

Breathalyzer Research Report

January 22, 2019

FINAL REPORT



PRR

Seattle • Washington DC • Austin • Norfolk • Portland



COLORADO
Department of
Transportation



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Research objective:

Understand how people perceive personal breathalyzers and how they might use these devices to make safer decisions about driving after drinking.

Purpose

- Colorado continues to see alcohol-involved traffic incidents that result in serious consequences. Ongoing education and outreach campaigns in recent years have successfully raised awareness for this issue, but studies show motorists are continuing to drive under the influence (DUI).
- In 2018, the Colorado Department of Transportation (CDOT) partnered with BACtrack and Responsibility.org to distribute free or discounted breathalyzers to promote the use of these devices and reduce the prevalence of DUI. CDOT gave out free breathalyzers to hear from people interested in using one but not willing to send \$50 during the promotion.
- To learn more about the breathalyzer user experience, CDOT hired PRR to reach out to people who had received a promotional breathalyzer.
- PRR designed and conducted focus groups and one-on-one interviews that addressed the following topics:
 - Attitudes and awareness around breathalyzers
 - Experience using the BACtrack device and how much they think breathalyzers are worth
 - Changes in behavior and perceptions since receiving their BACtrack device
 - Factors leading to using their device more or less often
 - Messages that would convince other people to get a breathalyzer

Methodology

Focus Groups and Interviews

- PRR conducted 8 online focus groups and 11 phone interviews in November and December 2018.
- All focus group and interview participants were recruited through the same methods and asked the same questions. The only difference was that the focus groups were a group discussion while the interviews were one-on-one conversations.
- We recruited participants from a BACtrack customer list. We contacted people who had received a free or reduced-price breathalyzer between July and September 2018. We invited everyone in the “Free” group (n=199) and half of the “Discounted” group (n=1,400) to participate in this study.
- As part of this recruitment, a screener survey collected people’s demographic information.
- The research was conducted online using Focus Vision’s InterVu software. This online platform allowed participants throughout Colorado to see and talk with each other and the moderator in real time.
- We conducted this research with 33 people: 22 focus group and 11 interview participants. The respondents represent a mix of the Free and Discounted breathalyzer recipients.
- Participants were paid for their time with a \$25 gift card.



Terminology

- Participants received one of two breathalyzer models from BACtrack: The Trace Pro model has a built-in digital display, while the Mobile Pro model displays results through a smart phone app. Everyone in the Free group received a Mobile Pro.



BACtrack Trace Pro



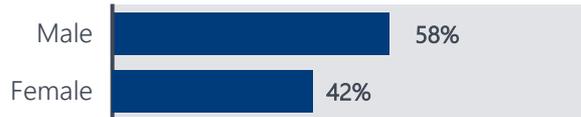
BACtrack Mobile Pro

- As a summary of qualitative data, we used descriptive categories to “quantify” things. We’ve defined these categories as follows:

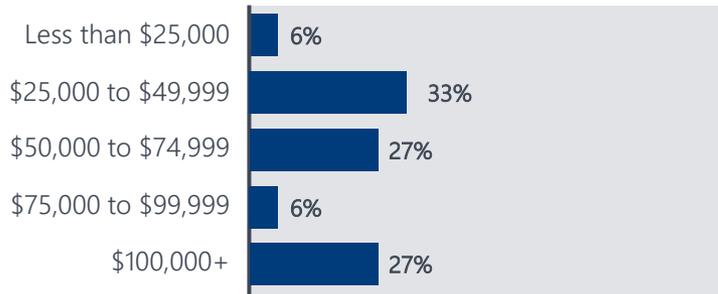
Term	Proportion of participants
Most	81% or more of participants
A Majority	51-80% of participants
Many	30-50% of participants
Some	10-29% of participants
A Few or Several	Less than 10% of participants

