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Original Investigation

# Accessing Vaping Products When Underage: A Qualitative Study of Young Adults in Southern California

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## Abstract

**Introduction:** California implemented multiple strategies, such as a Tobacco 21 law and compliance checks, to reduce high rates of youth e-cigarette use. However, the prevalence of use among underage youth and young adults continues rising. Little is known about how underage individuals obtain e-cigarettes.

**Aims and Methods:** We conducted structured qualitative interviews with 61 young adult (18–25 years old) vapers in the Los Angeles, CA area between June 2018 and June 2019. Interviews were comprehensive and designed to elicit information on participants' thoughts, feelings, and experiences related to vaping. We queried participants on where and how they obtained vaping products, and participants discussed their experiences accessing products while under the legal age for sale. Directed content analysis was used to analyze interviews.

**Results:** Four concepts emerged: (1) early experimentation of e-cigarettes with peers often occurred in a school setting, (2) continued use of e-cigarettes commonly obtained through peer sales, (3) inconsistent implementation of age restrictions at in-person retailers, and (4) at online retailers. Participants had peers purchase products on their behalf and frequented in-person and online retailers with few to no age verification processes. Few participants faced challenges when purchasing products from retailers.

**Conclusions:** The current study's findings offer insight into where and how underage individuals obtain vaping products despite restrictions to prevent them from doing so. Participant accounts of mixed ease of underage purchasing in-person and online suggest retailer education is needed, along with additional research to inform more effective policies to reduce underage access to vaping products.

**Implications:** Despite legal age restrictions, e-cigarettes remain accessible to underage individuals, but specific strategies that underage youth utilize to evade legal age restrictions are largely unknown. We found that participants often accessed vaping products for the first time at school. Sales between peers were common, and participants also reported frequenting in-person retailers that inconsistently enforced age restrictions. Many participants reported little to no age verification online, though some believed online age verification measures were increasingly difficult to surpass. Knowledge of strategies underage youth utilize to access e-cigarettes can inform enforcement efforts.

## Introduction

E-cigarette use, or vaping, among underage youth and young adults continues to increase in the United States.<sup>1,2</sup> In an effort to reduce the prevalence of vaping among youth and young adults, policymakers have considered various strategies to reduce access to e-cigarettes and other vaping products. One strategy has been the implementation of Tobacco 21 (T21) laws, which raise the minimum legal age of sale of tobacco products from 18 to 21 years.<sup>1</sup> California passed a state-wide T21 law in 2016 and a federal T21 law came into effect in 2019.<sup>3</sup> Federally and in California, another strategy to address rising underage e-cigarette use has been to conduct regular compliance checks to ensure that retailers are not selling products to youth.<sup>4</sup> Despite existing regulatory policies in California to reduce youth access to e-cigarettes, underage youth and young adults still easily obtain vaping products,<sup>5</sup> and the prevalence of underage e-cigarette use remains high at 27.5% for United States high school students in 2019.<sup>2</sup> Data on the methods underage individuals use to obtain vaping products are lacking, but are critically needed to determine the most effective means of reducing access to vaping products and decreasing the prevalence of underage vaping.

Three important access points to vaping products have been discussed in the literature: social means (eg, obtaining products from a peer), purchase from in-person conventional retailers (eg, vape shops), and purchase from online retailers. Previous studies on how youth younger than 18 access vaping products show most obtain them from a friend.<sup>6–8</sup> Sharing vaping devices is another common strategy; a recent study of 15- to 17-year-old youth in Connecticut found 72.8% of current e-cigarette users had used a vaping device that did not belong to them in the past 30 days.<sup>9</sup> However, recently reported results from a prospective cohort study in Southern California found that a majority of youth aged 18–20 (when the legal age to purchase e-cigarettes was 21) purchased products themselves rather than having someone else purchase vaping products and that the most common location for purchasing vaping products was vape shops.<sup>5</sup> In this study and another of youth in Connecticut, a majority of underage individuals reported they had not been denied purchase of vaping products from in-person stores due to their age.<sup>5,7</sup> Similarly, another study of underage youth found those attempting to purchase products online were often not refused purchase due to their age.<sup>7</sup>

