

# Quit Now Virginia

## 2015/2016 Stakeholder Report



were quit 7 months after receiving phone treatment



would recommend the phone program to other tobacco users



**ROI: \$6.63** was saved in Virginia in medical expenditures, lost productivity and other costs for every \$1 spent on the Quitline and tobacco cessation media in 2015/2016.

### What is the Quit Now Virginia tobacco cessation program?

- Quit Now Virginia (VAQL) provides empirically supported telephone- and web-based tobacco cessation coaching to all Virginians, including cessation medication support and education, integrated Web Coach<sup>®</sup>, a Web-Only program, and referral to community resources.

### Why is Quit Now Virginia needed?

- One out of six adults in Virginia (16.5%) are current smokers, and nearly two thirds (62.1%) of these smokers make a quit attempt in a given year.<sup>1</sup> The VAQL provides an easily accessible, free resource for those trying to quit. The majority (68.7%) of surveyed callers report that the VAQL is the only resource they use in a quit attempt, highlighting the importance of the program for Virginians.

### 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.<sup>2,3,4</sup> The United States Community Preventative Services Taskforce recommends quitline interventions based on 71 study trials of telephone counseling that show their effectiveness.<sup>5</sup>

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

- Virginia currently funds state tobacco control programs at only 11.7% of nationally recommended levels.<sup>6</sup> The State should consider increasing current funding levels to ensure the success of the Quitline and other tobacco control efforts. For example, the American Lung Association chapter in Virginia has called for elected officials to increase the cigarette excise tax by \$1.00 per pack, and raise taxes on other tobacco products up to the level of cigarettes. A portion of the resulting tax revenue could be earmarked for the VAQL.

### Who uses the Quitline?

- 90% tobacco users
- 64% female
- 60% White
- 34% Black or African American
- 30% do not have a formal high school degree
- 59% live with a chronic health condition
- 45% live with a mental health condition
- 52% between the ages of 41 and 60

*"I have tried other programs, [then I] saw this program's number and called. The information received in the mail was a helpful resource to help me quit. I keep referring to this information."*

*—Quit Now Virginia Caller*

### In this document

- Tobacco use impacts in Virginia
- Best practices and research evidence for phone-based tobacco cessation
- Description of VAQL services
- Who uses the Quitline services
- Program outcomes and Return On Investment (ROI) findings
- Feedback from Virginians who received services

### 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<sup>7</sup>

- In 2015, **16.5% of adults in Virginia were current smokers, which is in line with the national average** — 30 states have higher rates.<sup>1</sup> This translates to around 1.1 million adult tobacco users in the state.<sup>8</sup>
  - Virginia’s smoking rate has been improving. From 2011 to 2013, the adult smoking rate in Virginia decreased from 20.9% to 19.0%, a 9.1% relative decrease. When adjusted for sex, age, and race/ethnicity, this difference was not statistically significant.<sup>9</sup>
- **Smoking costs Virginia over \$3.1 billion annually in health care expenditures.**<sup>6</sup> Nationally, it is estimated that each pack of cigarettes sold costs \$19.16 in direct health care expenditures and lost workplace productivity.<sup>10</sup>
- **Virginians who do not smoke are impacted** by tobacco use. The Centers for Disease Control and Prevention (CDC) estimates that 25.3% of nonsmokers are exposed to harmful secondhand smoke, increasing the risk for smoking-attributable illnesses.<sup>11</sup>
  - While this percentage dropped dramatically between 2000 and 2012, there are notable disparities in exposure. Children, non-Hispanic Blacks, persons living in poverty, and persons living in rental housing still face high exposure rates.<sup>11</sup>
- The American Lung Association’s State of Tobacco Control Report **rated Virginia’s policies on tobacco prevention, smokefree air, tobacco tax, and access to cessation services an ‘F’.**<sup>6</sup>
  - Virginia’s excise tax on cigarettes was last increased in July of 2005.<sup>12</sup> At only \$0.30 per pack, it is the 2<sup>nd</sup> lowest in the nation and far below the national average of \$1.69.<sup>10</sup> **Raising this tax is one of the most effective ways to reduce smoking, especially among youth.**<sup>13</sup> The Community Preventative Services Task Force recommends tobacco taxes as a method to increase the cost of tobacco as part of a comprehensive tobacco control strategy.<sup>14</sup>

Virginia’s large smoking population and related costs 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<sup>2</sup>

- Quitting smoking reduces a person's risk for numerous chronic health conditions and premature death, with greater benefits the younger a person quits.<sup>15</sup> Quitting smoking by age 50 cuts a person's risk of dying within 15 years in half.<sup>16</sup>
- Extensive research and meta-analyses have proven the efficacy and real-world effectiveness of tobacco quitlines.<sup>2,3,4,5</sup>

### Quitlines

- Available in every state
- Proven to help tobacco users quit
- Best outcomes with multiple sessions + NRT
- Remove barriers
- Cost-effective