Who We Heard From

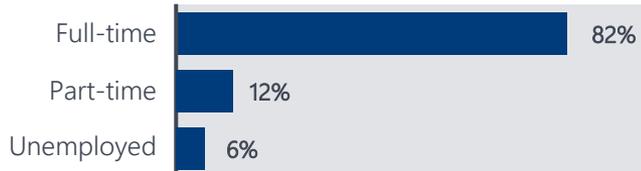
Gender



Household Income



Employment Status



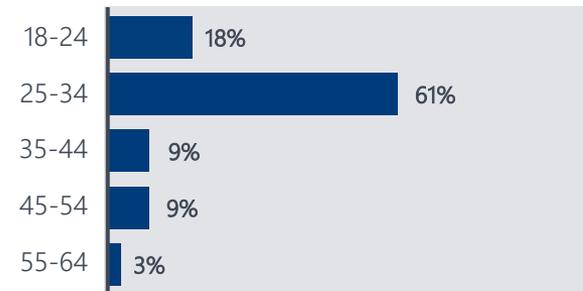
Ethnicity



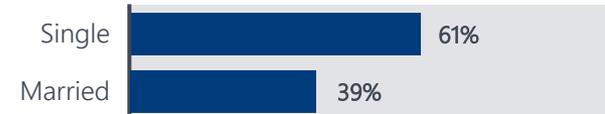
Race



Age



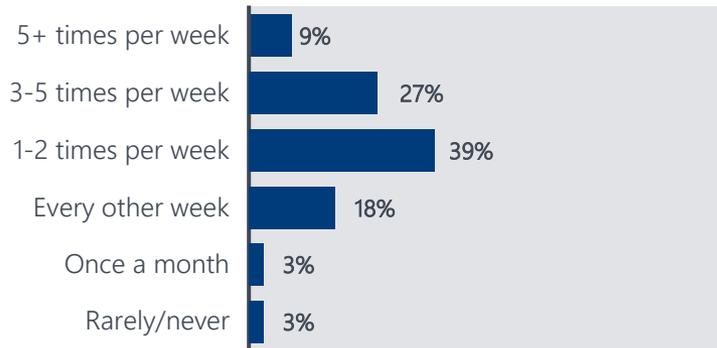
Household Composition



Due to rounding, or options where participants could select multiple answers, percentages may not sum to 100%. Rounding occurs on all demographic slides.

Who We Heard From

How often do you typically consume alcohol?

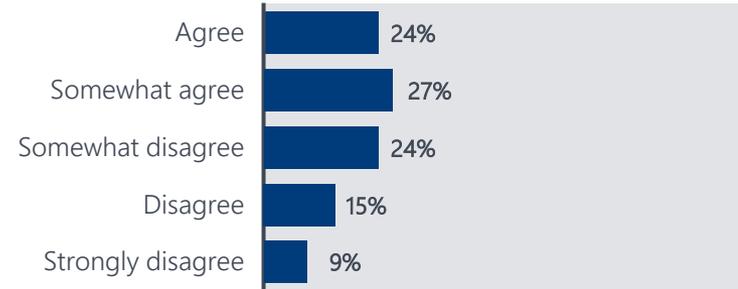


Where do you typically consume alcohol?

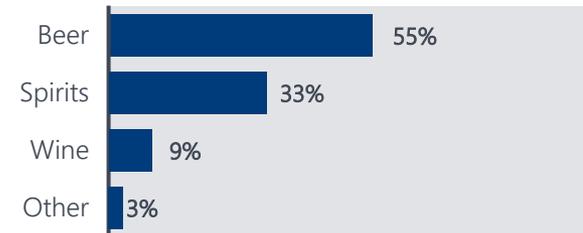


Due to rounding, or options where participants could select multiple answers, percentages may not sum to 100%. Rounding occurs on all demographic slides.

When drinking, I typically consume 4 or more alcoholic beverages



When you consume alcohol, what type of alcoholic beverage do you typically consume?



Type of Breathalyzer



Key Findings and Recommendations

Key Finding #1

Participants were supportive of personal breathalyzers, but there's still a stigma around these devices.

- Personal breathalyzers are a new concept for most people, who don't realize these devices are available for personal use and have not used one before.
- Although participants are generally supportive of breathalyzers and trust the results, there's a lingering stigma against using the devices in public. Breathalyzers are still associated with DUI offenses.

Recommendations

Keep up the good work, CDOT!

- Keep promoting breathalyzers. People are very supportive and tell their friends how great breathalyzers are. Several participants convinced friends or family to get a breathalyzer or purchased one for them as gifts. This means that the impact of a CDOT-promoted breathalyzer reaches beyond the individual recipient.
- Continue advertising through social media and serving the ads multiple times when this type of conversion is the goal. Most people found out about the breathalyzer offer through social media—and usually did not purchase or sign up until they had seen an ad multiple times. This focus group finding validated VJ's approach to keep the breathalyzers top of mind by continuing to show the ads to people who had clicked on the ad previously but had not yet purchased or signed up for a breathalyzer.
- Consider marketing breathalyzers through promotions at a range of venues, including: college campuses, bars/nightlife areas, and the DMV.

Key Findings and Recommendations

Key Finding #2

The legal limits for Driving While Ability Impaired (DWAI) are not well known.

- People frequently referenced the DUI limit of .08 as their bar for driving, but only a few mentioned the DWAI limit of .05.
- This indicates that even people who are trying to make safe choices are unaware that they are impaired and could get a DWAI if their BAC is between .05 and .08.

Recommendations

Emphasize the legal limits for DWAI in campaign materials.

- Continue educating the public about the .05 DWAI limit to build awareness that the threshold for driving impaired is much lower than people think.
- Don't let messages about DUI enforcement obscure information about DWAI offenses.
- Consider helping people get a handle on what .05 looks like, and how breathalyzers can help you track changes in your blood alcohol content (BAC), with a campaign. It's hard for people to accurately translate a number of drinks to a specific BAC level, especially when thinking about how BAC changes even after a person stops drinking. Breathalyzers are the best tool for accurately measuring impairment.