Previous studies offer important information regarding where underage youth and young adults access vaping products, however, insights on how those underage perceive the ease of accessing products, and the specific ways in which they are obtaining products are needed. Such information can inform effective regulatory practices to reduce access to vaping products for underage individuals, in order to subsequently reduce the prevalence of vaping. Qualitative reports have the potential to document underage experiences obtaining vaping products, which may provide urgently needed information on potential venues, sources of access, and strategies to evade existing regulations. In the current study, we conducted one-on-one qualitative interviews with young adults who vape to better understand how they obtained vaping products while underage, and their thoughts and opinions on access to vaping products for young people.

## Methods

### Participation and Recruitment

In-depth structured interviews were conducted at the University of Southern California (USC) from June 2018 to June 2019 with

young adults who reported vaping nicotine products and lived in Los Angeles, California. Participants were recruited via online advertisements posted on Facebook and Instagram publicizing a paid opportunity for vapers to participate in research. We recruited participants to identify emerging trends regarding vaping and related tobacco product use among young adults. Prior to study enrollment, interested participants completed a short phone screen to determine eligibility. Participants were eligible if they were 18–25 years old and endorsed using an e-cigarette, Juul, or other vaping device for at least 5 months on a weekly basis or more frequently. We used these criteria to ensure vaping was a regular part of participants' lifestyles to obtain thoughts and opinions from regular users familiar with vaping products. A total of 62 individuals completed the study protocol. Of these participants, 61 were included in the analytic sample (one participant was dropped due to never use of a nicotine vaping device). The USC Institutional Review Board approved the study. All participants provided written informed consent prior to data collection. Participants received \$50 remuneration for completing the study.

### Interviews

Interviews were conducted in a designated interview room at USC. All interviews were conducted by one of three trained interviewers (SS, KS, and AK). Interviews followed a structured qualitative interview guide, including prompts about a multitude of experiences related to vaping (see Supplementary material for abbreviated interview guide). In particular, we asked participants to reflect back on when they were under the legal age of sale of vaping products (under age 18 or 21 years depending on the year and age of participant) and to discuss general thoughts on, experiences with, and perceptions of obtaining vaping products while underage. Before beginning the interview, interviewers briefly explained the purpose of the research and encouraged participants to talk openly and honestly about their experiences. Interviews lasted between 30 and 90 min, and all interviews were audio-recorded. Participants completed a short quantitative survey following the interview to assess basic demographic and substance use information.

### Data Analysis

All interviews were transcribed verbatim by study staff using Express Scribe transcription software. We imported transcripts into NVivo (Version 12.5) analytical software to analyze data. We systematically coded transcripts using an iterative, multi-step process, utilizing an adapted directed content analysis (ie, using existing literature to develop a priori codes, which are then analyzed).<sup>10</sup> We developed an initial set of codes derived directly from the interview guide. Using these codes, two coders (SS and KS) independently coded five transcripts at a time using NVivo and met to compute a Kappa statistic and discuss discrepancies in coding. This process was repeated until consensus was reached (Kappa statistic > .70). The current study examined data from the code "ease of access to vaping products." Within the "ease of access to vaping products" code, the team developed an additional set of 3 *a priori* sub-codes, based on well-known strategies for accessing tobacco products as reported in the existing literature: (1) obtaining vaping products through social sources, (2) purchasing vaping products from in-person retailers, and (3) purchasing vaping products through online retailers.<sup>5–8</sup> All transcripts were coded using these three *a priori* subcodes. The team analyzed data within the 3 *a priori* subcodes to identify emergent concepts.

## Results

Our study included primarily male (78.7%), White (47.5%), young adult ( $M = 20.9$  years,  $SD = 1.3$ ) participants who endorsed regular use of vaping products (Table 1). Most participants self-reported that they currently “live comfortably” (34.4%) or “meet needs with a little left” (39.3%) and have completed some college but do not yet have a degree (70.5%) (Table 1). Of all 61 participants reporting ever use of e-cigarettes, 45.9% ( $n = 28$ ) reported using e-cigarettes every day in the past 30 days; of the 52 participants reporting ever use of cigarettes, 2 (3.3%) reported smoking cigarettes every day in the past 30 days (Table 1).