- **Tobacco users who receive Quitline services are 60% more likely to successfully quit** compared to tobacco users who attempt to quit without assistance.<sup>2</sup>
- **Tobacco users who receive medications and quitline counseling have a 30% greater chance of quitting** compared to using medications alone.<sup>2</sup>
- 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, may provide services that are not available locally, and reduce disparities in access to care.<sup>17</sup>
- The Community Preventative Services Taskforce has concluded that quitlines are cost-effective based on a review of 27 studies.<sup>5</sup>
- Three strategies have been proven to be especially effective in promoting Quitline use:<sup>5</sup>
  - 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 medication and nicotine replacement therapy through the Quitline
  - Referral to the Quitline by a health care provider

## Assuring Quitline Service Best Practices for Virginians

Quit Now Virginia is **operated and evaluated in line with North American Quitline Consortium (NAQC) best practices**. Since the Quitline's inception in 2005, Virginia has selected Optum (formerly Alere Wellbeing) as its Quitline service vendor.

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 federally and state-funded randomized clinical trials have demonstrated the effectiveness of Optum's tobacco cessation program.<sup>18,19,20,21,22</sup>

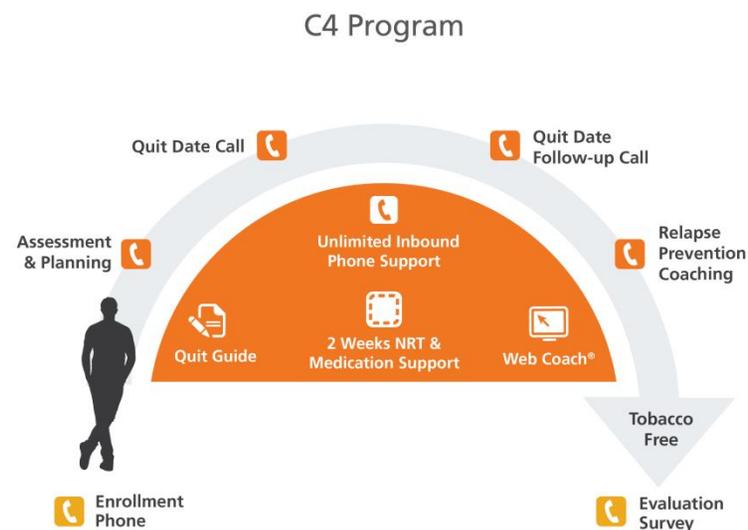
Additional vendor qualifications:

- More than 30 years of experience providing phone-based tobacco cessation services.
- Provision of tobacco cessation services to 27 tobacco quitlines (25 states, Washington DC, and Guam) and more than 750 commercial organizations (76 in the Fortune 500).
- Selected by the American Cancer Society to be its operating partner for quitline services.
- 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 in 2015/2016?

Quitline 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*.

- Phone-based tobacco cessation services:
  - **One-call (C1) tobacco cessation program for all callers**
    - Initial coaching session with Quit Coach® staff
  - **Four-call (C4) tobacco cessation program for select callers<sup>1</sup>**
    - 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
  - **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
- Web-based tobacco cessation services:
  - **Integrated Web Coach® website**
    - Interactive, web-based cessation tool designed to complement and enhance phone counseling
    - Integrated access with any phone-based Quitline program
    - Community forum for participants to discuss successes and challenges, moderated by Quit Coach® staff
  - **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) offering for all C4 participants during NRT promotion period:<sup>2</sup>**
  - **Two-week supply** of patches or gum



<sup>1</sup> Beginning March 31, 2016, adult callers who were uninsured were eligible for the C4 program. The C4 program was available to all callers, regardless of insurance status, from April 20 to May 31, 2016, and again from June 14 to July 29, 2016.

<sup>2</sup> A 2-week supply of NRT was available from June 14 to July 29, 2016.

## 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.
- 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.<sup>2</sup>
  - Using a combination of medications at the same time has also been shown to aid in quitting tobacco, especially for highly dependent smokers.<sup>2</sup>
- 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.<sup>5</sup>
- From June 14 to July 29, 2016, Virginia offered the multi-call program and a 2-week supply of NRT to all callers. Participants who were sent NRT were more likely to be satisfied with the program: 98% of NRT recipients reported satisfaction compared to 74% of non-recipients ( $p < 0.01$ ). Those who were sent NRT were also more likely to report having used NRT or other cessation medications to help them quit compared to those who were not sent NRT (80% vs. 56%,  $p < 0.01$ ).



