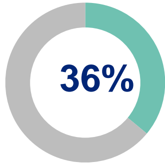
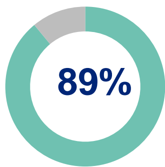
Quit Now Virginia
Stakeholder Report 2021/2022



of phone program respondents were quit 7 months after receiving treatment



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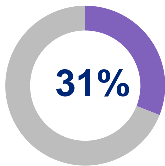
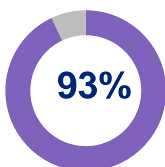


of TCBHP respondents were quit 7 months after receiving treatment



of TCBHP respondents were satisfied with the program

$2.62 was saved for every $1 spent on the Quitline and tobacco cessation media

What is included in this document?

This document presents an overview of tobacco cessation services provided to the residents of Virginia through the Quit Now Virginia quitline (VAQL). It includes national and state-level statistics on tobacco use, research on tobacco control efforts, data on demographics, tobacco use history, program utilization for VAQL participants, and the results of the 7-month post-registration follow-up survey. The survey assessed outcomes for all eligible VAQL Phone program, Tobacco Cessation Behavioral Health Program (TCBHP), and Pregnancy program participants.

What is Quit Now Virginia?

Quit Now Virginia (VAQL) provides empirically supported telephone- and web-based tobacco cessation coaching to all Virginias, including cessation medication support and education, nicotine replacement therapy (NRT), integrated Web Coach®, and referral to community resources.

Why is Quit Now Virginia needed?

Almost one in eight adults in Virginia (12.4%) were smokers during 2021,[1] and in 2020 around half (55.1%) of adult smokers reported making a quit attempt in the course of a year.[2] The VAQL provides an easily accessible, free resource for those trying to quit. Over two in five VAQL participants are uninsured (11%) or Medicaid-insured (34%), highlighting the importance of this free, low barrier program for the residents of Virginia.

What is the evidence for quitline effectiveness?

Tobacco users who use quitline services are 60% more likely to successfully quit compared to those who attempt to quit without help.[3,4,5] The United States Community Preventive Services Task Force recommends quitline interventions based on 71 study trials of telephone counseling that show their effectiveness.[6]

How do we ensure continued success of the program in Virginia?

Virginia currently funds its tobacco control programs at 15% of nationally recommended levels.[7] The state increased their cigarette excise tax rate in 2020, but it is still one of the lowest in the country at only $0.60 per pack.[8,9] Research has shown that increasing tobacco taxes is one of the most effective ways to reduce smoking, especially among youth.[10] Additionally, the American Lung Association chapter in Virginia has called for elected officials to pass legislation to increase the cigarette tax by at least $1.00 per pack.[7]

Who uses Quit Now Virginia?

- 86% enrolled in a phone program
- 63% female
- 31% Black or African American
- 63% White
- 30% Medicare insured
- 17% do not have a high school diploma or GED
- 54% live with a chronic health condition
- 54% live with a behavioral health condition
- 41% between ages of 41 and 60
- 45% Medicaid insured or uninsured

Quit Now Virginia Tobacco User Quitline

Report prepared for the Virginia Department of Health

May 31, 2023

Optum

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Tobacco use in Virginia

"The epidemic of smoking-caused disease in the twentieth century ranks among the greatest public health catastrophes of the century, while the decline of smoking consequent to tobacco control is surely one of public health's greatest successes."

— US Department of Health and Human Services[11]

- In 2021, **12.4% of adults in Virginia were current smokers, ranking Virginia's smoking prevalence at 14th in the nation.**[1,12] This translates to around **842,033** adult tobacco users in the state.[13] Approximately 10,300 Virginians adults die each year from smoking.[12]
- Approximately **2.8% of youth (under 18 years old)** in Virginia currently smoke. Each year, approximately 970 youth in Virginia start smoking.[12]
- **Smoking costs Virginia around 3.61 billion annually in health care expenditures.**[12] Nationally, it is estimated that smoking-caused health costs and productivity losses is $51.52 for each pack of cigarettes sold.[14]
- Virginians **who do not smoke are impacted** by tobacco use. The Centers for Disease Control and Prevention (CDC) estimates that 25.2% of nonsmokers are exposed to harmful secondhand smoke, increasing the risk for smoking-attributable illnesses.[15]
  - While this percentage dropped dramatically between 1988 and 2014, there are notable disparities in exposure. Children, non-Hispanic Blacks, persons living below the poverty level, and persons living in rental housing still face high secondhand smoke exposure rates.[15]
  - In the United States, secondhand smoke costs approximately $1.9 billion per year in healthcare costs for adults[16] and around $63 million per year in emergency room visits for children.[17]
- The American Lung Association's 2023 State of Tobacco Control Report rated Virginia's policies on tobacco prevention and cessation funding, smokefree air, tobacco taxes and flavored tobacco products an 'F'. For access to cessation services, Virginia received a grade of 'D'. [7]
  - Virginia's excise tax on cigarettes was last increased in July of 2020[8, 18] At $0.60 per pack, it is far below the national average of $1.91.[19] **Raising this tax is one of the most effective ways to reduce smoking, especially among youth**.[20] The Community Preventive Services Task Force recommends tobacco taxes as a method to increase the cost of tobacco as part of a comprehensive tobacco control strategy.[21] **The U.S. Surgeon General's report released in January 2020 reinforces these findings.**[22]

While Virginia's smoking prevalence is relatively low, the related cost and lost of life still underscore the importance of smoking cessation programs in improving the lives and health of Virginians.

Quitline research – What is the evidence base for state quitlines?

"Tobacco use treatment has been referred to as the 'gold standard' of health care cost-effectiveness."

— US DHHS, Clinical Practice Guideline: Treating Tobacco Use and Dependence[3]

- Quitting smoking reduces a person's risk for numerous chronic health conditions and premature death, with greater benefits the younger a person quits.[23] Quitting smoking before age 40 cuts a person's risk of dying from smoking by about 90%.[24]
- Extensive research and meta-analyses have proven the efficacy and real-world effectiveness of tobacco quitlines.[3,4,5,6]
  - **Tobacco users who receive quitline services are 60% more likely to successfully quit** compared to tobacco users who attempt to quit without assistance.[3]
  - **Tobacco users who receive medications and quitline counseling have a 30% greater chance of quitting** compared to using medications alone.[3]
- State quitlines **eliminate barriers** that may be present with in-person cessation interventions because they are free to callers, often available evenings and weekends, convenient, provide services that may not be available locally, and reduce disparities in access to care.[25]
- The Community Preventive Services Task Force has concluded that quitlines are cost-effective based on a review of 27 studies.[6]
- Three strategies have been proven to be especially effective in promoting quitline use:[6]
  - Wide-reaching health communications campaigns through channels such as television, radio, newspapers, and cigarette pack health warning labels that provide tobacco cessation messaging and the quitline phone number.
  - Offering tobacco cessation medication and nicotine replacement therapy through the quitline.
  - Referral to the quitline by a health care provider.

