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Understanding Use of Electronic Nicotine Delivery Systems (ENDS) Among Youth and Adults: Final Cognitive Interview Report

Prepared for

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BACKGROUND & OBJECTIVES

Given the rise of electronic nicotine delivery systems (ENDS) awareness and use among adults and youth, it is important to measure what the public understands about these products. ENDS terminology has been particularly challenging to sort out in the development of survey instruments evaluating perceptions and behaviors related to ENDS. To yield valid indicators of these outcomes, it is critical that survey questions use familiar, clear, and accessible language pertaining to ENDS (e.g., product and device types, ingredients or additives, and frequency of use). We conducted a set of cognitive interviews with youth and adults to assess their understanding of existing survey questions about ENDS and to inform revision of instruments used in ENDS surveillance (e.g., National Youth Tobacco Survey [NYTS], Behavioral Risk Factor Surveillance System [BRFSS]). Specifically, we were interested in participants' thoughts on the clarity, terminology, and relevance of each survey question and response option.

METHODS

Participant Eligibility

Eligibility for the interviews depended on several criteria for youth and adults:

- Youth had to be in grades 6 through 12 (12 to 17 years old), and adults had to be 18 years old or older and not in high school.
- All participants had to read, understand, and speak English.
- The sample had to include participants with varying levels of experience using electronic vaping products, including several non-users.
- We aimed for a diverse sample based race, ethnicity, and gender.

Participant Recruitment and Screening

We conducted two rounds of cognitive interviews (Round 1: Tampa, FL; Round 2: Seattle, WA). Two market research firms recruited participants and hosted the interviews (Round 1: L&E Research; Round 2: Consumer Opinion Services). The firms used their contact databases to identify potential participants and screen them for eligibility via telephone using a CDC-approved screener (**Appendix A**). Recruiters invited and scheduled eligible participants for the study. Before the interviews began the firms provided us with participants' screening responses to confirm eligibility. Screening responses were de-identified.

In Round 1, we conducted interviews with 8 adults and 8 youth. Round 2 included 8 adults and 7 youth, for a total of 31 participants across the two rounds. **Exhibit 1** shows the participant characteristics.

Exhibit 1. Participant Characteristics

	Round 1		Round 2		Overall (N = 31) n (%)
	Youth ^a (n = 8) n (%)	Adults (n = 8) n (%)	Youth (n = 7) n (%)	Adults (n = 8) n (%)	
Sex					
Male	3 (37.5)	4 (50.0)	3 (42.9)	4 (50.0)	14 (45.2)
Female	5 (62.5)	4 (50.0)	4 (57.1)	4 (50.0)	17 (54.8)
Education ^b					
Middle school (6th – 8th grade)	2 (25.0)	NA	1 (14.3)	NA	3 (9.7)
High school (9th – 12th grade)	6 (75.0)	NA	6 (85.7)	NA	12 (38.7)
Ever used e-cigarettes					
Yes	6 (75.0)	6 (75.0)	3 (42.9)	8 (100.0)	23 (74.2)
No	2 (25.0)	2 (25.0)	4 (57.1)	0 (0.0)	8 (25.8)
Ever tried other tobacco					
Yes	4 (50.0)	8 (100.0)	2 (28.6)	8 (100.0)	22 (71.0)
No	4 (50.0)	0 (0.0)	5 (71.4)	0 (0.0)	9 (29.0)
Race/Ethnicity					
Non-Hispanic White	6 (75.0)	4 (50.0)	4 (57.1)	3 (37.5)	17 (54.8)
Non-Hispanic Black or African American	1 (12.5)	1 (12.5)	0 (0.0)	3 (37.5)	5 (16.1)
Non-Hispanic Other	0 (0.0)	1 (12.5)	2 (28.6)	1 (12.5)	4 (12.9)
Hispanic	1 (12.5)	2 (25.0)	1 (14.3)	1 (12.5)	5 (16.1)

^a The screener asked youth for their education level but not adults. ^b One participant in Tampa who was 18 years old was categorized as youth since they were still in High School.

Survey Item Feedback

Hardcopy interview materials included separate cognitive interview guides for youth (**Appendices B and C**) and adults (**Appendices D and E**), surveys for youth and adults, and a photograph showing examples of electronic vaping products, including disposables, cartridge systems, and tank systems. The cognitive interview guides listed probes for each survey item, which differed for youth and adults. Cognitive interviews followed a think-aloud methodology to elicit participant reactions and evaluate their understanding the survey items and instructions (Willis, 2005). Using this approach, the interviewer

asked participants to read instructions and questions aloud and think through their responses aloud. The interviewer then probed on participants' feedback to understand how they interpreted the survey items.

DATA ANALYSIS

In preparation for analysis, we developed a matrix that organized participant feedback on each survey item. We employed a thematic analysis that identified trends and patterns across participant feedback to the questions and probes (Miles & Huberman, 1994). Themes include:

- clarity of instructions
- comprehension and interpretation of questions and response options
- relevance, suitability, and comprehensiveness of response options

Below we report on findings from the cognitive interviews and provide recommendations on how to revise the candidate items and instructions. We present a list of the original and subsequent revised questions in Exhibit 2 at the end of this report.

QUESTION-BY-QUESTION FINDINGS: YOUTH

BRFSS E-Cig Question:

[ALTERNATE WORDING FOR INSTRUCTIONS]

The next 2 questions are about vaping. Please don't think of vaping to use marijuana when you answer these questions.

Findings

- Most youth said they understood the meaning of "vaping" and included e-cigarettes (or electronic cigarettes) as part of their definition. In other words, they considered e-cigarettes and vaping to be part of the same category.
- Participants seemed more familiar with "vape" and "vapes" than "vaping" or "vaping products," but they still understood the term "vaping."
- In Seattle, most youth had not heard of vaping marijuana. Participants did not understand the alternate instruction "Please don't think of vaping to use marijuana when you answer these questions."
- Youth preferred the original version of the instructions (shown below) to the alternate version (shown above). Participants said the original instruction is more specific, provides a definition, and described more.
- One youth said both versions made sense. One participant nodded in agreement when the interviewer asked if it helped that the original version mentioned "e-cigarettes and other electronic vaping products" rather than "vaping" alone. A second participant said listing vaping alone is too vague while distinguishing "the two" (i.e., e-cigarettes and vaping) makes the instructions easier to understand.

Suggested Revisions to the Question

- We recommend retaining the original version with some revisions. Most importantly, the data suggested that the instructions should mention both e-cigarettes *and* vaping

products because some participants distinguish between these products. The suggested revision follows:

The next two questions are about e-cigarettes and electronic vaping products containing nicotine. Do not include marijuana when answering these questions.

E-cigarettes and electronic vaping products include vapes, vape pens, e-cigars, mods, and others. These products are battery powered and usually contain nicotine and flavors.

BRFSS E-Cig Question:

[ORIGINAL WORDING FOR INSTRUCTIONS]

The next 2 questions are about electronic cigarettes and other electronic “vaping” products containing nicotine. Do not include Marijuana.

Electronic cigarettes (e-cigarettes) and other electronic “vaping” products include electronic hookahs (e-hookahs), vape pens, e-cigars, and others. These products are battery-powered and usually contain nicotine and flavors such as fruit, mint, or candy.

Findings

- Overall, youth were somewhat split in terms of knowing that e-cigarettes and vaping products fall under the same ENDS umbrella. Several participants said e-cigarettes look like a cigarette, cost less than a vape, or are the “skinny” kind.
 - “In my opinion, e-cigarettes are to quit smoking...and vape pens just play with smoke...without any nicotine base so you don’t get addicted” (Youth, Tampa, User).
- This participant also said e-cigarettes contain nicotine while vape pens may or may not contain nicotine. However, later in the interview, this participant said a personal vaping product means “Like e-cigarettes, vapes...anything that has juice in it” (Youth, Tampa, User).
- It is possible that probing on whether e-cigarettes and vaping products were different increased the salience of their differences over their similarities. As mentioned above, several participants recognized that e-cigarettes and vaping products are similar products, even if some visualize cigalikes when they think of e-cigarettes.
- Most youth had heard of vape pens, while only a few had heard of e-hookahs (although two of these participants did not know what e-hookahs looked like). “Vapes” appeared to be the most popular term, and more popular than “e-cigarettes.” Vape pens appeared to be most familiar compared to the other products listed in the original instruction. A few youth had heard of e-cigars. One non-user participant had heard of “vaping” but not “vapes.” Most youth had not heard of tanks, while some were familiar with mods.
- In Tampa, youth were split in terms of knowing about marijuana use in vaping products; some knew about this behavior and others did not. Still, most youth understood the instruction “Do not include marijuana.” Several youth thought it would be more clear to say “Do not think about (using) marijuana when you are answering these questions.”
- In Seattle, most youth were generally familiar with nicotine, even if they could not define it specifically. Some mentioned the association between nicotine and cigarettes. Most youth understood that vaping products contain nicotine (i.e., nicotine is “loaded” into the devices;

the “flavors” or “juice” contain nicotine). A few youth mentioned that e-liquid without nicotine is available. One youth guessed that vaping products contain less nicotine than cigarettes.

- In Tampa, we did not ask youth a general question about nicotine, but instead asked if they thought people usually use nicotine or marijuana in personal vaporizers. Most youth were unsure, but two participants knew that vaporizers contain nicotine.

Suggested Revisions to the Question

- As described above, we recommend the following revision to the BRFSS instructions:

The next two questions are about e-cigarettes and electronic vaping products containing nicotine. Do not include marijuana when answering these questions.

E-cigarettes and electronic vaping products include vapes, vape pens, e-cigars, mods, and others. These products are battery-powered and usually contain nicotine and flavors.

BRFSS E-Cig Question:

[ALTERNATE WORDING FOR [1] 10.1]

Have you ever tried a vaping product, even just one time?

- 1 Yes**
- 2 No [Go to next section]**
- 7 Don't know / Not Sure**
- 9 Refused [Go to next section]**

Findings

- Youth generally understood the alternate question but there were a few points of confusion among some participants.
- Most thought that this question referred to any vaping product.
 - “It’s like have you ever tried a vaping product? So, that could be like anything basically like to do with vaping.” (Youth, Seattle, User)
- When asked, one participant thought that asking “have you ever vaped” sounded more involved.
 - “I think it sounds more into the subject and it might cause people who have only tried it once to say no, or don’t know.” (Youth, Seattle, User).
- Participants understood the phrase, “even just one time.”
- Youth understood that the question asked about trying vaping products at any point in their lives, without that being specifically stated.

Suggested Revisions to the Question

- We do not recommend adopting this alternate version of the question.
- The question stem should include reference to e-cigarettes and other vaping products more broadly.
- Removing the phrase “in your entire life” may be appropriate.

