The college-aged demographic is at an increased risk for adverse effects surrounding the use of electronic vaping devices (Kenne et al., 2017). Youth e-cigarette rates were 20.9% in 2018 (Campaign for Tobacco-Free Kids, 2021), and the most recent rate is 11.8% (ACHA, 2021). Although the rates have gone down, there is still risk for the college-aged population and intervention is necessary.

### Purpose and Framework

- To analyze the use of electronic vaping devices among college students after the Anti-Vaping Ongoing Information Dissemination (AVOID) program.
- Using the Transtheoretical Model, assessment of vaping behavior changes was conducted after the AVOID program was implemented (Prochaska & DiClemente, 1984).

### Methods

- **Approval:** University IRB
- **Setting:** Private, faith-based Midwestern university
- **Design:** 900 undergraduate students were invited to participate in a survey conducted through SurveyMonkey® after the implementation of the AVOID dissemination program which included 8 campus strategies.
- **Sample:** Undergraduate students
  
- **N = 464**, response rate 51.6%

### AVOID Program Activities

- Posters summarizing our research findings displayed around the campus
- YouTube video narrating the posters presented
- Social Media posts on Instagram as well as newspaper articles
- Tables set up to present findings to people walking by
- Campus TV Messages displaying findings
- Presented work at Fraternity/Sorority Life Meetings
- Passed out stress balls/information regarding vaping at campus sporting events

### Significance of Problem

- The college-aged demographic is at an increased risk for adverse effects surrounding the use of electronic vaping devices (Kenne et al., 2017).
- Youth e-cigarette rates were 20.9% in 2018 (Campaign for Tobacco-Free Kids, 2021), and the most recent rate is 11.8% (ACHA, 2021).
- Although the rates have gone down, there is still risk for the college-aged population and intervention is necessary.

### Rate of AVOID Program Exposure

<table>
<thead>
<tr>
<th>Rate of AVOID Program Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posts:</td>
</tr>
<tr>
<td>Social media:</td>
</tr>
<tr>
<td>Tabling displays:</td>
</tr>
<tr>
<td>Campus TV messages:</td>
</tr>
<tr>
<td>FSL meetings:</td>
</tr>
<tr>
<td>Youtube video</td>
</tr>
<tr>
<td>Newspaper Article:</td>
</tr>
<tr>
<td>Sporting events</td>
</tr>
</tbody>
</table>

### Stages of Change (n = 231)

- Quitting in 30 days: 54.11%
- Plan to quit next 6 months: 7.36%
- Think about quit, but no plan: 3.90%
- Think about cutting back: 8.23%
- Do not want to stop: 7.79%
- Not a problem, not quitting: 18.61%

### Conclusions

- A majority of participants responded that the information presented had little to no impact or effect on their vaping habits. However, over half of the participants have a plan to quit vaping following the AVOID program.
- Following the AVOID program, 86.7% of participants recognized the dangers of vaping and would recommend others to quit.
- Progress is being made on getting our message across our college campus regarding the dangers of vaping through further educational efforts.

### Recommendations

- Continue to work with the student health center tailoring a more indepth section regarding e-cigarettes and vaping.
- Conduct additional research into the change of age requirement and its impact on the ability to buy e-cigarettes.
- Conduct more research into the impact of flavor bans on vaping usage.

### Percent of Respondents by College (N = 464)

<table>
<thead>
<tr>
<th>College</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td>41.04%</td>
</tr>
<tr>
<td>Business</td>
<td>9.72%</td>
</tr>
<tr>
<td>Engineering</td>
<td>16.63%</td>
</tr>
<tr>
<td>Nursing &amp; Health Professions</td>
<td>30.45%</td>
</tr>
<tr>
<td>Christ College</td>
<td>2.16%</td>
</tr>
</tbody>
</table>

### Description of Vaping Use

- There is a significant difference in vaping rates between the colleges in 2020 and 2022 ($\chi^2 = 15.70, p = 0.003$). (Current data were compared to baseline data collected in 2020).

### Vaping Behaviors (N = 464)

- Vaping habits since arriving to campus
  - Vaped: 15.8%
  - Increased: 8.9%
  - Decreased: 8.7%
  - Same: 11.0%
  - Not applicable: 71.4%

- Exposure to electronic vaping devices
  - Family home: 19.4%
  - Parties: 68.3%
  - Campus home: 26.3%
  - Outside campus building: 42.0%
  - Work: 19.4%
  - Inside campus building: 15.7%
  - Social setting: 76.0%

### Comparison of Vaping Rates by College and Year

<table>
<thead>
<tr>
<th>College</th>
<th>2020</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td>15.70</td>
<td>7.36</td>
</tr>
<tr>
<td>Business</td>
<td>8.91</td>
<td>8.50</td>
</tr>
<tr>
<td>Engineering</td>
<td>11.00</td>
<td>27.40</td>
</tr>
<tr>
<td>Nursing &amp; Health Professions</td>
<td>26.30</td>
<td>30.45</td>
</tr>
<tr>
<td>Christ College</td>
<td>42.00</td>
<td>40.53</td>
</tr>
</tbody>
</table>

### Vaping by Year in School

- Freshman: 27.4%
- Sophomore: 23.7%
- Junior: 23.7%
- Senior: 23.7%
- Other: 1.5%