Quitlines

- **Available in every state**
- **Proven to help tobacco users quit**
- **Best outcomes with multiple sessions + Nicotine Replacement Therapy**
- **Remove barriers**

Assuring Quitline Service Best Practices

Quit Now Virginia is operated and evaluated in line with North American Quitline Consortium (NAQC) Best Practices. Quit Now Virginia has been operated by Optum in collaboration with the State of Virginia since 2006.

Optum specializes in behavioral coaching to help people identify health risks and modify their behaviors so they may avoid or manage chronic illness and live longer, healthier lives. Five large federal- and state-funded randomized clinical trials have demonstrated the effectiveness of Optum's tobacco cessation program.[26, 27, 28, 29, 30]

Additional vendor qualifications:

- More than 30 years of experience providing phone-based tobacco cessation services.
- Provision of tobacco cessation services to 23 tobacco quitlines (21 states, Washington D.C. and Guam) and more than 750 commercial organizations (76 in the Fortune 500).
- Participant in national tobacco control and treatment policy committees and workgroups.
- Quit Coach® staff complete more than 200 hours of rigorous training and oversight before speaking independently with participants.

What services did Quit Now Virginia provide from August 2021 – July 2022?

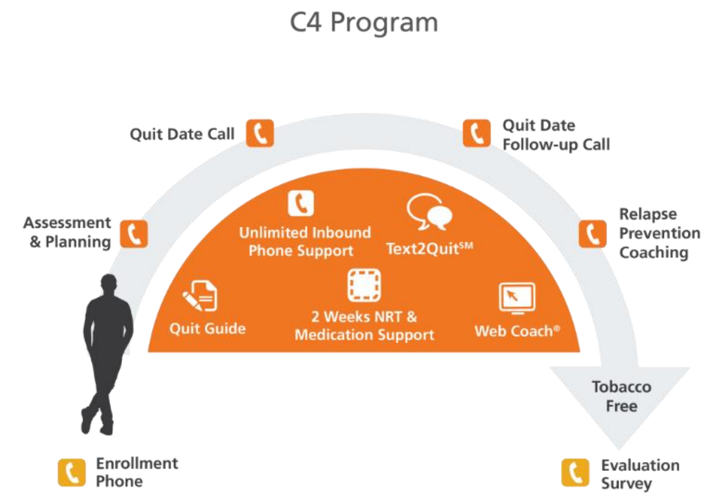
Quit Now Virginia services are culturally appropriate, available 24 hours per day, 7 days per week, and incorporate evidence-based strategies for tobacco dependence treatment as outlined in the USPHS Clinical Practice Guideline, Treating Tobacco Use and Dependence: 2008 Update.[3]

Phone-based tobacco cessation services:

- **One-call (C1) tobacco cessation program** ***for Medicaid and insured callers***
  - Initial coaching session with Quit Coach® staff.
- **Four-call (C4) tobacco cessation program** ***for callers who are uninsured or age 18-20***
  - Initial coaching session and three additional proactive follow-up calls.
- **Intensive 10-call (C10) program for pregnant tobacco users**
  - Intensive behavioral support tailored to unique needs during pregnancy and including postpartum contact to prevent relapse.
- **Tobacco Cessation Behavioral Health Program (TCBHP)** for uninsured tobacco users or age 18-20 with a behavioral health condition[31]
  - Intensive behavioral support tailored to unique challenges faced by tobacco users with behavioral health condition(s).
  - Program eligibility expanded to all participants (i.e. including insured tobacco users and/or age 21+) from November 1st, 2021 – June 15th, 2022.
- **Youth Support Program (YSP) for tobacco users ages 13 to 17**
  - Behavioral support tailored to unique challenges faced by youth tobacco users.
  - All calls completed with the same Quit Coach® trained in youth support.
- **All phone participants also have access to web- and text-based tobacco cessation services:**
  - **Integrated Web Coach®**: Interactive, web-based cessation tool designed to complement and enhance phone counseling.
  - **Text2Quit**: Interactive text messaging cessation aid designed to help guide smokers through the quitting process over a 12-month period.

Stand-alone Web Coach® program (Web-Only)

- Online participant application designed to guide tobacco users through an evidence-based process of quitting tobacco.



Nicotine Replacement Therapy (NRT)

2 weeks of patch or gum
for select participants enrolled in C1 and Web-Only participants planning to quit in the next 30 days

12 weeks of patch or gum
for C4 and pregnant enrollees

12 weeks of patch, gum, or combination NRT (patch + gum)
for all TCBHP participants

Nicotine Replacement Therapy

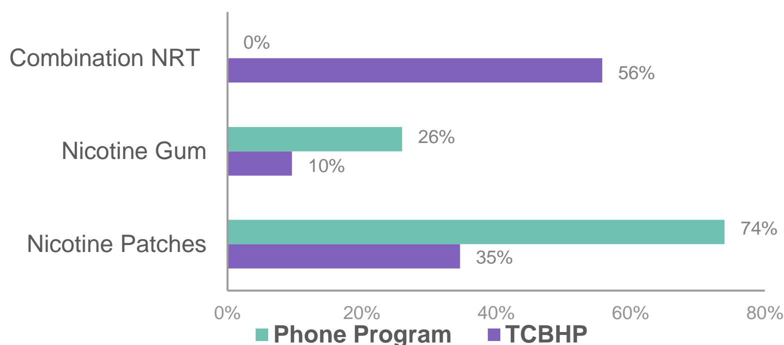
Nicotine replacement therapy (NRT) is a vital component in a multifaceted approach to tobacco cessation. It is available in several forms, including gum, patches, lozenges, inhalers, and nasal spray. **The U.S. Surgeon General's report released in January 2020 reinforces the following findings.**[22]

