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## Prevalence of Nicotine Delivery Systems by Biological Sex in the Spit for Science Study


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# Prevalence of Nicotine Delivery Systems by Biological Sex in the Spit for Science Study

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### INTRODUCTION

- Trends in nicotine use have changed as a result of a wider variety of nicotine delivery systems becoming available.<sup>1</sup>
- Among college students nationwide, 30-day cigarette prevalence rates increased from 2020 to 2021 in both males (4.2% to 7.0%) and females (3.9% to 5.5%). The 30-day prevalence rate of vaping nicotine increased from 3.2% in 2017 to 20.5% in 2021 in females, surpassing the rate of 19.9% in males in 2021.<sup>2</sup>
- The presence of sex differences for other nicotine methods remain unclear in young adults ages 18-25 who attend college.
- **Study Aim** This preliminary study will estimate rates of nicotine use across nicotine delivery systems in college students by biological sex.

### METHODS

- **Sample** VCU students participating in the Spit for Science study between 2021-2022.
- Cohort 6 (N=318, 65 males, 252 females, 1 choose not to answer) in Year 1 Spring, and Cohort 7 (N=670, 132 males, 533 females, 5 choose not to answer) in Year 1 Fall and Spring.
- **Measures** Self-report of 6 categories of lifetime nicotine use as number of occasions of use and biological sex assigned at birth.
- **Analyses** We present percentage of lifetime use, separately for males and females, as well as the percentage of hookah or vape users who used those products with nicotine in the 30 days preceding self-report.