Key Findings and Recommendations

Key Finding #3

Having a breathalyzer encouraged behavior change and reaffirmed good decision-making.

- Many participants said owning the breathalyzer changed their decision about whether to drive at one point in time.
 - Some decided not to drive because they had a high BAC reading.
 - Others decided not to drive even when they did not have their breathalyzer with them because they knew what their limit was from previous experiences using the breathalyzer.
- Most participants planned ahead to use rideshare when they went out drinking to avoid driving after drinking. However, they still found breathalyzers useful for:
 - Increasing their own awareness of how alcohol affected them (thereby reaffirming their decision to use rideshare rather than drive after drinking).
 - Sharing the device with others to see if they were below the legal limit before driving.

Recommendations

Promote breathalyzers as a way to check yourself and others.

- Breathalyzers may be particularly effective at reducing driving under the influence among people who want to be responsible but don't realize they're over the limit. Market directly to this audience.
- Emphasize that with a breathalyzer there's no guesswork about whether you're over the legal limit.
- Normalize the practice of asking friends or family who are about to drive after drinking to check their BAC with a breathalyzer first.
- For any future campaigns, embrace the fact that the people who are likely to buy breathalyzers want to be responsible and make good decisions, and message accordingly.

Key Findings and Recommendations

Key Finding #4

A majority of participants used their devices regularly, often for information-gathering purposes.

- Many participants used their breathalyzer at home for informational purposes to learn more about their personal tolerance. The results gave many participants a better understanding of their tolerance, which tended to be lower than expected.
- A few said they only brought the device when they intended to drink a lot, but most people brought it with them when they expected to drink at all. Some were in the habit of bringing it with them any time they left the house – most of these participants kept the breathalyzer in their car or purse.
- The breathalyzers were often pulled out at parties as a party trick, but this generated interest in the devices and destigmatized owning one. Only a handful of people said they used the device to see how high they could blow.
- There were not substantial differences between the Free and Discounted groups in terms of how often people used the devices or in their level of support.

Recommendations

Promote breathalyzers as a way to know your body better.

- Highlight that breathalyzers give you a better understanding of your personal tolerance, which is often lower than expected.
- Market the device as something “ordinary”, like any other health-related tech gadget (think Fitbits). Emphasize the features of guessing your BAC and the estimated time until it’s safe to drive.
- Normalize keeping a breathalyzer with you like an accessory (in a purse, in a glovebox) so that it’s not seen as something that only heavy drinkers or partyers benefit from.
- Sell the benefits of using the breathalyzer to test *others* at risk of driving under the influence.
- Avoid images or taglines that portray the device as a party trick.
- Keep it serious but positive, and avoid scare-tactics. Emphasize the benefits (getting home safe) more than negative outcomes (a DUI, harm to others)

Key Findings and Recommendations

Key Finding #5

Participants enjoyed using their breathalyzer, but would not pay full price for it.

- The devices were well-received because they were easy to set up and use and they had an appealing design. However, Android users often had difficulty pairing their phone with the device.
- Mobile Pro users really liked the following options and features of the app:
 - Guess your BAC before you blow
 - Estimate how long until your BAC falls below the legal limit
 - Track your BAC over time
 - Call an Uber from the app
- Some Mobile Pro users suggested having a built-in display so they could use it when their phone died or if they had poor reception.
- Despite the rave reviews, most were not willing to pay full price (\$100) for the device. \$30 to \$50 seemed to be the sweet spot. Those who received a discounted breathalyzer tended to be willing to pay more than those who received a free one.

Recommendations

Keep the deals coming to encourage breathalyzer adoption.

- The \$100 price-point is a barrier, so keep up promotions for discounted or free breathalyzers.

Promote models that include a built-in display and address technical issues.

- Promote BACtrack models that include a built-in display.
- Encourage BACtrack to resolve technical issues with the app for Android users.

Life Before the Breathalyzer

Support for breathalyzers is strong, but misperceptions about the devices persist

- Almost all participants were supportive of breathalyzers and thought they were great “tools” to have.
- Many were surprised these devices are available for personal use because they had been under the impression that only law enforcement officials and DUI offenders had breathalyzers—contributing to a certain stigma.
 - There is a common misconception that if you’re using a breathalyzer in public, it’s because you’re in trouble.
 - Some people associated breathalyzers with court-ordered ignition interlock devices.
- A few of the participants familiar with personal breathalyzers said they had been skeptical of the accuracy of devices that were not professional-grade. However, they did not doubt the BACtrack device, which they viewed as high-quality and accurate.
- Given the current norms around using breathalyzers, a few participants expressed appreciation that BACtrack devices are discrete.
- Several people said that having a breathalyzer was “eye-opening” and convinced them that everyone should own one, but a few felt uncomfortable using the breathalyzer in public because of the negative connotations.