We identified four final emergent concepts based on analysis of our a priori codes: (1) early experimentation of e-cigarettes with peers often occurred in a school setting, (2) continued use of e-cigarettes commonly obtained through peer sales, (3) inconsistent implementation of age restrictions at in-person retailers, and (4) inconsistent implementation of age restrictions at online retailers. We describe results within each concept below.

**Table 1.** Sociodemographic characteristics and tobacco use prevalence of participants ( $N = 61$ )

Characteristic	Total N (%) or M [SD]
Age	20.9 [1.3]
Gender	
Female	13 (21.3)
Male	48 (78.7)
Race	
Asian	8 (13.1)
Black or African American	3 (4.9)
Native Hawaiian or Pacific Islander	1 (1.6)
White	29 (47.5)
Multiethnic or Multiracial	11 (18.0)
Other	9 (14.8)
Ethnicity	
Hispanic/Latino	15 (24.6)
Non-Hispanic/Latino	46 (75.4)
Socioeconomic status	
Live comfortably	21 (34.4)
Meets needs with a little left	24 (39.3)
Just meet basic expenses	13 (21.3)
Do not meet basic expenses	1 (1.6)
Missing	2 (3.3)
Highest level of school completed	
High school graduate or GED (diploma)	6 (9.8)
Some college (no degree)	43 (70.5)
College degree (Associate or Bachelor's)	12 (19.7)
Frequency of nicotine use	
E-cigarette use	
Ever use but no past 30-day use	1 (1.6)
1–9 days in past 30	9 (14.8)
10–29 days in past 30	22 (36.1)
Every day in past 30	28 (45.9)
Missing	1 (1.6)
Cigarette use	
Never smoked cigarettes	9 (14.6)
Ever use but no past 30-day use	12 (19.7)
1–9 days in past 30	23 (37.7)
10–29 days in past 30	5 (8.2)
Every day in past 30	2 (3.3)
Missing	10 (16.4)

### Early Experimentation of E-cigarettes with Peers Often Occurred in a School Setting

The majority of participants indicated that they obtained their first vaping product while underage from a social source, such as a friend or peer. Many tried their first vape at secondary school, regardless of policies restricting use of vapes on campus. One participant described a teammate casually sharing their vaping device with a group of peers in their high school's locker room:

“I was on the football team and another football player just brought it in the locker room and let everyone try it.” (Male, 20 years old, reflecting on when he was ~14)

Another participant explained that he first tried vaping at the back of a crowded classroom with one of his friends:

“[I]t was a big [class]room, so we could be in different parts of the room. [W]e'd go in the back of this room and then we tried [the vape].” (Male, 21 years old, reflecting on when he was ~15)

Some participants were offered vapes from casual peers, while others described how closer friends offered them, which made participants more inclined to try them:

“I remember first using a vape when I was [in my second year] in high school. A friend asked me if I wanted to try it and I said sure.” (Female, 20 years old, reflecting on when she was ~15)

Being told to try a vape from a peer persuaded one participant to do so when he was in middle school:

“When I was in 8th grade [and]...I was 14, ...someone at school had a little [nicotine vape] pen...[and] they were like...‘try this, try that,’ and it was crazy.” (Male, 22 years old, reflecting on when he was ~14)

In all of these instances, participants shared how they initially tried vaping devices in social settings, primarily at school and undetected by adults, such as teachers, who might have enforced restrictions on their use.

### Continued Use of E-cigarettes Commonly Obtained Through Peer Sales

After their experience of first trying a vaping device, many participants continued obtaining vaping devices through social sources. One participant described how she buys products at cheaper prices from her friend who purchases products from another peer:

“I think he buys them for a lot at once from someone he knows and they're still in the usual packaging, but he sells them for 6 or 7 dollars cheaper.” (Female, 21 years old, commenting on the current climate of underage access)

Another participant explained that if she ever encounters a retailer who will not sell products to her because of her age, she asks friends to purchase products on her behalf. This participant also described how friends often upcharge the cost of devices in order to profit off secondary sales:

“All my friends are above age, so if I ever have a problem I just Venmo them...People get [vapes] shipped from Arizona [a state where you purchase vaping products at 18 years instead of 21], so they get [a vape] for \$20 [from Arizona] and sell [the vape] to their friends for \$24 [in California].” (Female, 20 years old, discussing where she currently obtains vaping products while underage)

Participants described that purchasing vapes from peers was not limited to close friends nor to brand new devices. One participant described how it was easy to identify friends of friends interested in selling their old devices once they quit vaping or start using a different device:

“You can buy [vapes from] friends. A lot of people stop using them altogether, so there’s always usually one for sale...And someone, like a friend of a friend...in the distance [selling the vape]...There’s usually [a vape] that people just don’t want anymore because they’re stopping or they’re not hard to get online.” (Male, 20 years old, commenting on the current climate of underage access)

### Inconsistent Implementation of Age Restrictions at In-person Retailers

Experiences with successful underage purchase of vaping products from in-person conventional retailers were mixed among participants. Many explained methods for evading age verification when making purchases. When asked how easy it was to purchase vaping products while underage, one participant expressed great ease when frequenting a local store without her identification:

“Super easy. I was definitely underage when I bought it, but I went to the local store by my high school that everyone went to and I [asked], ‘Can I get an e-cig?’ And [the store clerk] [asked], ‘Are [you] 18?’ And I [said], ‘Yeah but don’t have my driver’s license [with me].’ He just let us buy it.” (Female, 20 years old, reflecting on when she was underage)

In particular, “local” or “mom and pop” retailers (ie, not big or chain stores) were commonly reported as having less strict age verification. One participant discussed how he brought an underaged friend to purchase a vaping device because he knew that the store would not question his friend’s age.

“If you go to the mom and pop liquor store or a smoke or vape shop...they are more lenient...I have a friend, she’s nineteen, and I brought her in once, cause...I knew that if she went with me, [the store clerk] wouldn’t question it.” (Male, 23 years old, commenting on the current climate of underage access)

Many participants also discussed the importance of locating retailers that were willing to sell to underage youth so they could share this information with peers and exclusively frequent those more lenient retailers:

“I feel like it’s still kind of hard to obtain [vapes], but there are specific shops which do not ID anyone, so kids can walk in and purchase a vape if [they] wanted to. If you know where those shops are, [vapes are] easily accessible, otherwise you’ll have kind of a hard time.” (Male, 21 years old, commenting on the current climate of underage access)

In addition, participants often mentioned using false identification (fake IDs) at in-person retailers without strict age verification methods to evade legal age restrictions:

“As long as you are of legal age or have a fake ID, and they don’t scan [the fake ID], then you can get [a vape].” (Male, 21 years old, commenting on the current climate of underage access)

Participants also explained fake IDs are common in big cities, which allow underage youth to easily purchase vaping products:

“Something that’s common culture in big cities is to use fake IDs [to purchase vapes...] those big city kids all have fake IDs, so if you have that, [it’s] easy [to purchase vapes].” (Female, 20 years old, commenting on the current climate of underage access)

However, not all participants found it easy to purchase vaping products in person. One participant compared the ease of purchasing cigarettes vs. vapes and found age verification for vaping products to be much stricter:

“You’re going to get ID-ed [by retailers] though. No matter where you are...they’re going to ID you for a vape. They’ll ID you for a vape over cigarettes... they’re super strict on it.” (Male, 22 years old, commenting on the current climate of underage access)

Participants identified certain types of in-person retailers that are particularly difficult for underage purchasing. One participant cited the large national convenience store chain 7-Eleven, and gas stations in general, as retailers that verify the age of purchasers by requesting identification. Specifically, they described how these stores can discern fake IDs from real ones:

“[If you go to a] 7-Eleven... or a gas station... and you don’t look 21 you’re going to get carded. Even if you produce some fake ID, they might deny you [the vape].” (Male, 23 years old, commenting on the current climate of underage access)

### Inconsistent Implementation of Age Restrictions at Online Retailers

Participants shared a range of experiences regarding online purchasing and ways they bypass minimum age of sale policies. One participant expressed difficulty purchasing online due to strict enforcement of age restrictions. This participant described how his friend attempted to purchase a vaping device online but was unable to meet the strict age verification requirements, despite the friend being of an age at which the sale of products is legal:

“You have to send in a picture of your ID and it’s actually really tedious...One of my friends [tried to purchase a device online] and he’s actually 21, but for some reason they rejected him I think because he used an older email ... it had like a different age [attached to the account].” (Male, 20 years old, commenting on the current climate of underage access)

Other participants, however, found age verifications online easy to surpass and/or not present at all. For example, one participant described how while some specific online retailers had strict age verifications, like the Juul website, it was very easy to locate more lenient alternative sites:

“The Juul is harder to get because [Juul has] security things on their website. But you can buy pretty much everything on the Internet, you just have to find a site that will sell it to you.” (Male, 23 years old, commenting on the current climate of underage access)

Another participant described how they avoid age verification at the point of delivery by shipping vaping products to their overage friend’s home:

“[When purchasing online] I can’t get it shipped to my house because I’m not of age...[instead] I can probably do a very simple thing. [I can ask my friend who is overage] ‘Can I ship it to your house?’” (Male, 20 years old, discussing where he currently obtains vaping products while underage)



Not only did participants discuss how to evade online age verifications, but some expressed complete lack of age verifications online. One participant shared that they did not have to provide any age-related information when purchasing vaping products online:

“[I bought] the [e-liquid] online. [It was] very easy...I don't even think there was any age verification process.” (*Male, 21 years old, commenting on the current climate of underage access*)

Some participants expressed how online age verification processes have changed over time. One participant described how there used to be no age verifications online, but now websites use third party age verification services to comply with age restriction policies:

“A long time ago there was no [age] verification process...and now there are a lot of sites that actually require [you] to send a picture of your ID on a third-party software ... [and] they approve [and] verify [your ID].” (*Male, 21 years old, commenting on the current climate of underage access*)

One participant also described how they avoided age verification by ordering vaping products through the online delivery service Postmates:

“I used Postmates to get [e-cigarettes] delivered to me...The [Postmates delivery] lady did ask for my ID [when she brought it to my home] and I said, ‘Oh I don't have one,’ and she was just like, ‘Okay.’” (*Male, 19 years old, discussing where he currently obtains vaping products while underage*)

This method allowed the participant to bypass the retailer's in-person age verification by purchasing through an online delivery service that likely is not set up to handle purchases of products with age restrictions.

## Discussion

The current study presents timely and novel findings regarding contexts in which young people access vaping devices while under the legal age of sale of nicotine products. Nearly all participants reported trying their first vaping device through social sources in a school context and cited peers as easy and convenient mechanisms for purchasing vaping devices without detection from authority figures (eg, teachers and parents). Some participants bought vapes directly from peers to avoid age verifications and to secure cheaper prices. Many found the ease of purchasing vapes at in-person retailers depended greatly on what kind of retailer they attempted to purchase from (eg, local, independently owned vs. large commercial retailer) and noted specific stores were known for not checking IDs or being unable to recognize fake IDs. Participants reported mixed experiences with purchasing vapes online. While some faced little to no age verification, others believed that online age verification measures were difficult to evade.

Consistent with previous research,<sup>6-8</sup> the majority of participants explained that they obtained their first vaping device from a peer, often on school campuses. Participant descriptions of vaping products on high school grounds highlight areas for improvement regarding school regulation policies of tobacco use. For example, participants shared stories of using vaping devices while in sports locker rooms and in classrooms. Ineffective or unenforced tobacco use policies at schools may provide underage youth an easy location where they can try and share their devices,<sup>11</sup> thus increasing

access to a large number of underage youth. It is important that schools work alongside policymakers and researchers to develop more effective strategies to regulate tobacco use on campus. Obtaining vaping devices from social sources also emphasizes the social nature of vaping. Previous research suggests that the majority of youth use vaping devices that do not belong to them,<sup>9</sup> which is consistent with how our participants reported trying and using their friends' devices. Participants reporting how peers shared devices with large numbers of individuals further highlights the role that sharing vaping devices plays in indiscriminately increasing use among peer groups.

