

SHIFTING E-CIGARETTE PREFERENCE AMONG UNDERGRADUATES IN MISSISSIPPI

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Disclosures

- This study is part of a larger surveillance and evaluation project for the Office of Tobacco Control, Mississippi State Department of Health



Overview

- January 2020 - FDA implemented enforcement policy on unauthorized flavored *cartridge-based* e-cigarettes
- March 2020 – public health faced COVID-19 pandemic and survey efforts tracking youth e-cigarette use were disrupted in many states
- Current study – assessed whether e-cigarette preference shifted among Mississippi college students after the FDA enforcement policy



Design

- Design

- *Cross-sectional, web-based survey*
 - Qualtrics survey software

- Timeframe

- *Spring 2019*
- *Spring 2020: Two universities surveyed prior to the start of the pandemic*
- *Fall 2020: One university surveyed after the pandemic began*
- *2021: Same split sample implemented as 2020*



Sample

- Undergraduate students at three Mississippi universities
 - $N = 1,170$ (2019 sample)
 - $N = 1,499$ (2020 sample)
 - $N = 1,166$ (2021 sample)

- Age 18 years of age or older



Procedures

- Universities provided undergraduate student e-mail addresses
 - *Random sample*
 - 50% of e-mail addresses provided for each university
- Series of three e-mails sent via Qualtrics
 - *1st e-mail: Initial request for participation*
 - Embedded URL link to complete survey or to opt out of participating
 - *2nd and 3rd e-mails: Sent to respondents who did not start or finish the survey after initial e-mail*



Measures

- E-Cigarettes

- *Trial e-cigarette use*

- “Have you ever tried an e-cigarette or vaping device?”

- *Frequency of use*

- Past 30-day users

- “How often do you currently use an e-cigarette or vaping device?”

- *Product preference*

- “What e-cigarette or vaping device (do/did) you use the most?”