“I didn’t know they were available for people who didn’t have a couple DUIs.”

- White male, 25-34, Dependable Drinker

“I just thought about people who were in trouble with law..”

-White female, 45-54, Dependable Drinker

“If I’m out at a party or out in public it feels weird to just take it out and be using it in a corner—not necessarily that people would be judging me but just feeling a little awkward or uncomfortable so having to feel like I either need to make everyone try it or go into a bathroom to use it.”

-White female, 25-34, Interested but Not Committed

Prior experience with breathalyzers was limited

- Most participants had not tried a breathalyzer before they received one from CDOT. Only a few people had previously owned a breathalyzer.
 - One person had purchased a BACtrack device a few years ago after receiving a DUI.
 - Someone else shared a breathalyzer with her roommate in college.
- The most common places where people had tried breathalyzers before turned out to be parties (often in college) and bars.
- Every participant said that before they received the CDOT breathalyzer they gauged impairment by how they “felt”.
 - A few people had used charts or apps to estimate their intoxication.
 - The participants who had owned breathalyzers before also mentioned using their devices.

“Obviously, I became a whole lot more responsible [after getting a DUI] and I decided to invest in my own little breathalyzer like that from the same company. That was probably 4 years ago I got that.”

- Hispanic Male, 25-34, Breathalyzer Evangelist

Strategies for Determining Impairment

Frequently-used (Mentioned by many participants)

- Vision
- Motor skills
- Clear-headedness
- Number of drinks
- Time since they stopped drinking

Infrequently-used (Mentioned by a few participants)

- Chart estimates based off gender, weight, and number of drinks
- App estimates based off gender, weight, and number of drinks

“I knew that these existed and I had always been interested just to see...how it actually would affect your BAC. I had thought about getting one in the past and just had never done it.”

-White female, 35-44, Dependable Drinker

Review of the Device

BACtrack devices have an appealing look and feel, plus they're easy to use

- People liked the look and feel of BACtrack devices. At times they compared their breathalyzer to Fitbits or Google watches. Most found the device straightforward to set up and easy to use, but there is room for improvement.

	Praise	Critiques	Observations
Design	<ul style="list-style-type: none"> • Sleek • Compact • Discrete • Small • Trim 	<ul style="list-style-type: none"> • Even participants with the Bluetooth-enabled Mobile Pro would like a digital display on the device so they can use it if their phone dies or they have poor reception. 	<ul style="list-style-type: none"> • A few participants said they appreciated the device's small size because it meant they could discretely use it in public.
Functionality	<ul style="list-style-type: none"> • Straightforward set up • Easy to use 	<ul style="list-style-type: none"> • Android users tended to have difficulty pairing their phone to the device and maintaining the connection. This sometimes caused the device to malfunction. • Some people were surprised by how long and/or hard they had to blow into the device to get a clear reading (although they noted this was another test of their sobriety). • A few people noted that the required maintenance was a barrier because the process of getting the device serviced was time-consuming and expensive. 	<ul style="list-style-type: none"> • A few people admitted to cutting short the necessary waiting period between consuming alcohol and blowing into the device. They noted that waiting will become harder as people become more inebriated.

Participants suggested keeping the price low

- Participants who received a discounted breathalyzer were willing to pay more for the device than those who received it for free.
 - On the whole, participants in the Free group were willing to pay less (average: \$20-\$30) than people in the Discounted group (average: \$50).
 - A few people, especially those in higher income brackets or who used their breathalyzer more frequently, were willing to pay \$100 or more.
- A consistent critique we heard was that the retail price of the device is too high “for most people”. Participants said that bringing down the price point would encourage more people to buy personal breathalyzers.
- Participants were very supportive of this breathalyzer campaign. They wanted CDOT to expand the effort to offer free and discounted breathalyzers. Some suggested venues for marketing, such as:
 - Increasing the price of car registration and including a personal breathalyzer with vehicle registration.
 - Advertising at college campuses
 - Advertising at the Department of Motor Vehicles
 - Reducing insurance rates for having a breathalyzer
 - Introducing a payment plan to make the device more affordable

“It’s not worth the risk...\$300 is a very low price to pay versus what the catastrophe of an alcohol-related accident could be. Obviously, you’re talking about loss of life...\$300 is worth keeping you safe versus losing your life or someone else’s life.”

-White male, 25-34, Dependable Drinker

“The price deterred me a little bit because it was \$100 if I remember correctly. While I knew it would be accurate, I don’t drink enough to justify the expensive purchase.”

-Asian American male, 18-24, Interested but Not Committed

Building the Breathalyzer Habit

Most participants first tried the breathalyzer at home

- Most participants tried out the breathalyzer for the first time at home, often with a spouse, friend, or partner.
- They were interested to see how
 - The device worked
 - The number of drinks they had affected their BAC
 - The length of time they were consuming alcohol affected their BAC
- A few people described a methodical process of blowing into the device after each drink to see how their BAC changed with every additional drink. Some people experimented with the way different types of alcohol (for example, a beer vs. a shot of liquor) affected their BAC.