- A combination of quitline counseling and medication is particularly effective in treating nicotine dependence. Those who use quitline counseling and medication are 30% more likely to successfully quit than those who use medication alone.[3]
- Using a combination of medications at the same time has also been shown to aid in quitting tobacco, especially for highly dependent smokers.[3] For example, combining a long-acting form of NRT, such as the patch, with a short-acting form like nicotine lozenges or gum is often more effective than using a single form of NRT.
- NRT is often used as an incentive to engage tobacco users with quitline services. Several studies have shown that when quitlines promote free medication for callers, call volume and quit rates increase.[6]

Among respondents to the follow-up survey at 7 months post enrollment:

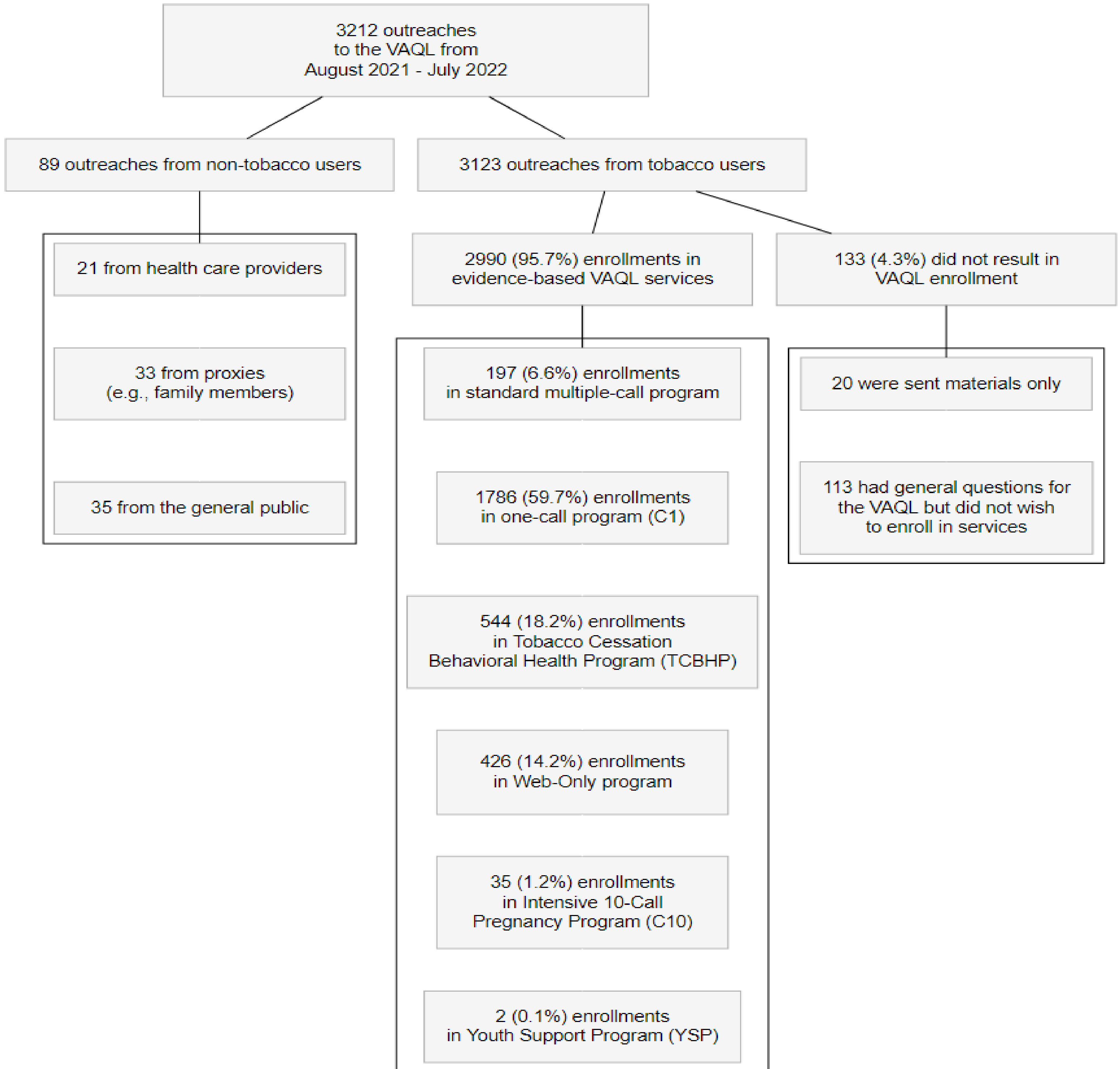
- About 88% of phone program and 85% of TCBHP program participants were sent NRT through the VAQL.
- Combination NRT of patches + gum (56%) were the most common medication sent to TCBHP participants, while nicotine patches (74%) were the most common medication sent to the phone program participants.

Types of NRT sent to respondents [i, ii]



[i] Participants may have used multiple medications, thus the total may will not add up to 100%.
[ii] Responses of "refused" and "don't know" are excluded from analyses.
[iii] Only if used for quitting tobacco.

Who contacts Quit Now Virginia?