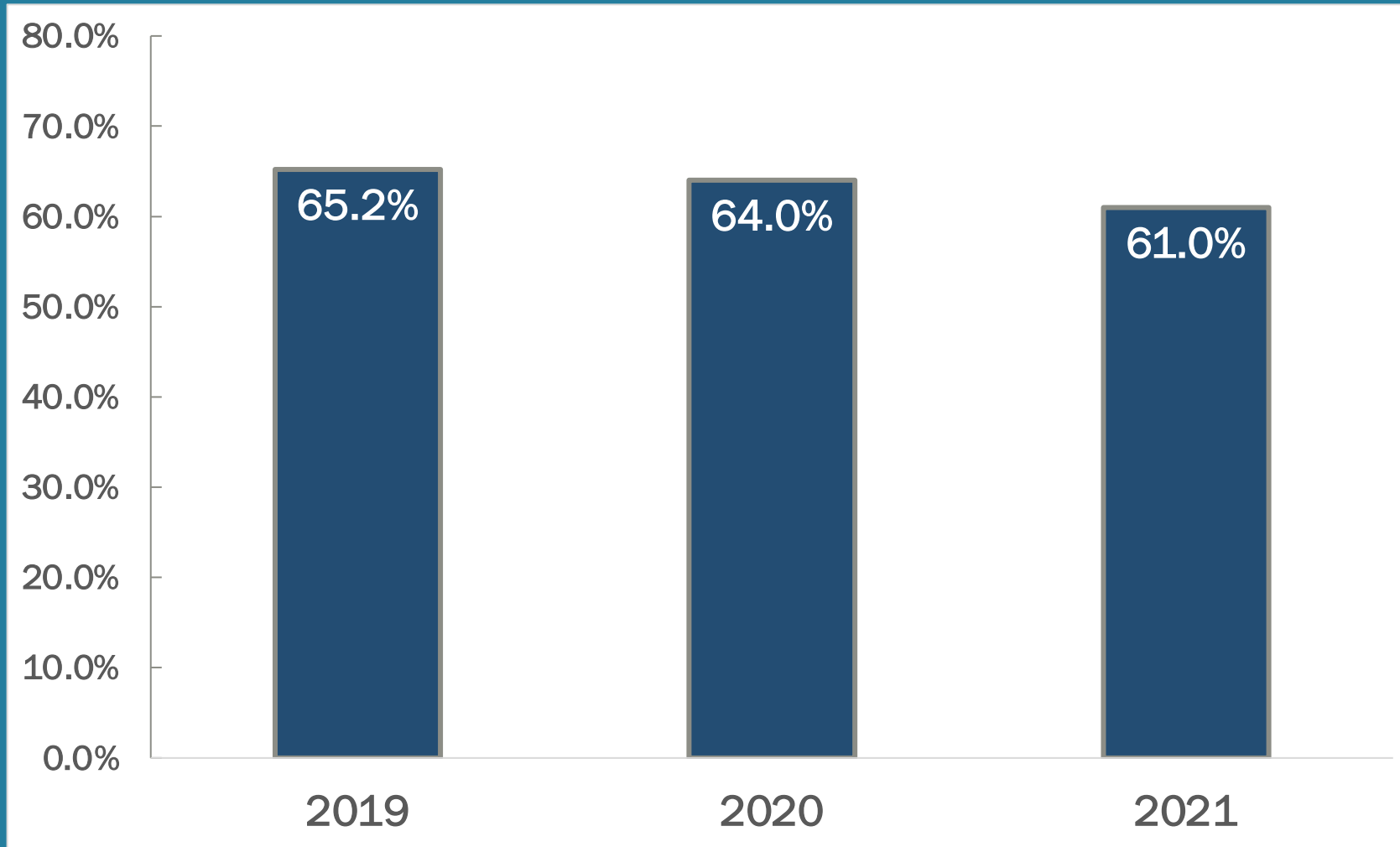


Population and Sample Characteristics

2021 Population and Sample Characteristics								
University #1 (Spring)			University #2 (Spring)			University #3 (Fall)		
	Population	Sample		Population	Sample		Population	Sample
Freshman	20.31%	24.10%	Freshman	-	-	Freshman	23.12%	28.90%
Sophomore	19.72%	24.50%	Sophomore	-	-	Sophomore	20.17%	17.60%
Junior	24.40%	26.00%	Junior	-	-	Junior	24.40%	29.20%
Senior and Beyond	35.57%	25.40%	Senior and Beyond	-	-	Senior and Beyond	32.31%	24.30%
Female	49.66%	48.20%	Female	63.92%	69.30%	Female	56.84%	60.30%
Male	50.34%	51.80%	Male	36.08%	30.70%	Male	43.16%	39.70%
Black	17.51%	4.90%	Black	28.81%	14.60%	Black	12.18%	8.00%
White	72.87%	84.80%	White	60.54%	69.20%	White	77.45%	78.20%
Other	9.62%	10.30%	Other	10.65%	16.30%	Other	10.36%	13.70%



