THE E-CIGARETTE SUMMIT

Science, Regulation & Public Health

The Royal Society · London · November 12th 2015

Welcome from the Chair

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UKCTAS - King's College London

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Trends in electronic cigarette use in England

 @robertjwest

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Declaration of competing interests

- I undertake research and consultancy of companies that manufacture licensed smoking cessation medications (Pfizer, GSK and J&J)

- I am a trustee of the charity, QUIT

- I am an unpaid advisor to the National Centre for Smoking Cessation and Training

- My salary is funded by Cancer Research UK

Aim

- To track use of electronic cigarettes over time and relationships with key smoking and smoking cessation variables

Methods

- Monthly household surveys
- Each month involves a new representative sample of ~1800 respondents; smokers ~450
- Data collected on electronic cigarettes since second quarter 2011
- Fidler, et al., 2011. *'The smoking toolkit study': a national study of smoking and smoking cessation in England.* BMC Public Health 11:479
- For more info see www.smokinginengland.info

Use of nicotine products while smoking

E-cigarette use is increasing slowly
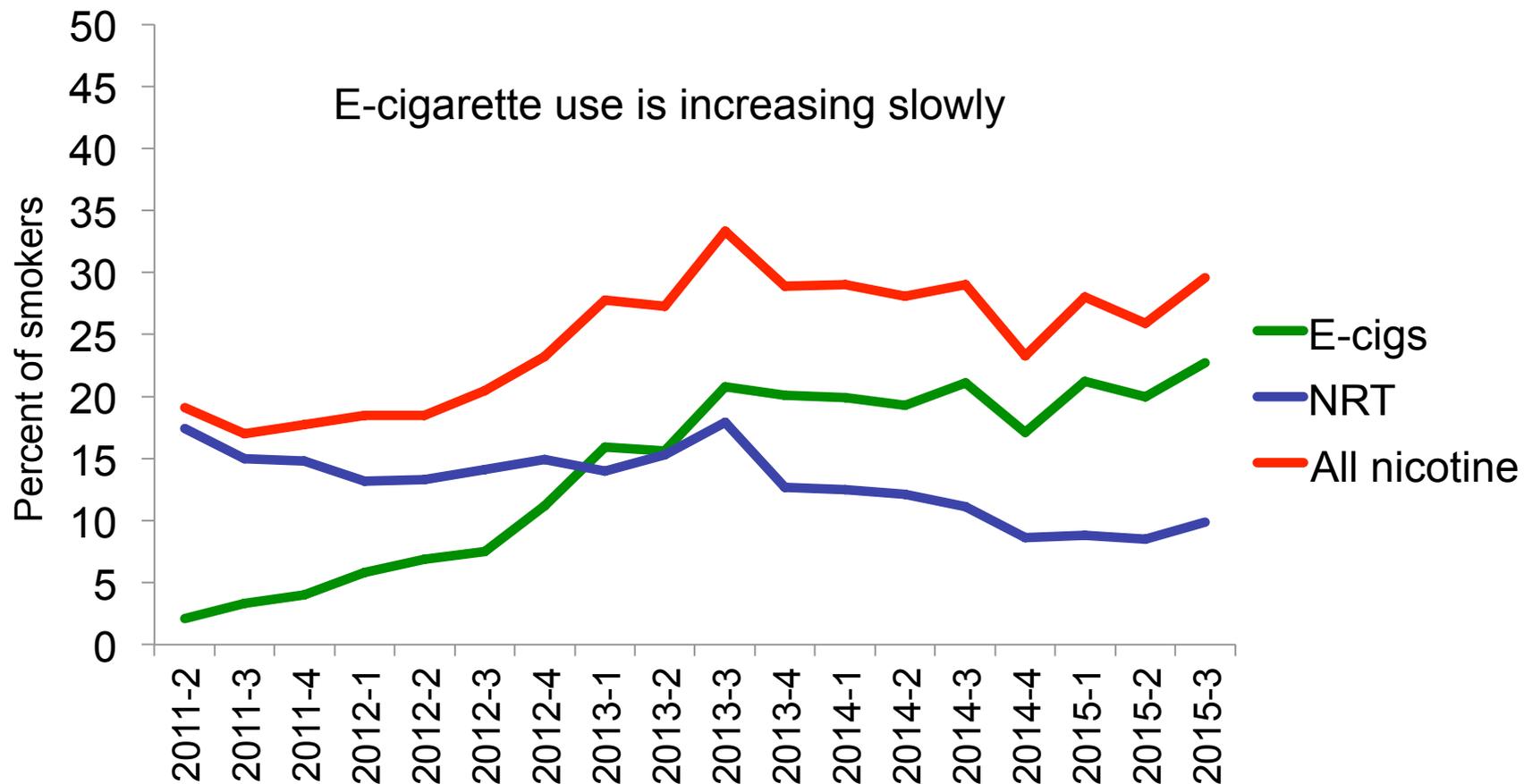
N=17443 smokers, increase p<0.001 e-cigs and all nicotine; decrease p<0.001 for NRT

Use of nicotine products in recent ex-smokers

E-cigarette use is increasing slowly

Percent of ex-smokers

- E-cigs
- NRT
- All nicotine
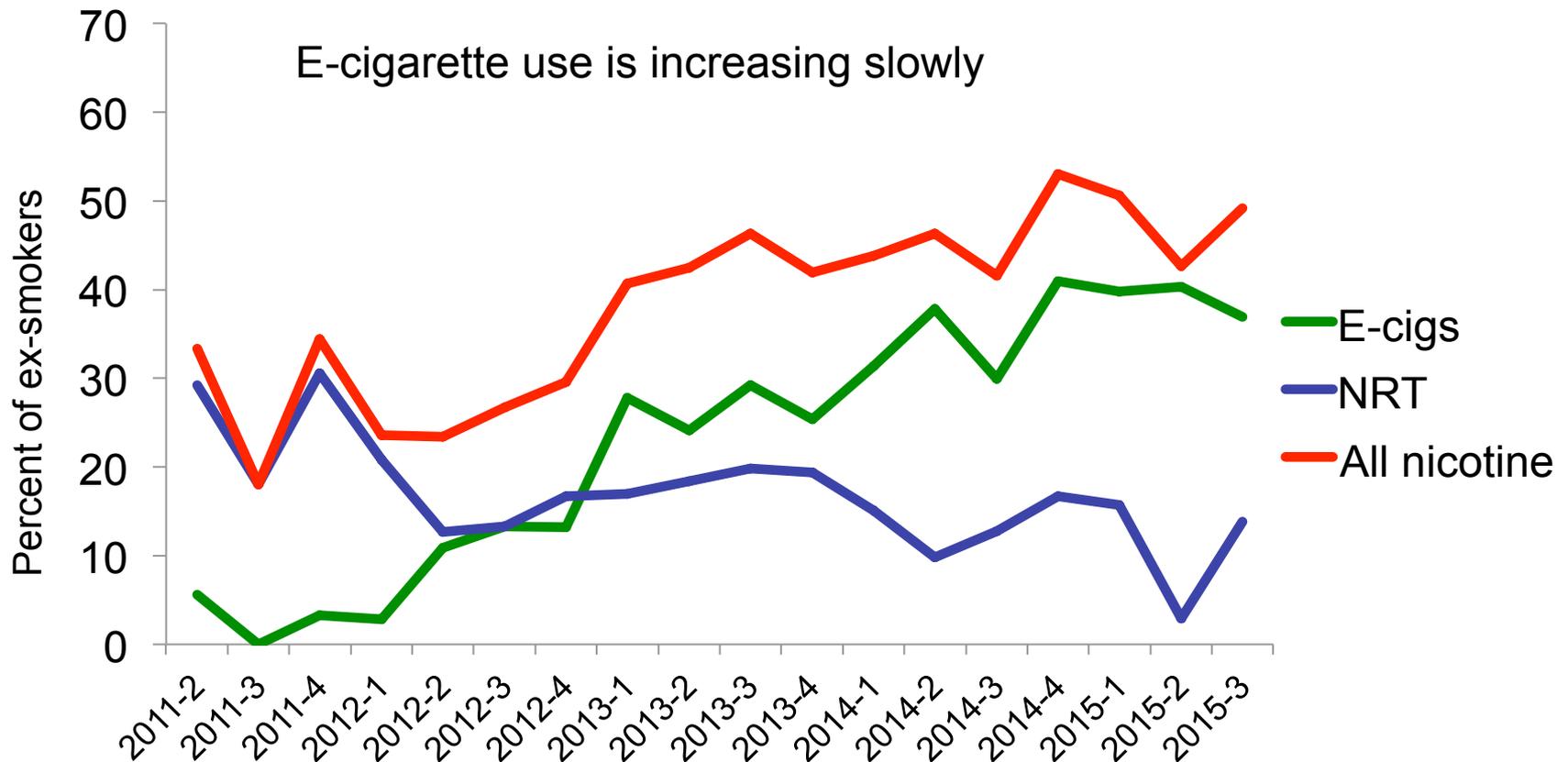
N=1225 adults who stopped in the past year; increase p<0.001 for e-cigs and all nicotine; decrease p<0.001 for NRT