BRFSS E-Cig Question:

[1] 10.1

Have you ever used an e-cigarette or other electronic “vaping” product, even just one time, in your entire life?

- 1 Yes
- 2 No [Go to next section]
- 7 Don't know / Not Sure
- 9 Refused [Go to next section]

Findings

- For this question, we explored participants’ understanding of the terms “e-cigarette” compared to “other electronic vaping product” and their comprehension of the phrases “just one time” and “in your entire life.”
- Participants generally understood the question to refer to any e-cigarette or other vaping product.
 - Some participants distinguished between these products with e-cigarettes being associated with disposable devices that look like cigarettes and contain nicotine and electronic “vaping” devices being associated with cartridge and tank systems that may or may not contain nicotine.
- At least one participant did not understand this question to be asking about products including vape pens.
 - “Have you ever used an e-cigarette or other electronic vaping products, even just one time in your entire life? No. I’ve only tried a vape pen.” (Youth, Seattle, User)
- Most participants preferred the original wording. They reported the original version was clearer because it included examples. Some thought that it might not be clear to everyone that this question included e-cigarettes.
 - “Yeah, I think, well it’s more specific so I feel like that’s a more clear question.” (Youth, Seattle, Non-User)
- Participants generally understood the phrase *even just one time*.
 - “One time as in, like, if you picked it up once, inhaled once, and exhaled once all in one go. That’s just one time.” (Youth, Tampa, Non-User)
- Some participants did not think that the phrase *in your entire life* was necessary but they thought it might be helpful to others.
- “I think, for me, I guess, it would seem like it would either be a very definitive yes or no, or guess for some if you don’t remember, but I think that would be something that you would remember so I don’t think you’d have to say ‘in your entire life’.” (Youth, Seattle, Non-User)

Suggested Revisions to the Question

- Participants generally understood this question but adding the examples such as vape pens may be helpful for youth.
- The phrase “in your entire life” may not be necessary.

BRFSS E-Cig Question:

[2] 10.2

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

- 1 Every day
- 2 Some days
- 3 Not at all
- 7 Don’t know / Not sure
- 9 Refused

Findings

- Most user participants selected the response option “Some days,” while most non-users selected the response option “Not at all.” The interpretation of “some days” widely differed among youth participants, with a range of four times a week to once a month.
 - “Comes to mind as not once a day per week, but more as like maybe you pick up a cigarette at least three times a week.” “Rarely—that would be probably to me twice every 2 to 3 months.” (Youth, Tampa, User)
 - “To me, more than 5 days out of the month.” (Youth, Tampa, Non-User)
 - “I’m not sure because people have different definitions for “some days.” It could be twice a day, it could be once every month.” (Youth, Seattle, Non-User)
 - “Some days would be more in a social way or with your friends. Rarely would be every couple of weeks or months or as a get together.” (Youth, Seattle, User)
 - One participant noted that some days and rarely are kind of the same thing. Some days would mean 3 to 4 days a week.
- Participants did not demonstrate or express difficulty in interrupting the term “now.” Several participants who had once tried e-cigarettes or electronic vaping products, but have since ceased to use them, selected the response option “Not at all.”
 - One participant selected his response option with the understanding that “now” referred to current activity. Thus, because he does not use e-cigarettes or other electronic “vaping” products now but has done so in the past, he selected the response option “Not at all.”
 - Another participant explained if he selected the response option, “not at all” because he had only picked up an e-cigarette and tried it one time. (Youth, Tampa, Non-User)
- Two youth participants in round two shared that many youths vape for the purposes of being cool or for the tricks, rather than the flavor.
 - “Yeah, I know people would like them, but I don’t think they would do it for the flavor... I know some people do it to get over smoking nicotine and regular cigarettes, and then I just feel like some people in school do it just for fun and to be cool. (Youth,

Seattle, Non-User)

- “I think people just do it to, cause a lot of people do it just to do it, just not for like health use or something, they just do it to like, cause I seen like on Twitter and stuff like videos of people doing it. Like people just do like tricks and stuff with it, like people just do it for fun.” (Youth, Seattle, User)
- When asked “rarely” or “occasionally” response options, most non-users participants noted “rarely.” Interpretations of rarely ranged from once a month to every 6 months.
 - “Like every 6 months.” (Youth, Seattle, Non-User)
 - “I guess like once every month maybe.” (Youth, Seattle, Non-User)
- One participant noted that the response option “don’t know” is not needed. The participant stated, “They shouldn’t say “don’t know” because kids know what they’re doing. I don’t think you need to have that answer because they know what they’re doing with their body.” (Youth, Tampa, User)

Suggested Revisions to the Question

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

- 1 Every day**
- 2 Some days**
- 3 Not at all**
- 9 Refused**

NYTS 2017 Marijuana questions [ORIGINAL WORDING FOR [3] 34.]

Have you ever used marijuana, marijuana concentrates, marijuana waxes, THC, or hash oils in an e-cigarette?

- A. I have never used an electronic product**
- B. Yes**
- C. No**

Findings

- Participants understood the term “electronic product.” They said it referred to vapes, vape pens, “e-cigarettes, and all these other electronic devices that you could put nicotine in.” (Youth, Tampa, User)
- Most youth had not heard of marijuana concentrates. Some had heard of waxes, hash oils, and THC.
- Most youth said they would feel comfortable answering this question on a survey.
- Four youth answered “Yes” to this NYTS question. One participant selected “Yes” incorrectly because he or she had used marijuana before, but not in an e-cigarette.
- One participant incorrectly answered “No” to this question even though he or she had never used an electronic vaping product before. He or she thought “No” and “I have never used an electronic product” were equivalent responses.

- One participant said referring to “e-cigarettes” in questions about marijuana and vaping is not appropriate because e-cigarettes are for “a different type of liquid...” than marijuana oil, “...like that juice of some sort” (Youth, Tampa, User). Conversely, another participant suggested asking if you have put “weed” in your *e-cigarette*, rather than listing multiple marijuana products in this question.

Suggested Revisions to the Question

- We recommend replacing the original version with the alternate version tested in Seattle for several reasons: the original version may yield unreliable responses (i.e., responses that are prone to error); the alternate version tested in Tampa did not resonate with marijuana users; and the alternate version tested in Seattle yielded reliable responses and resonated with most, if not all, youth participants. The recommended version follows:

Have you ever used an e-cigarette or electronic vaping device to use marijuana?

- A. Yes
- B. No

NYTS 2017 Marijuana questions
[ALTERNATE WORDING FOR [3] 34.]

Have you ever used an electronic cigarette or electronic vaping device to use marijuana?

- A. I have never vaped
- B. Yes
- C. No

Findings

- Non-marijuana users tended to prefer the alternate wording because it says “Have you ever vaped marijuana.” In addition, one marijuana user preferred the alternate wording and subsequently chose an accurate answer to this version of the question (after choosing an inaccurate answer to the original version).
- Conversely, both of the remaining youth who had used marijuana before did not think the alternate wording made sense. One participant said people don’t say “Have you vaped marijuana?” Another participant pointed out that it is not possible to use all marijuana products in vaping devices, and mentioned marijuana oil as the appropriate product.

Suggested Revisions to the Question

- We do not recommend using this alternate version given that marijuana users did not think it made sense. See above for the recommended revisions to the original NYTS item.

NYTS 2017 Marijuana questions
[ALTERNATE WORDING FOR [3] 34.]

Have you ever used an electronic cigarette or electronic vaping device to use marijuana?

- A. Yes
- B. No

Findings

- All participants who saw this alternate version provided an accurate response that matched their actual reported behavior. Participants understood that this version referred to using marijuana specifically through vaping devices (rather than ingesting marijuana in other ways or in general).
- Most youth thought this alternate version was easier to answer for several reasons: the response options were limited to “Yes”/”No”; it does not imply that answering “Yes” means you have used all types of marijuana listed in the original version (e.g., concentrates, hash oils); and the wording is less distracting. Some youth thought this alternate version was more broad than the original version. One ENDS and marijuana user suggested revising this version to “Have you ever *used marijuana in* an electronic...”
- Participants tended to prefer vaping “device” over vaping “product.”
- One participant thought that electronic cigarette and electronic vaping device were different because “they are separated in the question” (Youth, Seattle, User), but did not know how they differed. Another participant thought this question should list both “electronic cigarette” and “electronic vaping device.”

Suggested Revisions to the Question

- We recommend using this version in place of the original version. See above for the recommended revisions.

NYTS 2017

[ALTERNATE WORDING FOR [4] 32]

[IF PARTICIPANT HAS NOT USED VAPING PRODUCTS, ASK THIS QUESTION ABOUT PEOPLE IN GENERAL]

Where have you gotten or bought vaping products? (Select one or more)

1. A gas station or convenience store
2. A grocery store
3. A drugstore
4. A mall or shopping center kiosk/stand
5. On the Internet
6. A vape shop or other store that only sells e-cigarettes
7. Some other place not listed here
8. From a family member
9. From a friend
10. From some other person that is not a family member or a friend
11. I have never tried a vaping product

Findings

- For this question, we explored participants’ reactions to the existing response options.
- Overall, participants said the response options were thorough and there were no other options that should be added. A few participants commented that grocery stores and drug stores do not sell the products and suggested they could be eliminated as options.
 - “The only two I don’t really see [as options] is a grocery store or a drug store. I suppose you could get medicinal marijuana at a drug store but I don’t know. I don’t automatically think vaping products come from a drug store.” (Youth, Seattle, Non-user)
- Participants identified gas stations, vape shops, and friends as the top responses where users have purchased them and non-users have seen them.

- One participant said smoke shops should be added as a response option.
 - “Often vape shops and smoke shops are the same but sometimes not.” (Youth, Seattle, User)

Suggested Revisions to the Question

- No recommended changes to this question.

NYTS 2017

[4] 32.