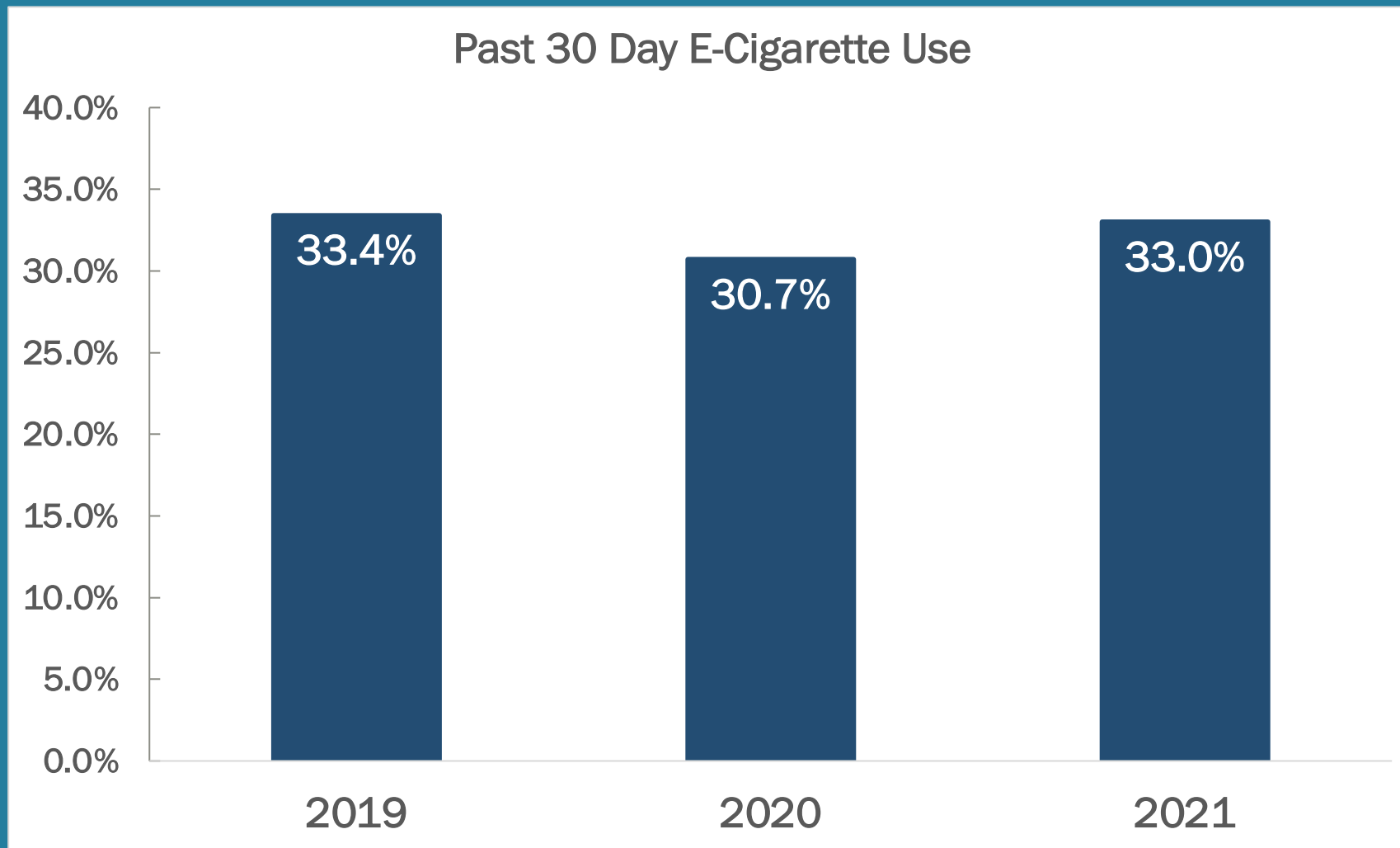
Trial E-Cigarette Use



- Over half of undergraduates in each sample year has tried an e-cigarette