"I had decided that I was going to wait to blow until I was at 0.08, just to get a gauge for where that was. It was like 0.14...which was the surprise factor for me because, to be totally honest, I have driven in that state because I thought [the legal limit felt like that]...So that was kind of scary actually...Thankfully I wasn't driving...It was really eye-opening because I had no context....Now that I've done that I've started [blowing] from my very first drink."

-White female, 25-34, Breathalyzer Evangelist

"I was just curious to see how drunk I really am...It takes a lot less than people realize to break the law...because I've learned the actual limit is a .04 [sic], not a .08...[a DWAI] is the same punishment as a DUI...even though the limit is half what everyone...thinks it is.."

-White male, 25-34, Breathalyzer Evangelist

"[The first time I used my breathalyzer] I went to a bar and had a couple beers and I felt fine...I drove home and I just so happened to wonder and so I picked up the breathalyzer and it turned out that had I gotten pulled over on my way home I would have gotten a DUI. That was really eye-opening...After that I didn't even play with it any more. If I went out I'd stop driving and brought that with me just to see."

-White female, 18-24, Dependable Drinker

"It was me using it as well as 20 other people. It was at some party or something like that. It was a party trick for lack of a better term."

- Asian American male, 18-24, Interested but Not Committed

The biggest surprise: How “normal” 0.08 BAC feels

- They believed the results, but some things still surprised them.

What surprised you when you used the breathalyzer for the first time?

Common surprises (Mentioned by many participants)

- It is hard to gauge impairment based on feel
- Lower tolerance than expected
- The way 0.08 feels; someone can feel safe to drive even when they are above the legal limit
- BAC increases at a faster rate as the night wears on
- BAC takes a long time to drop, especially after a long period of drinking

Occasional surprises (Mentioned by a few participants)

- Higher tolerance than expected (these participants recognized this may have to do with other factors such as how much they'd eaten, the alcohol content what they were drinking)
- Impact of food/full stomach on BAC
- How hard you need to blow into the device to get an accurate reading

"I actually didn't successfully use it the first time because I didn't realize the force that was needed behind the breath. I was just blowing this puny breath into it because I'd never used it before."

-White female, 25-34, Dependable Drinker

"I was mostly surprised at how bad I was at gauging, but I was in the opposite direction because I could have drank more than I thought I could."

-White male, 25-34, Dependable Drinker

Participants fall into three segments based on their breathalyzer use and drinking habits

- In general, participants fell into three different groups, distinguished more by breathalyzer use and drinking habits than by demographics.

An Overview of Group Characteristics			
	Breathalyzer Evangelists	Dependable Drinkers	Interested, but not Committed
Device's Priority	Top of mind	Important	Interesting, but non-essential
Proportion	Many (~20%)	A Majority (~70)	Some (~10%)
Promotional Group	Free and discounted breathalyzer recipients	Free and discounted breathalyzer recipients	Free breathalyzer recipients only
Demographic Differences	None	None	None
DUI Record	Most of the participants with a DUI were in this group	To the best of our knowledge, one person had a DUI	To the best of our knowledge, none had a DUI

Where and how participants drink, by Group

- Drinking is a routine part of the social life of Breathalyzer Evangelists and Dependable Drinkers, although Breathalyzer Evangelists tend to drink more and more often than other groups.
- Most participants said they drank at home or other people's homes more than they went out to drink.

Drinking Habits			
	Breathalyzer Evangelists	Dependable Drinkers	Interested but not Committed
Drinking habits	On the whole, tend to drink more often or more heavily than other groups	Casual drinkers	On the whole, tend to drink less often than other groups
Drink at home or someone else's home	Primary location (for some)	Primary location (for most)	Primary location
Go out to drink	Secondary location (for some)	Secondary location (for most)	Rare

Tips for remembering the breathalyzer, by Group

- Breathalyzer Evangelists and Dependable Drinkers were more likely to bring their breathalyzer with them, even if they were not planning to drink. The Interested but Not Committed usually brought the breathalyzer if they knew they were going somewhere where other people were likely to be drinking heavily (parties, family gatherings).
- Keeping the breathalyzer somewhere visible or in a vehicle helped participants remember to bring their devices with them.