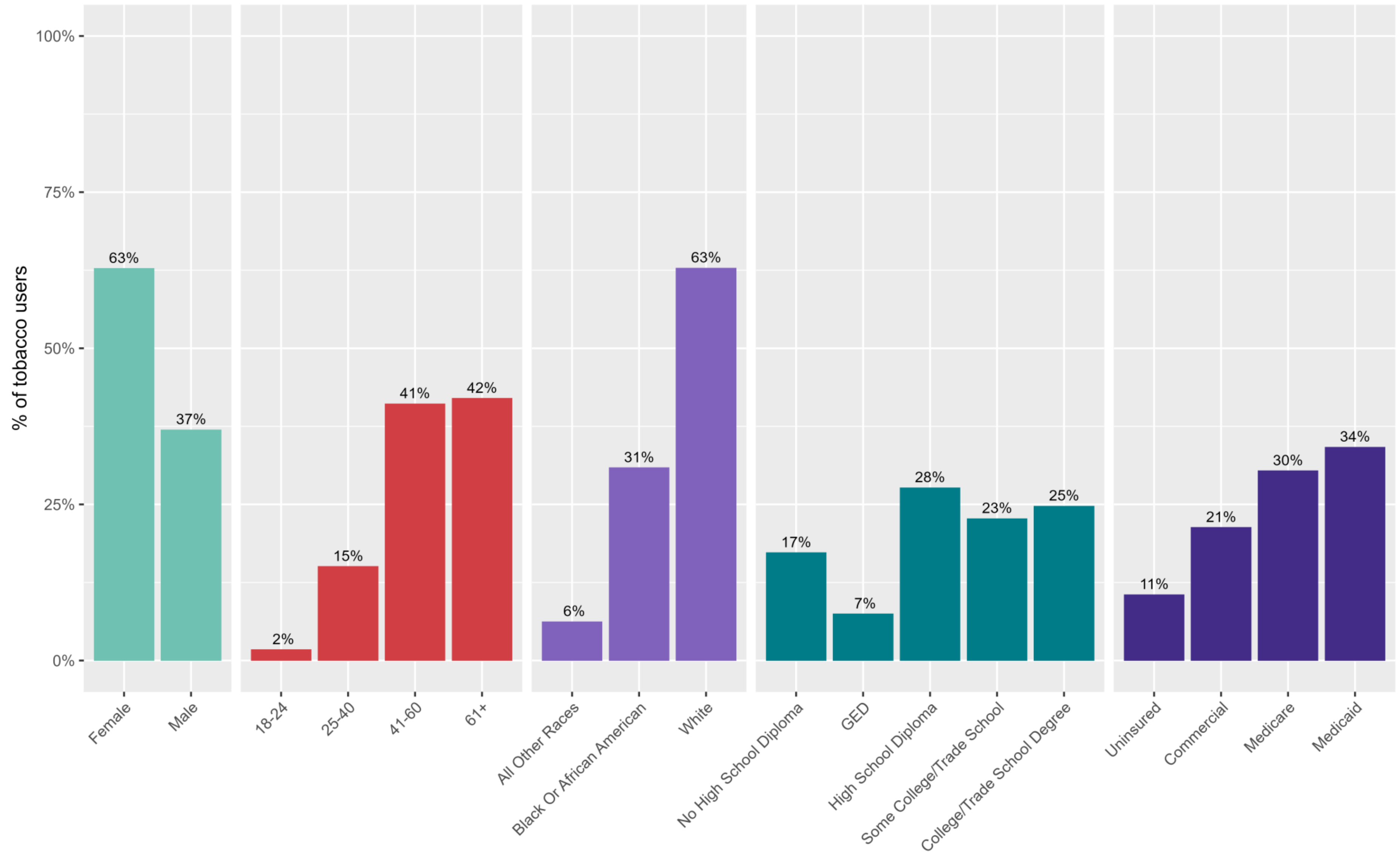
The figure above represents all outreaches to the VAQL between August 2021 – July 2022 for enrollment or other services. For individuals who reached out and/or enrolled in quitline services multiple times, every outreach is included.

Who enrolls in Quit Now Virginia services?

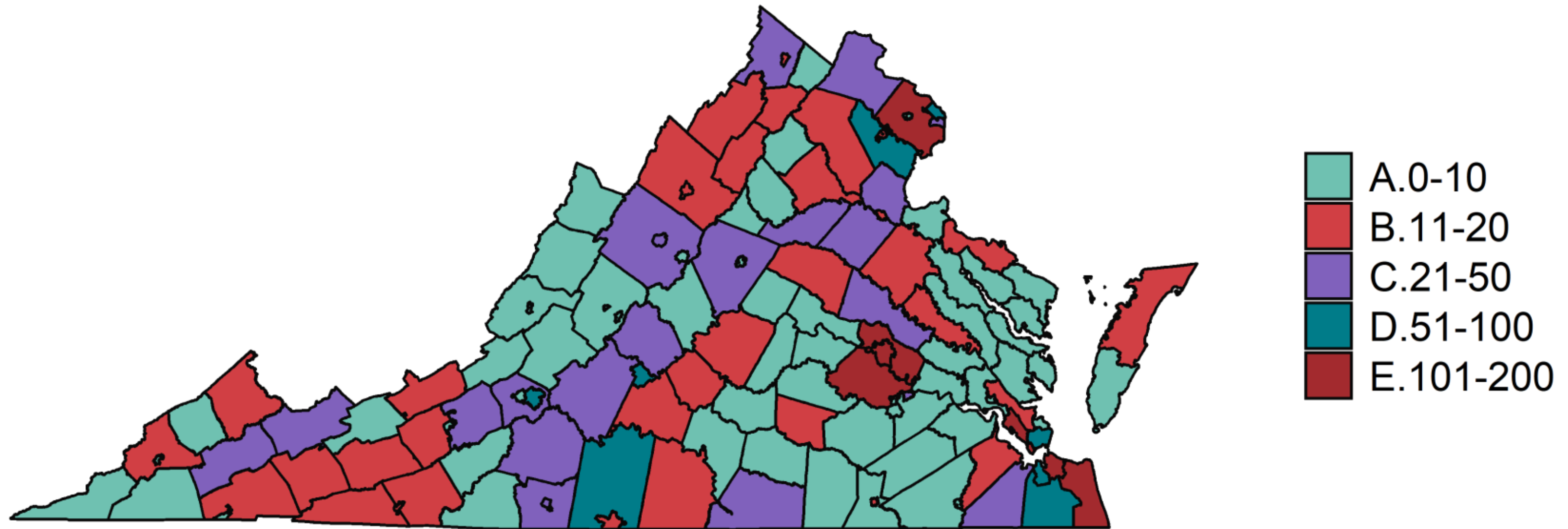
From August 2021 through July 2022, there were a total of 3,123 enrollments into a phone-based program or the Web-Only program. Of those total enrollments, 2,488 were *unique* individuals who enrolled in a phone-based program and 423 were *unique* individuals who enrolled in the Web-Only program. The difference in total enrollments versus unique individuals is due to some participants choosing to re-enroll in services for additional support. Based on data collected at registration:

- Over half of the participants were female (63%) and the majority of quitline enrollees (83%) were over age 40.
- **The quitline serves tobacco users who may have limited access to other resources:**
  - 45% of enrollees were either uninsured (11%) or Medicaid-insured (34%).
  - 17% did not have a high school diploma or GED.
- **The VAQL also serves tobacco users whose health status is especially vulnerable:**
  - 54% live with at least one chronic health condition, most commonly COPD (29%), asthma (19%), and diabetes (17%).
  - 54% live with at least one behavioral health condition, most commonly depression (38%), generalized anxiety disorder (33%), and post-traumatic stress disorder (PTSD; 17%).
- Services were provided in English (99.5%) and Spanish (0.4%, 13 participants); translation services were also available for callers who spoke other languages.
- The majority of participants sought help to quit cigarettes (95%), but some sought help to quit smokeless tobacco (2%), cigars (0.5%), pipes (0.4%), and other tobacco products (11%).
- About 15% of all enrollees reported using e-cigarettes (i.e., electronic nicotine delivery systems [ENDS] or "vaping") at enrollment.
- Over half of VAQL program participants learned about the quitline through TV commercials (54%). Other callers learned of the quitline through a health professional (17%), family or friends (9%), or a website (7%).

