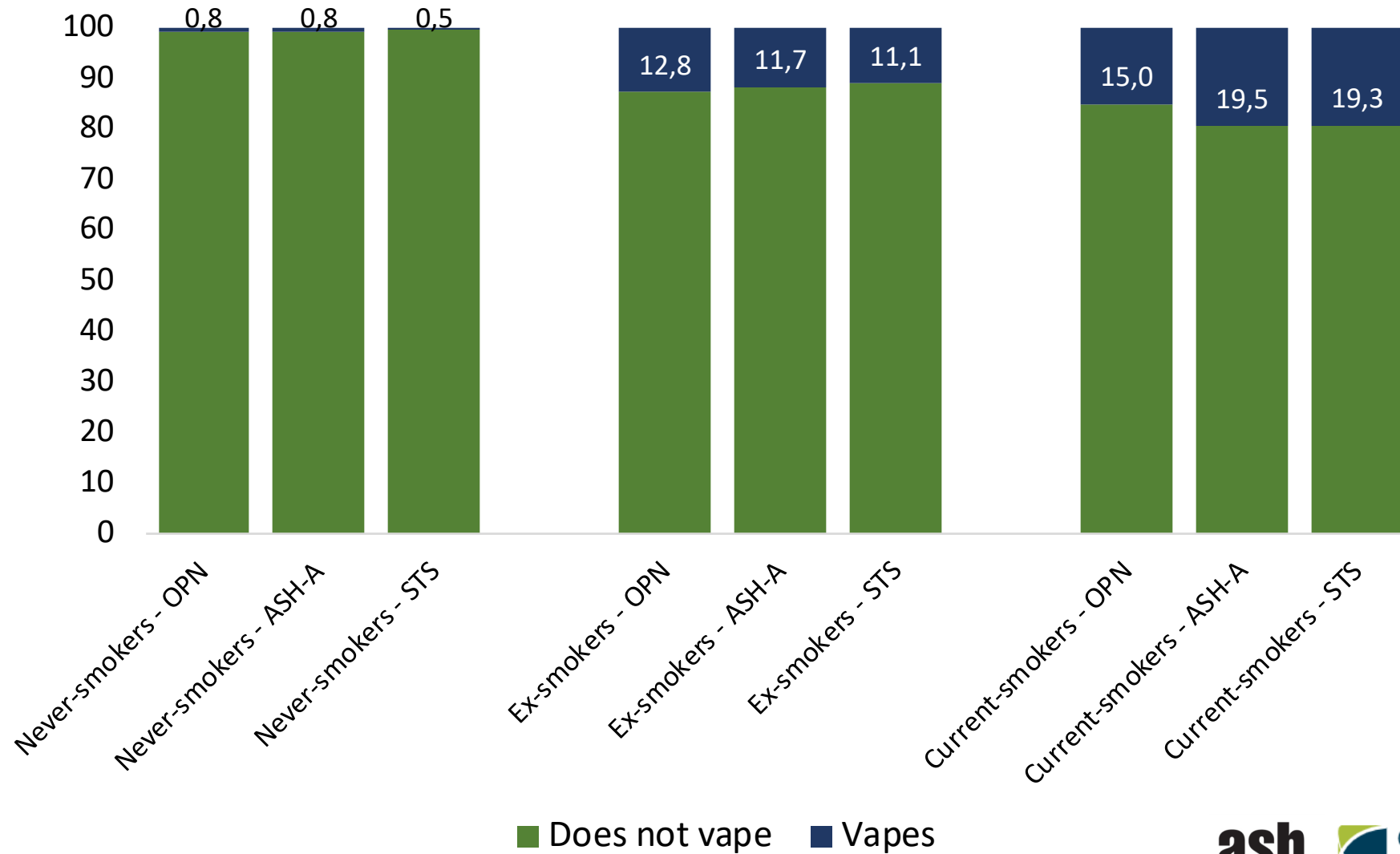
	Smoke-free Survey, adults ASH-A	Opinion and Lifestyle Survey OPN	Smoking Toolkit Study STS
Conducted for	Action on Smoking & Health	Office for National Statistics	University College London (UCL)
Data collection	YouGov, online	Household (changing to phone)	IPSOS Mori, Household
Date	Feb – Mar 2019	2018	Monthly since 2007
Location	Great Britain	Great Britain	England
Minimum age	18	16	16
Sample size	12393	8303	~1700 per month

# Prevalence of e-cigarette use, ages 16+

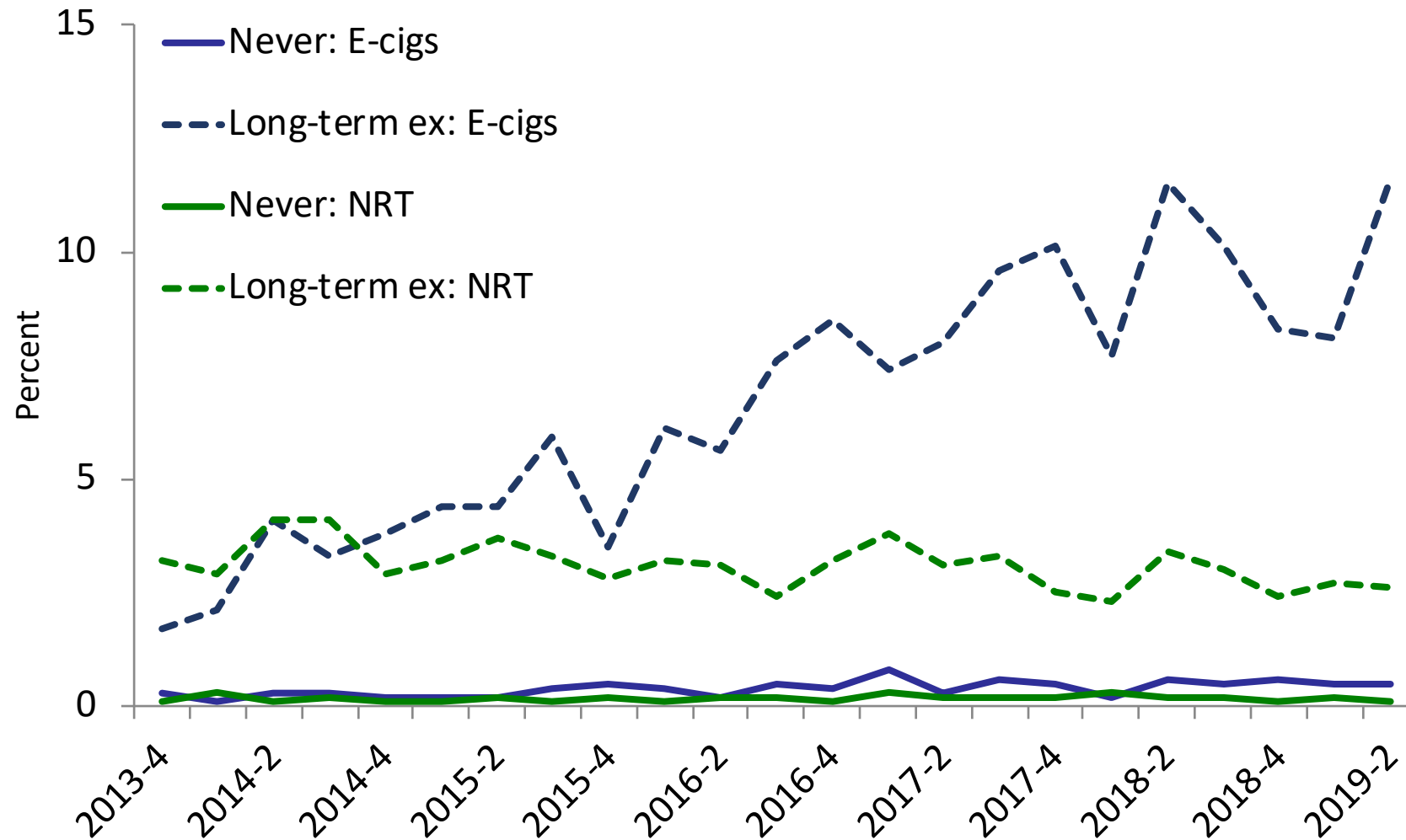


N=115320 adults from Nov 2013 (E-cig); N=20519 adults from Aug 2018 (Juul)