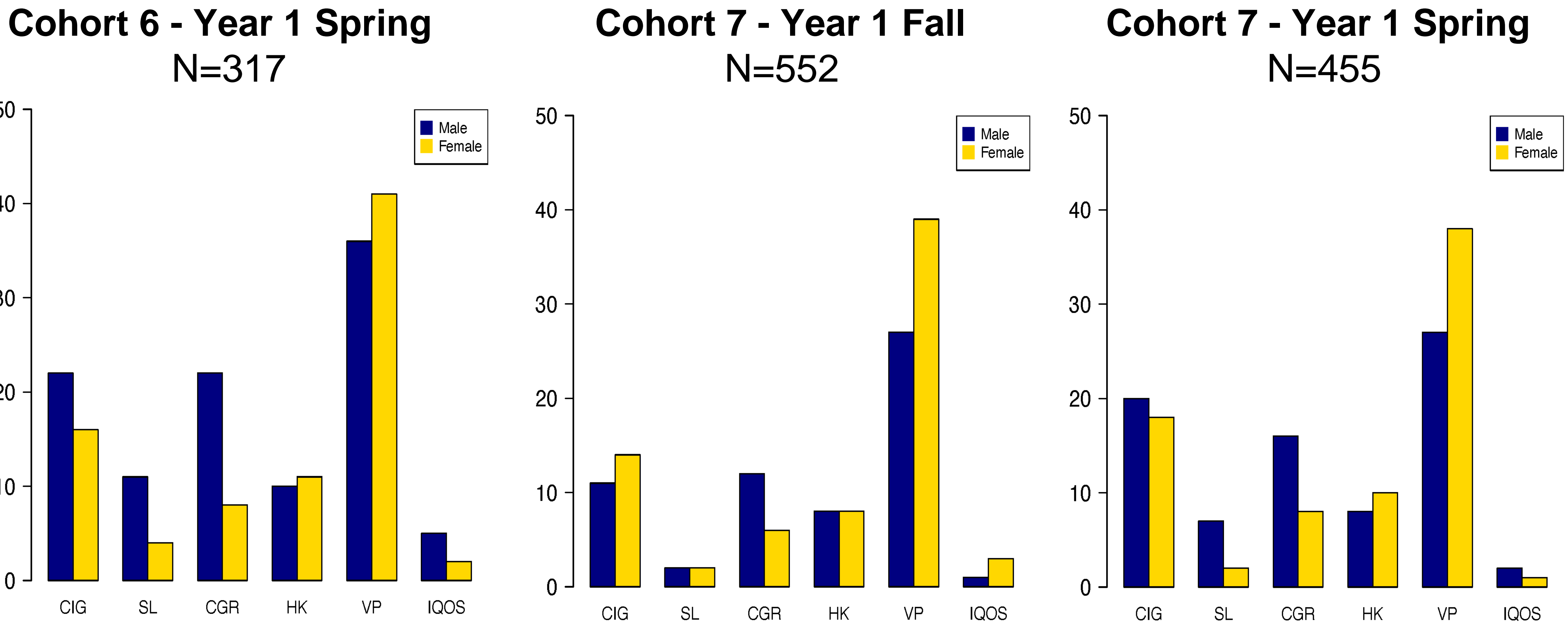
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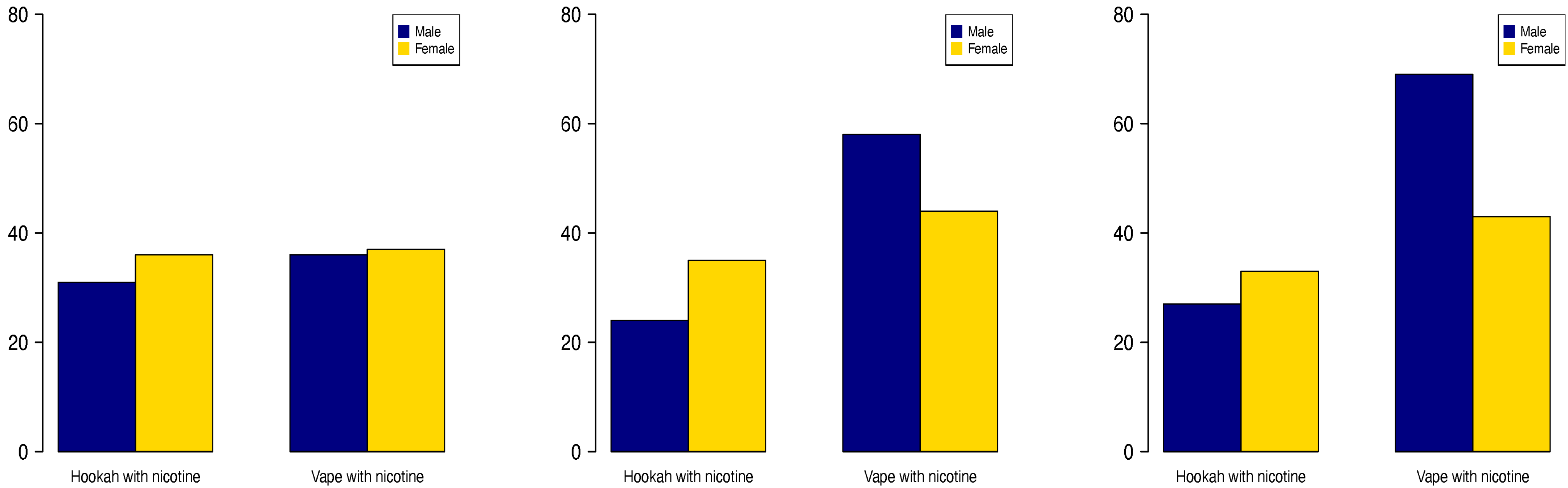
### RESULTS

## Ever Use of Nicotine Delivery Systems by Biological Sex

Y-axis - percentage of respondents who indicated they have ever used the specific nicotine product



CIG – Cigarettes	SL – Smokeless Tobacco	CGR – Cigars/Little Cigars/Cigarillos	HK – Hookah	VP – Vaping	IQOS – Heat-not-burn products
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### CONCLUSIONS

- Male participants had a higher prevalence of nicotine consumption throughout many different nicotine delivery methods.
- Female participants had greater prevalence of hookah and electronic cigarettes consumption compared to males.
- Of note, females had higher use of nicotine intake via hookah, while male participants had higher use of nicotine intake via vape.

### FUTURE DIRECTIONS

- Although these analyses focused on assessing nicotine use trends by sex, there are other demographic factors, such as socioeconomic status (SES) and race/ethnicity, for which differences in nicotine use have been reported.
- By studying rates of nicotine delivery systems by biological sex, SES, and race/ethnicity, additional research (i.e., genetic studies) could inform the development of prevention and intervention models tailored to specific groups.

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