Prevalence of electronic cigarette use: smokers and recent ex-smokers
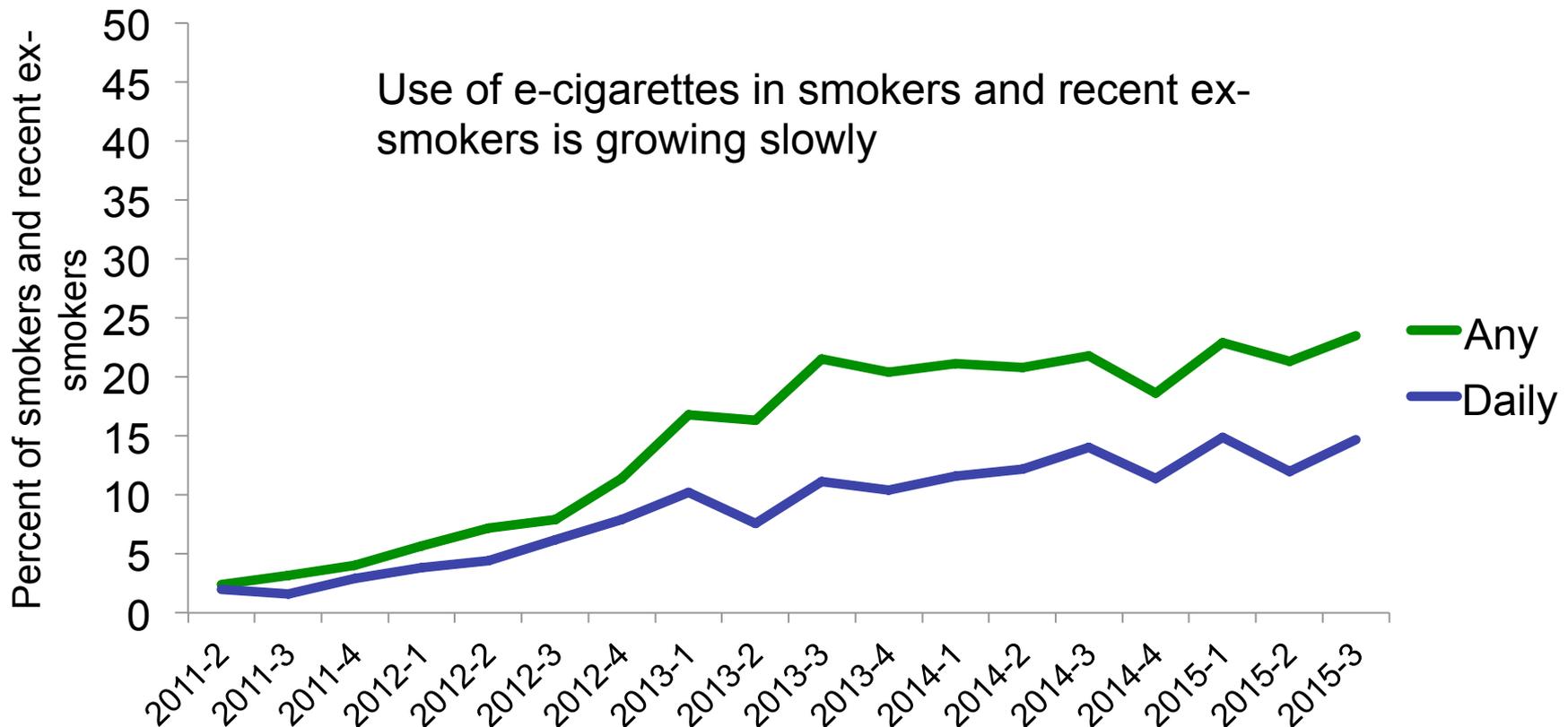
N=18,668 adults who smoke or who stopped in the past year; increase p<0.001

Nicotine use by never smokers and long-term ex-smokers

E-cigarette use by never smokers remains negligible; use among long-term ex-smokers is low but growing

Legend:
- Never smoker: E-cigs
- Long-term ex=smoker: E-cigs
- Never smoker: NRT
- Long-term ex:-smoker NRT

Percent (y-axis: 0 to 10)