During the past 30 days, where did you get or buy the e-cigarettes that you have used? (Select one or more)

1. I have never tried an e-cigarette in the past 30 days
2. A gas station or convenience store
3. A grocery store
4. A drugstore
5. A mall or shopping center kiosk/stand
6. On the Internet
7. A vape shop or other store that only sells e-cigarettes
8. Some other place not listed here
9. From a family member
10. From a friend
11. From some other person that is not a family member or a friend

Findings

- This question examines a different wording of question NYTS 2017 4 [32]. Our cognitive interview guide assessed participant reaction to the question stem (i.e., additional of phrase “During the past 30 days,” the use of the phrase e-cigarettes instead of vaping products and the order of the response option, “I have never tried...”) (listing first versus listing last).
- Participants’ reactions to the placement of the response option, “I have never tried...” (first verses last) were mixed. Participants who said it should go first explained that it would save time by not having to read all the responses. Those who wanted it at the bottom said it would be less confusing by having it at the end.
- Only one participant said having “During the past 30 days” may change someone’s answers so it should remain and two others said it was not necessary or they were indifferent about it.
- When asked about using the term “e-cigarettes” instead of “vaping products,” participants did differentiate e-cigarettes from vaping products with vaping products being a more inclusive term.
 - “People might have tried vaping but not e-cigs, so their answers may change.” (Youth, Seattle, Non-User)
 - “Should say vaping products because e-cigarettes are different. Some [products] are recreational than addict[ive].” (Youth, Seattle, User)
 - “Probably include vaping products in this question too, not just e-cigarettes. I don’t really see kids using e-cigarettes...[they] are for older people.” (Youth, Seattle, User,)

- o “I don’t think different things about the products but I count them as different things...e-cigarettes are vaping products but vaping products can be lots of other things that are not e-cigarettes.” (Youth, Seattle, User)

Suggested Revisions to the Question

- Based on the participant responses, a combination of the two questions is recommended with two changes:
 - o A clarifying phrase to list e-cigarettes could be considered (see italics below).
 - o Move the response option, “Some other place” toward the bottom and combine it with the option, “Some other person.”

Where did you get or buy the vaping products you have used, *including e-cigarettes*? (Select one or more)

1. A gas station or convenience store
2. A grocery store
3. A drugstore
4. A mall or shopping center kiosk/stand
5. On the Internet
6. A vape shop or other store that only sells e-cigarettes
7. From a family member
8. From a friend
9. Some other place / some other person (not a family member or a friend)
10. I have never tried a vaping product

NYTS 2017

[5] 33

What are the reasons you have used e-cigarettes? (Select one or more)

1. I have never tried an e-cigarette
2. Friend or family member used them
3. To try to quit using other tobacco products, such as cigarettes
4. They cost less than other tobacco products, such as cigarettes
5. They are easier to get than other tobacco products, such as cigarettes
6. Famous people on TV or in movies use them
7. They are less harmful than other forms of tobacco, such as cigarettes
8. They are available in flavors, such as mint, candy, fruit, or chocolate
9. They can be used in areas where other tobacco products, such as cigarettes, are not allowed
10. I used them for some other reason

Findings

- This NYTS question on reasons for using an e-cigarette was tested in Round 2 only. We explored if there were any answer choices that should be added or that did not belong.
- Friend or family member was the most common response among users. Other selected response options included because e-cigarettes cost less than cigarettes, are available in flavors, and can be used in areas where other tobacco products are not.
- Multiple participants reported that “peer pressure” was a main reason other youth might

use e-cigarettes.

- “Well I know from people telling me, they’re peer pressured into it or they do it just because another friend does it. I think that could be included.” (Youth, Seattle, Non-User)
- Other possible reasons for using e-cigarettes included “craving nicotine,” to do tricks with clouds of vapor, and to make YouTube or social media videos.
- Several participants thought that it was unlikely that any youth would select “famous people on TV or in movies use them.”
 - “Why, why would there be an answer that was, famous people on TV or movies use them? That seems like not very associated to this. Even though like, I know people do, but I don’t see why people would do it just because like, a celebrity’s doing it.” (Youth, Seattle, Non-user)

Suggested Revisions to the Question

- Consider adding peer pressure as a response option.
- Consider removing “famous people on TV or in movies use them.”

NYTS 2016 E-Cig Product Types Question

[6] 34.

Thinking about all types of e-cigarettes, have you used the disposable kind or rechargeable/refillable/tank kind?

- A. I have never tried an e-cigarette
- B. Only the disposable kind
- C. Only the rechargeable/refillable/tank kind
- D. Both the disposable kind and rechargeable/refillable/tank kind

Findings

- Participant responses were mixed and varied based on whether the participant was a user. Most non-users answered “I have never tried an e-cigarette,” while most users answered “rechargeable/refillable/tank kind.” However, one participant suggested adding another response option.
 - “I think that definitely a “Not sure” or “Don’t know” answer would be good here... because I know that I don’t know the answer to this question in my case. Otherwise, I think that the answers are pretty solid, there are only ones that ... it’s a pretty narrow question, which in this case is good, it needn’t have that many answers.” (Youth, Seattle, User)
- Of two participants who were asked if the first response option was confusing and if it should be put at the bottom, one noted that the first response option did not confuse them. However, the second participant suggested that this response option should be moved to bottom.
 - “It should be the bottom like this question. I eliminated the rest of these. I read over these options but I know I was going to choose that.” (Youth, Seattle, Non-User)
- When probed, it was discovered that several of the participants were familiar with one or two of the three kinds of e-cigarettes within option C, the majority being the refillable or

rechargeable kind. Only four participants mentioned the tank kind in their response. Four participants noted that the rechargeable and refillable e-cigarettes are all the same thing, while one participant noted that the refillable, rechargeable and tank e-cigarettes are all the same kind.

- “Because I guess in my mind, rechargeable, refillable, tank pens are all kinda the same. So, and I mean refillable means you can just use the tank over and over if you own cartridges I guess.” (Youth, Seattle, Non-User)
- One participant had only heard of the rechargeable kind; however, after reading the question the participant understood that rechargeable and refillable e-cigarettes are the same thing because of the slashes between both terms in response choice C. Thus, the inclusion of slashes was helpful in the comprehension of the question.
- Regarding the clarity of the responses, one participant noted that response option C was a little unclear. When probed how they would ask about those different things, the participant noted “I guess I would add another question with the tank kind.” (Youth, Tampa, Non-User)
 - Another suggested eliminating the word “kind” from the branch of the question. “For the most part, but it could be better because you don’t often answer with ‘kind.’ It could be more... like it is very broad. If you’re trying to be more specific, you could drop kind and leave it at rechargeable/refillable/tanks. (Youth, Tampa, User)
 - One participant in Tampa noted that vaping was not in the response option choices and asked if a vape fit in one group.
- Although only one of the youth participants selected response B, 9 of 15 youth participants could correctly defined disposable e-cigarettes.
 - “It makes me think of the e-cigarettes that you but, that they are disposable but they only have such a certain lifespan. When they die, you dispose of them, and you’ve got to throw them away.” (Youth, Tampa, User)
- When prompted, one participant noted that disposables are self-explanatory and can be disposed of after use. (Youth, Tampa, User)
 - “I imagine that the disposable kind would be more like, like you can’t change out the cartridge like it’d just be like you buy one and then you use that and it’s done.” (Youth, Seattle, Non- User)

Suggested Revisions to the Question

- Thinking about all types of e-cigarettes, have you used the disposable or rechargeable/refillable/tank?
- Add another question specifically for the tank e-cigarette.

NYTS 2016 E-Cig Product Types Question [ALTERNATE WORDING FOR [6] 34.]

Thinking about all types of vaping products, have you ever used...

1. Vaping products that you can't refill using bottles of e-liquid
2. Vaping products with refillable tanks and special features
3. Vaping products with refillable tanks and no special features
4. I have never tried a vaping product

Findings

- Of 11 participants, only 4 stated that the alternate version was easier to answer, while other participants found the alternate version to be confusing.
 - One participant noted that the alternate version was asking an entirely different question because the original question was about e-cigarettes while the alternate version was about vaping products and special features.
 - Another participant noted that the original question was easier to answer because it explained more types. "The first one, because it explains more of the types. If I didn't I would just be thinking about one time." (Youth, Tampa, User)
 - One participant believed that the original question and alternate question were the same but had different response formats. "I think they're both the same kind of question, just like a different like answer type. 6B, this is more of like a complete the sentence I guess. 6A is like actual multiple choice. But they're just the same question I guess, just I think they are the same." (Youth, Seattle, Non-User)
 - "I think the first one was easier to understand because 'have never tried a vaping product' was at the top." (Youth, Tampa, Non-User)
- Several participants lacked knowledge about special features or temperature control, which made it difficult to select the appropriate response option.
- In Round 2, one participant suggested changing the order position of the response option "I have never tried a vapor product" to the first response option (Youth, Seattle, User). Another participant liked the same response option at the bottom of the list explaining that it didn't make sense with the sentence in the question ellipse. (Youth, Seattle, Non-User)

Suggested Revisions to the Question

Thinking about all types of vaping products, have you ever used...

1. I have never tried a vaping product
2. Vaping products that you can't refill using bottles of e-liquid
3. Vaping products with refillable tanks and special features
4. Vaping products with refillable tanks and no special features

Styles 2017 Dripping Questions:
[8] DRIP1.

“Dripping” is a method of heating electronic vapor product liquid by dripping drops directly onto a heating element and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vapor product?

- 1 Yes
- 2 No
- 3 Don't know/not sure

Findings

- Only one youth had heard of dripping. A second youth did not know what it was, but also said his or her extended family member used the dripping method.
- Most participants understood “e-liquid.” Some mentioned “juice” or “syrup.” Several participants knew that e-liquid contained nicotine.
- One participant explained that “your vaping product” referred “e-cigarettes, vapes, anything with the juice in it,” even though earlier in the interview, he or she reported that e-cigarettes are different from vaping.
- One participant incorrectly guessed that dripping referred to refilling/changing out e-liquid.

Suggested Revisions to the Question

- It is possible that this question will yield a subset of unreliable data for people who confuse dripping with refilling. Neither of the alternate versions of this item completely resolved this confusion. It is possible that asking about “adding e-liquid” inadvertently implies refilling rather than dripping. We recommend using the alternate wording shown in Tampa with several modifications: underline certain words to better distinguish dripping from refilling; spell out “electronic vapor product liquid” to increase clarity for people who have not heard of e-liquid but may have heard of juice or syrup; and incorporate revisions based on feedback from adult participants (see Question-by-Question Findings: Adults). We recommend replacing the original item with the following version:

“Dripping” is a method of dripping drops of electronic vaping product liquid directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor.

Have you ever used the “dripping” method with your electronic vaping device?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Styles 2017 Dripping Questions:
[ALTERNATE WORDING FOR [8] DRIP1]

“Dripping” is a method of heating e-liquid by dripping it directly onto a heating element inside an electronic vaping product and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vaping product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Findings

- Most youth preferred this alternate version more than the original version. One participant preferred the reference to “e-liquid” in the alternate version rather than “electronic vapor product liquid” in the original version.
- A few participants did not understand one or both versions. One of these participants incorrectly guessed that the alternate version referred to “adding e-liquid” and “just, globing it in there” (Tampa, Youth, User).

Suggested Revisions to the Question

- Although our primary recommendation is to use the revision above, some of the findings pertaining to e-liquid and refilling devices may suggest that the question should explicitly address these factors. Therefore, we offer a second possibility for revision that lists e-liquid instead of electronic vapor liquid and adds an instruction to distinguish dripping from refilling. However, we recognize that some participants may not have heard of e-liquid, and adding more information is not necessarily effective because participants may skip over it.