# E-cigarette use/vaping by smoking status

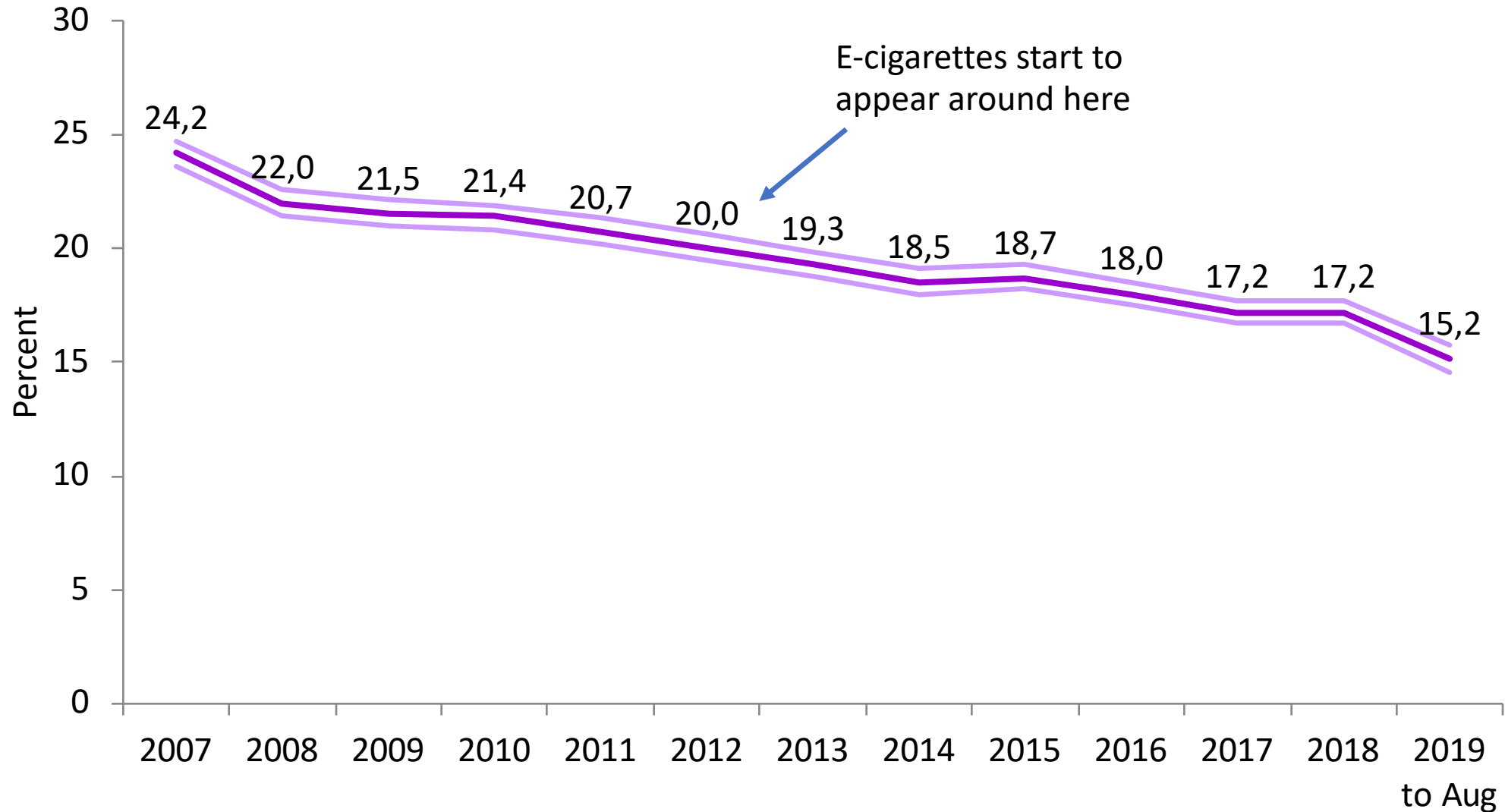


# Nicotine use by never smokers and long-term ex-smokers, 16+



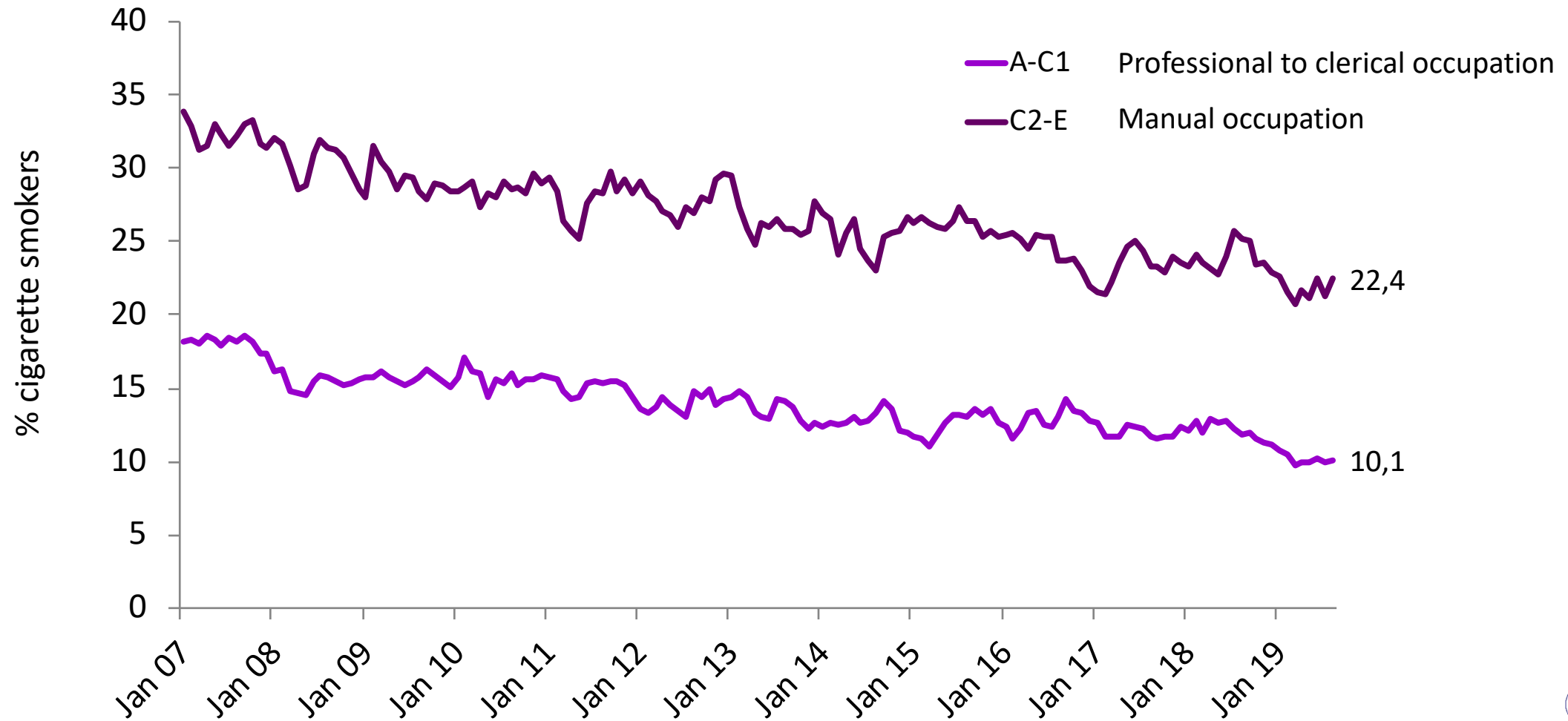
N=92928 never and long-term ex-smokers (stopped at least a year ago) from Nov 2013

