

## Background

E-cigarettes are used frequently by U.S. adolescents, with reported use of 1 in 5 high school students and 1 in 20 middle school students.<sup>1</sup> Nicotine is the primary substance delivered and can have a negative effect on the developing brain, impacting attention, learning, and memory. Other drugs can be used in e-cigarettes and vaping devices, with marijuana being the most common. Health professionals have an important role in screening for use, providing patient education on the risks, and encouraging patients to quit.

## Aims

Increase patient-provider discussions (recorded through patient surveys) and provider documentation (recorded through documentation in Epic) regarding e-cigarettes and vaping use by 30% from baseline during all well-child visits at the Young Adult and Adolescent Clinic.

## Interventions

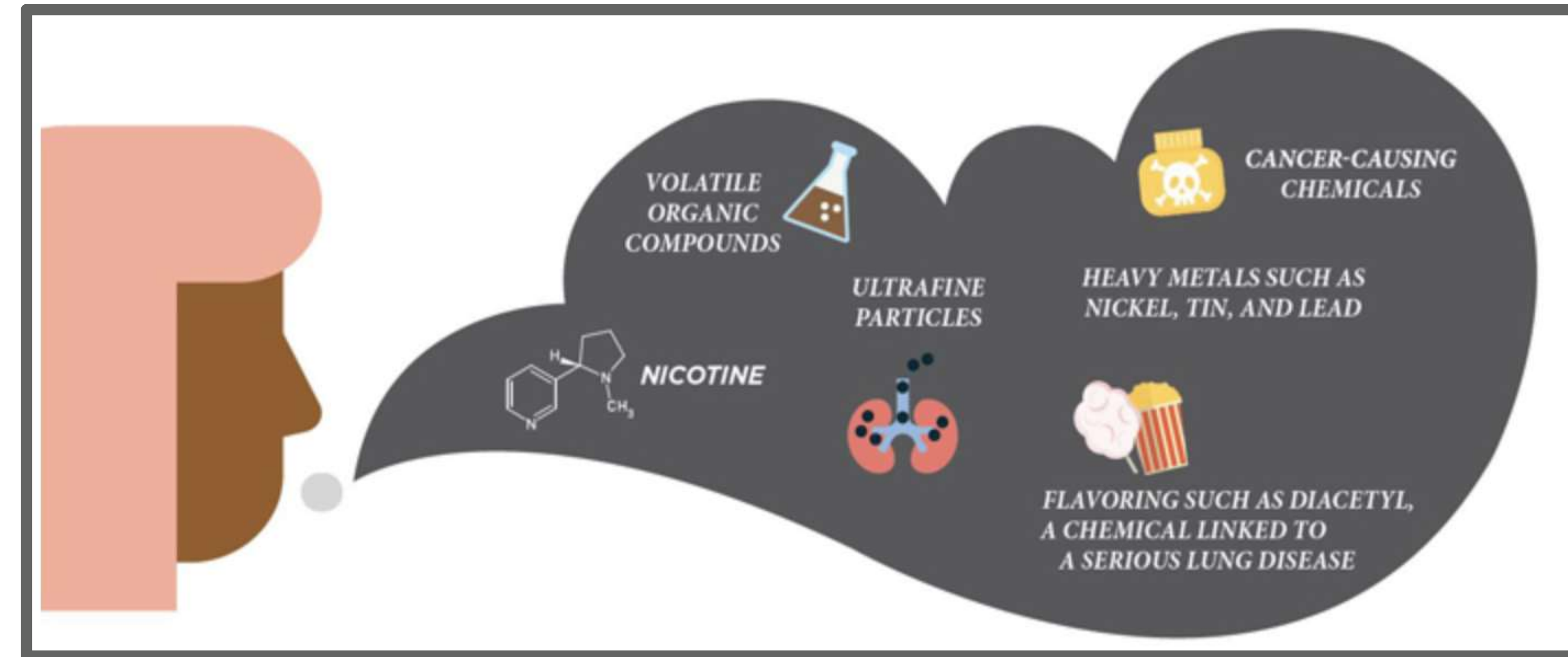
An initial provider survey was completed by attending and resident physicians and revealed the following:

- Providers desired more information to provide to patients in the form of handouts, websites, or props.
- Providers desired to know the most common terms for e-cigarette and vaping use.
- Optimal discussion and documentation of e-cigarette and vaping use occur during the HEEDSSS review and subsequent documentation in the note rather than during intake.