X-axis: 2013-4, 2014-1, 2014-2, 2014-3, 2014-4, 2015-1, 2015-2, 2015-3
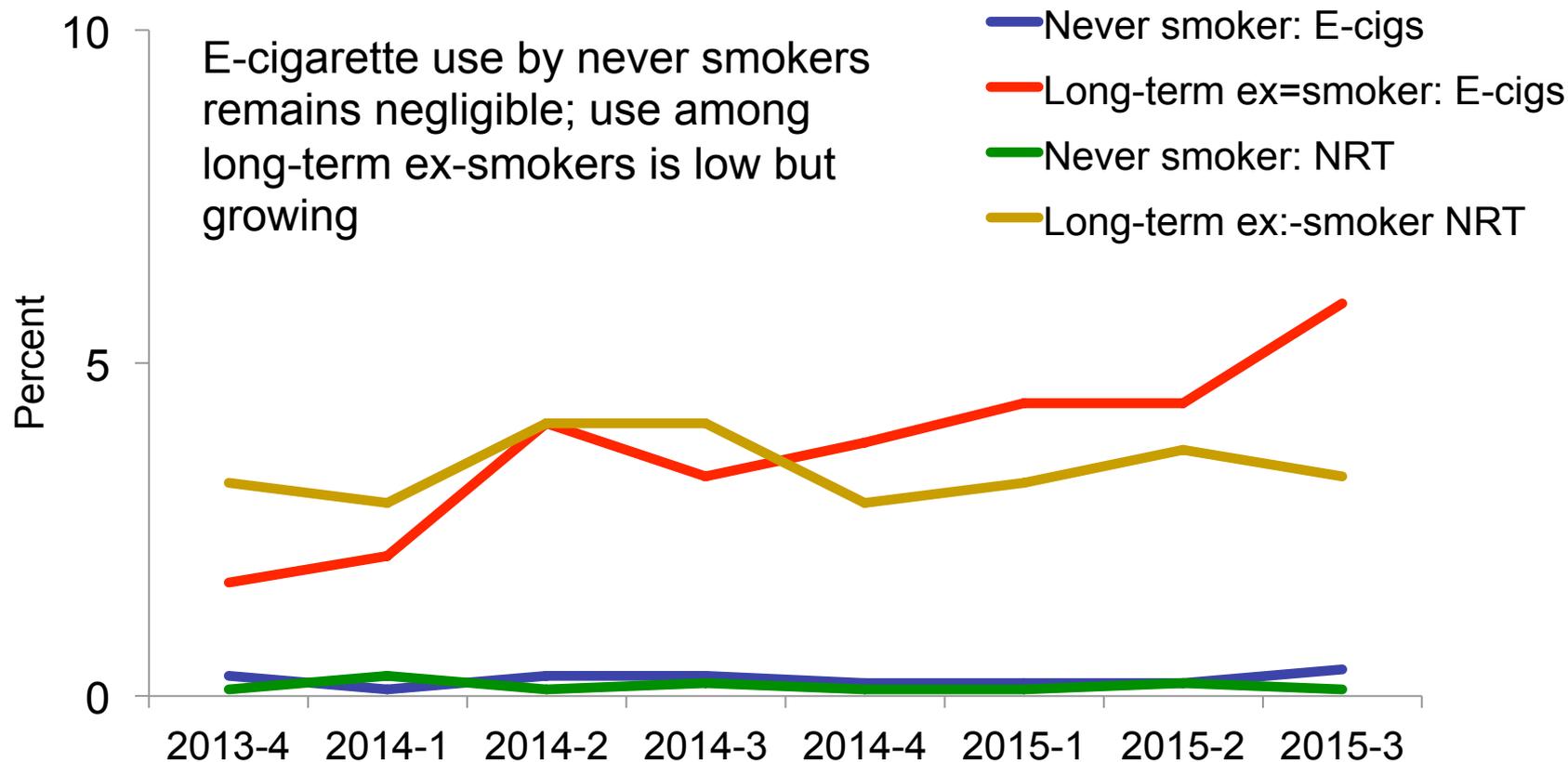
N=30,398 never and long-term ex-smokers from Nov 2013

Proportion of smokers believing e-cigarettes less harmful than cigarettes

A minority of current smokers believe e-cigarettes are less harmful than cigarettes
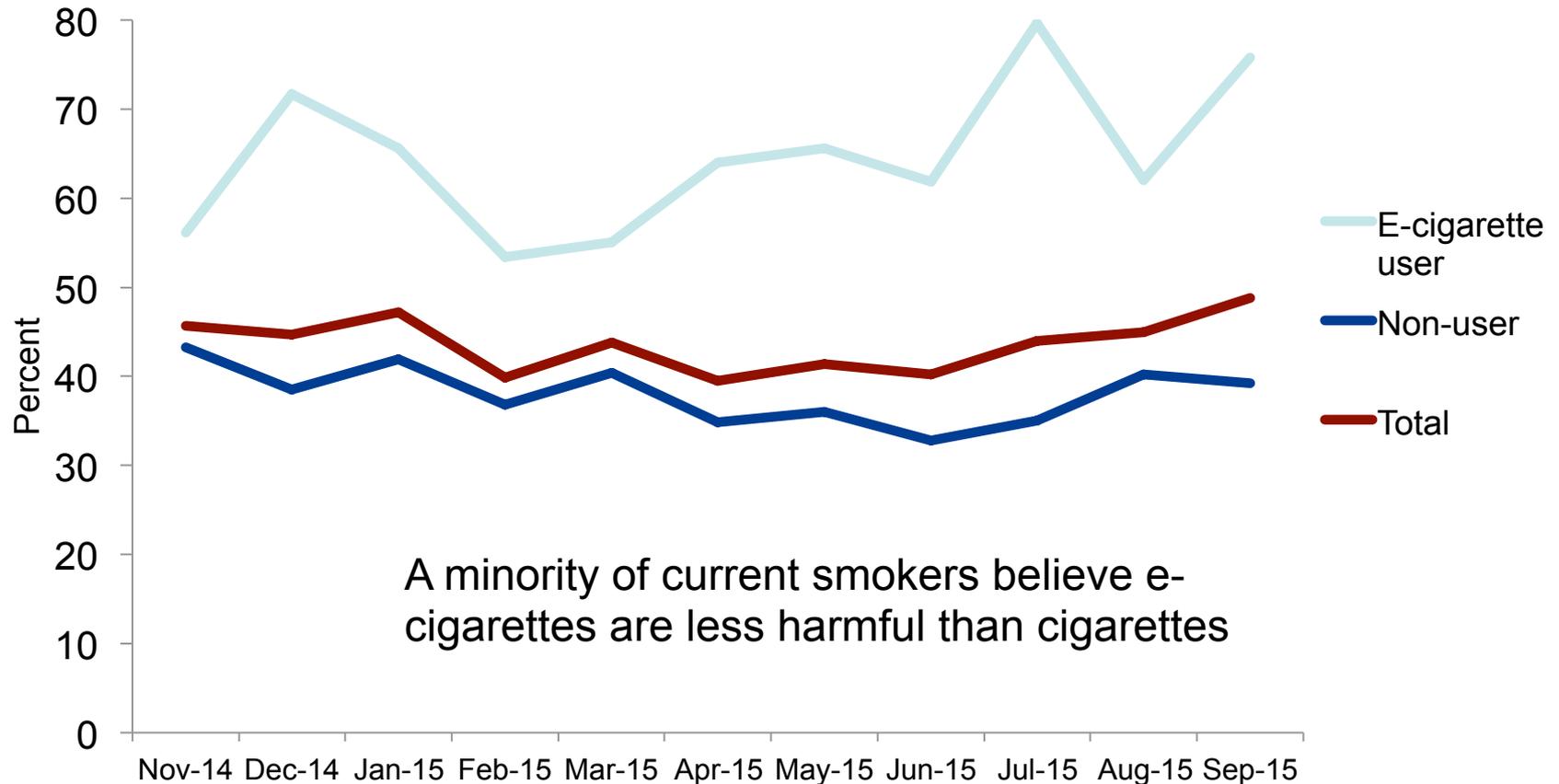
N=3594 current smokers