# Cigarette smoking prevalence, 16+

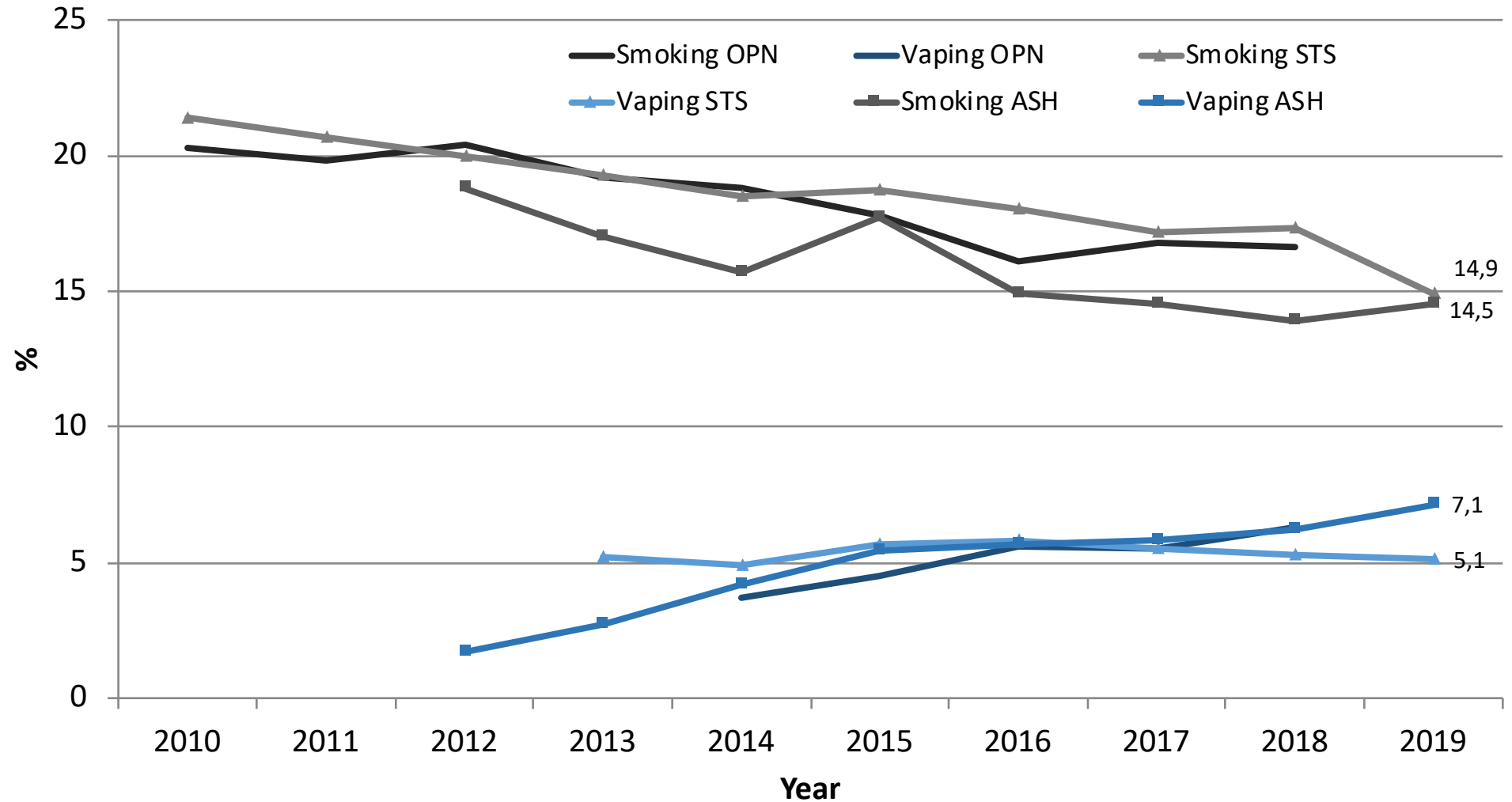


Graph shows prevalence estimate and upper and lower 95% confidence intervals

# Prevalence of cigarette smoking by social grade, 16+



# Comparison across national surveys of adults



## Notes

- Vaping includes any frequency
- Smoking of any combustibles or cigarette smoking





- Modelled on STS, but from age 14
- Started 2016, every 2 months
- Daniel Kotz, Sabrina Kastaun, Universität Düsseldorf
- <https://debrastudy.wordpress.com/>
- Kastaun S, Brown J, Brose LS, ... Kotz D. Study protocol of the German Study on Tobacco Use (DEBRA): a national household survey of smoking behaviour and cessation. [BMC Public Health 2017; 17:378](#)