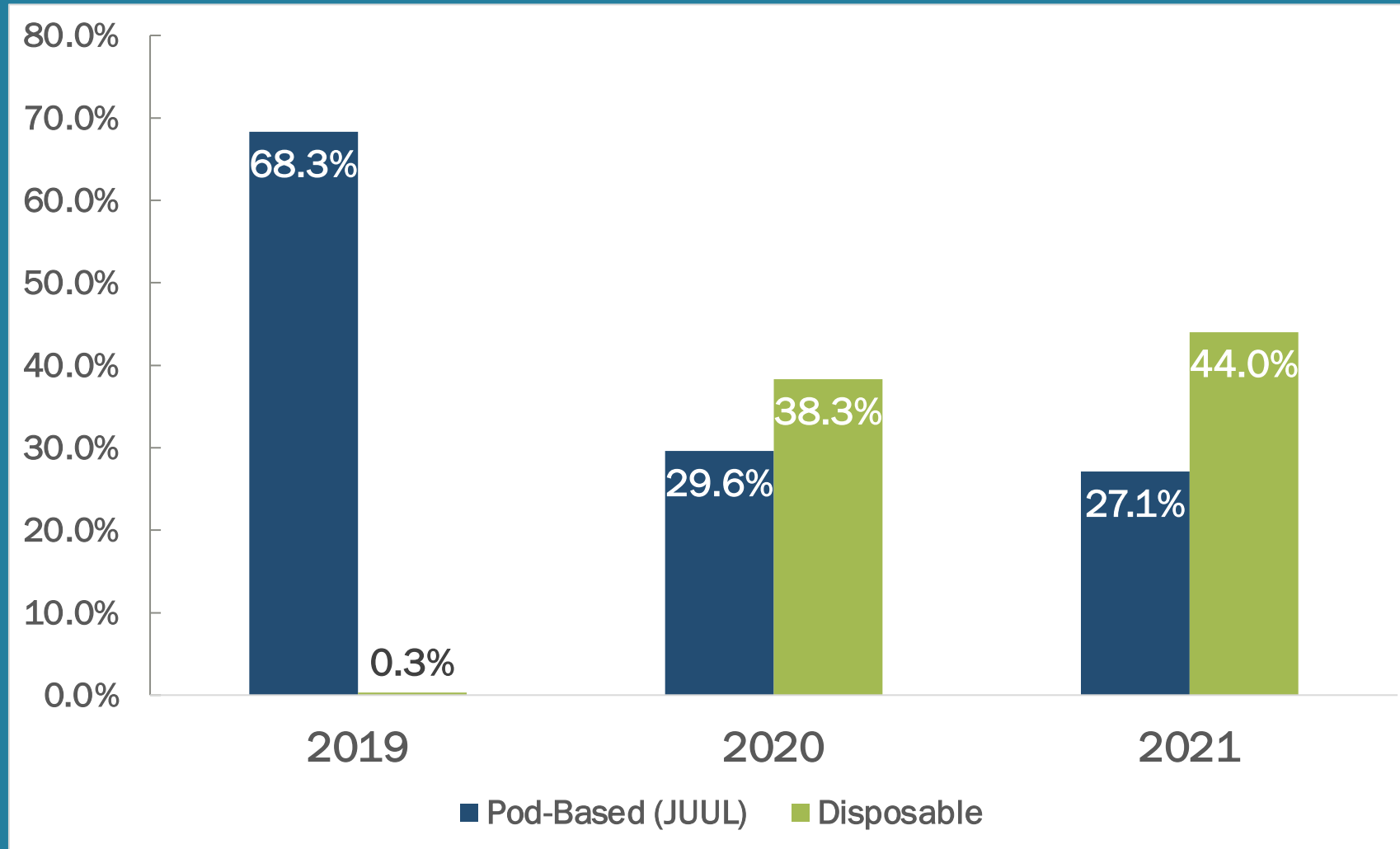
Frequency of E-Cigarette Use



- A third of undergraduates in each sample year has reported using an e-cigarette in the past thirty days