“Dripping” is a method of dripping drops of e-liquid or “juice” directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor. “Dripping” is different from refilling an electronic vaping device.

Have you ever used the “dripping” method with your electronic vaping device?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Styles 2017 Dripping Questions:

[ALTERNATE WORDING FOR [8] DRIP1]

“Dripping” is a method of heating e-liquid by dripping it directly onto a heated coil inside a vaping product and then immediately inhaling. Have you ever used dripping to add e-liquid to a vaping product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Findings

- Most youth had not heard of dripping. One participant reported hearing of people describing this method but said it was not called “dripping.” Two youth thought they had used the dripping method but seemed to confuse this method with merely refilling their device. Notably, one non-user claimed to have not heard of dripping but described the method perfectly: “I think there’s like a coil inside the e-cigarette, when you use it, it like, releases the liquid onto the coil...And then the liquid evaporates and then that’s where you get all like, the vapor.” (Youth, Seattle, Non-User)
- Most participants were at least somewhat familiar with e-liquid although some were

more familiar with the terms “juice,” “vape juice,” or “syrup.”

- Very few participants were familiar with coils.
- A few participants preferred “electronic vapor product liquid” rather than “e-liquid” because the longer term is easier to visualize. This subset of participants had not heard of e-liquid before. One participant knew the term “e-liquid” and preferred this term over “electronic vapor product liquid” because “e-liquid” is less wordy.
- There was little consensus as to whether this alternate version was easier to understand than the original version. One participant preferred the original version but seemed to think a heating element could refer to multiple types of heated surfaces. Another participant preferred the original version because it better described how to fill up the device, which is an *incorrect* interpretation of dripping.

Suggested Revisions to the Question

- Our primary recommendation for revision is as follows:

“Dripping” is a method of dripping drops of electronic vaping product liquid directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor.

Have you ever used the “dripping” method with your electronic vaping device?

1 Yes

2 No

3 Don’t know / Not sure

Styles 2017 Dripping Questions:

[8] 16. New. [**** ASK ONLY IF PARTICIPANT HAS USED DRIPPING**]

Why did you use the dripping method?

- DRIP2a. It makes the flavor taste better
- DRIP2b. It makes a stronger “hit”
- DRIP2c. It makes a thicker cloud of vapor
- DRIP2d. I was curious
- DRIP2e. Other reason

Findings

- Although most participants had not heard of dripping, they generally understood the response options.
- Youth thought “I was curious” would be the most likely reason for dripping.
- Participants understood the flavor option because they generally associated e-cigarettes and e-cigarette liquid with flavors.
 - “The juice comes in, like, different flavors like strawberry. Really wild flavors.” (Youth, Tampa, Non-user)
- Some youth associated thicker or larger clouds of vapor as being cool or being perceived as cool.
 - “Most of the reason why people use it is because, like, the smoke coming out ... It looks cool. And, like, the bigger the better.” (Youth, Tampa, User)

- Participants understood the answer choice “stronger hit.”
- One youth who had used the dripping method explained why he had used it:
 - “Uh, I, I was just kinda curious. My friend came over with his vape, and he was showing me how to do it, and I’m like, ‘Whoa, that’s cool.’” (Youth, User, Tampa)
- Another participant referenced a reason for dripping would be for the flavor, a stronger hit, and to do tricks.
 - “Uh, well, it makes, it does make the flavor taste better. It’s just stronger, more potent. It makes a stronger hit, so it’s harsher... And it makes it thicker uh vapor to where it’s clouds and you can do tricks with them.” (Youth, Seattle, User)

Suggested Revisions to the Question

- Consider adding a response option “to do tricks with clouds of vapor.”
- Remove the word throat from the second response option.

Image Activity

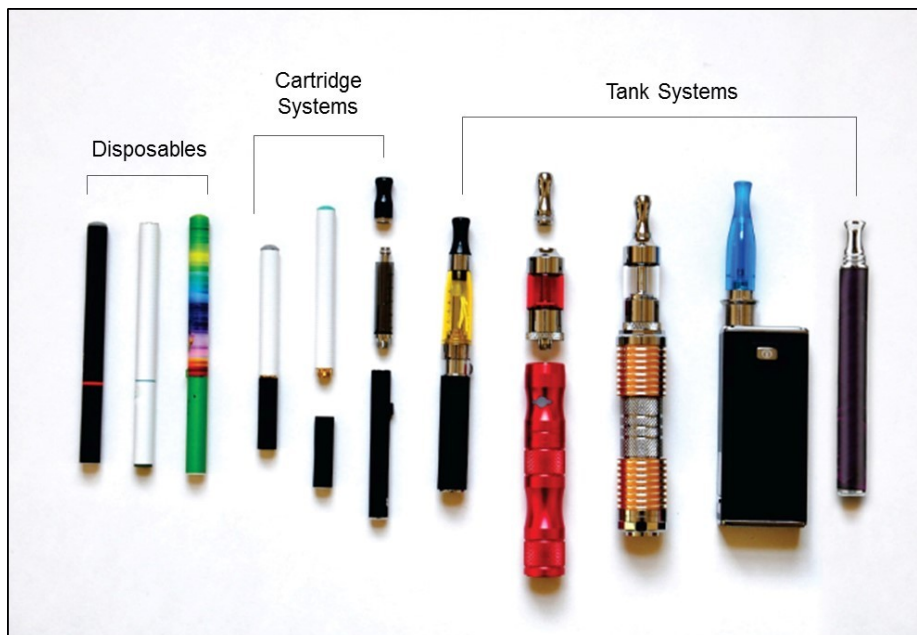


Image Courtesy of the FDA’s Center for Tobacco Products and DHgate.com

- Have you ever seen any of these products? Are there any that you’ve never seen?
- What’s the difference between these products [point to disposables, cartridges, and tanks as you ask this]?
- Are we missing any products in this picture?

Findings

- All participants could answer this question about products without difficulty. When

probed during Round 1 on which products participants have seen that were not on the list, one participant noted the big hookah and another noted sticks mods.

- Five participants clearly recalled seeing all the electronic vaping products in the picture. Most participants noted seeing the tank and disposable products.
- Participants identified gas stations as the top response for locations where they have seen or purchased electronic vaping products. Other responses included around school, smoke shops, vape shops, and online.
- Many of the participants found the picture of electronic vaping products helpful.
 - “Yeah. Because it explains and it shows the different types of vapes and the difference between vapors, e-cigs, and hookahs.” (Youth, Tampa, User)
 - While looking at the picture several of the participants were able to recognize and differentiate some of the electronic products by size (e.g., tanks).
- Three participants noted seeing kids at or around school with electronic vaping products.
 - “Yeah, for e-cigarettes and vaping, they use the tanks, not really cartridge systems. ..It’s bad that they look like cigarettes, they light up on the end. They call cigarettes cancer sticks.” (Youth, Tampa, Non-User)
- Of four participants, two did not know the difference between an e-hookah and a regular hookah. The two participants that knew the difference correctly stated that e-hookah was smaller than the regular hookah.
 - “Well obviously, like it’s in a smaller thing, so, and the other hookah is like big and stuff, I’ve seen like videos and stuff.” (Youth, Seattle, User)

Suggested Recommendations

- Cost permitting, include the picture of the products in advance of asking the survey questions.

QUESTION-BY-QUESTION FINDINGS: ADULTS

BRFSS E-Cig Question:

The next 2 questions are about electronic cigarettes and other electronic “vaping” products containing nicotine. Do not include Marijuana.

Electronic cigarettes (e-cigarettes) and other electronic “vaping” products include electronic hookahs (e-hookahs), vape pens, e-cigars, and others. These products are battery-powered and usually contain nicotine and flavors such as fruit, mint, or candy.

Findings

- Most adults had heard of electronic cigarettes, e-cigarettes, and electronic vaping products. One participant said the term “e-cigarettes” is more commonly used than “electronic cigarettes.” A few participants were not familiar with the term “vaping.” However, two other participants said “vaping” is a common term.
- Several participants were familiar with the term “vapes.” Referring to vaping products, one participant said, “Most all people I know that use it refer to them as, you know, vape pens

or devices” (Adult, Tampa, User). Most were not familiar with mods except for one participant in Seattle who frequently vaped using marijuana (and rarely vaped using nicotine). “Personal vaporizers” was also an unfamiliar term.

- Some adults had heard of mods while others had not. Few mentioned tanks. Most adults were not familiar with e-cigars. Some had heard of e-hookahs but a few were less familiar with this product. In Seattle, participants were not asked specifically about e-cigars or e-hookahs when discussing the instructions but almost no one pointed out these products specifically in their feedback.
- Participants were split in terms of understanding that e-cigarettes and vaping fall under the same ENDS umbrella. Some thought e-cigarettes were distinct from vapes, while others thought these products were part of the same category. One participant had heard of electronic cigarettes but not electronic vaping products; he or she guessed that vaping products were associated with e-cigarettes.
- Several adults put e-cigarettes and electronic vaping products in the same category. One participant associated e-cigarettes with a fake cigarette that is not rechargeable and said vape pens are larger with a chamber for flavors. Another participant associated tank systems with marijuana use and e-cigarettes with nicotine, but understood that tank systems can also contain nicotine. Our interpretation is that most adults understand that e-cigarettes and vaping products all represent one electronic product category but think e-cigarettes look like cigalikes and vaping products look like devices other than cigalikes.
- We asked Seattle participants specifically if they noticed the reference to nicotine in the instructions. All responded yes.
- Most adults had heard of smoking marijuana with vaping devices or performed this behavior.
- Most adults understood the instruction “Do not include marijuana.” For example, one participant interpreted these instructions as meaning, “Maybe not to talk about marijuana in my usage” (Adult, Tampa, User).
- One adult suggested changing this instruction to “Do not include marijuana in the thought process maybe, for the rest of the questions” (Tampa, Adult, Non-User).
- Most adults did not think the instructions should list specific product brands.

Suggested Revisions to the Question

- The findings of the adults survey suggest that the revisions from the youth interviews can be applied to the BRFSS instructions for adults, as shown below:

The next two questions are about e-cigarettes and electronic vaping products containing nicotine. Do not include marijuana when answering these questions.

E-cigarettes and electronic vaping products include vapes, vape pens, e-cigars, mods, and others. These products are battery-powered and usually contain nicotine and flavors.

BRFSS E-Cig Question:

[1] 10.1

Have you ever used an e-cigarette or other electronic “vaping” product, even just one time, in your entire life?