Demographics of tobacco users who enrolled in quitline services



Virginians enrolled in a Quit Now Virginia program by County of residence[i]



See table on following page for county-specific counts

[i] Based on information provided at registration for participants who enrolled from August 2021 through July 2022. Unknown, missing, or invalid addresses are excluded from analysis.

County	Total Served	County	Total Served	County	Total Served	County	Total Served
ACCOMACK	15	DICKENSON	3	KING WILLIAM	11	PRINCE GEORGE	6
ALBEMARLE	27	DINWIDDIE	10	LANCASTER	5	PRINCE WILLIAM	65
ALEXANDRIA CITY	30	EMPORIA CITY	13	LEE	8	PULASKI	18
ALLEGHANY	3	ESSEX	6	LEXINGTON CITY	3	RADFORD	0
AMELIA	5	FAIRFAX	124	LOUDOUN	31	RAPPAHANNOCK	0
AMHERST	21	FAIRFAX CITY	0	LOUISA	14	RICHMOND	2
APPOMATTOX	13	FALLS CHURCH CITY	1	LUNENBURG	5	RICHMOND CITY	104
ARLINGTON	61	FAUQUIER	17	LYNCHBURG CITY	58	ROANOKE	36
AUGUSTA	26	FLOYD	4	MADISON	6	ROANOKE CITY	60
BATH	1	FLUVANNA	8	MANASSAS CITY	11	ROCKBRIDGE	6
BEDFORD	39	FRANKLIN	35	MANASSAS PARK CITY	0	ROCKINGHAM	19
BLAND	6	FRANKLIN CITY	5	MARTINSVILLE CITY	33	RUSSELL	23
BOTETOURT	7	FREDERICK	23	MATHEWS	6	SALEM	0
BRISTOL CITY	0	FREDERICKSBURG CITY	12	MECKLENBURG	41	SCOTT	9
BRUNSWICK	2	GALAX CITY	11	MIDDLESEX	4	SHENANDOAH	14
BUCHANAN	13	GILES	12	MONTGOMERY	22	SMYTH	13
BUCKINGHAM	13	GLOUCESTER	7	NELSON	6	SOUTHAMPTON	10
BUENA VISTA CITY	6	GOOCHLAND	8	NEW KENT	8	SPOTSYLVANIA	32
CAMPBELL	17	GRAYSON	13	NEWPORT NEWS CITY	110	STAFFORD	27
CAROLINE	17	GREENE	7	NORFOLK CITY	162	STAUNTON CITY	21
CARROLL	15	GREENSVILLE	4	NORTHAMPTON	4	SUFFOLK CITY	45
CHARLES CITY	2	HALIFAX	16	NORTHUMBERLAND	7	SURRY	2
CHARLOTTE	10	HAMPTON CITY	57	NORTON CITY	5	SUSSEX	5
CHARLOTTESVILLE CITY	10	HANOVER	27	NOTTOWAY	11	TAZEWELL	31
CHESAPEAKE CITY	78	HARRISONBURG CITY	20	ORANGE	22	VIRGINIA BEACH CITY	124
CHESTERFIELD	106	HENRICO	123	PAGE	16	WARREN	12
CLARKE	10	HENRY	27	PATRICK	7	WASHINGTON	20
COLONIAL HEIGHTS CITY	9	HIGHLAND	1	PETERSBURG CITY	9	WAYNESBORO CITY	0
COVINGTON CITY	10	HOPEWELL CITY	22	PITTSYLVANIA	55	WESTMORELAND	16
CRAIG	1	ISLE OF WIGHT	12	POQUOSON CITY	3	WILLIAMSBURG CITY	1
CULPEPER	12	JAMES CITY	8	PORTSMOUTH CITY	56	WINCHESTER CITY	12
CUMBERLAND	4	KING AND QUEEN	5	POWHATAN	10	WISE	16
DANVILLE CITY	20	KING GEORGE	6	PRINCE EDWARD	10	WYTHE	18
						YORK	18

Tobacco Use and Behavioral Health Conditions

Adults with behavioral health conditions (BHC) smoke at higher rates than the general population; based on the results from the 2019 and 2020 National Survey on Drug Use and Health, 22.8% of adults with a BHC smoked cigarettes, compared to only 13.6% of adults without a BHC[32] Adult smokers with BHCs also tend to be heavier smokers,[33,34] more nicotine dependent, experience worse nicotine withdrawal, and have more trouble successfully quitting.[34]

Many people with BHCs want to quit and can successfully quit smoking. Contrary to previous popular belief, tobacco cessation appears to enhance outcomes for individuals with BHCs:

- Research indicates that quitting smoking is linked to *decreased* anxiety, depression, and stress, and *increased* quality of life and overall mood—**regardless of whether a person has a BHC**.[35]
- Tobacco cessation interventions with smokers in substance abuse treatment have been associated with a 25% **greater likelihood of long-term sobriety**.[36]
- Among smokers in inpatient psychiatric care, tobacco cessation interventions have been associated with a **lower likelihood of readmission**.[37]

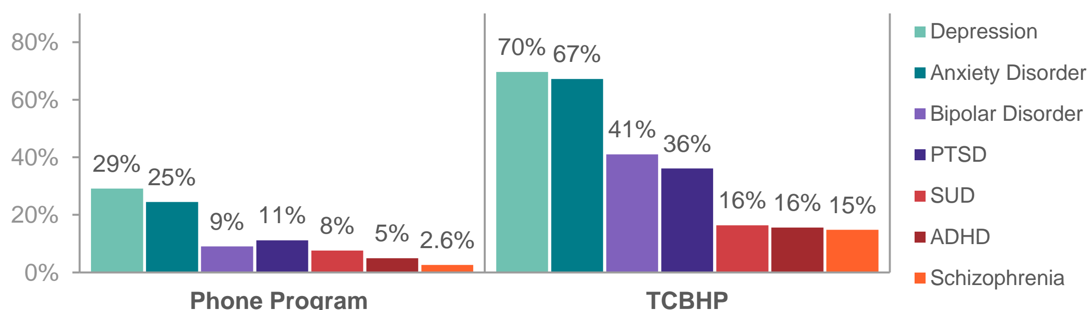
Quitlines have been shown to be an effective resource for those living with BHC in cutting down tobacco use and achieving abstinence, especially when combined with NRT and more intensive treatment.[38] Participants who report a BHC may benefit from additional benefits, such as targeted counseling sessions or additional NRT shipments.