Youth

# Prevalence of e-cigarette use, youth

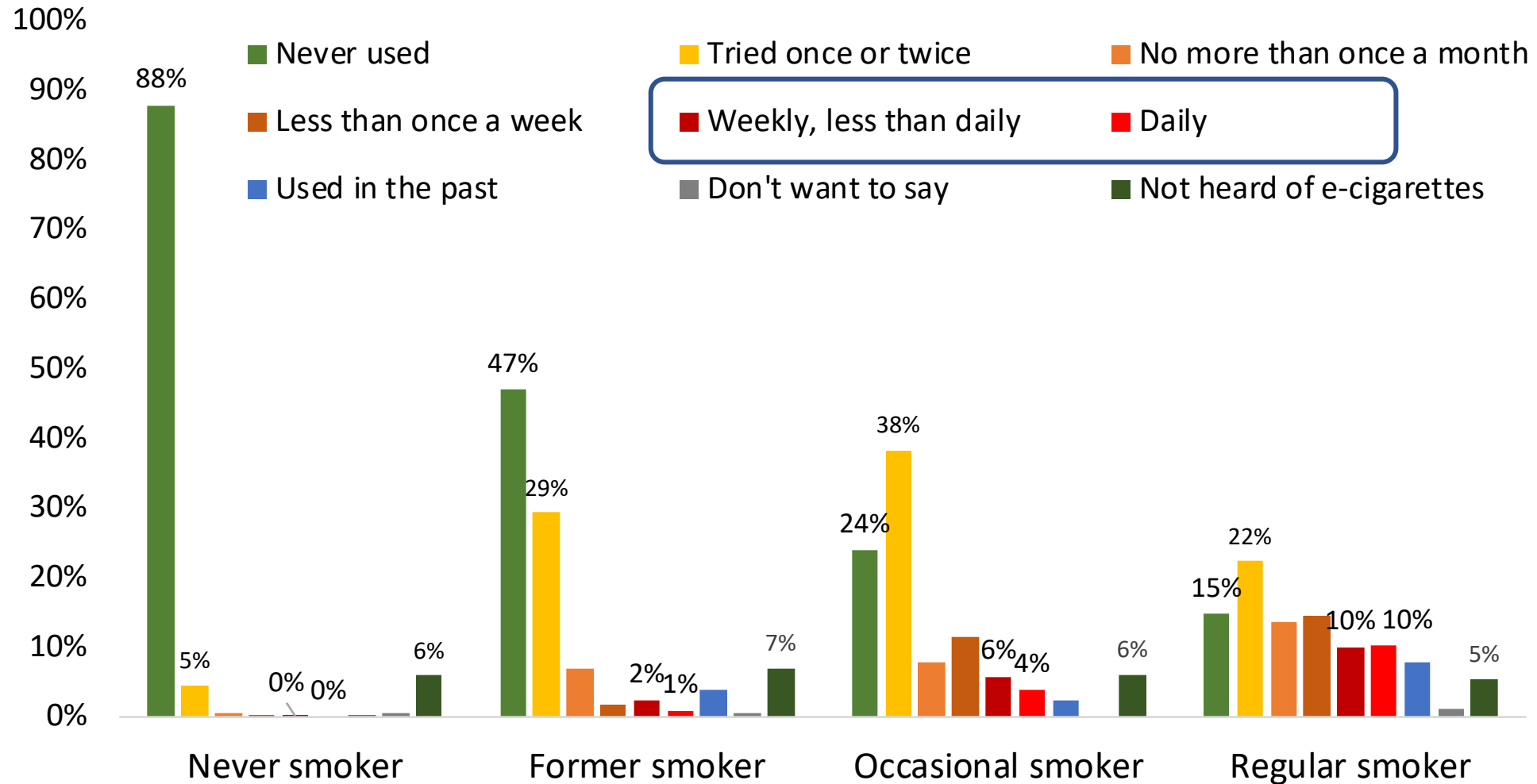
	Smoking, Drinking and Drugs Survey Governmental survey	Smoke-free survey, youth Action on Smoking & Health
Data collection	IPSOS Mori in schools	YouGov, online
Survey date	Sep 2018 - Feb 2019	Mar - Apr 2019
Location	England	Great Britain
Age range	11 to 15	11 to 18
Sample size	13191	2173
<b>Vaping status, %</b>		
Haven't heard of e-cigs		
Don't want to say		
Never tried		
Tried once or twice		
Former user		
Current user		

# Prevalence of e-cigarette use, youth

	Smoking, Drinking and Drugs Survey Governmental survey	Smoke-free survey, youth Action on Smoking & Health
Data collection	IPSOS Mori in schools	YouGov, online
Survey date	Sep 2018 - Feb 2019	Mar - Apr 2019
Location	England	Great Britain
Age range	11-15	11 to 18
Sample size	13191	2173
<b>Vaping status, %</b>		
Haven't heard of e-cigs		6.6
Don't want to say	-	1.1
Never tried	75.3	76.9
Tried once or twice	15.3	9.5
Former user	3.5	1.0
Current user	5.9	4.9

Smoking Toolkit Jan to Jun 2019: 138 participants aged 16 or 17: 0.8% current use among them

# Frequency of use, youth

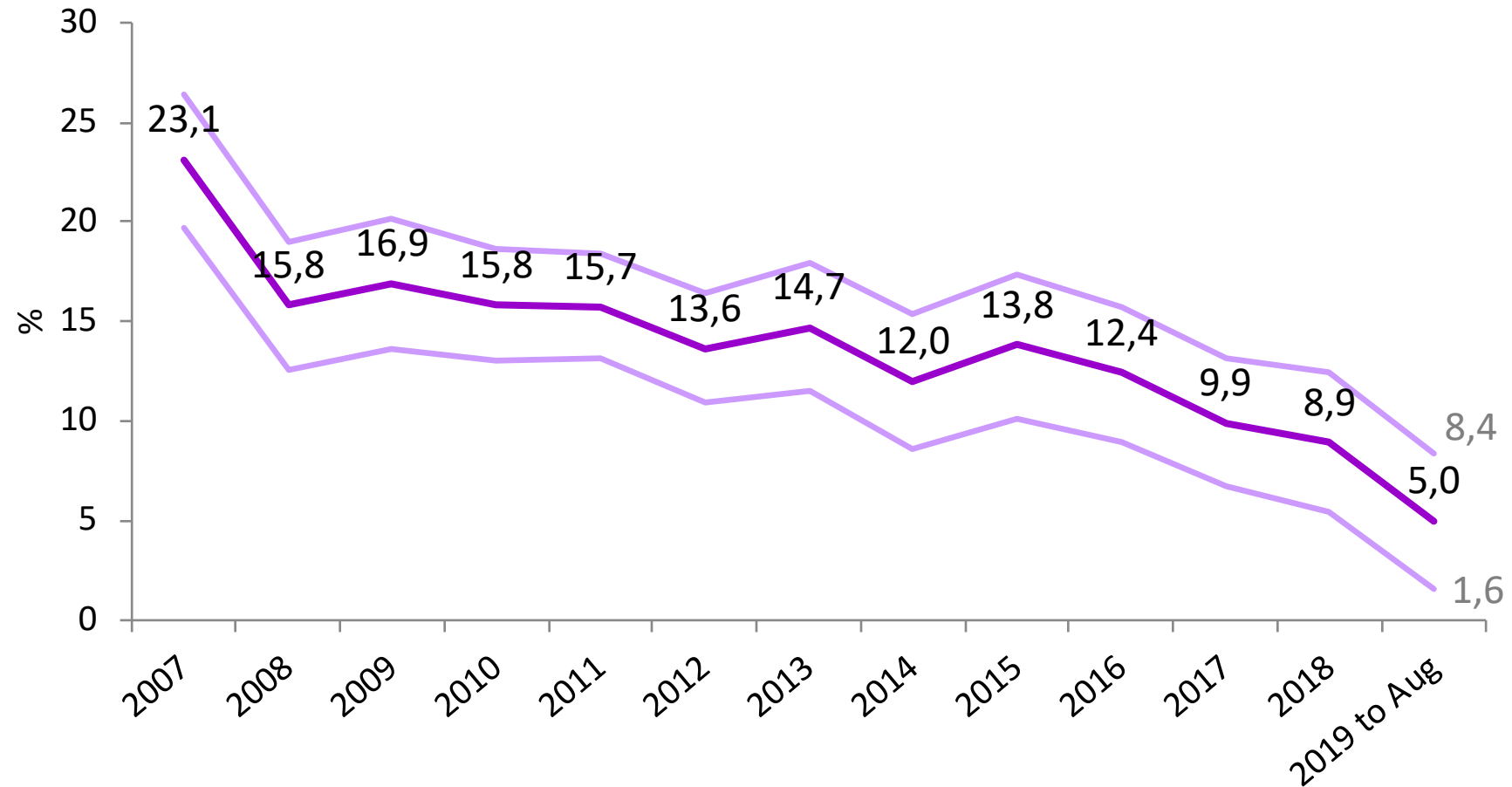


Unweighted base = n=2523, all children

# Smoking prevalence youth

	Smoking, Drinking and Drugs Survey Governmental survey	Smoke-free survey, youth Action on Smoking & Health
<b>Smoking status, %</b>		
Don't want to say	-	1.5
Never tried	83.8	79.3
Tried	8.4	9.2
Former	2.8	3.4
Current	5.0	3.8