- 1 Yes
- 2 No [Go to next section]
- 7 Don’t know / Not Sure
- 9 Refused [Go to next section]

Findings

- For this question, we explored how easy or difficult it was for participants to answer, how they understood the word “used” and what substances they thought of when answering.
- Adult participants found this question to be clear and easy to answer.
 - “I knew what it meant because of the instructions in the beginning. I knew what it was immediately. There’s nothing to think about.” (Adult, Tampa, Non-user)
- Participants understood “used” to mean putting the product to your mouth and that it might include only one puff.
- Participants understood this question was not asking about marijuana use and generally thought of e-cigarettes as containing nicotine, although they were aware that not all e-cigarettes contained nicotine.
 - “No (not thinking of marijuana), the e-cigarette was specific there... it’s very clear that it e-cigarettes, nicotine products, not marijuana.”
- Some participants thought that if the question had just referenced electronic vaping products, it could have been confusing about whether the question was referring to nicotine or marijuana.

Suggested Revisions to the Question

- No recommended changes to this question.

BRFSS E-Cig Question:

[ALTERNATE WORDING FOR [1] 10.1]

Have you ever tried a vaping product with nicotine, even just one time?

- 1 Yes
- 2 No [Go to next section]
- 7 Don’t know / Not Sure
- 9 Refused [Go to next section]

Findings

- An alternate version of this question was tested during Round 2. Many participants did not clearly understand this question to include e-cigarettes.
- A participant who reported ever e-cigarette use but responded no to this question explained he answered no to this question because he imagined devices that produced large clouds were separate from e-cigarettes.

- “I see these people when I was back at school puffing on these things. They blow big clouds of smoke out and they keep doing it. I’m just like, wow, that’s a little harsh. It just looks like they’re getting too much smoke or something. It’s crazy.” (Adult, Seattle, User)
- Another participant specifically pictured “mods” when asked this question.
 - “I automatically, on this one, for some reason go more towards a mod though. I think just because it’s more common to have a non-nicotine cartridge for your mod than it is for, like, e-cigs, or a cigarette, it’s supposed to be nicotine based, so, I go right to a mod for this.” (Adult, Seattle, User)
- Although some participants preferred this because it was shorter, it introduced confusion around which products were included.

Suggested Revisions to the Question

- We do not recommend adopting the alternate language.

BRFSS E-Cig Question:

[2] 10.2

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

- 1 **Every day**
- 2 **Some days**
- 3 **Not at all**
- 7 **Don’t know / Not sure**
- 9 **Refused**

Findings

- For question 2, most participants did not find the term “now” confusing in any way. Participants clearly answered the questions in regard to present day and not by past actions.
- Most participants correctly differentiated between every day, some days, and not at all. Participants that currently use e-cigarettes or other electronic vaping products but not on an everyday basis, proceeded to select “some days.”
- A few participants noted some areas of confusion:
 - “Once again, I don’t understand the relevance of the don’t know not sure response but with me, it would be some days.” (Adult, Tampa, User)
 - “Actually the “every day, some days,” I don’t know if it makes a difference but to me it’d probably be more straightforward to say ‘every day, occasionally or not at all.’ Occasionally would seem to fit more for me because it’s not some days. Its more of an occasion. It’s not on a particular day that I’m just smoking that product. Seems a little more specific than just every now or then.” (Adult, Tampa, User)
- Responses around the interpretation of “some days” varied on an individual basis. Although the number of days differed, most participants understood that some days referred to a few days in the week or in a month.
 - “Maybe 5 days a week, and smoke about 3 times, about 20 minutes each. (Could some days mean something less than 5 out of 7?) Some days means you don’t use something every day, like coffee. There are some days I can go without smoking, I don’t

get the urge to want to smoke anything.” (Adult, Tampa, User)

- “Some days. Well I’m not like an everyday user. I just know I like social settings or if I’m really stressed I might. So definitely not every day for me. Cause I do it sometimes so yeah just some days. Just doing like on the weekends, maybe 5 to 10 days out of the month. So definitely not every day use.” (Adult, Seattle, User)

- Additional probes for the words “occasionally” and “rarely” were included to this question during Round 2. Some participants were about to differentiate between occasionally, some days, and rarely while others were not. The inability to differentiate the terms was most likely a result of using indefinite terms that vary per personal vaping usage.

- “Rarely is the same as occasionally. Rarely means 1-2 days a week, some days would be 3+ days a week.” (Adult, Seattle, User)

- “Some days and occasionally would be interchangeable.” (Adult Seattle, User)

- One participant noted that to receive a correct answer, a distinction on the definition of each term must be made.

- “If you want the correct answer from somebody, you’re going to have to make a distinction on what it is. Is it every day just like this one is, some days, and just occasionally and some day’s kind of differ a little bit. Occasionally just kind if means every weekend, or you know every other day. (Adult, Seattle, User)

- When asked how participants would write this question any differently participants provided the following responses.

- “If I had to write this question, I would exclude electronic and just say somedays vape. I would also add ‘rarely’ and ‘not sure’.” (Adult, Tampa, User)

- Only one participant noted using another term, “dabbing,” besides e-cigarettes or electronic vaping products. All other participants that noted the original terms were clear.

Suggested Revisions to the Question

- Distinguish between the words some days, rarely ,and occasionally for this question.

Summer Styles 2017:

[3] 1. New.

Have you ever tried any of the following products, even just one time?

TOBTR1. Cigarettes

TOBTR2. Cigars (e.g., big cigars, cigarillos, or little cigars that look like cigarettes)

TOBTR3. Electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor product)

TOBTR4. Smokeless tobacco (e.g., chewing tobacco, snuff, dip, snus, or dissolvable tobacco)

TOBTR5. Pipes filled with tobacco

TOBTR6. Water pipes, also known as hookahs filled with tobacco

TOBTR7. Some other tobacco product

TOBTR8. None [SP]

Findings

- Cigarettes, cigars, and electronic vapor products were identified as the most tried products, even just one time.
- Most participants noted that it was clear they could pick more than one response. However, one participant noted that he or she did not know participants could select more than one answer and that the question should include “select all that apply.” (Adult, Tampa, User)
- When asked about using the term “vapor” instead “vaping,” most participants preferred the term “vaping.”
 - “Probably vaping, because you’re actively vaping something. It just makes more sense than ‘vapor’.” (Adult, Tampa, User)
- Five of eight participants had never heard of vapes, mods, and personal vaporizers. Of the three products, mods were the most unheard of product.
 - “Mods I haven’t heard of, but vapes and personalize, yes, I have. I visualize everybody carries them around constantly.” (Adult, Tampa, User)
- Several participants had heard of the term “smokeless tobacco” but noted that people never use the term. Participants shared that smokeless tobacco is commonly called “chew,” “snus,” “snuff,” and on some occasions “dip.”
 - “People never use the term smokeless tobacco, just use snus. I haven’t heard a lot of people use the term smokeless tobacco, people just call it snus. But dip is different, it is the loose cut tobacco like Copenhagen that you put in your lip, that is different than snus. Chewing tobacco is the same thing.” (Adult, Seattle, User)
 - “Heard it referred to as smokeless tobacco, but more commonly called chew or chewing tobacco. Either smokeless tobacco or ‘chew/dip’ and then there is snus or snuff – generally all tobacco you put in your mouth, but they are all different and each is a distinct product.” (Adult, Seattle, User)
- Products that participants had not heard of included water pipes, e-pipes, hookahs, dissolvable tobacco, other tobacco products.
- Most participants knew that water pipes and hookahs were the same thing. One participant stated “People get caught up in the wording. I’ve never heard anybody say water pipes” (Adult, Tampa, User). This statement was deemed correct when one participant in

Round 2 noted he did not know the difference between water pipes and hookahs. The wording most likely confused the participant.

- “I don’t know the difference between water pipes and other hookahs – I believe that as opposed to using nicotine or any other flavored product, you can use water as another option, like a vapor product that is using water.” (Adult, Seattle, User)
- None of the participants had difficulty understanding the meaning of “tried.” Participants understood “tried” to mean using of the listed products at least one time.
 - “To use it at least use it once.” (Adult, Tampa, User)
 - “Experimented, not necessarily more than once. Tried it once so you’d have an opinion about it. Either the word tried or experimented would be fitting. Try and experiment no difference. Only difference is you see something and you want to try it and see what it is like. Try is like someone just offers it to you and you didn’t want to do in advance. It just presented itself to me.” (Adult, Tampa, User)
 - “Done it at least once.” (Adult, Tampa, User)

Suggested Revisions to the Question

- One participant noted that for a good answer, as many examples as possible should be listed.

Summer Styles 2017:

[4] 8. EVPBUY.

Where have you ever purchased electronic vapor products (a device or e-liquid), such as e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens?

- TOBGT1. A gas station or convenience store
- TOBGT2. A drug store
- TOBGT3. A supermarket, a grocery store, or a warehouse club
- TOBGT4. Over the Internet
- TOBGT5. A mall or shopping center kiosk/stand
- TOBGT6. A vape shop or specialty store that sells electronic cigarettes (e-cigarettes)
- TOBGT7. A smoke shop, tobacco specialty store or tobacco outlet store
- TOBGT8. I got them from some other person
- TOBGT8. Somewhere else

Findings

- The most popular responses included smoke shops followed by gas stations with malls and drug stores being the least popular responses.
 - “If it asked just about the devices (not what you put in it) then I would be more inclined [to list] a smoke shop or marijuana shop and less the drug store or station.” (Adult, Seattle, User)
- Of note, several participants (users and non-users) responded with locations where they have seen the products, not necessarily where they have purchased them. This may be a result of asking this question of the non-users as one participant commented, “My choice is not there.

I've never purchased." (Adult, Tampa, Non-user)

- When asked if vape shops were different than smoke shops, responses were mixed. Those participants who said they differed shared the reasons for the difference was in breadth of products sold and generational differences in customers.
 - "I think a smoke shop would sell e-cigarettes but a vape shop would not sell cigarettes." (Adult, Tampa, Non-user)
 - "Smoke shop is nicotine based and a vape shop is not." (Adult, Tampa, User)
 - "Vape shops...are strictly vape. They don't sell cigarettes. They advocate for not smoking. I've never even seen someone smoke a cigarette outside a vape shop. They are two different things." (Adult, Tampa, User)
 - "I would just say smoke shop or vape shop. One is electronic and one is not...9 times out of 10 tobacco stores have both, just a smaller selection." (Adult, Tampa, User)
 - "I don't think the older generation [would] go to a vape shop, whereas, the new generation won't go to a smoke shop." (Adult, Tampa, User)
- Several participants shared that the two types of shops were the same.
 - "I wouldn't have thought they were two different places." (Adult, Seattle, User)
 - "I put smoke shop and vape shop in the same category." (Adult, Seattle, User)
- One participant recommended the term *grocery store* be used in place of *supermarket* and another suggested collapsing the first two response options into one option called, "A retail location."
- Although most participants said the response options were complete, two suggested including additional response options; vending machines (i.e., such as those at casinos) and flea markets.