Two interventions were initiated to improve patient-provider discussions and documentation about e-cigarette and vaping use:

**Intervention 1:** Informational poster added to patient rooms

**Intervention 2:** Epic note template expanded to include a comprehensive multi-select substance list in the HEEDSSS review for providers to review and document e-cigarette and vaping use



[https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/Quick-Facts-on-the-Risks-of-E-cigarettes-for-Kids-Teens-and-Young-Adults.html)

## Measures & Results

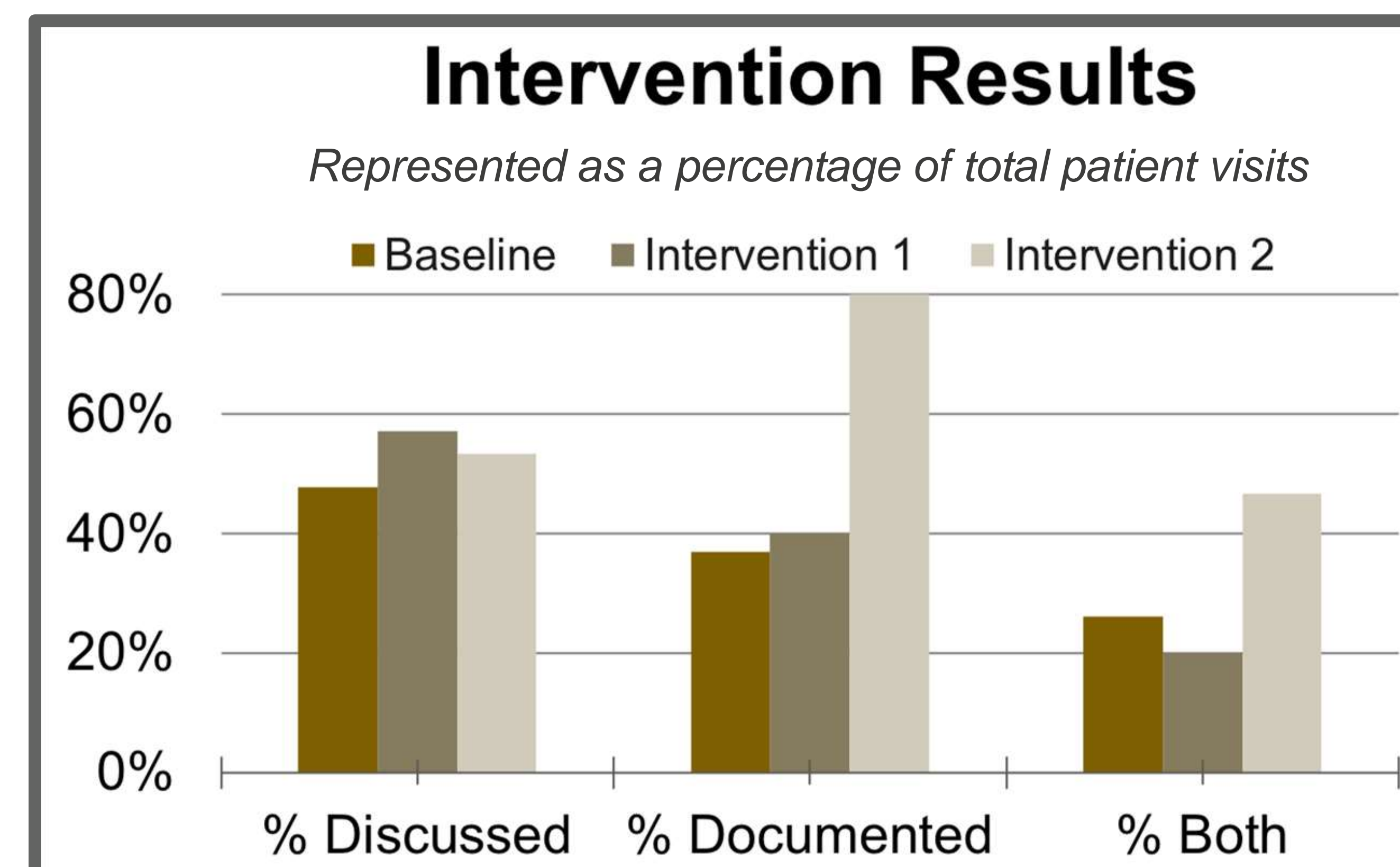
Data was gathered in 4 week intervals via:

- Patient surveys, provided after the visit by clinic staff
- Epic chart review of provider documentation after the visit

### Results Summary

- Patient-provider discussions increased from baseline by 9.32% after intervention 1 and by 5.51% after intervention 2.
- Provider documentation increased from baseline by 3.04% after intervention 1 and by 43.04% after intervention 2.
- Success of both discussion and documentation for a given encounter decreased by 6.09% from baseline after intervention 1 but increased by 20.58% from baseline after intervention 2.

Most frequently reported terms from patients for describing e-cigarette and vaping were “vape”, “JUUL”, and “ecig”. The term “dab pen” was also used in conjunction with marijuana or THC oil.



## Conclusions

- Implementing an educational poster in patient rooms was helpful for increasing rates of discussion of e-cigarette and vaping use and to a lesser extent documentation.
- Providing a more detailed note template for providers improved the thoroughness of discussion of substance use and to a greater extent documentation.
- Lack of standardization across providers in the clinic resulted in inconsistency for rates of discussion and documentation.

## Challenges

- Providing a detailed multi-select list of options in the Epic note template did not guarantee that providers discussed use of every substance included in the list with patients.
- Differences in clinic staff workload and workflow resulted in unequal sample sizes and collection timeframe between the baseline and intervention groups.

## Future Work

- Focus interventions on making discussion and documentation of e-cigarette and vaping use routine with consideration of individual provider practice
- Increase patient and provider education about e-cigarettes
- Continue optimizing Epic note templates to meet the needs of providers and reflect current adolescent tendencies

## Acknowledgments

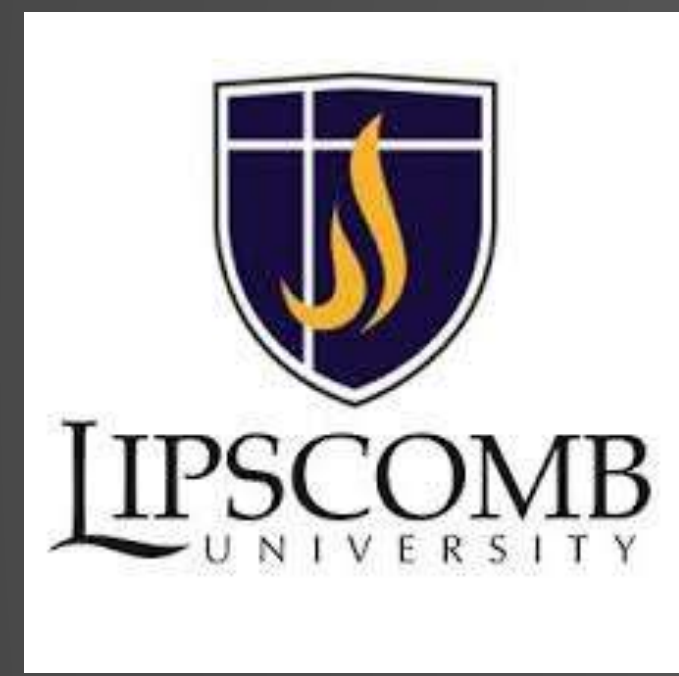
We would like to thank the following people for their assistance with this project:

- Dr. Neerav Desai, Dr. Debra Braun-Courville, Dr. Mary Romano, and the Adolescent Medicine Clinic staff
- Dr. Pamela Waynick-Rogers and the Vanderbilt Program in Interprofessional Learning (VPIL) faculty

## References

1. [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/index.htm](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm)
2. Klein DA, Goldenring JM, Adelman WP. HEEDSSS 3.0: the psychological interview for adolescents updated for a new century fueled by media. *Contemp Pediatr.* 2014;16-28.





# Improving Discussions and Documentation of E-cigarette and Vaping Use During Well-Child Visits in an Adolescent Medicine Clinic



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## Intervention 1

### Informational Poster

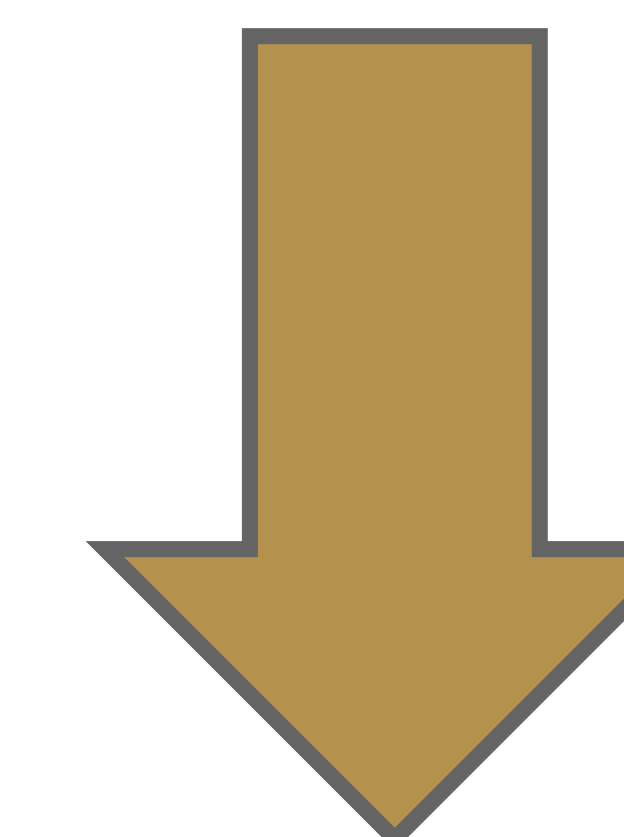
Informational poster was added to patient rooms

## Intervention 2

### Note Template - Before Intervention

```

HEADSS Assessment:
Home: {Home:20571}
Education: {Education:20572}
Employment: {Employment:20575}
Eating: {Daily diet habits:20576}
Activities: {Activities:20584}
Drugs: Alcohol use: {Alcohol:20592}
Sexuality: {Sexual history:20593}
Safety: {Safety:20599}
    
```



### Note Template - After Intervention

```

HEADSS Assessment:
Home: {Home:20571} denies all substance use, including alcohol, cigarettes, e-cigs/vaping, MJ, & other illicit substances.
Education: {Education:20572} alcohol ***
Employment: {Employment:20575} cigarettes ***
Eating: {Daily diet habits:20576} e-cigarettes/vaping ***
Activities: {Activities:20584} marijuana ***
Drugs: {Substance use:32083} other: ***
Sexuality: {Sexual history:20593}
Safety: {Safety:20599}
    
```

Epic note template was modified to include a comprehensive multi-select substance list in the HEADSS review for providers to review and document e-cigarette and vaping use