Electronic cigarette and NRT use across the age range
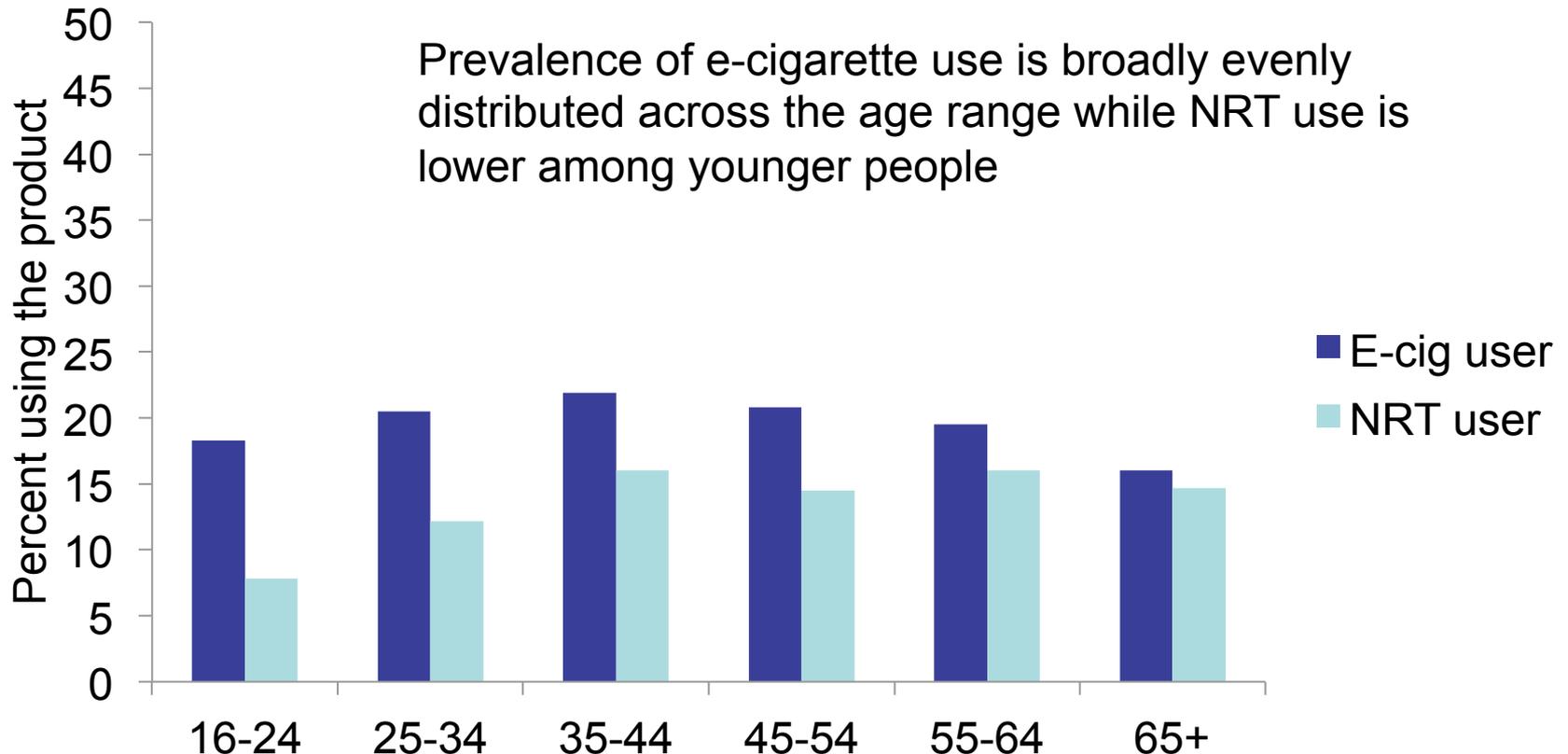
Prevalence of e-cigarette use is broadly evenly distributed across the age range while NRT use is lower among younger people

N=8,263 adults who smoke or who stopped in the past year and were surveyed between 2013 and 2014

Electronic cigarette and NRT use in men and women
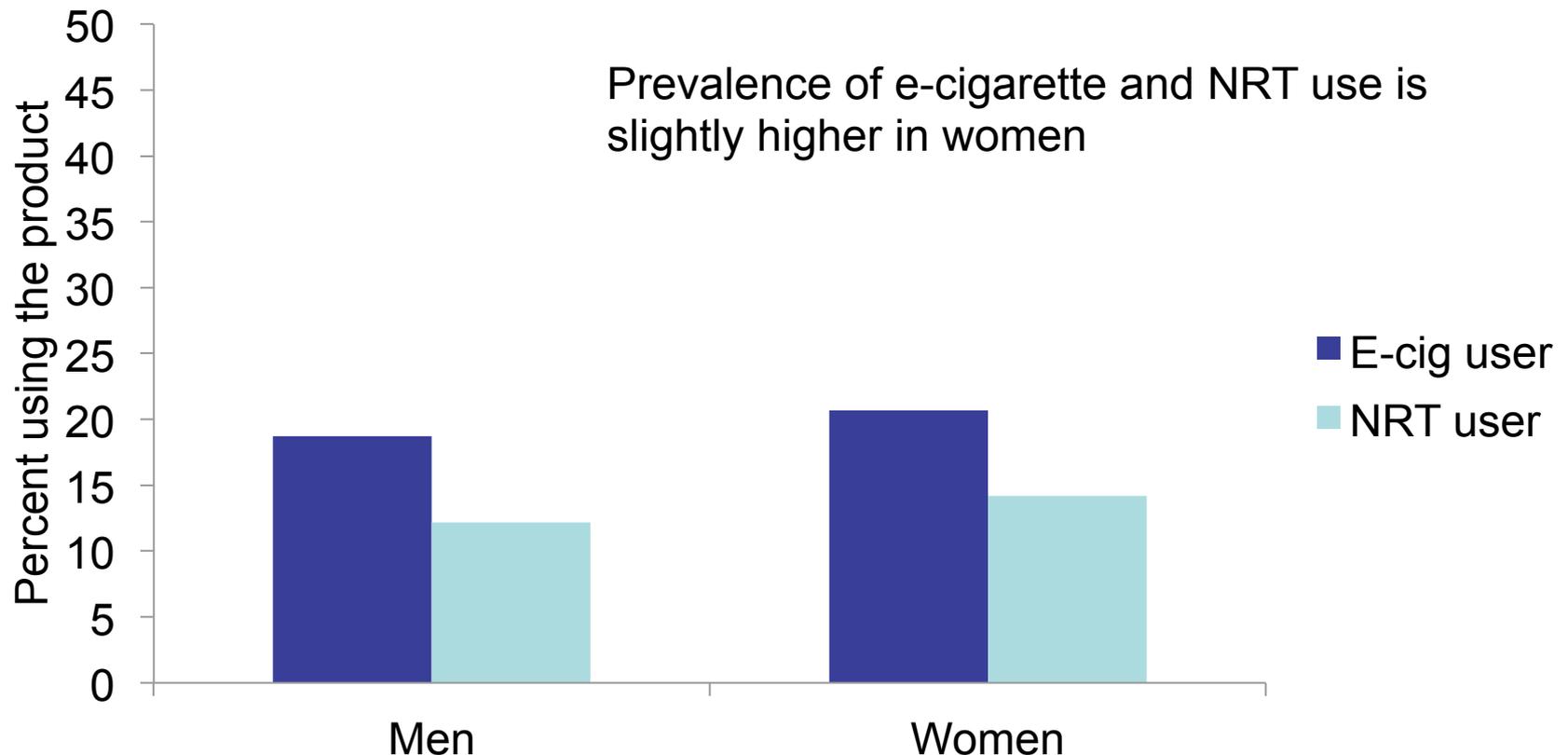
N=8,263 adults who smoke or who stopped in the past year and were surveyed between 2013 and 2014

