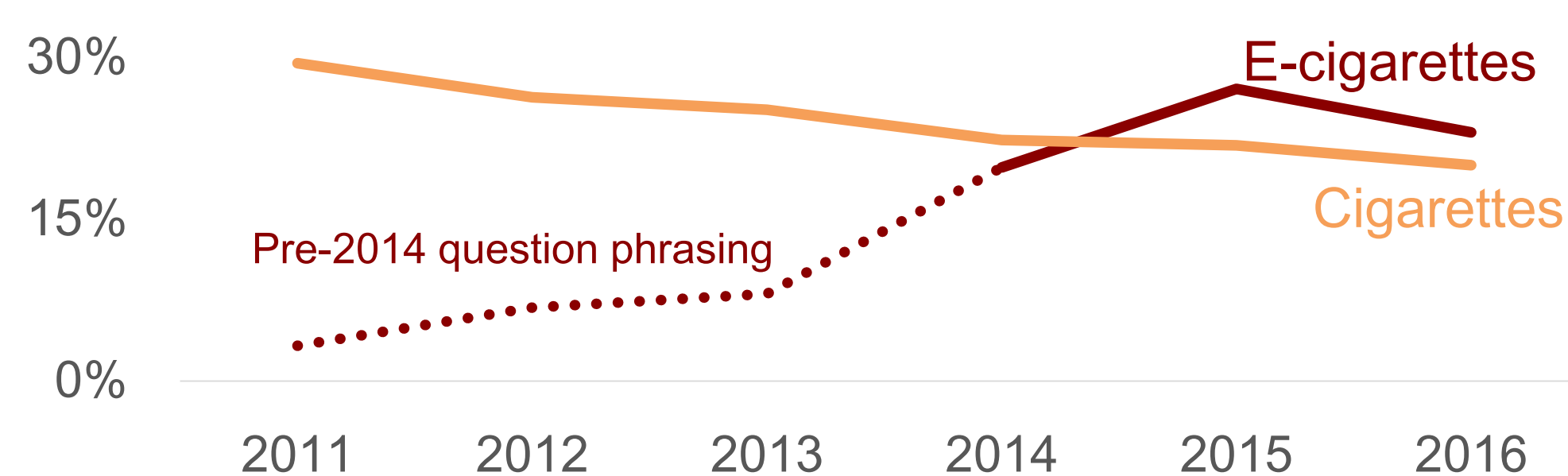


# Coresident e-cigarette contagion

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## Background

Adolescents are trying e-cigarettes at the same rate as conventional cigarettes.



- Intergenerational transmission of cigarette smoking has been clearly established.
- Not enough research on intergenerational transmission of e-cigarette use has been done.

**Q1:** How many adolescents are potentially at increased risk of e-cigarette use given a coresident adult user?

Over half a million adolescents may be at increased risk of e-cigarette use given a coresident adult user.