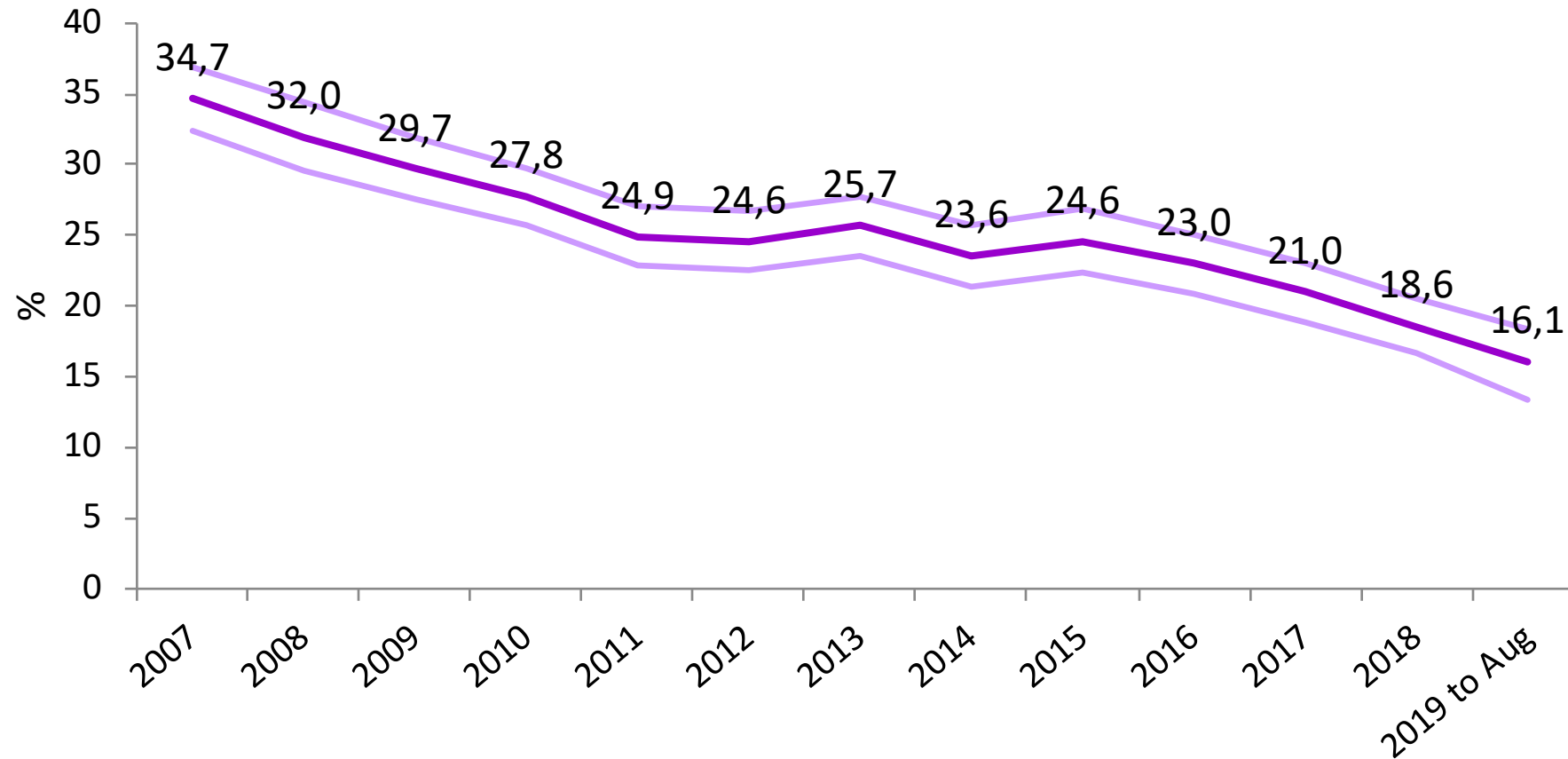
# Cigarette smoking prevalence in 16-17 year olds



Base: Aged 16-17; n between 260 and 641 per year

Graph shows prevalence estimate and upper and lower 95% confidence intervals

# Cigarette smoking prevalence in 18-21 year olds



Base: Aged 18-21; n between 1347 and 1713 per year

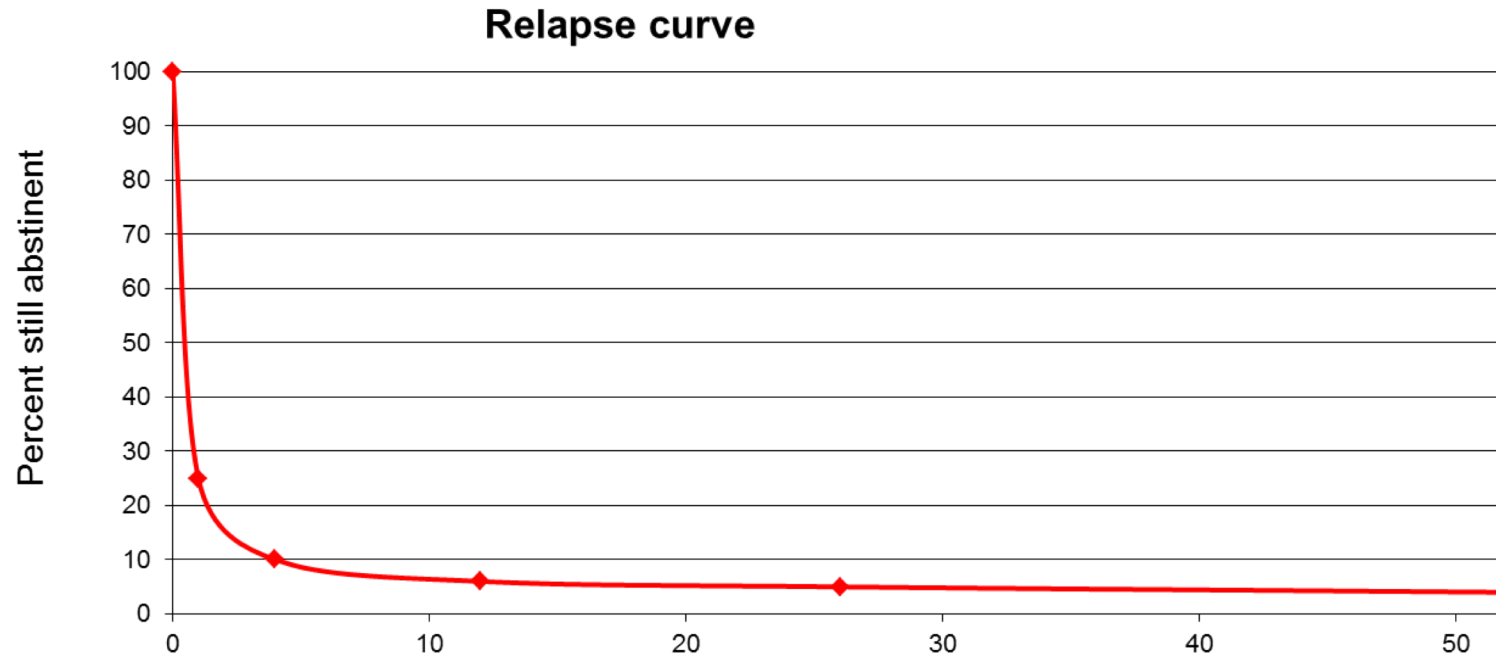
Graph shows prevalence estimate and upper and lower 95% confidence intervals