Electronic cigarette and NRT use across the social gradient
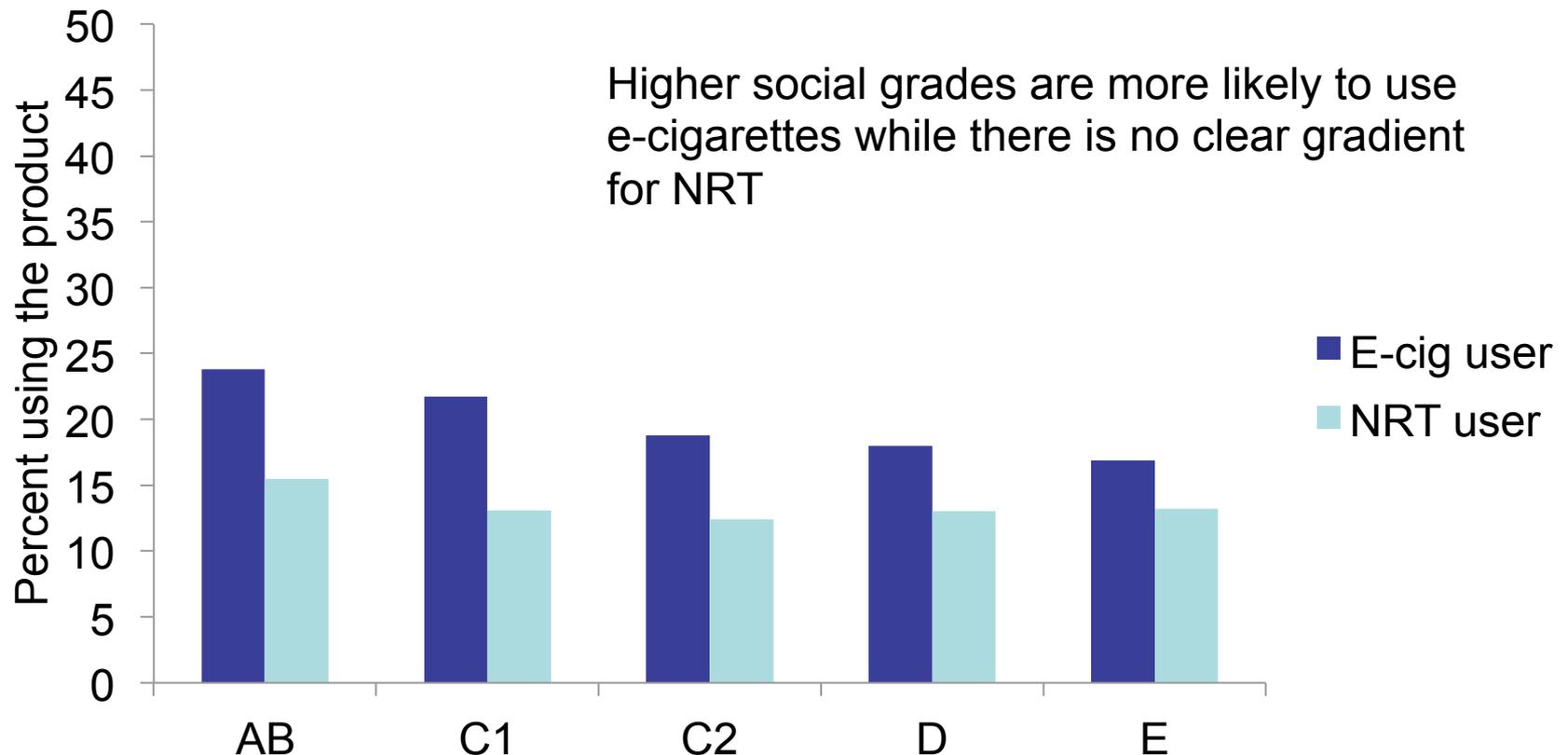
Higher social grades are more likely to use e-cigarettes while there is no clear gradient for NRT

Percent using the product (y-axis: 0 to 50)

Categories: AB, C1, C2, D, E

- E-cig user
- NRT user

N=8,263 adults who smoke or who stopped in the past year and were surveyed between 2013 and 2014

Aids used in most recent quit attempt

E-cigarette use for quitting is still increasing

Legend: E-cigs, NRT OTC, NRT Rx, Champix, Beh'l supp

Y-axis: Percent of smokers trying to stop (0 to 50)

X-axis: 2009-3, 2009-4, 2010-1, 2010-2, 2010-3, 2010-4, 2011-1, 2011-2, 2011-3, 2011-4, 2012-1, 2012-2, 2012-3, 2012-4, 2013-1, 2013-2, 2013-3, 2013-4, 2014-1, 2014-2, 2014-3, 2014-4, 2015-1, 2015-2, 2015-3
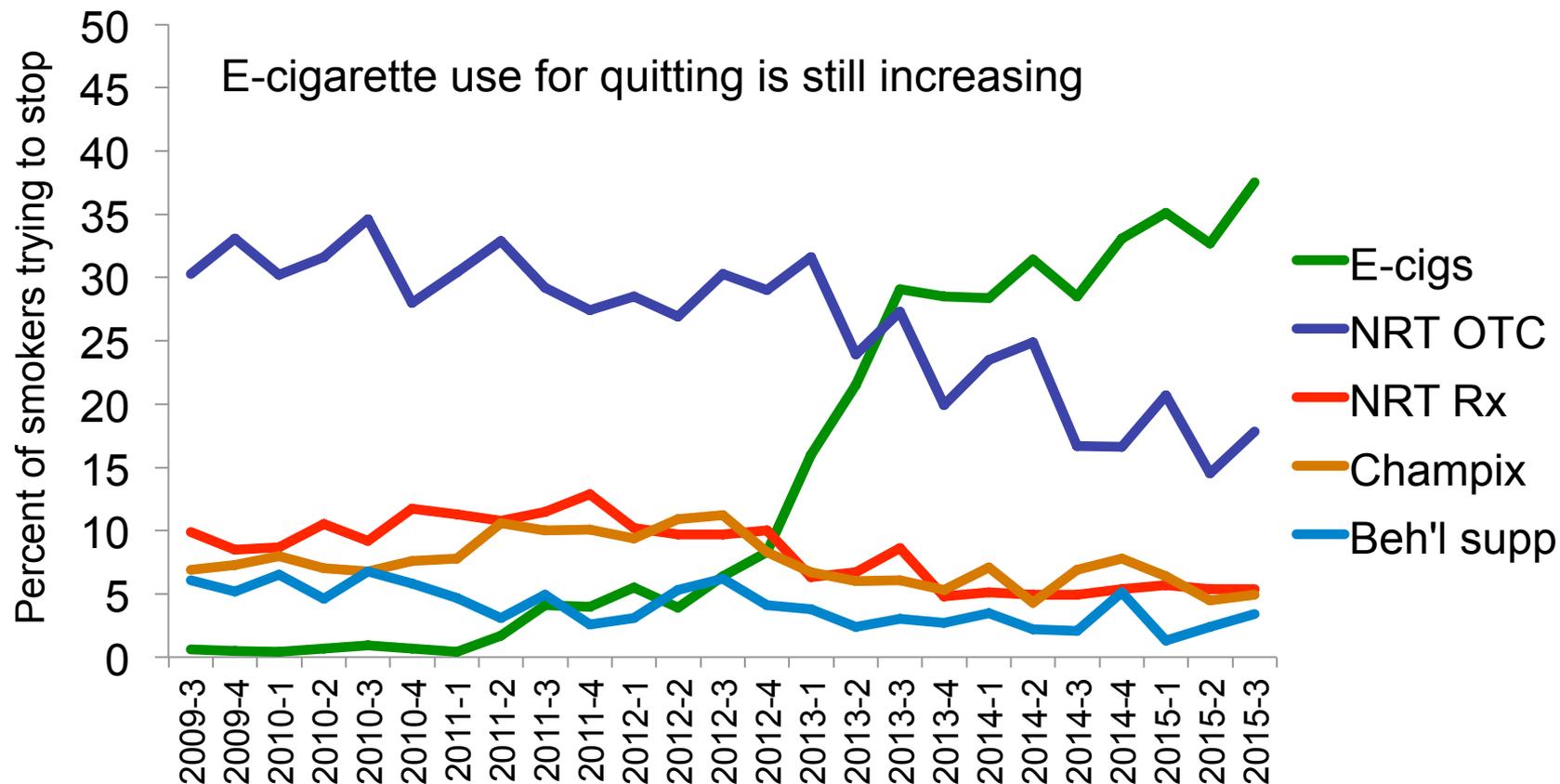
N=10,756 adults who smoke and tried to stop or who stopped in the past year; method is coded as any (not exclusive) use