Looking at those who enrolled in VAQL from August 2021 through July 2022, approximately 54% of VAQL enrollees reported one or more BHCs, including depression (38%), anxiety (33%), post-traumatic stress disorder (PTSD; 17%), bipolar disorder (16%), attention-deficit/hyperactivity disorder (ADHD; 8%), drug or alcohol abuse (SUD; 8%), or schizophrenia (6%).

Among respondents to the follow-up survey at 7 months post enrollment:

- 42% of the phone program and 100% of the TCBHP respondents reported having one or more behavioral health condition at the time of enrollment.

Behavioral Health Conditions reported by survey respondents:



Menthol Cigarettes and Tobacco Cessation

Based on data from the 2020 National Survey on Drug Use and Health, the Federal Drug Administration (FDA) reported that almost 18.6 million people currently smoke menthol cigarettes.[39] Current research suggests that use of menthol cigarettes is higher among youth, young adults,[39, 40, 41] and minorities, with the highest rates of menthol use among Black or African American adults.[39, 40, 41, 42, 43, 44]

Research suggests that adult non-menthol smokers have greater short- and long-term success in smoking cessation than menthol cigarette smokers.[43, 45, 46, 47] Differences in quit outcomes are well documented among Black or African American smokers, showing that those who smoke menthol cigarettes are less likely to quit than their non-menthol smoking counterparts.[42, 48, 49]

As of April 2021, the FDA committed to proposing product standards that would ban the use of menthol as a “characterizing flavor” in both cigarettes and cigars.[50] This announcement comes after the FDA banned other flavored cigarettes in 2009. Current research suggests that a ban on menthol flavored cigarettes and cigars could help improve quit outcomes for current menthol smokers:

- In recent studies and reviews, 25% to 64% of adult menthol cigarette smokers stated that they would quit smoking if menthol cigarettes were banned and no longer sold in the US.[41, 51, 52, 53]
- A small study conducted in Ontario, Canada with past month smokers who reported smoking at least one menthol cigarette in the past year observed changes in smoking behavior as quickly as one month after a menthol cigarette ban. Of the 206 participants who responded both before and after the menthol ban took effect, 60 (29%) reported quitting or making a quit attempt at 1-month post-ban implementation. Pre-ban, only 30 participants (14.5%) had stated they would quit after the ban was implemented.[54]

With appropriate retailer education and compliance,[52, 55, 56] enforcement of the ban on menthol cigarette sales could have positive implications in the Virginia.

Future evaluations should consider assessing menthol use among VAQL enrollees, as well as potential impacts of the future ban on menthol flavors in cigarettes and cigars.

Electronic Nicotine Delivery Systems

"The potential benefit of e-cigarettes for cessation among adult smokers cannot come at the expense of escalating rates of use of these products by youth."

— US Department of Health and Human Services[22]

Electronic nicotine delivery systems (ENDS), also called vapes, e-cigarettes, electronic, or vapor cigarettes, are battery operated devices that vaporize nicotine, flavoring, and other chemicals for a user to inhale. A 2022 Cochrane Review found that e-cigarettes help people stop smoking and may be more effective than traditional nicotine replacement therapy,[57] but the drawback to the availability of these products is that persons who have never smoked are initiating and becoming dependent on e-cigarettes. A 2018 report released by the National Academies of Science, Engineering, and Medicine concluded that while e-cigarettes are less harmful than cigarettes, they are not without risk.[58]

There is particular concern about e-cigarette use among youth and young adults, and in 2018 the Surgeon General declared an epidemic of e-cigarette use among youth.[59] In 2022, almost one in seven high school students (14.1%) and about one in thirty middle school students (3.3%) used e-cigarettes, translating to about 2.5 million US youth. **In high school students, e-cigarette usage is trending upward; from 2017 to 2022**, **e-cigarette use increased by 21%** (from 11.7% to 14.1%). **Conversely, e-cigarette use among middle-schoolers is estimated to be roughly equivalent to the 2017 use rates** (3.3% in both periods).[60, 61]

Research has shown that **e-cigarette companies are using tactics that target youth and young adults**, such as adding flavorings that appeal to kids and using social media campaigns directed at young people.[62] While the FDA issued a ban on flavored e-cigarettes in February 2020, the ban makes significant exceptions on flavored e-cigarette cartridges/pods, specifically. **Flavored nicotine e-liquids, refillable e-cigarettes, and cheap, disposable e-cigarettes are still widely available in most states** in flavors like cool mint, pink lemonade, and gummy bear. In addition, **all menthol-flavored e-cigarettes (including pods) are still available in most states.**[63, 64, 65] These tactics, loopholes, and the high prevalence of e-cigarette use among youth and young adults are especially concerning given **research indicating that nicotine exposure may harm brain development in this vulnerable population**.[66]