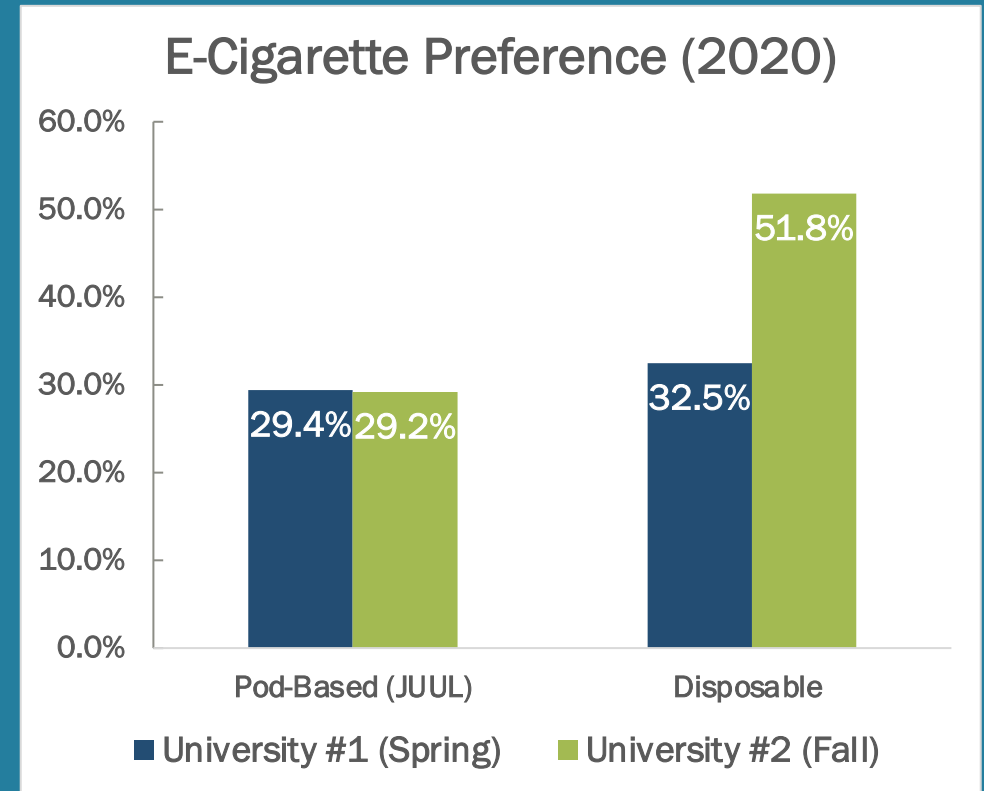
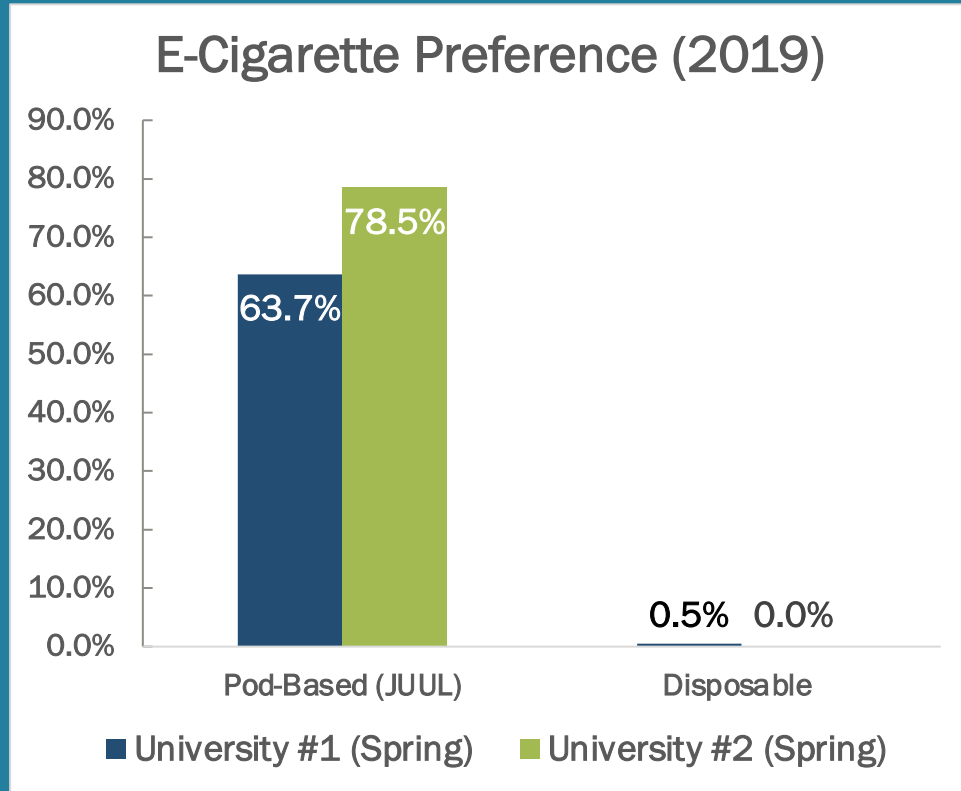
E-Cigarette Preference



- After the enforcement policy, student preference transitioned from pod-based products such as JUUL to disposable products



E-Cigarette Preference



- University #1 survey launched February 2020 prior to Covid and not long after implementation of the FDA's enforcement policy. University #2 survey launched October 2020 several months after the enforcement policy had been implemented



Disposable E-Cigarettes

- 2021 Survey:
 - *Disposable e-cigarette users*
 - 62.4% said they switched to using a disposable e-cigarette after first using pod-based devices, such as JUUL
 - 70.6% of past 30-day e-cigarette users who reported using a disposable e-cigarette the most said they switched to using a disposable e-cigarette after first using pod-based devices, such as JUUL