Factors associated with odds of success in most recent quit attempt

Odds ratio

Factors (x-axis): Time since quit started, Female (vs male), Aged over 35 yrs (vs 35 and under), Social grade C2-E (vs AB-C1), Abrupt (vs gradual), Unplanned (vs planned in advance), Level of addiction (6 pnt scale), NRT bought over the counter, NRT on prescription, Zyban, Champix, E-cigarette, Behavioural support

Values:
- Time since quit started: 0.76 / 0.71
- Female (vs male): 1.1 / 0.89
- Aged over 35 yrs: 1.4 / 1.2
- Social grade C2-E: 0.9 / 0.73
- Abrupt (vs gradual): 2 / 1.6
- Unplanned: 1.1 / 0.88
- Level of addiction: 0.28 / 0.31
- NRT bought over the counter: 1.1 / 0.84
- NRT on prescription: 1.8 / 1.2
- Zyban: 1.8 / 0.7
- Champix: 2.6 / 1.7
- E-cigarette: 2.2 / 1.5
- Behavioural support: 1.8 / 1.1

Base: 14,813 smokers who tried to quit in past 12 months

www.smokinginengland.info/latest-statistics

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E-cigarette use after quitting

The proportion of recent ex-smokers who started using an e-cigarette is low but increasing

Percent of smokers and recent ex-smokers

Any
Daily

2011   2012   2013   2014   2015 (Sept)
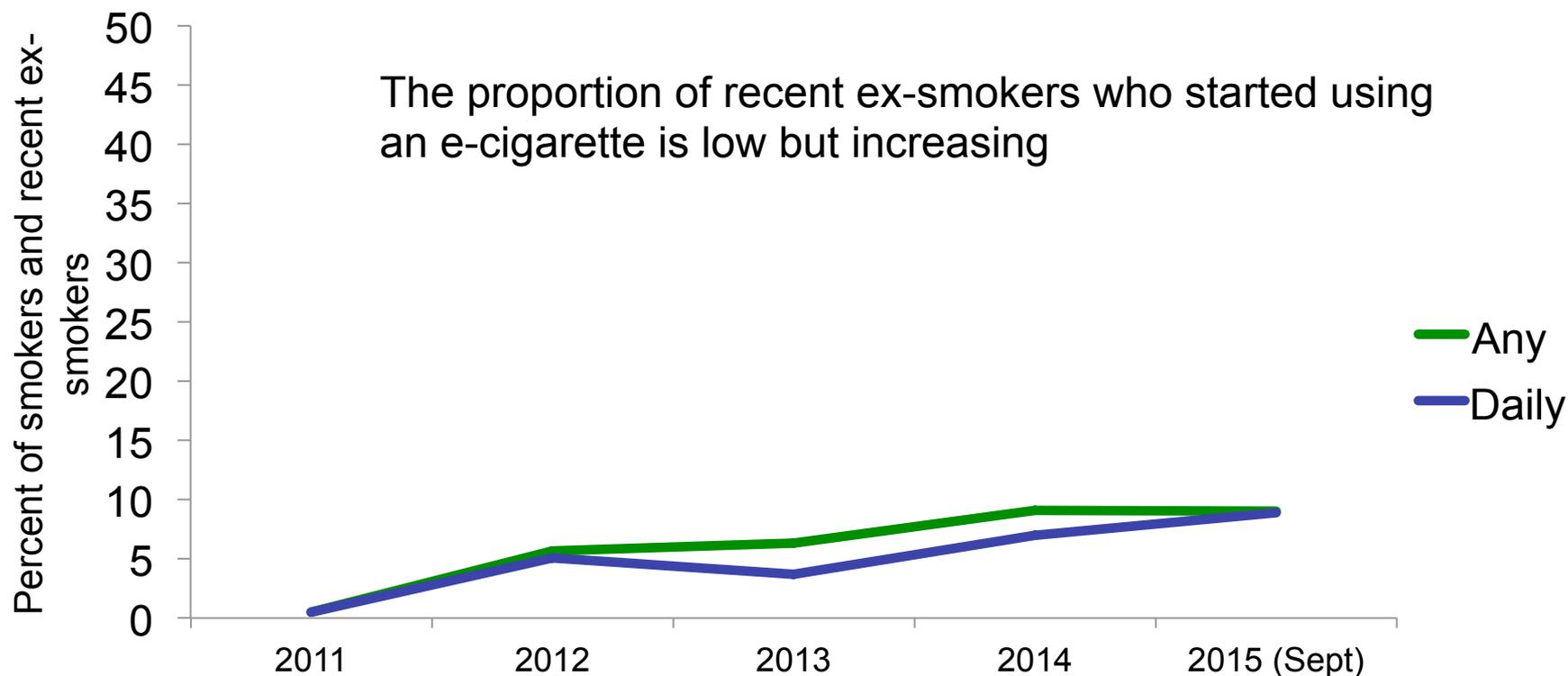
N=792 adults who stopped in the past year and did not report using an e-cigarette to help during the quit attempt

Take-up of smoking

Proportion of people under 25 years who have ever smoked regularly has remained constant

Percent who report having ever smoked regularly

100
90
80
70
60
50
40
30
20
10
0

2011-2
2011-3
2011-4
2012-1
2012-2
2012-3
2012-4
2013-1
2013-2
2013-3
2013-4
2014-1
2014-2
2014-3
2014-4
2015-1
2015-2
2015-3
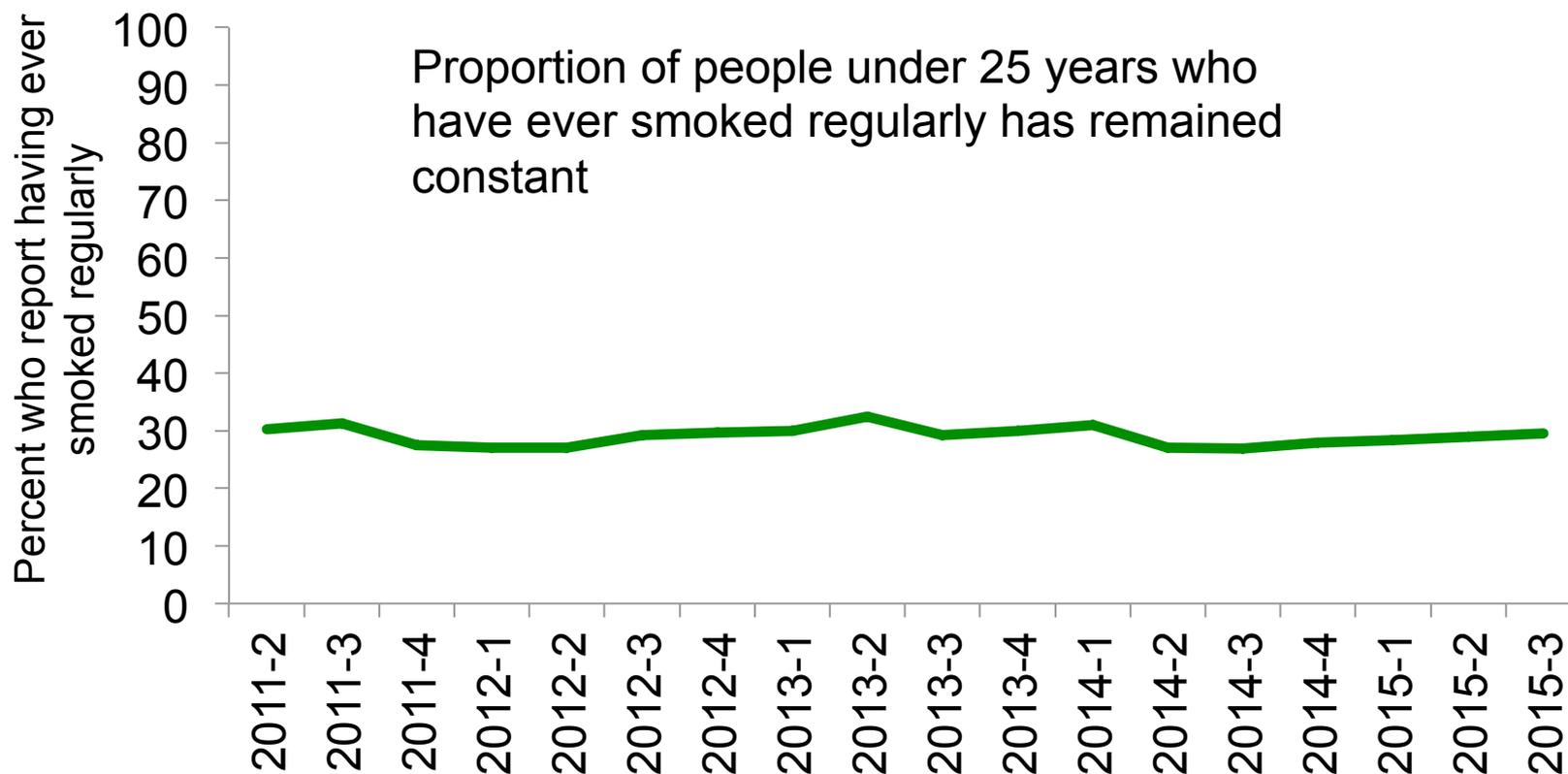
N=14469 people aged 16-24