Our data also highlight how underaged youth utilize peers to avoid age restrictions when trying to purchase vaping products. Having older peers purchase tobacco products on behalf of younger peers has previously been reported as a common mechanism for accessing tobacco products while underage,<sup>12</sup> and our data similarly suggest that this practice is common. T21 policies were implemented in part to combat youth accessing products through peers of legal age attending the same school (and in the same social groups).<sup>13</sup> In our study, many participants reported asking overage peers to obtain products on their behalf. Notably, many participants in our study were in high school when the legal age of purchase was still 18 in California; thus, this route of e-cigarette access may be lower for youth currently in high school as access to those 21 or older may be more limited. Participants also discussed purchasing products directly from friends because it is cheaper, since people often purchase products in bulk and resell them at a discount. Often, a secondary sale can lead to greater distribution of vaping products to wider peer groups. This informal microeconomy and vaping marketplace presents another target for intervention that should be considered when developing regulatory policy and educational programs for schools and parents.

A common experience, of participants purchasing vaping devices at in-person retailers, is underage youth easily accessing products once they identify a retailer willing to sell to them. Underage youth can then direct peers to purchase at these retailers to avoid age verification. A number of quantitative studies have reported high rates of noncompliance with age of tobacco purchase regulations.<sup>5,7,9,14,15</sup> In our study, participants reported that noncompliance may be more common in certain types of retailers, such as small, independent, or local retailers. There are multiple explanations for why these stores may lack enforcement efforts, such as insufficient funds for advanced age verification technologies, the belief there is little risk to noncompliance due to infrequent law enforcement compliance checks,<sup>16,17</sup> or lack of education on federal and state regulations pertaining to age verification processes.<sup>18</sup> Consequences for retailers violating age of sale policies for tobacco products could also be seen as minimal, which may contribute to widespread violation rates.<sup>19</sup> Thus, regulatory bodies should consider alternative methods for effectively enforcing age restriction policies at all tobacco retailers, regardless of size.

While some participants found purchasing online to be difficult, others found it easy if they know what sites to frequent and certain strategies to evade age verifications. Consistent with the current study, past research shows that online retailers can be easily accessible to underage youth as many lack sufficient age verification<sup>20,21</sup> and underage participants can often bypass age verifications that exist.<sup>7,22</sup> Our data identified potential strategies by which these age verification processes can be exploited, such as by falsely indicating

you are legally of age to purchase products or shipping products to homes of peers who are over the legal age of purchase. Both previous literature and current study data suggest that certain online retailers are enacting stricter age verification policies which both accurately and inaccurately deny purchase to buyers. Although some online retailers may have gotten better at enforcing age restrictions over time, these stricter verification measures should be applied to all online retailers. Finally, regulations must be constantly updated to address the ever-changing online purchasing landscape as online delivery services, such as Postmates, could be exploited by underage youth to access vaping products.

### Limitations

The results of this qualitative study may not be generalizable to a nationally representative population. Further, our sample was predominantly male, and we were unable to analytically test whether findings differed by gender. The majority of our sample was also college educated which may not accurately reflect all e-cigarette users. In addition, we asked participants to reflect back on when they were under the legal age of tobacco sale; participant accounts may be subject to recall bias. The mean age of participants was 20.9 years, and a majority were under the age of 21 at the time of interview, so findings reported herein are unlikely to be substantially impacted by differential recall.

### Conclusion

Participants in the present study were generally easily able to obtain vaping devices through peers at school, in-person conventional retailers, and online retailers when they were under the legal age of sale of tobacco products. Participants avoided age verifications by purchasing vapes directly from peers, frequenting stores that either did not check IDs or were unable to discern fake IDs, and using online sites with easily avoidable or non-existent age verification methods. With only few participants citing difficulty obtaining vaping products, there are clear areas for improvement to properly enforce legal age restrictions. Future research is needed to inform tobacco policy and enforcement efforts in order to address these gaps.

### Supplementary Material

A Contributorship Form detailing each author's specific involvement with this content, as well as any supplementary data, are available online at <https://academic.oup.com/ntr>.

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### Declaration of Interests

None declared.

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