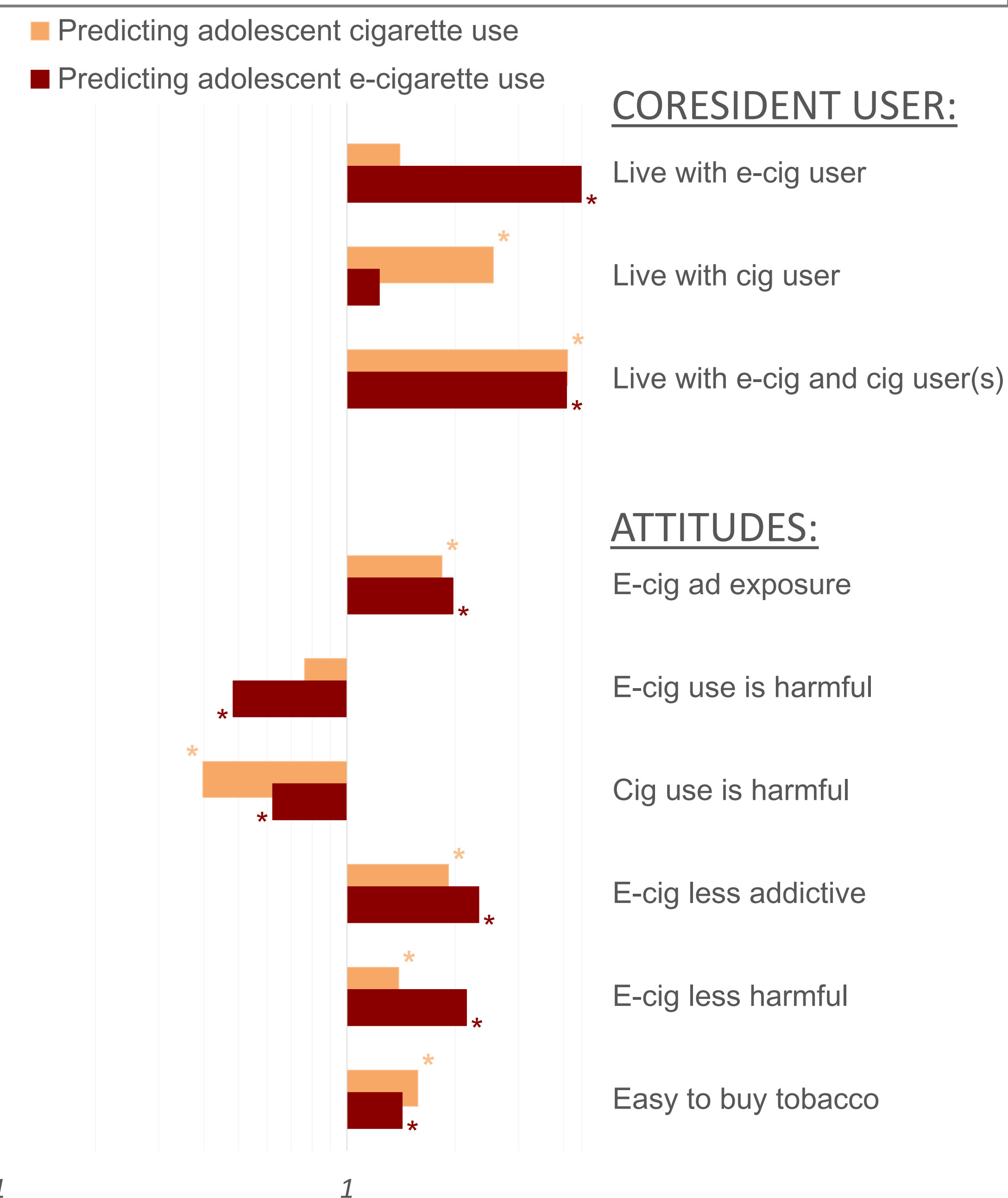
### Weighted population estimates

Dataset	HHs with adult e-cig users <sup>†</sup>	Adolescent e-cig users	Adolescents with coresident e-cig user
IPUMS NHIS	300,927	--	<b>621,371</b>
IPUMS CPS	391,385	--	<b>560,550</b>
IPUMS NYTS	--	1,483,101	<b>1,422,021</b>