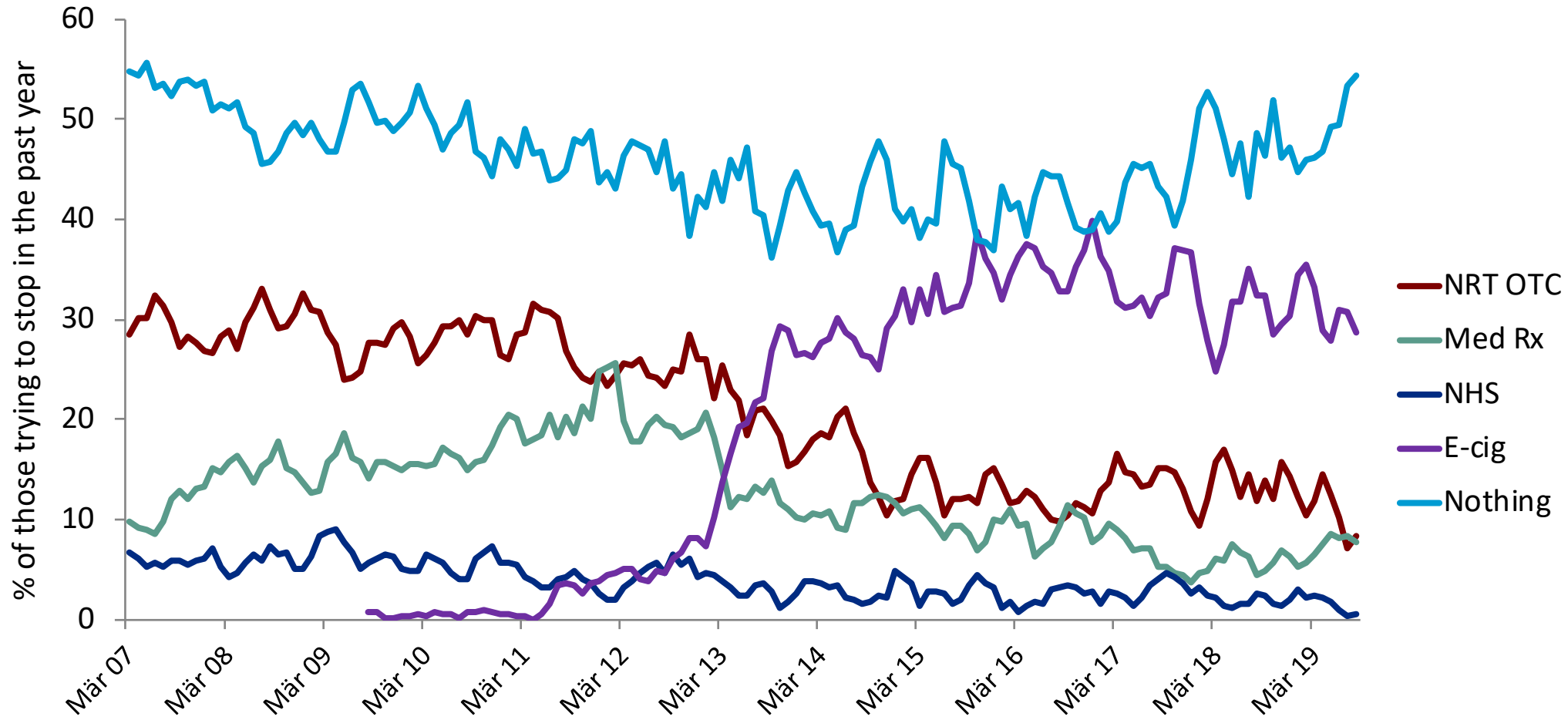
# E-cigarettes and smoking cessation

# Cessation

Without help, about 3%-4% of all smokers trying to quit are abstinent for one year