Cigarette smoking prevalence

Percent

24.2
22.0
21.5
21.4
20.7
20.0
19.3
18.5
18.8

Cigarette smoking prevalence continued to decline until 2014 but may be increasing

30
25
20
15
10
5
0

2007 (N=22079)
2008 (N=18990)
2009 (N=21137)
2010 (N=24794)
2011 (N=21879)
2012 (N=21330)
2013 (N=22167)
2014 (N=20170)
2015 (Sept) (N=15000)
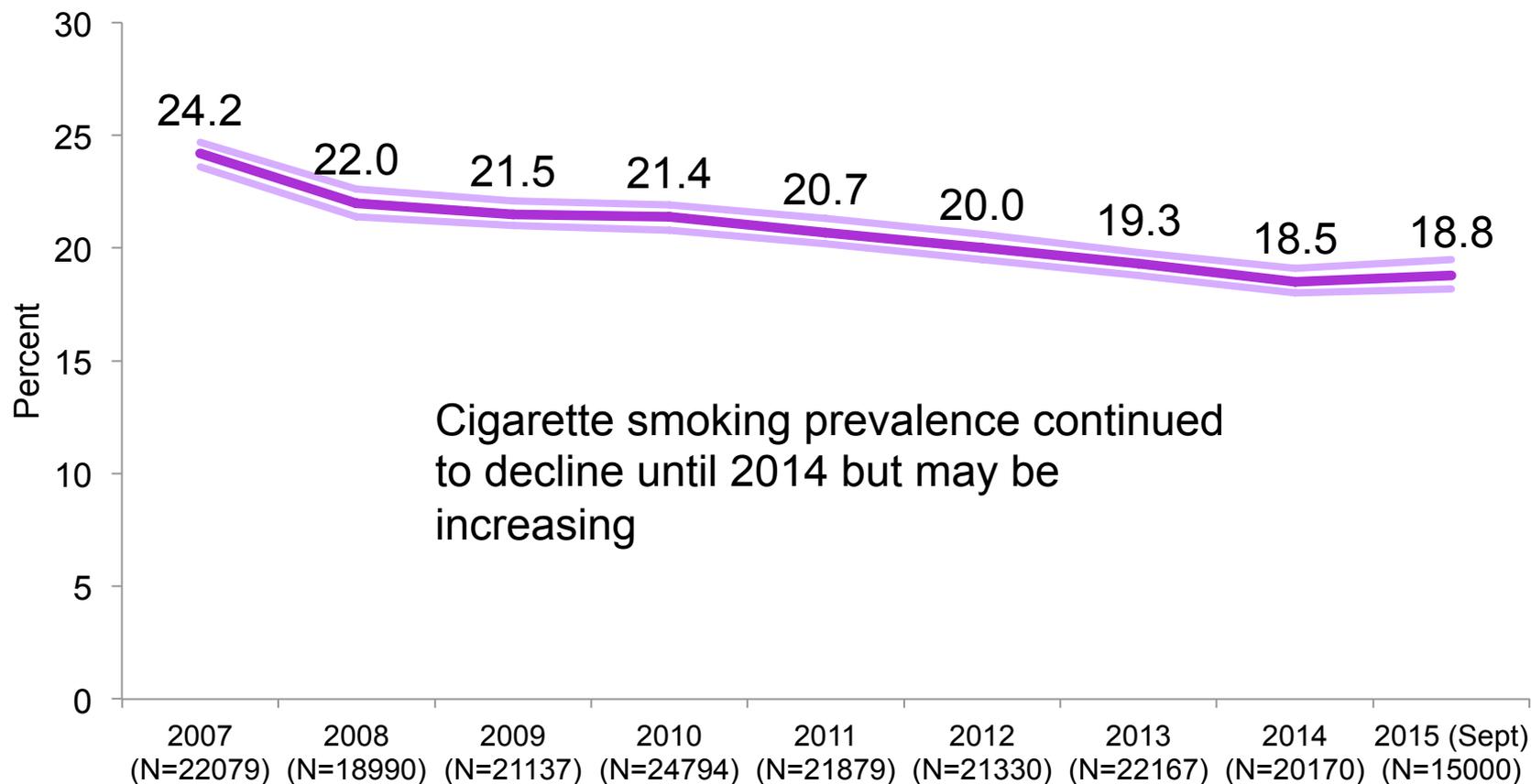
Base: All adults

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

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Tried to stop smoking in past year