<sup>†</sup>and coresident children

**Q2:** What are the odds of adolescent e-cigarette use given any coresident<sup>†</sup> user?

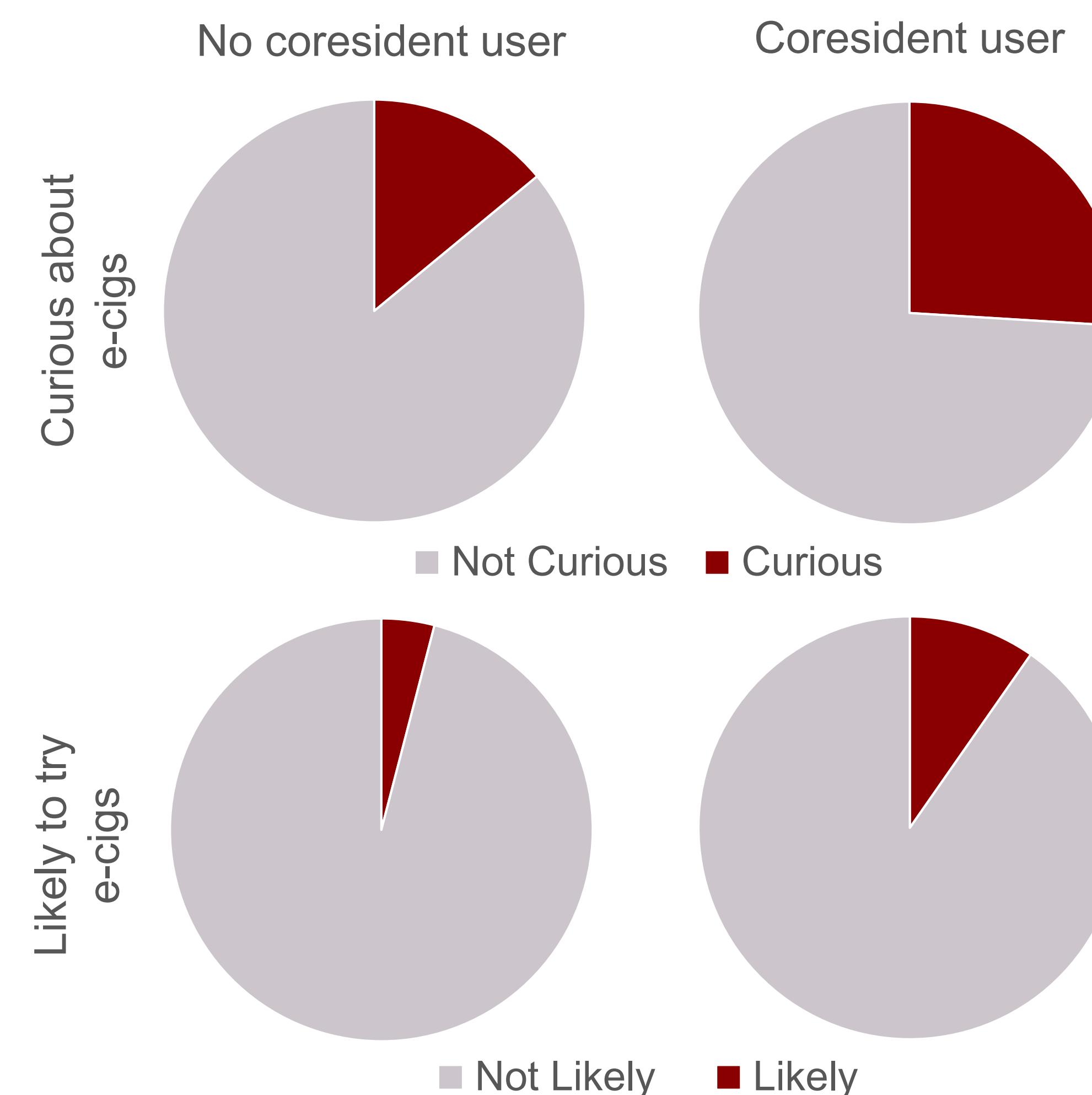
Odds of adolescent current e-cigarette use is 4.5 times higher given any coresident<sup>†</sup> user.



\*  $p < 0.05$   
 Controls omitted from the above figure: age\*, sex\*, race\*, attitudes comparing cigarettes to e-cigarettes  
 Pooled NYTS 2014 and 2016 data, N=16,659

**Q3:** Is living with an e-cigarette user<sup>†</sup> associated with measures of adolescent interest in e-cigarettes?

Adolescents with a coresident<sup>†</sup> e-cigarette user are significantly more likely to report curiosity about and likelihood of trying e-cigarettes.



Pooled NYTS 2014-2016 data, N=44,236

<sup>†</sup> NYTS does not identify the age or relationship of coresident e-cigarette users; these coresident users may be siblings or other adolescents.

## Discussion

**Q1:** Population estimates of at risk adolescents

- Adult e-cigarette use to quit smoking may inadvertently contribute to adolescent uptake.
- The age and relationship of coresident users may have differential impacts on adolescent use.
- Exploring these impacts requires nationally representative data with both adolescent and adult e-cigarette use information; this is not currently available.

**Q2:** Odds ratios given coresident e-cigarette use

- Coresident e-cigarette use has a large effect size, and is greater than the effect of coresident cigarette use on adolescent cigarette smoking.
- Perceived harm of e-cigarettes reduces the odds of adolescent use.

**Q3:** Curiosity and likelihood to try e-cigarettes

- Given the novelty of e-cigarettes and limited information, attitudes may be especially contagious.
- Consistent contact with e-cigarettes may have an outsized impact on adolescents.

## Data

**Pooled 2014-2016 IPUMS NYTS:** adolescent use and attitudes about e-cigarettes and other tobacco products

**Pooled 2014-2016 IPUMS NHIS, 2014-2015 IPUMS CPS** linked to Tobacco Use Supplement of CPS (TUS CPS): adult e-cigarette and tobacco use, detailed demographic and family information