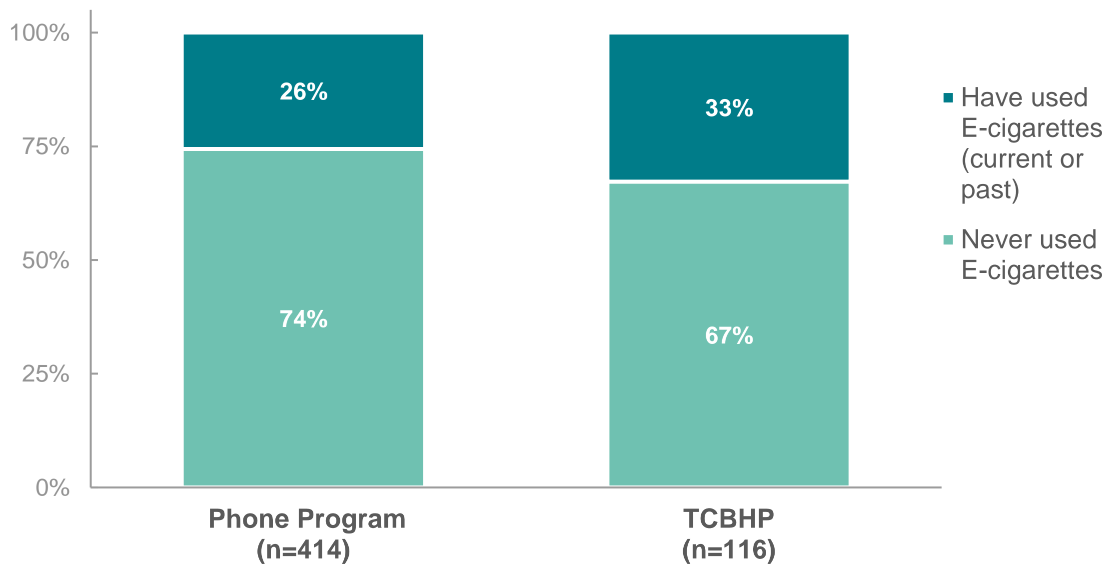
In 2020, about 9.1 million adults in the United States were e-cigarette users (3.7% of the adult population).[67] Among adults, e-cigarette use is highest among those aged 18 to 24, and use rates tend to drop off with age.[68] Current cigarette smokers and former smokers who quit within the last year are more likely to use e-cigarettes than the general population.[69, 70] However, the rate of current **e-cigarette use among young adults (18-24) who have *never smoked combustible cigarettes* increased significantly** from 1.5% in 2014 to 4.6% in 2018.[68]

VAQL participants were asked about their e-cigarette use at both enrollment and 7-month follow-up. **About 15% of all VAQL enrollees reported using e-cigarettes or "vaping" within the 30 days prior to enrollment into the quitline.** Overall, e-cigarette use was more common at enrollment among Web-Only program participants compared to participants who enrolled into a phone program (14% vs 23% respectively, $p < 0.0001$).

Among respondents to the follow-up survey at 7 months post enrollment:

- While enrolling into the quitline, about 16% of TCBHP and 13% of phone program respondents reported using e-cigarettes within the 30 days prior to enrollment.
- At follow-up, roughly 11% of phone program and 12% of TCBHP respondents were current e-cigarette users (used in the last 30 days).

Respondent's Lifetime E-Cigarette Use



Pregnancy and Tobacco Use

- **From August 1, 2021 – July 31, 2022, 8% of women (age 18 to 49) served by the VAQL were pregnant (26), planning pregnancy in the next 3 months (12), or breastfeeding (3).**
- Reducing tobacco use among pregnant women reduces infant mortality rates, improves birth outcomes, decreases neonatal health care spending in the state, and improves maternal health.[71,72]
- The VAQL continues to provide the enhanced 10-call program for pregnant tobacco users with the goal of reducing health risks to the baby and other children in the household. The program targets cessation during pregnancy and skill development to help women sustain their quit postpartum.
- For this evaluation year:
  - **4 out of 24** (17%) participants in the pregnancy program **responded to the follow-up survey at 7 months post-enrollment.**
  - **0 out of 4** survey respondents **had been quit for at least 30 days** at 7 months post-enrollment with the VAQL.
  - **3 out of 4** (75%) survey respondents **reported being satisfied with the pregnancy program.**
- Because such a small number of pregnant women contact the VAQL, **all estimates for this subgroup should be considered provisional and interpreted with caution. A small number of additional responses could significantly alter estimates.**

How do we know Quit Now Virginia works?

Best practices in quitline evaluation and measurement of outcomes

To encourage quality standards and comparability of findings across state quitlines, the North American Quitline Consortium (NAQC) has established a series of recommendations and best practices for the evaluation of tobacco cessation quitlines. These standards include:

- Ongoing evaluation to maintain accountability and demonstrate effectiveness.[73]
- Assessment of outcomes 7 months following callers' enrollment in services, utilizing NAQC methodology and measurement guidelines.[74]
- Reporting of 30-day point prevalence tobacco quit rates (the proportion of callers who have been tobacco-free for 30 or more days at the time of the 7-month follow-up survey) in conjunction with survey response rates.[74]

Quit Now Virginia has a strong commitment to evaluation and identifying ways to improve their program to benefit the health of Virginians. Evaluations are designed utilizing strong methodology and adequate sample sizes for confidence and accuracy in outcome estimates. VAQL's 2021- 2022 evaluation included:

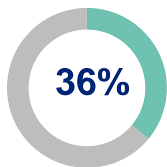
- a random sample of the **phone program participants who received treatment** (i.e., completed one or more coaching calls) through the one-call (C1) or four-call (C4) program,
- a census sample of **participants who received treatment through the Tobacco Cessation Behavioral Health Program (TCBHP)** (i.e., completed one or more coaching calls), and
- a census sample of **participants who received treatment in the 10-Call Intensive Pregnancy program**.

The survey response rates for the phone program, TCBHP and Intensive Pregnancy program were 26%, 29% and 17%, respectively. This resulted in 427, 122, and 4 survey respondents, respectively, for a total of 553 survey respondents across all surveyed programs.

The findings on the following page include data from the VAQL's fourteenth evaluation (2021-2022) and represent 7-month outcome data from sampled phone program and TCBHP participants who enrolled August 2021 through July 2022.

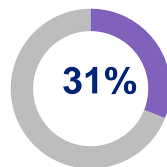
What are the program outcomes?[i]

36% of phone program respondents and **31%** of TCBHP respondents successfully quit.