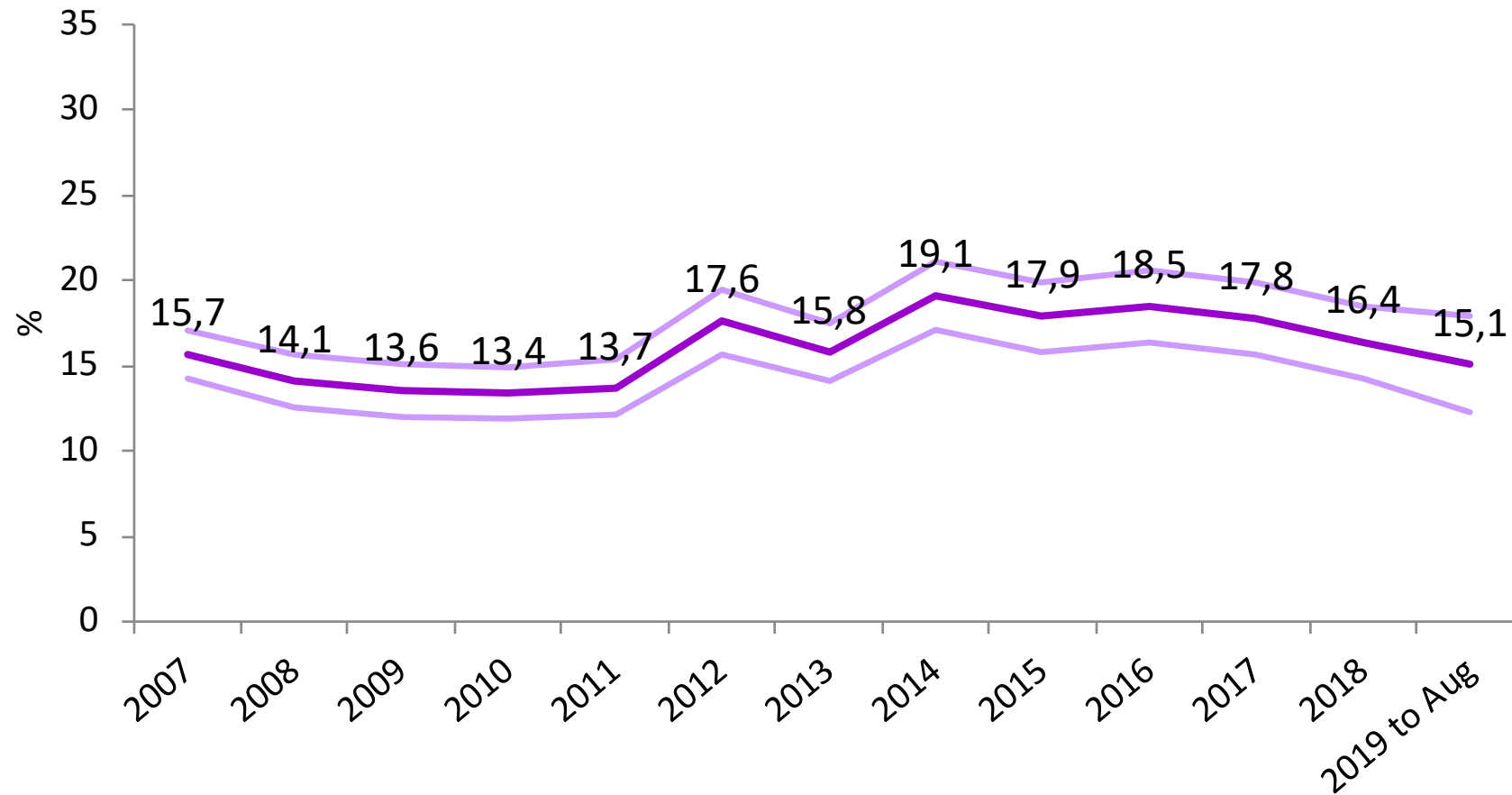


# Support used in quit attempts



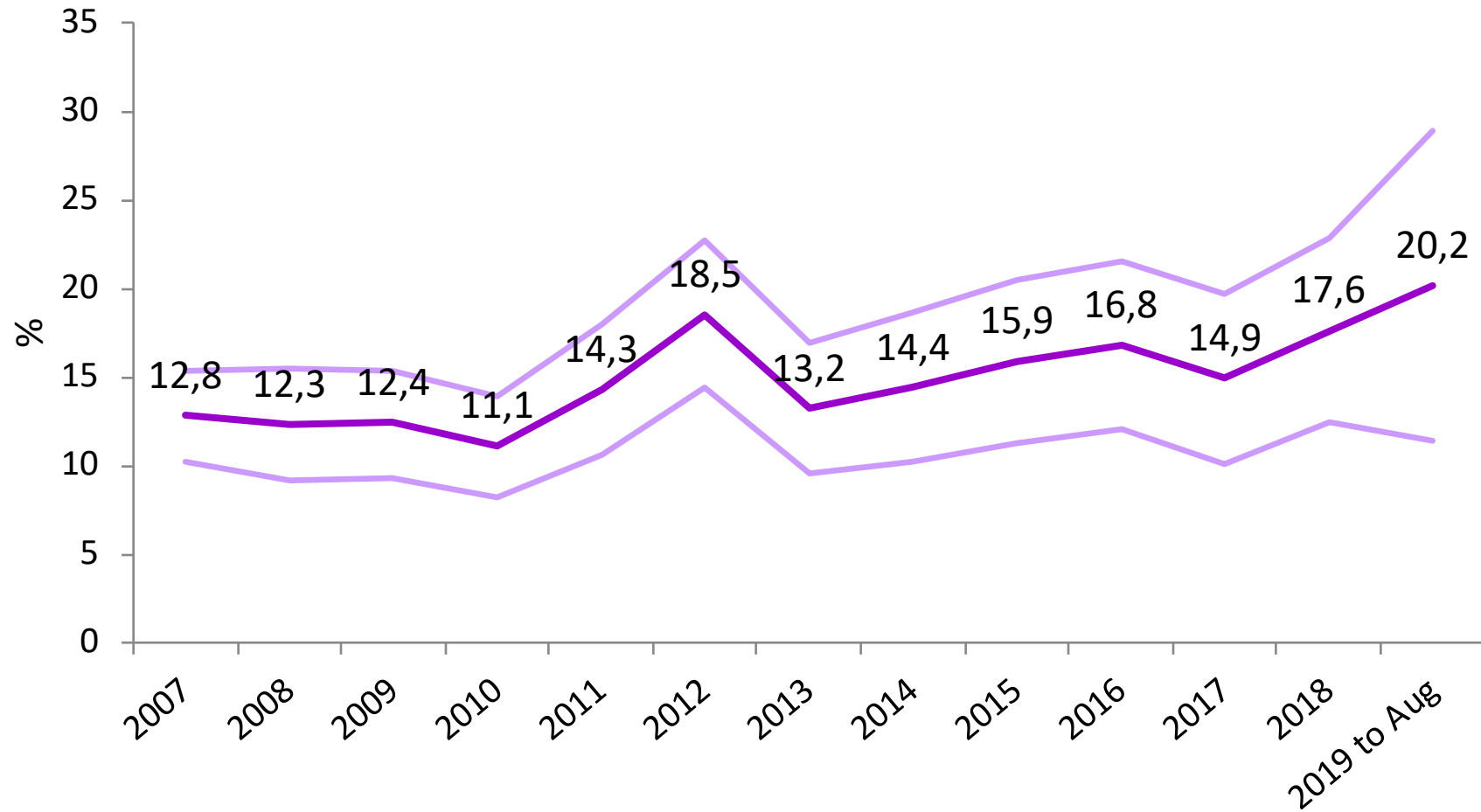
NRT OTC: Nicotine replacement therapy bought over the counter; Med Rx: Prescription medication; NHS: Stop Smoking Service; E-cig: E-cigarette

# Success rate (at time of survey) in those who tried



Base: Smokers (16 and over) who tried to stop in the past year; n between 1139 and 2553 per year

# Success rate for stopping in those aged 16-24 who tried



Base: Smokers (16-24) who tried to stop in the past year; n between 209 and 626 per year

# Overview of systematic reviews

2015 to 2017: 14 systematic reviews, 7 included a meta-analysis

Review	Relative risk /odds of being abstinent with EC
Rahman, 2015	RR 2.29, (1.05 - 4.96) p=0.04
Hartmann-Boyce 2016	RR 2.29, (1.05 - 4.96) p=0.04
Khoudigian 2016	RR 2.02, (0.97 - 4.22) p=0.06
Vanderkam 2016	RR 1.91, (0.93 - 3.89) p=0.08
Kalkhoran & Glantz 2016	OR 0.72, (0.57 – 0.91)
Malas 2016	AOR 0.10, (0.05, 0.22) - 6.07 (1.11, 33.18)
El Dib 2016	RR 2.03, (0.94- 4.38) p=0.07

## Reasons for inconsistent findings

### Types of studies included

RCTs only vs observational studies

### Types of participants included in a meta-analysis

E.g. current/ex-smokers, smokers who had 'tried an EC' but who continued to smoke at baseline (These exclude people who have successfully stopped smoking using an EC and level of use unclear)