Suggested Revisions to the Question

- Drop the word supermarket and just use grocery store.
- Consider adding vending machines to the response options.

Where have you ever purchased electronic vapor products (a device or e-liquid), such as e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens?

- TOBGT1. A gas station or convenience store
- TOBGT2. A drug store
- TOBGT3. A grocery store, or a warehouse club
- TOBGT4. Over the Internet
- TOBGT5. A mall or shopping center kiosk/stand
- TOBGT6. A vape shop or specialty store that sells electronic cigarettes (e-cigarettes)
- TOBGT7. A smoke shop, tobacco specialty store or tobacco outlet store
- TOBGT8. I got them from some other person
- TOBGT8. Somewhere else

Summer Styles 2017:

[5] 12. New.

EVPRUL.

Which statement best describes the rules about using electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor product) inside your home?

- 1 It is not allowed anywhere or at any time inside my home
- 2 It is allowed in some places or at sometimes inside my home
- 3 It is allowed anywhere and at any time inside my home
- 4 Don't know/Not sure

Findings

- Responses were mixed and varied based on whether the participant was a user. Users were more likely to allow use in their homes.
- Several participants said their answer would depend on whether children were also physically present (i.e., not allowing use while children were present).
 - “If there’s children, you don’t want them to be around vapor or anything that could be harmful.” (Adult, Seattle, User)
 - “Although I said I smoke anywhere, but [if] my daughter is home, I don’t do it because I don’t want her to see me...that response option is not here.” (Adult, Tampa, User)
 - “I think of my friends that have kids. I think they would probably not want you to use it if their kids were awake, but maybe if their kids were asleep.” (Adult, Seattle, User)
- Other reasons for not allowing use in the home included if individuals are eating or if the vape clouds get too large for individuals in the home to see well.
- A few participants who allowed the products to be used anywhere/anytime inside the home, explained their answer by commenting that they did not view electronic vapor products as harmful. These participants said they although they did allow EVP to be used in their homes, they did not allow cigarette smoking inside their home.
 - “It’s vapes...I don’t care. I wouldn’t do a hookah thing [inside my home.] That would put more steam in the room.” (Adult, Tampa, User)
 - “It’s allowed anywhere because it’s the same as the smoke you’ve seen in foggers. It’s more like the nebulizers. It’s the same thing but instead of water, its vegetable oil.” (Adult, Tampa, User)
 - “If it was like real cigarettes, there would be rules but because it’s vape, there’s not.” (Adult, Seattle, User)
- A few participants were confused by the wording of the response options. For example, some were confused by the verbiage “electronic vaping products.” Others were unclear about the overall reference to time versus place.
 - “Anywhere but not any time? So you are saying it’s allowed in my room but not at any time?” (Adult, Seattle, User)
 - “[The term] ‘Vaping’ throws me.” (Adult, Tampa, User)

- “I don’t like smoke in my house. I don’t care what it is. Obviously, that was confusing.” (Adult, Tampa, User)
- “I don’t know. I’m not sure if it’s asking and they’ve already said use it.” (Adult, Tampa, User)

Suggested Revisions to the Question

- Add examples for context to complement the time reference.
- Remove the don’t know / not sure response option.

Summer Styles 2017:

[ALTERNATE WORDING FOR [6] 10. New]

Have you heard that vaping products can help people quit smoking tobacco from any of the following sources?

- HLPHR2. Print advertisement (magazine or newspaper)
- HLPHR3. Internet (social media, a website, or blog)
- HLPHR4. Television (show or ad)
- HLPHR5. A healthcare provider (doctor, nurse, dentist, etc.)
- HLPHR6. Vape shop (employee/owner, store sign, etc.)
- HLPHR7. Friend or family member
- HLPHR8. Other
- HLPHR9. Don’t know/Don’t remember
- HLPHR1. I have never heard that vaping products can help people quit smoking tobacco

Findings

- During Round 2, we tested an alternate version of this question. Participants generally understood both questions to be asking the same thing.
- Many participants preferred the alternate question because it was shorter and more direct.
- Most participants easily understood the term *vaping products*. However, only referring to “vaping products” introduced some confusion for at least one participant.
 - “I think e-cigarettes were invented to replace the cigarette. I’m not quite sure what the vaping thing is supposed to be doing there.... Vaping products. Electronic vaping products...This one (version of the question) doesn’t say anything, it just says vaping products. That made me think, what are we talking about.” (Adult, Seattle, User)
- Most participants thought the question would be easier to answer if it was asked as two questions.

Suggested Revisions to the Question

- Consider separating this item into two questions. A yes or no question assessing if a survey respondent has heard that e-cigarettes can help people quit smoking tobacco and a second question on sources.
- Considering asking about “e-cigarettes or other electronic vaping products.”

Summer Styles 2017:

[6] 10. New.

Have you heard that electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor products) can help people quit smoking tobacco from any of the following sources?

- HLPHR1. I have never heard that electronic vapor products can help people quit smoking tobacco [SP]
- HLPHR2. Print advertisement (such as in a magazine or newspaper)
- HLPHR3. Internet (such as on social media, a website, or blog)
- HLPHR4. Television (show or ad)
- HLPHR5. A healthcare provider (doctor, nurse, dentist, etc.)
- HLPHR6. Vape shop (employee/owner, store sign, etc.)
- HLPHR7. Friend or family member
- HLPHR8. Other
- HLPHR9. Don't know/Don't remember

Findings

- For this question, we tested comprehension of the question and explored if any response options should be removed or added. We also investigated how participants understood the term “quit smoking.”
- This question required participants to first recall if they had heard that e-cigarettes could help people quit smoking and then where they had heard this. Although participants tended to reach the correct answer, responding frequently required participants to re-read the question and think for longer periods of time about what the question was asking.
- A few participants selected response options for where they assumed people would hear that e-cigarettes would help people quit smoking, without having heard it from that source directly.
 - For example, one participant selected vape shops because she assumed vape shops would tell customers e-cigarettes help people quit smoking to increase sells though she, herself, had never been to a vape shop.
- Some participants thought the option “I have never heard...” should be the last response option. It was confusing to read the “I have never heard” first after the question asked about sources of information.
- Participants understood “quit smoking tobacco” to include all tobacco products.
 - “All of it. No snuff, no chewing tobacco, no tobacco period.” (Adult, Tampa, Non-user)
- Some participants based their belief that e-cigarettes could help people quit smoking or cut back on smoking from their own personal experiences.
 - “It actually helped me, so I would go with um, I don't see myself (as a response option). So maybe other or myself. Just because I don't go out as, as much because of the heat index, and like I haven't totally quit cigarettes, but I've noticed that since I've been

doing the vape, my packs definitely last a lot longer.” (Adult, User, Tampa)

- “Yeah, I would say so the other (response option) would be me, because I’m, I’m actually experimenting. When I moved down here, I was smoking a lot. At work. And then I went from just work to my house and then when I was going out, so I was like, okay, this is getting out of hand. Because I have a kid, I don’t like smoking around her. So then, um, I vape every now and then which is, I feel, better for me.” (Adult, Tampa, User).

Suggested Revisions to the Question

- Consider separating this item into two questions. A yes or no question assessing if a survey respondent has heard that e-cigarettes can help people quit smoking tobacco and a second question on sources.
- Consider moving the response option “I have never heard...” to the bottom.
- Consider adding “from personal experience” as a response option.

Styles 2017 Heat-Not-Burn Tobacco Questions:

[7] 17. New.

“Heat-not-burn” tobacco products heat tobacco sticks or capsules to produce an aerosol or “vapor.” They are different from electronic vapor products such as e-cigarettes, which heat a liquid to produce an aerosol or “vapor.” Some brands of “heat-not-burn” tobacco products include iQOS, glo, Ploom TECH, and Revo. Before today, have you heard of “heat-not-burn” tobacco products?

- 1 Yes
- 2 No
- 3 Don’t know/Not sure

Findings

- The majority of participants had not heard of heat-not-burn tobacco nor capsules or sticks. The two participants who said they did hear of it, did not recognize the brands. Two other were unsure if they had heard of it.
 - “Yeah, I know what they are talking about. I recognize this brand glo but I wouldn’t know that it was heat-not-burn.” (Adult, Seattle, User)
- Participants found the question confusing and they disliked the term, “heat-not-burn” saying it was “a mouthful,” and something “a doctor would say.” They commented there should be a different name for it. One participant said it was the same as dabbing marijuana.
 - “The word itself is weird. There should be a different word for it.” (Adult, Tampa, User)
 - “It’s a mouthful to say, ‘heat-not-burn.’ Then naming the products is a mouthful.” (Adult, Tampa, User)
 - “[The] only word I know on that is vapor. Everything else is confusing.” (Adult, Tampa, User)
- Use of the term aerosol was a bit disconcerting for some and few said it reminded them of hair spray.

- “The aerosol part is kinda scary.” (Adult, Tampa, User)
- “I’m picturing a hair spray can or a bug spray can. It doesn’t sound too appealing to me.” (Adult, Tampa, User).
- “May be close but two totally different words. Aerosol makes me think of spray and vapor is liquid turning into smoke or steam.” (Adult, Seattle, User)
- Acceptability regarding the use of the term “cloud” varied.
 - “No, you don’t call it a cloud. I’ve never heard of anyone call[ing] it anything other than a vapor.” (Adult, Seattle, User)
 - “Some people think it’s cool to refer to it as a ‘vape cloud.’” (Adult, Seattle User)
 - “I would call it vapor in a social setting. I am sure there is a scientific difference between aerosol and vapor if I am talking about these products but I don’t care about science.” (Adult, Seattle, User)
 - “Never heard of anyone refer to the cloud as an aerosol or vapor. They just call it smoke.” (Adult, Seattle, User)

Suggested Revisions to the Question

- Ask first, “Have you heard of heat-not-burn tobacco products?” Then explain what they are to simplify it for the reader.

Styles 2017 Dripping Questions:
[8] DRIP1. ORIGINAL WORDING

“Dripping” is a method of heating electronic vapor product liquid by dripping drops directly onto a heating element and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vapor product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Findings

- Most adults had not heard of dripping, including some ENDS users.
- Two ENDS users had used the dripping method and provided the correct description of this method. One of these adults reported that “packing” is another term for “dripping.”
- Some adults seemed to confuse dripping with refilling in both the alternate version and the original version.