Helpful Reminders			
	Breathalyzer Evangelists	Dependable Drinkers	Interested but Not Committed
Remember to bring it with them	Always	Regularly	Sometimes
Keep it in the car	<ul style="list-style-type: none"> Glove compartment Center console (Both tend to be men) 	N/A	Don't often take the breathalyzer with them
Keep it in the home	<ul style="list-style-type: none"> Purse (women) Central, visible location 	Central, visible location	
Make it part of your routine	<ul style="list-style-type: none"> Partners remind each other It has become a habit 	N/A	

How participants use their breathalyzer, by Group

- In general, Breathalyzer Evangelists were more likely than other groups to routinely use the breathalyzer to test themselves or others before driving. Dependable Drinkers and the Interested but Not Committed were more likely to drink at places where driving was not an issue, such as at home or a friend's home where they planned to stay the night.
- Most Dependable Drinkers and the Interested but Not Committed said they primarily used their breathalyzers to gain a better understanding of their own tolerance and how various factors (type of alcohol, a full stomach) affect impairment.
- Breathalyzer Evangelists and Dependable Drinkers were more likely to use the device as a party trick. The Interested but Not Committed sometimes only brought it to discourage other people from driving under the influence.

Breathalyzer Uses			
	Breathalyzer Evangelists	Dependable Drinkers	Interested but Not Committed
Test yourself before driving	Primary	Secondary	Secondary
Test others who might drive	Primary	Secondary	Secondary
Information-gathering	Secondary	Primary	Primary
Share with friends and family	Secondary	Secondary	Primary

Impact of breathalyzers on driving behavior, by Group

- Most participants said that they used rideshare, transit, or another form of transportation to get around when they go out for drinks.
- Breathalyzer Evangelists and Dependable Drinkers often had at least one experience where they changed their mind about driving after using their breathalyzer.
- The devices encouraged almost all participants to be more cautious when they didn't have the breathalyzer because seeing results on previous occasions had given them a better understanding of their personal tolerance.

Behavior Change			
	Breathalyzer Evangelists	Dependable Drinkers	Interested but Not Committed
Changed mind about driving after seeing the results	Most	A majority	A few (Rarely drink)
Changed mind about driving even without using the device	Many	Many	A few (Rarely drink)
Became more cautious in general about driving after drinking	All	Almost all	Almost all

What Breathalyzer Evangelists have to say

"You have the proof right there in numbers, you're over the limit and you definitely should stay off the road...Call a friend, call an Uber...You can potential get in trouble and that's not a chance to take."

- Hispanic Male, 25-34, Breathalyzer Evangelist

"I have 3 DUIs and I love my breathalyzer...I know it's going to save me from getting behind the wheel and a lot of my friends and a lot of my family members ."

-White female, 25-34, Breathalyzer Evangelist

"You'd be completely surprised at how easy it is to break that [legal] limit and you'd be even more surprised at how easy it is for the cops to catch you one time...I was stupid for many years...and I got away with all of them. It only takes one to really [mess] up your day and it ain't worth the headache."

- White Male, 25-34, Breathalyzer Evangelist

"I bring it with me everywhere on the weekends."

-White female, 25-34, Breathalyzer Evangelist

What Dependable Drinkers Have to Say

"For me it's been more of an informative process so I can gauge where I am a little more accurately. If I feel a certain way, how intoxicated I would be, trying to get that level."

- White male, 25-34, Dependable Drinker

"It's a good back up. Even if I think I can have 2 beers and still drive, I always check it first because I just don't know. Sometimes it just doesn't drop off as quickly as it usually does."

-White male, 25-34, Dependable Drinker

"[I got the results] 'driving while ability impaired' or something like that, which surprised me because it was a lower amount of impairment than I thought might trigger that. But that in itself was a good data point to have personally going forward. It's kind of changed how I view a drink or two."

-White male, 25-34, Dependable Drinker

"There's still situations where I'm surprised by it and a lot of time it's in the context of how soon the BAC drops off. I've tested it a couple of times just periodically hours afterwards and sometimes it dropped off really quickly and sometimes it hasn't."

-White male, 25-34, Dependable Drinker

"I'm cautious with the whole drinking and driving thing. I remember being a little kid and my dad driving to a friend's house and having 7 or so beers and still wanting to drive...[that] kind of scared me."

-White male, 18-24, Dependable Drinker

"I'd say anybody that plans on having a drink and then driving afterwards [should have a breathalyzer]...It could be a very strong drink"

-White male, 25-34, Dependable Drinker

What the Interested, but Not Committed Have to Say

"I need help remembering to use it when I see people getting ready to leave. I need to think about consequences and drinking and driving more often. I could put a reminder on my phone, that might help."

- Hispanic female, 25-34, Interested but Not Committed

"If I think about it at all...If I go out and I know I'm going to [drink], whether it's a little or a lot, I would like to take it."

- White male, 25-34, Interested but Not Committed

"While I wanted to use it more, it was kind of inconsistent...I use an Android device and the Android app is extremely atrocious. It just failed to connect so much...so for that reason I was deterred from using it...because I was just got extremely frustrated with the device.."