### Types of outcomes included in a meta-analysis:

Length of follow up

Treatment of missing data

# Latest randomised controlled trial

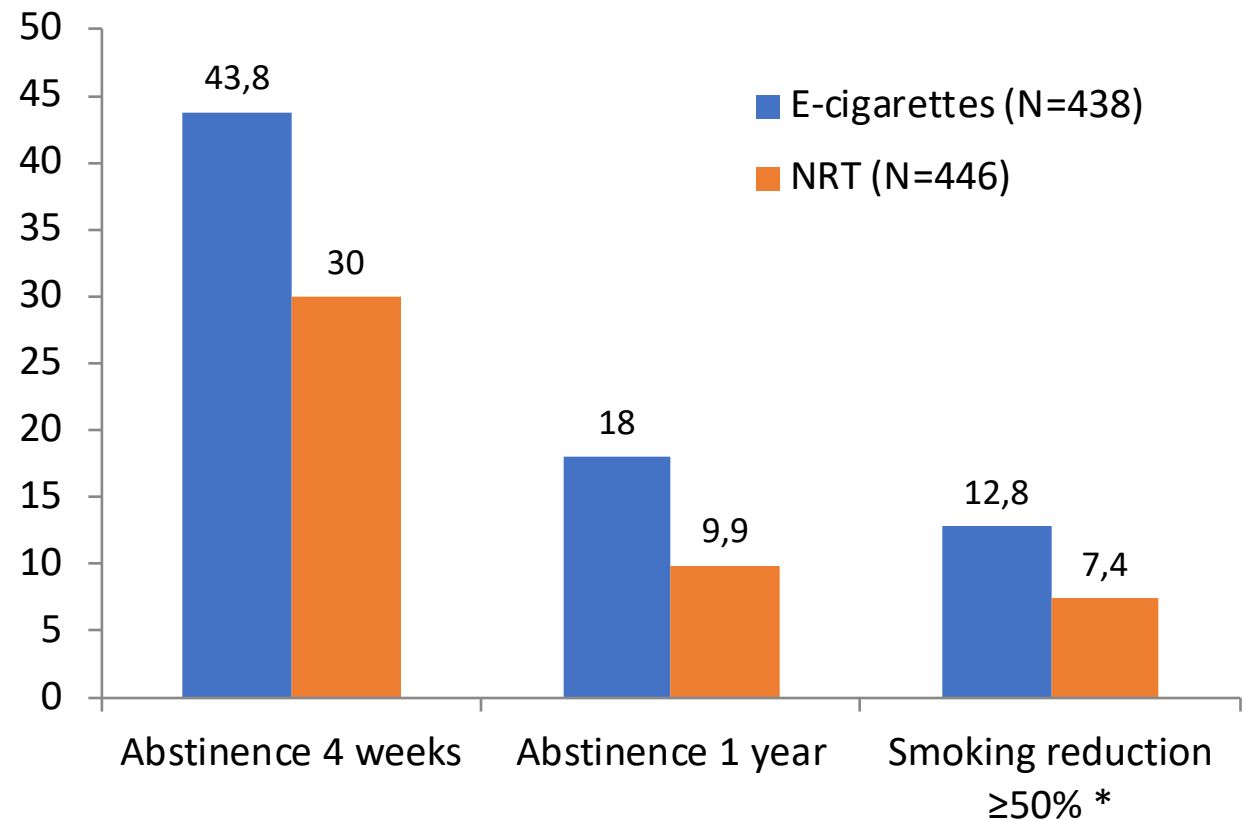
- Weekly behavioural support for at least 4 weeks and
- Nicotine-replacement products of their choice, including combinations, for up to 3 months

Or

- Refillable e-cigarette with one bottle of nicotine e-liquid (18 mg/ml nicotine), recommendation to purchase further e-liquids of their choice

Respiratory symptoms at 52 weeks:

- No difference in shortness of breath or wheezing
- Less phlegm and cough in e-cig group



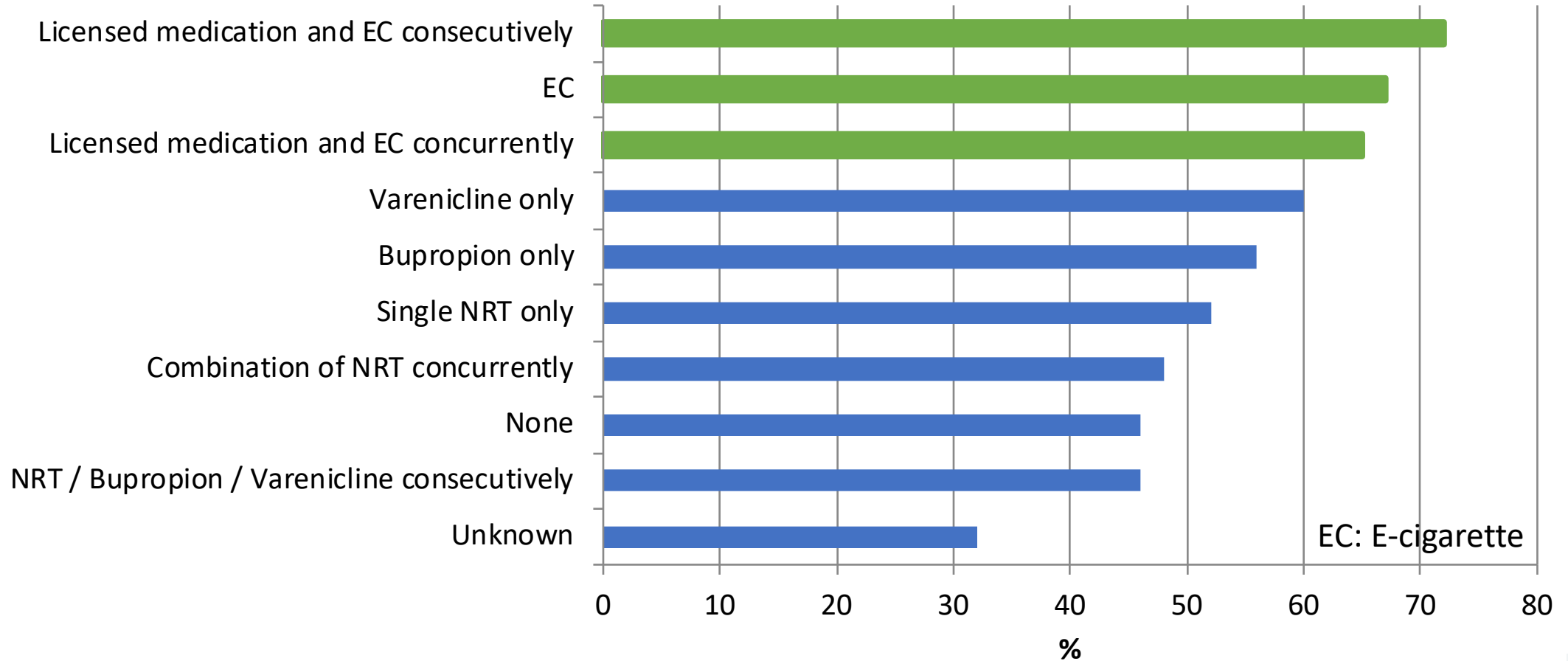
All differences significant

Abstinence= Not more than 5 cigarettes since week 2, CO of  $\leq 8$ ppm

\* Reduction among those not quit

# Stop smoking services 2018/19

## 4-week self-reported success rates by pharmacotherapy



236,175 people set a quit date



# Vaping and smoking in England 2019

- Very strong tobacco control
- E-cigarettes regulated
- E-cigarette prevalence stable at about 5 - 6%
- Use by never smokers remains very rare
- Smoking prevalence declining, now 15% in adults, 5% in youth
- Attempts to quit smoking with e-cigarettes very good success rates
- Continue to monitor situation through PHE reports and surveys
- So far seem to be getting balance roughly right: Allowing e-cigarettes to reduce deaths and disease caused by smoking without attracting non-smokers