Suggested Revisions to the Question

- Revisions to the dripping item should attempt to reduce confusion between dripping and refilling. The youth findings yielded a similar conclusion. Our suggested revision is therefore similar to the youth revision and shown below.

Styles 2017 Dripping Questions:
[ALTERNATE WORDING FOR [8] DRIP1]

“Dripping” is a method of heating e-liquid by dripping it directly onto a heating element inside an electronic vaping product and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vaping product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Findings

- Most adults preferred this alternate wording to the original wording because, as they reported, it was more streamlined, sounded better, more specific, and more concise and straightforward.

Suggested Revisions to the Question

- We recommend revising the dripping item to be more concise. Our suggested revision, which combines the findings from the original version, this Round 1 alternate version, and the Round 2 alternate version, is shown below.

Styles 2017 Dripping Questions:
[ALTERNATE WORDING FOR [8] DRIP1]

“Dripping” is a method of heating e-liquid by dripping it directly onto a heated coil inside a vaping product and then immediately inhaling. Have you ever used dripping to add e-liquid to a vaping product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Findings

- Most participants preferred the original version to this alternate version because they said the description was easier to understand. However, one frequent user of marijuana in vaping devices thought the original wording—without the reference to coils—sounded like the dabbing method with THC (i.e., dripping drops onto a heating element).
- One participant preferred the reference to “electronic vapor product liquid” rather than “e-liquid” because, as he or she reported, e-liquid is for e-cigarettes rather than vaping.
- Despite participants’ affinity toward this version, responses were usually incorrect. Although most adults were not familiar with dripping, they selected “No” rather than “I don’t know.” Two adults selected “Yes” but one of these participants did not seem to know what dripping was. He or she said, “That’s where you get the various flavors.” (Adult, Seattle, Non-User)
- A few adults thought they knew of the dripping method but described it incorrectly. Another thought the method was like making drip coffee. Most adults, however, did not seem to understand dripping even after reading the description in the question.
- One adult thought “dripping” and “dabbing” were synonymous. (Note, this participant is in addition to the participant above who said that the original wording sounds like it refers to dabbing.)
- Most adults were not familiar with coils.
- Most adults recognized the term “e-liquid” but “juice” was more widely used. A few adults mentioned “e-juice,” “syrup,” or “drops.” One participant who frequently smoked marijuana through vaping devices reported that juice refers to nicotine, while oils refers to marijuana.
- Adults were split in terms of thinking that all e-liquid contains nicotine. A few thought some e-liquid contains nicotine and some does not. A few did not know what e-liquid was made of but associated it with “flavors.” Two adults confirmed that e-liquid contains nicotine.

Suggested Revisions to the Question

- We recommend applying similar revisions to the adult dripping item as we did for the youth dripping item. However, given that e-liquid and juice were highly recognized among adults, the adult version of the question could potentially list these terms, as show below:

“Dripping” is a method of dripping drops of electronic vaping product liquid (e-liquid or e-juice) directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor.

Have you ever used the “dripping” method with your electronic vaping device?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Styles 2017 Dripping Questions:

[9] 16. New. [**ASK ONLY IF PARTICIPANT HAS USED DRIPPING]

Why did you use the dripping method?

- DRIP2a. It makes the flavor taste better
- DRIP2b. It makes a stronger “hit”
- DRIP2c. It makes a thicker cloud of vapor
- DRIP2d. I was curious
- DRIP2e. Other reason

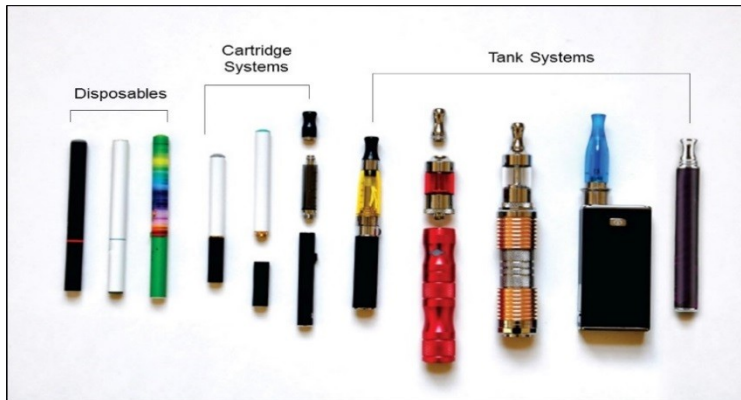
Findings

- For this question, we explored if participants understood the response options and asked participants familiar with the dripping method if any reasons for dripping were missing.
- During the first round, the second response option was tested in its original wording “It makes a stronger throat hit.” Some adult participants found this wording to be odd and suggested removing the word throat.
 - “It makes a stronger throat hit is kind of, um, weird. We do use the word hit, though, when we just say hits better, like if it’s stronger.” (Adult, Tampa, User)
- One participant who was very familiar with the dripping method thought that the current response options covered the reasons he and his friends had used the dripping method.
 - “Me, myself, personally, it would be first three. The dripping is almost, you get this almost the same hit as you do as you taking a drag off of a cigarette. And you can make it stronger by turning it, turning up the amperage, or turning it down if you want a weaker hit.” His top choice was thicker cloud of vapor because “You can actually do tricks with the vapor. Blow rings out ... I can, I can blow rings. But my friends can blow rings, they can blow a ring inside that ring, it actually looks like a jellyfish.” (Adult, Tampa, User)
- Participants were asked if the question should ask: “What is the main reason you drip?” All participants understood the meaning to be the same but some participants preferred this phrasing because they felt it sounded more open and “less accusatory.”

Suggested Revisions to the Question

- Remove the word throat from the second response options so that it reads: It makes a stronger “hit.”
- Consider adding a response option “To do tricks with clouds of vapor.”
- Consider revising the question to “What are the reasons you use the dripping method?”

Image Activity



- Have you ever seen any of these products? Are there any that you've never seen?
- What's the difference between these products [point to disposables, cartridges, and tanks as you ask this]?
- Are we missing any products in this picture?

Findings

- Several participants had seen all the products in the image activity picture, while many others identified with seeing the disposable, cartridge, and tank systems.
- A few participants noted “hookah pipes” and “hookahs” as a missing product in the picture. Another participant described a product that appeared to be missing but did not know the specific name.
 - “There is a Buse one that as a thicker barrel to it and the top is a little different, but that is the only one that may be missing.” (Adult, Seattle, User)
 - One participant said “the pictures need to be more clear. Because it’s hard to tell with them separated, they all kind of look like the normal stuff you see so I can’t really picture anything that’s missing.” (Adult, Seattle, User)
 - “Maybe the hookah product is missing, no pictures of hookah, so a few missing.” (Adult, Tampa, User)
- Only a few participants could differentiate between the mechanical mod and regulated mod. The participants who did respond noted differences in tank size.
 - “The black square one looks like it holds more juice than the others because the tank is bigger.” (Adult, Tampa, User)
 - “Maybe this one has a bigger tank.” (Adult, Tampa, User)
- Several participants noted that picture should be included along with the survey questions.
 - “Yes, it would be helpful, pictures are always worth a thousand words.” (Adult, Tampa, User)

Suggested Recommendations

- Make the images clearer.

GLOBAL FINDINGS AND CONCLUSIONS

Based on the research findings, we present the following key conclusions:

- In general, participants understand most questions and if a question is unclear, they are able to determine their answer based on the available wording. However, there could be misperceptions as to what the question is referencing. For example, with respect to e-hookahs versus hookahs. Images and graphics may help to clarify which devices the questions are referring to.
- Participants appreciate the definitions the questions provide but find the definitions more useful when they are presented towards the end of the question or as an additional separate question (i.e., one that follows a question assessing knowledge such as have you heard of x or do you use y).
- Vaping, although a commonly accepted term, has a wide breadth of definitions and misperceptions exist as to which products contain nicotine. Youth generally perceive e-cigarettes as a product used by adults and vaping is often done socially for tricks and sport.
- Few participants have heard of dripping and heat-not-burn. Dripping was occasionally confused with marijuana dabbing. We recommend questions clarify if and when they are asking about marijuana usage versus tobacco usage.
- One notable difference by city was that youth in Tampa were more familiar with vaping marijuana than in Seattle. This may be because marijuana use remains illegal in Florida.

Below in Exhibit 2, we present a list of the original and subsequent revised questions.

Exhibit 2. Summary of Recommended Changes

RECOMMENDATIONS FOR YOUTH SURVEY QUESTIONS

BRFSS E-Cigarette Question Instructions

Original instructions:

The next 2 questions are about electronic cigarettes and other electronic “vaping” products containing nicotine. Do not include Marijuana.

Electronic cigarettes (e-cigarettes) and other electronic “vaping” products include electronic hookahs (e-hookahs), vape pens, e-cigars, and others. These products are battery-powered and usually contain nicotine and flavors such as fruit, mint, or candy.

Recommended revised instructions:

The next two questions are about e-cigarettes and electronic vaping products containing nicotine. Do not include marijuana when answering these questions.

E-cigarettes and electronic vaping products include vapes, vape pens, e-cigars, mods, and others. These products are battery-powered and usually contain nicotine and flavors.

BRFSS E-Cigarette Ever Use Question

Original survey question:

Have you ever used an e-cigarette or other electronic “vaping” product, even just one time, in your entire life?

1. Yes
2. No [Go to next section]
7. Don’t know / Not Sure
9. Refused [Go to next section]

Recommended revised survey question:

Have you ever used an e-cigarette or other electronic “vaping” product, even just one time?

1. Yes
2. No [Go to next section]
7. Don’t know / Not Sure
9. Refused [Go to next section]

BRFSS E-Cigarette Current Use Question

Original survey question:

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

1. Every day
2. Some days
3. Not at all
7. Don’t know / Not sure
9. Refused

Recommended revised survey question:*

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

1. Every day
2. Some days
3. Not at all
9. Refused

* Rarely was included in the adult recommendation for this question. While youth participants preferred rarely but there was variation in how they defined it so it was not included in the recommendation.

NYTS 2017 Marijuana Question [Question 34]

Original survey question:

Have you ever used marijuana, marijuana concentrates, marijuana waxes, THC, or hash oils in an e-cigarette?

- A. I have never used an electronic product
- B. Yes
- C. No

Recommended revised survey question:

Have you ever used an electronic cigarette or electronic vaping device to use marijuana?