- Asian American male, 18-24, Interested but Not Committed

Most participants had NOT used the breathalyzer to see how high they could get their BAC

- Only a handful participants had used the breathalyzer to see how high they could blow. This behavior was more common among male participants.
- Most participants agreed that people may use the device this way, especially younger people or college students.
- However, they were divided on whether CDOT could do anything to discourage this behavior.
 - One participant said this behavior should not concern CDOT because people would learn about their tolerance this way.
 - A more common belief was that CDOT could not do anything to discourage this behavior because people would do what they wanted to do regardless of what CDOT did.
- Suggestions by participants for steps CDOT could take to discourage this behavior:
 - Warning included in breathalyzer advertisements
 - Public education about responsible breathalyzer use
 - When people blow over a certain amount, the device only reads “Too High”

“People are going to do what people are going to do...These BACtracks really only have to say “You’re drunk”...If you’re really looking to stop abusive use...then just shut it off at 200.”

-White male, 55-64, Breathalyzer Evangelist

“You can’t protect against every stupid use that some stupid person is going to come up with.”

-White female, 35-44, Dependable Drinker

The majority of participants said they had NOT used the breathalyzer after combining alcohol with other substances

- Some participants said they or their friends had used the breathalyzer after combining alcohol with cannabis. No one reported combining alcohol with prescription medications or other substances.
- One person said that he knew the breathalyzer wasn't picking up on the combined effect of alcohol and THC in his system. Another said his BAC was higher after combining alcohol and cannabis.
- No one who had combined alcohol and cannabis drove after doing so, at least not since they received a breathalyzer from CDOT. One person said a friend who had combined substances drove afterwards.

"I don't know that there was really any change as far as the read out goes. Definitely it would be lower levels and heightened experiences. It's definitely not picking up the two components being together at the same time."

-White male, 25-34, Dependable Drinker

"It was actually the same. It didn't change anything [in terms of the results people were getting]."

-Hispanic female, 25-34, Dependable Drinker

"I've heard that if you combine the two things it pretty much heightens the effects of one or both of the drugs. That's another thing when I smoke weed and drink my blood alcohol level is definitely higher than it would be."

-White male, 18-24, Dependable Drinker

Having a breathalyzer changed many people's perceptions of the devices and gave them new insight into drinking

How perceptions changed

Many participants said:

- Anyone can own a breathalyzer for personal use; it's not just for people who get in trouble for driving impaired.
- Using a breathalyzer is the responsible thing to do; it's not a novelty gadget or a punishment.
- It's interesting (and even fun) to learn more about how alcohol affects your body.
- Breathalyzers are sleek, compact, and easy to use.

Insights participants had

Many participants said:

- Breathalyzers give you a better understanding of how alcohol affects your body.
 - It takes fewer drinks than expected to reach the DUI limit and even less to reach the DWAI limit.
 - The effects of alcohol linger long after you stop drinking; you continue to get intoxicated even after you stop drinking.
- You consume a lot more alcohol than you might realize when you're drinking over a long period of time; you can end up more intoxicated this way than if you go out for a few hours.
- The way you *feel* is an inaccurate measure of whether you're at the legal limit. You may feel fine even when you're well over the limit.

Remembering to bring it along, concerns about accuracy, and device design influence how often people use their breathalyzers

I would use my breathalyzer MORE often if...

Many participants said:

- I remembered to bring it along by keeping it in my purse or the glovebox.
- I went out more often or drank more heavily.

Some participants said:

- I felt comfortable using it in public.
- The device had a built-in display [for participants using the Mobile Pro].
- The connection was faster or took fewer steps.
- The battery life was even better (although it's fine now).

I would use my breathalyzer LESS often if...

Many participants said:

- I had concerns about its accuracy (a high error rate or inconsistent readings).
- The device were difficult to use or did not work properly (did not pair with my phone or required frequent calibration).
- The device were bulkier or aesthetically unappealing.

Some participants said:

- The device collected my personal information and/or sent that information to law enforcement.
- I felt judged by others for using the device.

Influencing Driving Behavior

Breathalyzers were rarely used by participants to decide in the moment whether they could drive after drinking

- Almost all participants said they either drank at home with no intention of driving or that when they went out they got around using rideshare or transit.
- However, they all agreed that the breathalyzer was an incredibly helpful tool for increasing their awareness of their personal tolerance. Owning a breathalyzer reinforced their decision to avoid driving after drinking. In general, it made them more cautious about driving after having anything at all to drink.
- For most people, seeing the results showed them how little alcohol it takes to reach the legal limit. For some, this was enough to convince them to take the device with them even if they were just going for what they thought would be a drink or two.
- The majority of participants thought breathalyzers would discourage people from driving after drinking because
 - People see actual numbers, which makes impairment more concrete—for most people, 0.08 BAC is an abstract concept until they use a breathalyzer.
 - They're faced with facts, so it's harder to dispute that they're over the legal limit and at greater risk of getting a DUI.

"I had been feeling like I might be on the edge of the legal limit to drive but I might be okay and when I used it I was far over the legal limit, a lot more than I had thought so I ended up calling my boyfriend to get me."

-White female, 18-24, Breathalyzer Evangelist

"Sometimes people don't know. They think they're good and fine to drive and then they do the breathalyzer and they're like 'okay, maybe not'."