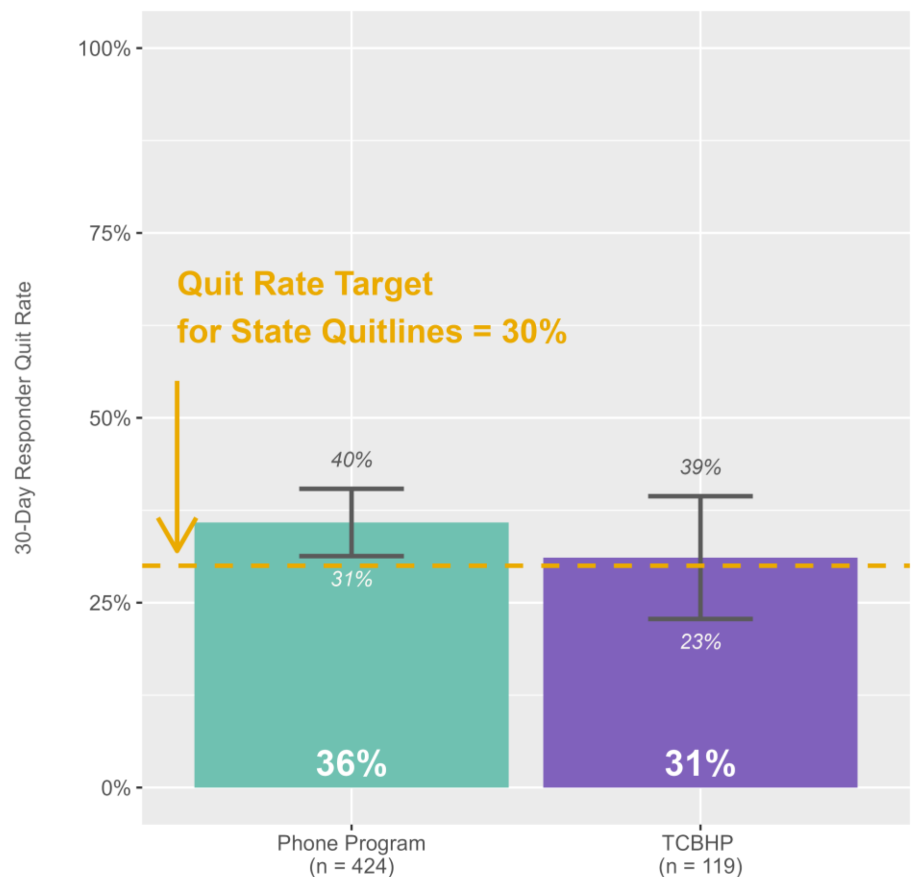
of phone program respondents were quit at the 7-month follow-up evaluation survey (30-day responder quit rate)

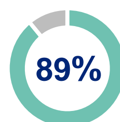
32% of respondents were quit from both tobacco and ENDS at 7-month follow-up



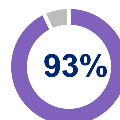
of TCBHP respondents were quit at the 7-month follow-up evaluation survey (30-day responder quit rate)

29% of respondents were quit from both tobacco and ENDS at 7-month follow-up





of phone program respondents were satisfied with the program



of TCBHP respondents were satisfied with the program

[i] Responses of "refused," "don't know," and "not collected" are excluded from analyses.

Is Quit Now Virginia cost-effective?

Estimated $2.62[i, ii] saved in medical expenditures, lost productivity, and other costs _for every $1 spent_ on the VAQL phone program and Tobacco Cessation Behavioral Health Program (TCBHP).

Return on Investment (ROI)	
Quit Rate • 30-day respondent quit rate for August 2021 – July 2022 **phone program** respondents • 30-day respondent quit rate for August 2021 – July 2022 **TCBHP** respondents	**35.8%** **31.3%**
Estimated Total Quit • 35.8% quit rate x total of 1,791 unique registrants enrolled in the phone program received a phone intervention: **641** • 31.3% quit rate x total of 488 unique registrants enrolled in the TCBHP received a phone intervention: **153**	**794**
Total $ Saved • Medical expenses (one year):[75] $311.06 x 794 = $246,984 • Lost productivity:[76] $1,733.06 x 794= $1.38M • Worker's compensation:[77] $85.33 x 794 = $67,755 • Secondhand smoke (one year): [16,17,78] $55.54 x 794 = $44,096	**$1.73M**
Total $ Spent • Total VAQL operating[79] and tobacco cessation media [80] costs	**$661,035**
Return on Investment • Amount saved per $1 spent on the VAQL (ratio of Total $ Saved / Total $ Spent)	**$2.62**

[i] ROI calculated in this report is based on outcomes from phone program and TCBHP respondents who registered between August 1, 2021 and July 31, 2022. Though evaluation did not include outcomes for the Pregnancy program or the Web-Only program, they are included in the operating costs used to calculate the current ROI.

[ii] The methodology used to calculate the Total Dollars Saved estimate was updated in April 2023. Two changes are notable: 1) the workers compensation numbers were adjusted using the US Bureau of Labor Statistics employment population ratio. This accounts for the fact that not all program participants are employed, and 2) a new 2022 source of information for lost productivity costs was incorporated (see #76 in the reference section). This new reference incorporates absenteeism, presenteeism, home productivity and inability to work across both employed and non-employed persons.

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[76] Shrestha, S. S., Ghimire, R., Wang, X., Trivers, K. F., Homa, D. M., & Armour, B. S. (2022). Cost of Cigarette Smoking–Attributable Productivity Losses, U.S., 2018. American journal of preventive medicine, 63(4), 478–485. https://doi.org/10.1016/j.amepre.2022.04.032. Note: The $1,467 productivity savings attributable to a smoker becoming a former smoker is reported in 2018 dollar values. When adjusted to 2022 dollar values based on the Consumer Price Index (CPI), the attributable savings is $1,733.06.

[77] Sherman, B. W., & Lynch, W. D. (2013). The relationship between smoking and health care, workers' compensation, and productivity costs for a large employer. Journal of Occupational and Environmental Medicine, 55(8), 879–884. https://doi.org/10.1097/JOM.0b013e31829f3129. Note: The $101 workers compensation cost attributable to smoking is reported in 2010 dollar values. This savings is applicable only to employed persons. When adjusted to 2022 dollar values based on the Medical Consumer Price Index (CPI), and adjusted for the 2022 employment population ratio, the attributable savings is $85.33.

[78] Yao et al. (see references 16 and 17) estimates secondhand smoke (SHS) attributable costs to be $1.9 billion for adults in 2010 and $62.9 million for children in 2010. Assuming a 2010 US smoking prevalence of 19.3% and a total adult population of 229.5 million, the total cost per smoker in 2010 was $42.90 in SHS-attributable costs to adults and $1.42 in SHS-attributable costs to children. Adjusted to 2022 dollars using the Medical Consumer Price Index (CPI), this totals approximately $55.54 savings per smoker who quits.

[79] Operating costs include Quitline costs incurred from August 1, 2021, through July 31, 2022. These costs exclude billing line items specific to evaluation and the Live Vape Free program. All other line items utilized by the phone program, pregnancy program, TCBHP, and Web-Only program, and items that apply to multiple programs (e.g., text message enrollment, materials, NRT) are included.

[80] State anti-tobacco media campaign expenditures related to the Quitline provided by the State; costs are from August 1, 2021 through July 31, 2022 and totaled $205,000.