

# Does dose of vaping prevention messaging impact vaping-related beliefs and behaviors in young adults?

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## BACKGROUND & AIMS

- Widespread marketing of electronic vapor products as well as perceptions of vape products as “safer alternatives” and “enhancing social interactions”, among others, have led to the popularization of these devices.
- Preliminary studies suggest that vaping prevention messaging can increase vaping-related harm perceptions.
- This study evaluated the effects of vaping-prevention message dose on vaping-related harm perceptions and beliefs in young adults (YAs).

## METHODS



### Policy and Communication Evaluation (PACE) Vermont Study

- 396 Vermont YAs aged 18-24 participated in both a randomized controlled trial of vaping prevention messages and an ongoing online cohort study.
- Participants were exposed to: 1) Vermont’s UNHYPED targeted digital media campaign, 2) vaping prevention messages shown to half of participants in the randomized trial, and/or 3) a vaping prevention video shown to all participants at the end of the randomized trial.
- Participants had varying levels of exposure to three types of vaping messages in Fall 2020, with dose of exposure categorized as low (0-1; n= 158), moderate (2; n=192), or high (3; n=46).

### Analysis

- Prospective analyses examined associations between message dose (fall 2020) and vaping-related beliefs and harm perceptions six months later (spring 2021).

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## RESULTS

**Table 1.** Demographics of Vermont young adults who participated in study, by dose of vaping prevention messages

	0-1 messages N (%)	2 messages N (%)	3 messages N (%)	Total N (%)
<b>Sex</b>				
Male	41 (25.9)	42 (21.9)	16 (34.8)	99 (25)
Female	117 (74.1)	150 (78.1)	30 (65.2)	297 (75.0)
<b>Race/ethnicity</b>				
White	138 (87.3)	154 (80.2)	39 (84.8)	331 (83.6)
Non-white/other race	11 (7.0)	23 (12.0)	3 (6.5)	37 (9.3)
Hispanic	9 (5.7)	15 (7.8)	4 (8.7)	28 (7.1)
<b>Employment status</b>				
Work full-time (35 hours/week or more)	55 (34.8)	58 (30.2)	10 (21.7)	123 (31.1)
Work part-time (15-34 hours/week)	36 (22.8)	43 (22.4)	8 (17.4)	87 (22.0)
Work part-time (<15 hours/week)	25 (15.8)	34 (17.7)	15 (32.6)	74 (18.7)
Don't currently work for pay	42 (26.6)	57 (29.7)	13 (28.3)	112 (28.3)
<b>Enrolled in school/degree program</b>				
No	68 (43.0)	60 (31.3)	7 (15.2)	135 (34.1)
Yes	90 (57.0)	132 (68.8)	39 (84.8)	261 (65.9)

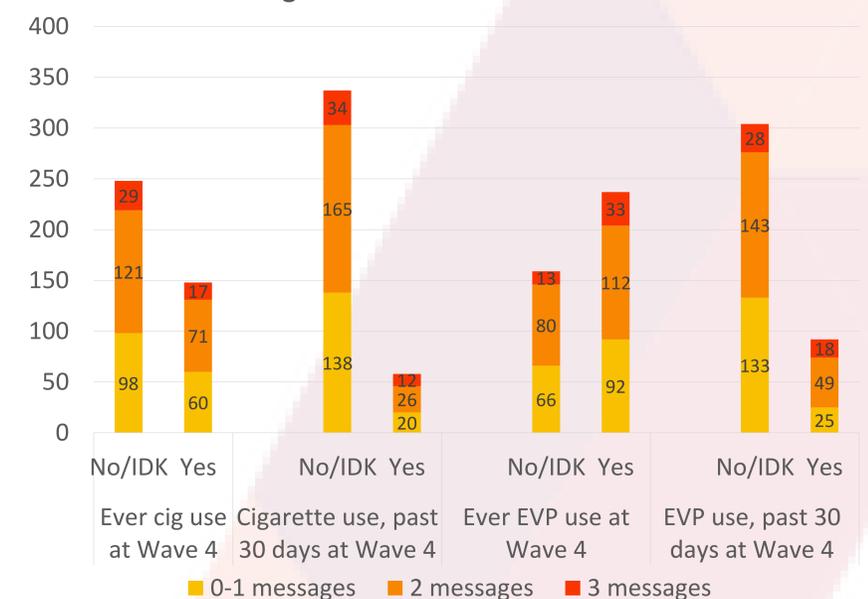
**Table 2.** Risk perceptions based on dose of vaping prevention messaging