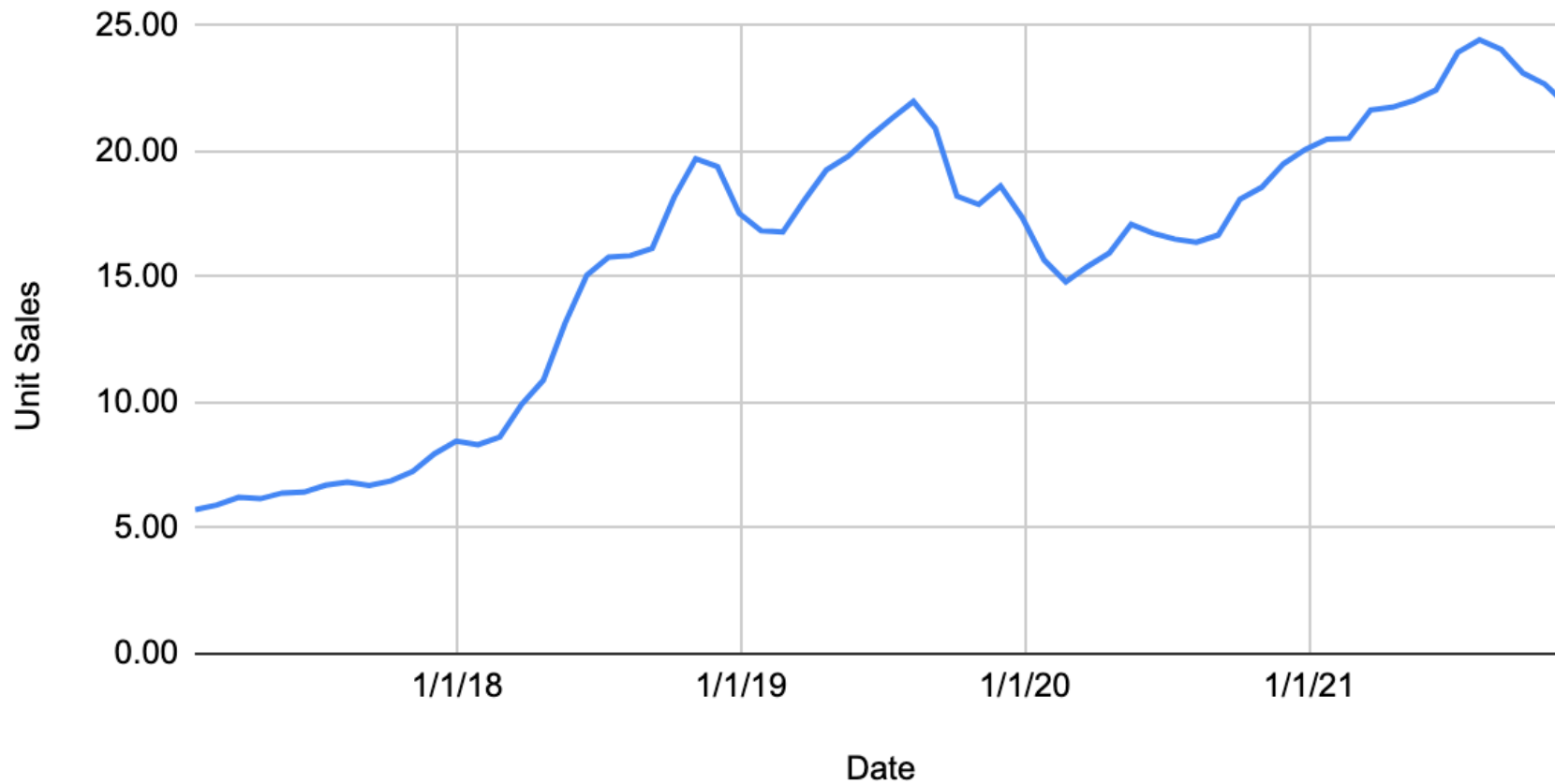
Flavor Preference by Type Among Past 30-Day E-Cigarette Users

- Other flavor such as fruit, candy, alcohol, coffee, vanilla, etc.
 - 2019:
 - Disposable – 0.6%
 - Pod-Based – 45.8%
 - 2020:
 - Disposable – 47.7%
 - Pod Based – 13.8%
 - 2021:
 - Disposable – 62.1%
 - Pod Based – 6.2%



E-cigarette Sales Data

National E-Cigarette Unit Sales (in millions), 4 Week Estimates
1/2017 – 11/2021



Source: CDC Foundation



E-Cigarette Sales Data

- 2020 – E-cigarette sales down 8.9%
 - *Vaping related lung disorder*
 - *Regulations to combat underage vaping*
 - *From 33.9% (2019) to 29.5% (2020)*
- 2021 – E-cigarette sales increased 21.6%
 - *Disposable e-cigarettes*
 - Dollar sales up 44.1% and unit sales up 24.1% as of October 2021
 - Dollar sales down October 2021 vs. September 2021



Conclusions

- E-cigarette use continues to be high among undergraduates in Mississippi
- Product preference has shifted after implementation of the FDA enforcement policy
- Flavors continue to influence e-cigarette use among young adults



Thank you

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