The rate at which smokers have tried to stop in the past year increased from 2011 and has decreased in 1st three quarters of 2015
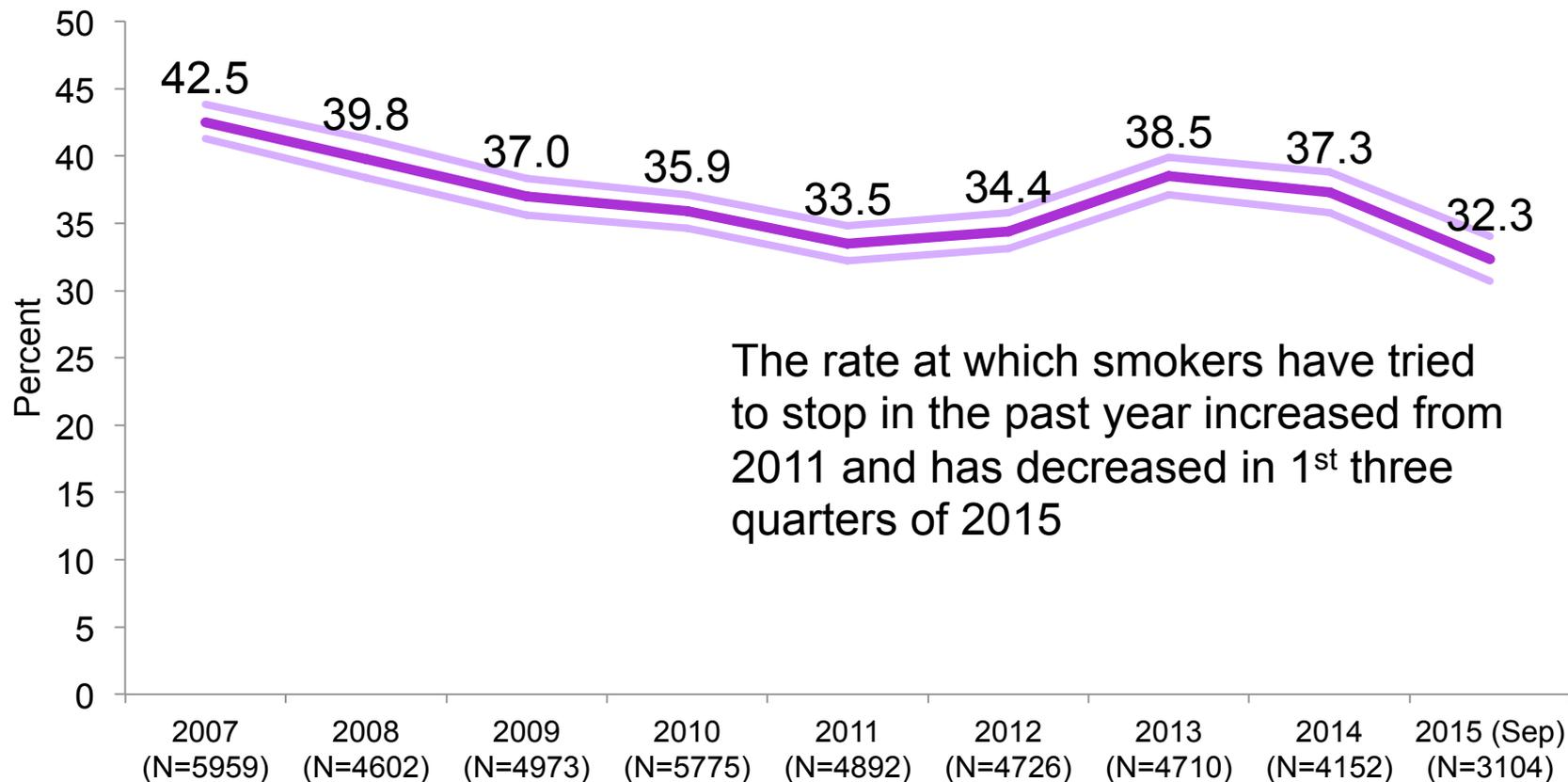
Base: Adults who smoked in the past year

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

Success rate for stopping in those who tried

Percent

15.7 14.1 13.6 13.4 13.7 17.6 15.8 19.1 16.1

The success rate in those who have tried to stop smoking increased from 2011

| 2007 (N=2533) | 2008 (N=1829) | 2009 (N=1833) | 2010 (N=2068) | 2011 (N=1637) | 2012 (N=1627) | 2013 (N=1729) | 2014 (N=1485) | 2015 (Sept) (N=980) |
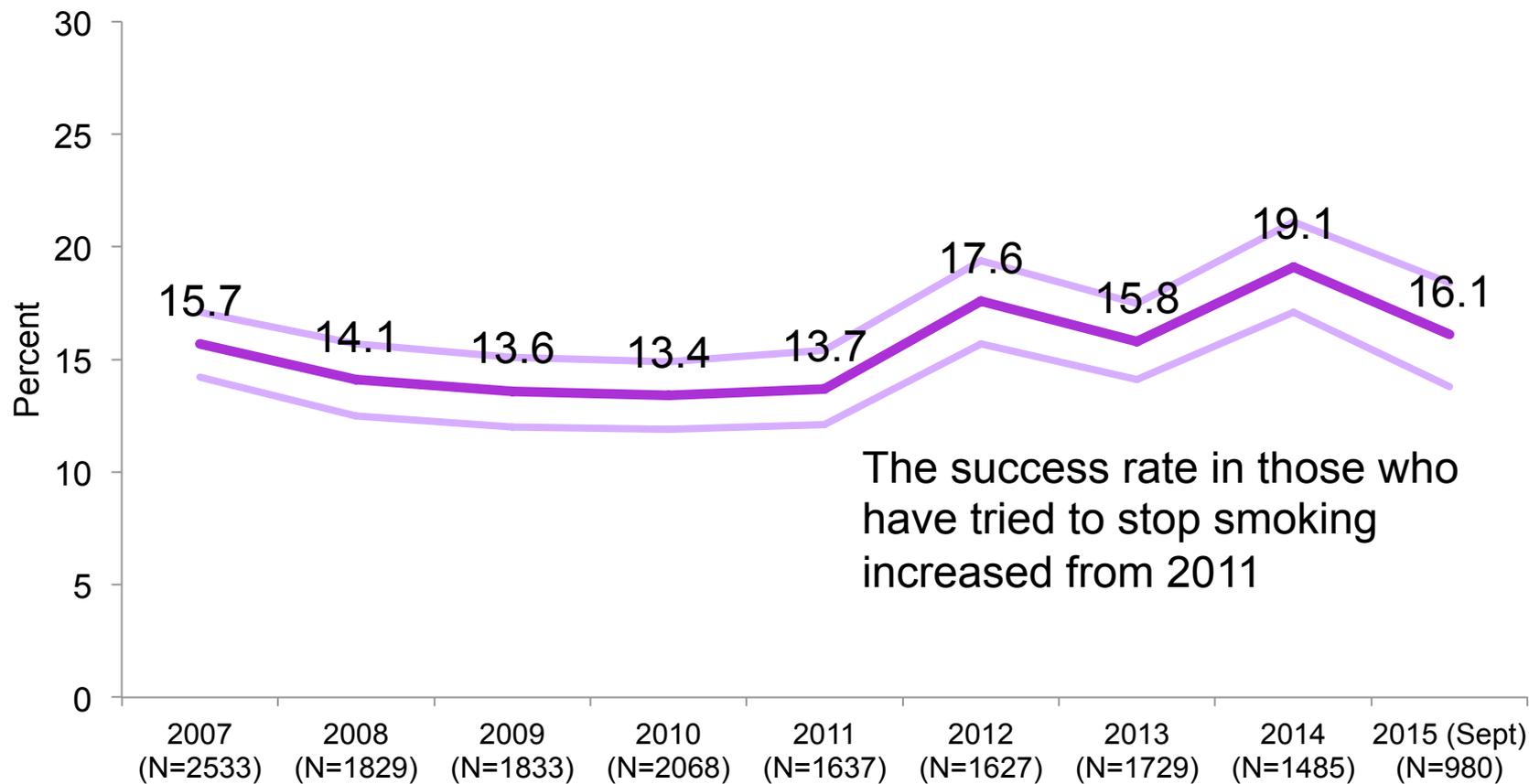
Base: Smokers who tried to stop n the past year

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

Conclusions

- E-cigarettes are being used primarily by smokers want to stop or reduce their smoking

- Use of e-cigarettes is slightly more prevalent in younger adults and people with higher social grade compared with NRT

- Only a minority of people believe e-cigarette are less harmful than smoking

- They are the most popular aid to cessation and appear to be effective

- There is no clear association between growth in e-cigarette use and changes in smoking cessation rates or smoking prevalence

www.smokinginengland.info/latest-statistics

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