	0-1 messages N (%)	2 messages N (%)	3 messages N (%)	Total N (%)
<b>How large a part of the health risks of cigarette smoking comes from the nicotine itself</b>				
None or a very small part	100 (63.7)	125 (65.1)	29 (63.0)	254 (64.3)
A relatively small part	23 (14.6)	23 (12.0)	13 (28.3)	59 (14.9)
A relatively large part	34 (21.7)	44 (22.9)	4 (8.7)	82 (20.8)
A very large part or all	157 (100.0)	192 (100.0)	46 (100.0)	395 (100.0)
<b>How large a part of cancer caused cigarette smoking comes from the nicotine itself</b>				
None or a very small part	17 (10.8)	16 (8.4)	6 (13.0)	39 (9.9)
A relatively small part	69 (43.7)	77 (40.3)	21 (45.7)	167 (42.3)
A relatively large part	51 (32.3)	79 (41.4)	15 (32.6)	145 (36.7)
A very large part or all	21 (13.3)	19 (9.9)	4 (8.7)	44 (11.1)
<b>Risk perceptions of weekly EVP use</b>				
No risk	4 (2.5)	0 (0.0)	2 (4.3)	6 (1.5)
Slight risk	33 (20.9)	36 (18.8)	13 (28.3)	82 (20.7)
Moderate risk	59 (37.3)	87 (45.3)	23 (50.0)	169 (42.7)
Great risk	62 (39.2)	69 (35.9)	8 (17.4)	139 (35.1)
<b>Harm from EVPs</b>				
Less harmful	1 (0.6)	0 (0.0)	0 (0.0)	1 (0.3)
No different	28 (17.7)	28 (14.6)	14 (30.4)	70 (17.7)
More harmful	65 (41.1)	92 (47.9)	22 (47.8)	179 (45.2)
<b>Harm of EVPs vs. smoking cigarettes</b>				
Less harmful	32 (20.3)	44 (22.9)	10 (21.7)	86 (21.7)
No different	94 (59.5)	115 (59.9)	30 (65.2)	239 (60.4)
More harmful	32 (20.3)	33 (17.2)	6 (13.0)	71 (17.9)
<b>Harm of vaping nicotine vs. marijuana</b>				
Less harmful	12 (7.6)	16 (8.3)	6 (13.0)	34 (8.6)
No different	64 (40.5)	79 (41.1)	20 (43.5)	163 (41.2)
More harmful	82 (51.9)	97 (50.5)	20 (43.5)	199 (50.3)

## RESULTS

- There were few differences in baseline characteristics across groups, however the high-exposure group had the highest prevalence of past 30-day electronic vapor product (EVP) use.
- High message exposure participants had greater endorsement of the following: “One 5% vape pod can contain as much nicotine as entire pack of cigarettes” (89% vs. 71%; p = 0.022) and “a cigarette brand low in nicotine means that it is less addictive” at follow-up (28% vs. 15%; p = 0.035) compared to low-exposure YAs.
- Conversely, the high-exposure group had lower mean perceived risk from weekly EVP use at follow-up (-0.33 points; 95% CI: -0.58, -0.074).

**Figure 1.** Tobacco and EVP use



## CONCLUSIONS

- Results suggest that greater exposure to vaping prevention messages may result in more accurate nicotine beliefs, but may not increase vaping-related harm perceptions, particularly in those already using EVPs.
- Incorporation of vaping cessation content in prevention messaging may promote greater vaping reduction in YAs.