- A. Yes
- B. No

NYTS 2017 E-Cigarette Source Question [Question 32]

Original survey question:

During the past 30 days, where did you get or buy the e-cigarettes that you have used? (Select one or more)

- 1. I have never tried an e-cigarette in the past 30 days
- 2. A gas station or convenience store
- 3. A grocery store
- 4. A drugstore
- 5. A mall or shopping center kiosk/stand
- 6. On the Internet
- 7. A vape shop or other store that only sells e-cigarettes
- 8. Some other place not listed here
- 9. From a family member
- 10. From a friend
- 11. From some other person that is not a family member or a friend

Recommended revised survey question:

Where did you get or buy the vaping products you have used, including e-cigarettes? (Select one or more)

- 1. A gas station or convenience store
- 2. A grocery store
- 3. A drugstore
- 4. A mall or shopping center kiosk/stand
- 5. On the Internet
- 6. A vape shop or other store that only sells e-cigarettes
- 7. From a family member
- 8. From a friend
- 9. Some other place / some other person (not a family member or a friend)
- 10. I have never tried a vaping product

NYTS 2017 Reasons for E-Cigarette Use [Question 33]

Original survey question:

What are the reasons you have used e-cigarettes? (Select one or more)

1. I have never tried an e-cigarette
2. Friend or family member used them
3. To try to quit using other tobacco products, such as cigarettes
4. They cost less than other tobacco products, such as cigarettes
5. They are easier to get than other tobacco products, such as cigarettes
6. Famous people on TV or in movies use them
7. They are less harmful than other forms of tobacco, such as cigarettes
8. They are available in flavors, such as mint, candy, fruit, or chocolate
9. They can be used in areas where other tobacco products, such as cigarettes, are not allowed
10. I used them for some other reason

Recommended revised survey question:

What are the reasons you have used e-cigarettes? (Select one or more)

1. I have never tried an e-cigarette
2. Friend or family member used them
3. To try to quit using other tobacco products, such as cigarettes
4. They cost less than other tobacco products, such as cigarettes
5. They are easier to get than other tobacco products, such as cigarettes
6. I was peer pressured into using them
7. They are less harmful than other forms of tobacco, such as cigarettes
8. They are available in flavors, such as mint, candy, fruit, or chocolate
9. They can be used in areas where other tobacco products, such as cigarettes, are not allowed
10. I used them for some other reason

NYTS 2016 E-Cig Product Types Question [Question 34]

Original survey question:

Thinking about all types of e-cigarettes, have you used the disposable kind or rechargeable/refillable/tank kind?

1. I have never tried an e-cigarette
2. Only the disposable kind
3. Only the rechargeable/refillable/tank kind
4. Both the disposable kind and rechargeable/refillable/tank kind

Recommended revised survey question:

Thinking about all types of vaping products, have you ever used...

1. I have never tried a vaping product
2. Vaping products that you can't refill using bottles of e-liquid

3. Vaping products with refillable tanks and special features
4. Vaping products with refillable tanks and no special features

Styles 2017 Dripping Question

Original survey question:

“Dripping” is a method of heating electronic vapor product liquid by dripping drops directly onto a heating element and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vapor product?

1. Yes
2. No
3. Don’t know/not sure

Recommended revised survey question:

“Dripping” is a method of dripping drops of electronic vaping product liquid directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor. Have you ever used the “dripping” method with your electronic vaping device?

1. Yes
2. No
3. Don’t know / Not sure

Styles 2017 Reasons for Dripping Question

Original survey question:

Why did you use the dripping method?

1. It makes the flavor taste better
2. It makes a stronger throat “hit”
3. It makes a thicker cloud of vapor
4. I was curious
5. Other reason

Recommended revised survey question:

Why did you use the dripping method?

1. It makes the flavor taste better
2. It makes a stronger “hit”
3. It makes a thicker cloud of vapor
4. I was curious
5. To do tricks with clouds of vapor
6. Other reason

E-Cigarette Image Activity

Recommendation:

Cost permitting, include the picture of the products in advance of asking the survey questions.

RECOMMENDATIONS FOR ADULT SURVEY QUESTIONS

BRFSS E-Cigarette Question Instructions

Original survey instructions:

The next 2 questions are about electronic cigarettes and other electronic “vaping” products containing nicotine. Do not include Marijuana.

Electronic cigarettes (e-cigarettes) and other electronic “vaping” products include electronic hookahs (e-hookahs), vape pens, e-cigars, and others. These products are battery-powered and usually contain nicotine and flavors such as fruit, mint, or candy.

Recommended revised survey instruction:

The next two questions are about e-cigarettes and electronic vaping products containing nicotine. Do not include marijuana when answering these questions.

E-cigarettes and electronic vaping products include vapes, vape pens, e-cigars, mods, and others. These products are battery-powered and usually contain nicotine and flavors.

BRFSS E-Cigarette Ever Use Question

Original survey question:

Have you ever used an e-cigarette or other electronic “vaping” product, even just one time, in your entire life?

- 1 Yes
- 2 No [Go to next section]
- 7 Don't know / Not Sure
- 9 Refused [Go to next section]

Recommended revised survey question:

No Recommendations.

BRFSS E-Cigarette Current Use Question

Original survey question:

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

- 1 Every day
- 2 Some days
- 3 Not at all
- 7 Don't know / Not sure
- 9 Refused

Recommended revised survey question:*

Do you now use e-cigarettes or other electronic “vaping” products every day, some days, or not at all?

- 1 Every day
- 2 Some days
- 3 Rarely
- 4 Not at all
- 7 Don’t know / Not sure
- 9 Refused

*Rarely was not included in the youth version of this question. Rarely or occasionally may be used for the adult version of this question. Both tested equally well.

Summer Styles 2017 E-Cigarette Point of Sale Question

Original survey question:

Where have you ever purchased electronic vapor products (a device or e-liquid), such as e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens?

- TOBGT1. A gas station or convenience store
- TOBGT2. A drug store
- TOBGT3. A supermarket, a grocery store, or a warehouse club
- TOBGT4. Over the Internet
- TOBGT5. A mall or shopping center kiosk/stand
- TOBGT6. A vape shop or specialty store that sells electronic cigarettes (e-cigarettes)
- TOBGT7. A smoke shop, tobacco specialty store or tobacco outlet store
- TOBGT8. I got them from some other person
- TOBGT8. Somewhere else

Recommended revised survey question:

Where have you ever purchased electronic vapor products (a device or e-liquid), such as e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens?

1. A gas station or convenience store
2. A drug store
3. A grocery store, or a warehouse club
4. Over the Internet
5. A mall or shopping center kiosk/stand
6. A vape shop or specialty store that sells electronic cigarettes (e-cigarettes)
7. A smoke shop, tobacco specialty store or tobacco outlet store
8. I got them from some other person
9. Somewhere else

Summer Styles 2017 ENDS Home Rules

Original survey question:

Which statement best describes the rules about using electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor product) inside your home?

- 1 It is not allowed anywhere or at any time inside my home
- 2 It is allowed in some places or at sometimes inside my home
- 3 It is allowed anywhere and at any time inside my home
- 4 Don't know/Not sure

Recommended revised survey question:

Which statement best describes the rules about using electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor product) inside your home?

- 1 It is not allowed anywhere or at any time inside my home (i.e., must go outside to use)
- 2 It is allowed in some places or sometimes inside my home (i.e., can use in a certain room like a basement or bedroom or can use certain times like when no children around)
- 3 It is allowed anywhere inside my home
- 4 It is sometimes allowed inside my home

Summer Styles 2017 Sources of Information about E-Cigarettes and Quitting

Original survey question:

Have you heard that electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor products) can help people quit smoking tobacco from any of the following sources?

1. I have never heard that electronic vapor products can help people quit smoking tobacco
2. Print advertisement (such as in a magazine or newspaper)
3. Internet (such as on social media, a website, or blog)
4. Television (show or ad)
5. A healthcare provider (doctor, nurse, dentist, etc.)
6. Vape shop (employee/owner, store sign, etc.)
7. Friend or family member
8. Other
9. Don't know/Don't remember

Recommended revised survey question:

Have you ever heard that electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor products) can help people quit smoking tobacco?

1. Yes
2. No
3. Don't know / Not sure

[Ask if yes]

Where have you heard that electronic vapor products (e.g., e-cigarettes, e-hookahs, e-cigars, e-pipes, hookah pens, vape pens, or some other electronic vapor products) can help people quit smoking tobacco?

1. Print advertisement (such as in a magazine or newspaper)
2. Internet (such as on social media, a website, or blog)
3. Television (show or ad)
4. A healthcare provider (doctor, nurse, dentist, etc.)
5. Vape shop (employee/owner, store sign, etc.)
6. Friend or family member
7. From personal experience
8. Other
9. Don't know/Don't remember

Styles 2017 Heat-Not-Burn Tobacco Question

Original survey question:

“Heat-not-burn” tobacco products heat tobacco sticks or capsules to produce an aerosol or “vapor.” They are different from electronic vapor products such as e-cigarettes, which heat a liquid to produce an aerosol or “vapor.” Some brands of “heat-not-burn” tobacco products include iQOS, glo, Ploom TECH, and Revo. Before today, have you heard of “heat-not-burn” tobacco products?

- 1 Yes
- 2 No
- 3 Don't know/Not sure

Recommended revised survey question:

Have you heard of heat-not-burn tobacco products? “Heat-not-burn” tobacco products heat tobacco sticks or capsules to produce an aerosol or “vapor.” They are different from electronic vapor products such as e-cigarettes, which heat a liquid to produce an aerosol or “vapor.” Some brands of “heat-not-burn” tobacco products include iQOS, glo, Ploom TECH, and Revo.

- 1 Yes

- 2 No
- 3 Don't know/Not sure

Styles 2017 Dripping Question

Original survey question:

“Dripping” is a method of heating electronic vapor product liquid by dripping drops directly onto a heating element and then immediately inhaling. Have you ever used the dripping method to add e-liquid to your electronic vapor product?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Recommended revised survey question:

“Dripping” is a method of dripping drops of electronic vaping product liquid (e-liquid or e-juice) directly onto the heating element inside an electronic vaping device and then immediately inhaling the heated vapor.

Have you ever used the “dripping” method with your electronic vaping device?

- 1 Yes
- 2 No
- 3 Don't know / Not sure

Styles 2017 Reasons for Dripping Question

Original survey question:

Why did you use the dripping method?

1. It makes the flavor taste better
2. It makes a stronger throat “hit”
3. It makes a thicker cloud of vapor
4. I was curious
5. Other reason

Recommended revised survey question:

What are the reasons you used the dripping method?

1. It makes the flavor taste better
2. It makes a stronger throat “hit”
3. It makes a thicker cloud of vapor
4. To do tricks with clouds of vapor
5. I was curious
6. Other reason

Image Activity

Recommendation: Include images throughout the surveys if budget/ survey administration mode allows.

REFERENCES

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage Publications.

Willis, G. B. (2005). *Cognitive interviewing: A tool for improving questionnaire design*. Thousand Oaks, CA: Sage Publications.

APPENDICES