-White male, 18-24, Dependable Drinker

"It does change my mind about what you're allowed to do. I feel like that's probably too much [the .08 limit]."

- White male, 25-34, Interested but Not Committed

Memorable experiences with the breathalyzer

- One couple spent an evening at a concert with a bottle or two of wine. Before driving home, they used the breathalyzer and saw they were too impaired to drive. So, they pulled out camping chairs and waited in the parking lot, watching everyone else fight traffic.
- Two participants had the experience of waking up the morning after drinking and using the breathalyzer to see if they could drive home. They were surprised to learn they were far too impaired to drive—they had never considered that their BAC might be above the legal limit the day after drinking. Both participants said they waited to drive until their BAC fell below the legal limit.
- Another participant described their surprise on Thanksgiving when they used the breathalyzer after a full day of drinking. They learned that their BAC was much higher than it typically was after a couple of drinks at a bar. Even more surprising, they felt more sober than they did after a couple of drinks over a couple of hours. This was not what they had expected.

"A couple weeks ago we had a girl's night...[the next morning] I decided to blow before I left because I still had that haze in the morning. And I was over the legal limit in the morning. And because of that I stayed there and we had breakfast and I hung out longer...If I would have driven and gotten pulled over, I would have definitely got a DUI...Prior to having this [that's something] I never thought about, the next day...so that was really eye-opening to me."

*-White female, 25-34,
Breathalyzer Evangelist*

Participants often shared their breathalyzer with friends and family

- Participants frequently used the breathalyzer in group settings and it often became a feature of parties.
- Almost all participants had shown the device to other people, primarily partners (husbands, wives, girlfriends, boyfriends) or friends. They even encouraged others to try it out.
- They said the reaction from other people was consistently positive; their friends and family were eager to try it out and test themselves.
- Using the device in public produced a more mixed reaction because a stigma around using breathalyzers remains.
 - Many participants expressed disbelief at why anyone would judge them for using a breathalyzer because it was the safe and responsible thing to do.
 - While some participants insisted they openly used the breathalyzer without a second thought, others preferred to be more discrete. They preferred to use it away from crowds or in private.
 - One person said that at first they felt uncomfortable using it in public, but they got over their discomfort pretty quickly.

"They laughed. They didn't think I was serious."

- Hispanic female, 25-34, Interested but Not Committed

"They're thrilled! They're like, are you serious?...You have a breathalyzer that I can test myself on?!"

-White female, 25-34, Breathalyzer Evangelist

Marketing Breathalyzers

Most people said that anyone who drinks should have a breathalyzer— even if they don't drink often

- Participants thought that breathalyzers were valuable to have, regardless of how much someone drinks.

Who Should Own a Breathalyzer?	
Common suggestions (Mentioned by many participants)	<ul style="list-style-type: none">• People who go out a lot• People who drink heavily• Casual drinkers—they may not know their tolerance or may be more affected by alcohol because they drink less• Anyone who drinks
Occasional suggestions (Mentioned by several participants)	<ul style="list-style-type: none">• Everyone, even non-drinkers (they can test themselves, they can test others)• People who want to drink responsibly

"People who do go out, who do drink...I think it would be great [for younger people] because it would save [them from] problems...if they could have a way to prevent that [DUI], that would be cool."

-Hispanic female, 25-34, Dependable Drinker

"As humans were probably really bad at judging how intoxicated we are and that this helps either confirm what you were thinking or tell you where you fall in terms of your level of intoxication."

-White male, 25-34, Dependable Drinker

Participants thought CDOT could use the same arguments they would use with their friends and family

- Participants suggested arguments that they or CDOT could use to convince someone to try a breathalyzer. People generally thought the same arguments that would work for them, would also work for CDOT.
- Several people suggested CDOT avoid certain approaches, such as scare-tactics or making the breathalyzer look like a toy. However, the line between stating real consequences of a DUI and scare-tactics became blurred at times.
- On the other hand, some people supported advertisements describing the harsh consequences of driving under the influence—going to jail, getting a DUI, harming yourself or others.

Argument	Message	Guidance on Tone
Money matters	<ul style="list-style-type: none"> • The cost of a DUI is much higher than the cost of a breathalyzer (\$100 vs. \$10,000). 	<ul style="list-style-type: none"> • Keep it positive and avoid scare-tactics • Make it serious but not heavy-handed • Normalize breathalyzers by showing everyday people doing fun activities • Highlight the device's features (guessing your BAC, tracking consumption) • Emphasize the benefits (getting home safe) more than negative outcomes (DUI, harm to others)
Safety concerns	<ul style="list-style-type: none"> • You may harm yourself or others. 	
Risk of a DUI/DWAI	<ul style="list-style-type: none"> • The repercussions of a DUI are financial, professional, and personal. 	
Professional risk	<ul style="list-style-type: none"> • You can lose your job or professional license. 	