

Is Adolescent E-cigarette Use Renormalising Smoking?

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Background & Aims

Existing studies show an increase in adolescent e-cigarette use, causing a public health concern about whether e-cigarettes will renormalise cigarette smoking. We examined whether an increase in e-cigarette use in the USA has **renormalised** or **displaced** cigarette smoking.

Methodology

Design: National Youth Tobacco Survey & Monitoring the Future

Setting: Nationally representative samples of middle & high school students in the USA.

Participants: Students in grade 6 to 12 from 2014 to 2019 of the NYTS (N = 117, 470) and students in grade 12 from 2014 to 2018 of the MTF (N = 30, 981).

Intervention: Recent e-cigarette use within the past 30 days (0 days [abstained], 1-19 days [occasionally], 20-30 days [regularly]).

Measurement: Frequent cigarette smoking within the past 30 days (20-30 days for NYTS and > one to five cigarettes per day for MTF).

Acknowledgements

This project was conducted at the National Centre for Youth Substance Use Research (NCYSUR) at the University of Queensland. No funding bodies had any role in the study

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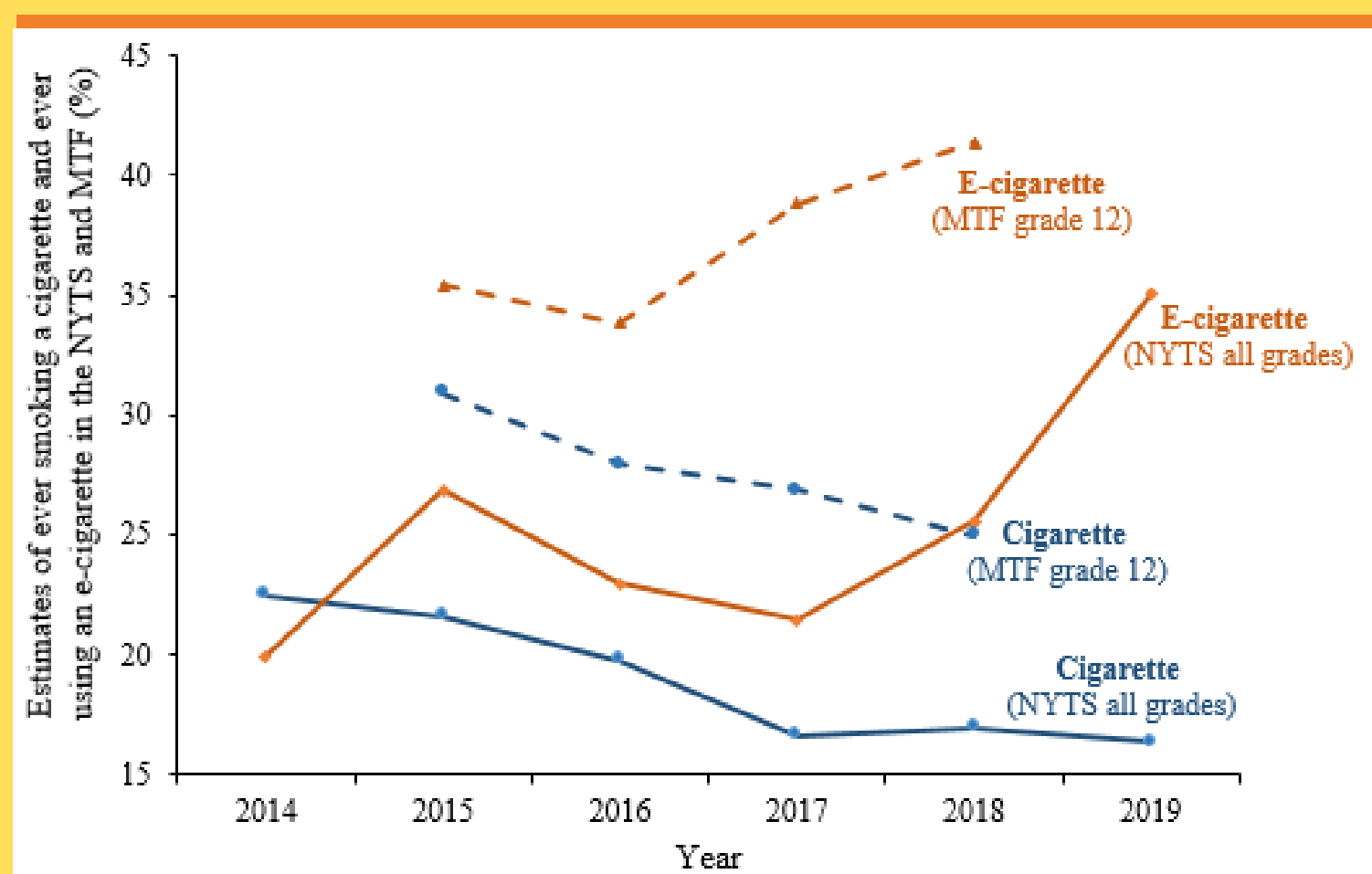
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Results

- **E-cigarette use increased** over the study period.
- **Cigarette smoking decreased** in all groups defined by their e-cigarette use.
- In both data sets the relative percentage change of **frequent smoking decreased** among adolescents who:
 - used e-cigarettes **regularly** in the past 30 days (between 58% to 65%).
 - used e-cigarette **occasionally** (between 48% to 68%) and
 - who **abstained** from using an e-cigarette (between 51% to 75%) in the past 30 days.



Among adolescents who

vape "frequently":

Frequent smoking **significantly decreased** by a relative change of:

65% in the NYTS
(from 2014 to 2019)

58% in the MTF
(from 2014 to 2018)

Frequent smoking significantly decreased

Conclusion

In 2 large national samples of young adults in the USA, **smoking prevalence declined by a sizeable relative percentage in all groups defined by e-cigarette use**, despite e-cigarette use increasing over the same period. These results do not support the hypothesis that e-cigarettes are renormalizing cigarette smoking among adolescents.

Where to go from here?

The rapid increase in e-cigarette use is of public health concern but regulatory frameworks that treat vaping as equivalent to cigarette smoking, may increase the risk of renormalization.

Efforts should focus on reducing the toll of tobacco smoking rather than regulating e-cigarettes more rigorously than cigarettes.