## Quit Now Virginia Stakeholder Report

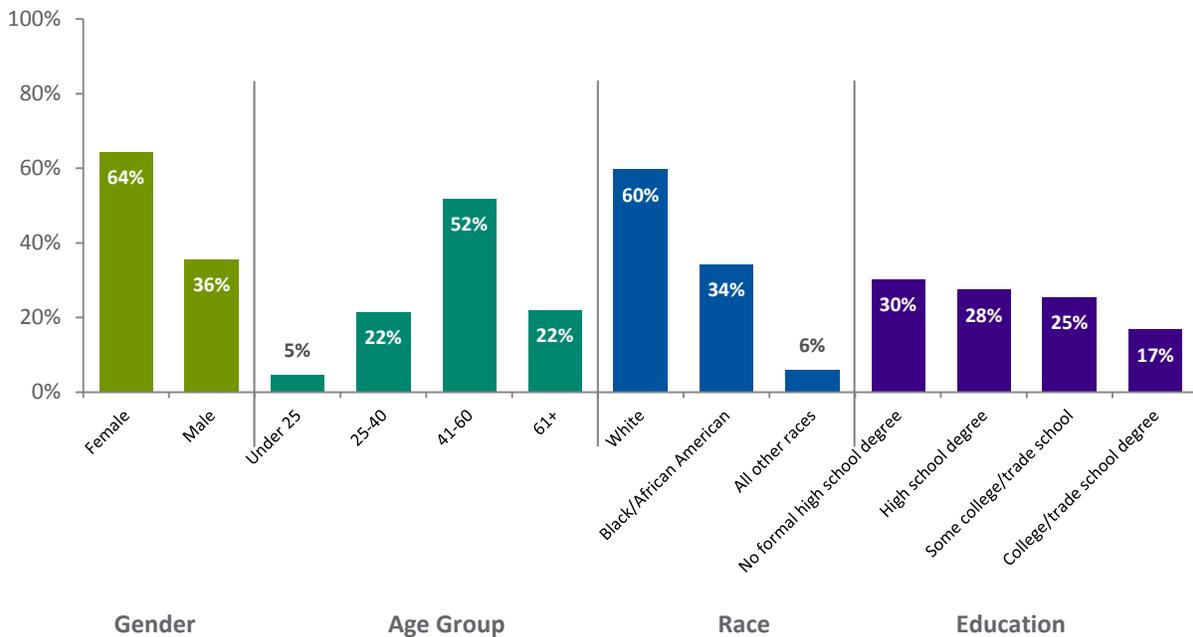
| County           | Total Served | County         | Total Served | County             | Total Served | County         | Total Served |
|------------------|--------------|----------------|--------------|--------------------|--------------|----------------|--------------|
| Accomack         | 36           | Danville       | 77           | King William       | 9            | Prince William | 112          |
| Albemarle        | 50           | Dickenson      | 12           | Lancaster          | 8            | Pulaski        | 47           |
| Alexandria       | 34           | Dinwiddie      | 23           | Lee                | 28           | Radford        | 21           |
| Alleghany        | 12           | Emporia        | 0            | Lexington          | 9            | Rappahannock   | 1            |
| Amelia           | 6            | Essex          | 13           | Loudoun            | 51           | Richmond       | 9            |
| Amherst          | 16           | Fairfax        | 132          | Louisa             | 25           | Richmond City  | 268          |
| Appomattox       | 15           | Fairfax City   | 6            | Lunenburg          | 13           | Roanoke        | 64           |
| Arlington        | 42           | Falls Church   | 2            | Lynchburg          | 104          | Roanoke City   | 150          |
| Augusta          | 38           | Fauquier       | 33           | Madison            | 8            | Rockbridge     | 9            |
| Bath             | 2            | Floyd          | 13           | Manassas City      | 14           | Rockingham     | 29           |
| Bedford          | 37           | Fluvanna       | 11           | Manassas Park City | 0            | Russell        | 31           |
| Bedford City     | 0            | Franklin       | 68           | Martinsville       | 80           | Salem          | 32           |
| Bland            | 6            | Franklin City  | 16           | Mathews            | 7            | Scott          | 22           |
| Botetourt        | 17           | Frederick      | 33           | Mecklenburg        | 34           | Shenandoah     | 27           |
| Bristol          | 24           | Fredericksburg | 25           | Middlesex          | 13           | Smyth          | 39           |
| Brunswick        | 18           | Galax          | 48           | Montgomery         | 43           | South Boston   | 0            |
| Buchanan         | 35           | Giles          | 18           | Nelson             | 19           | Southampton    | 16           |
| Buckingham       | 17           | Gloucester     | 31           | New Kent           | 12           | Spotsylvania   | 52           |
| Buena Vista      | 7            | Goochland      | 10           | Newport News       | 189          | Stafford       | 56           |
| Campbell         | 21           | Grayson        | 17           | Norfolk            | 274          | Staunton       | 32           |
| Caroline         | 27           | Greene         | 15           | Northampton        | 17           | Suffolk        | 60           |
| Carroll          | 53           | Greensville    | 28           | Northumberland     | 17           | Surry          | 7            |
| Charles City     | 4            | Halifax        | 29           | Norton             | 7            | Sussex         | 16           |
| Charlotte        | 19           | Hampton        | 130          | Nottoway           | 14           | Tazewell       | 55           |
| Charlottesville  | 29           | Hanover        | 43           | Orange             | 25           | Virginia Beach | 228          |
| Chesapeake       | 102          | Harrisonburg   | 27           | Page               | 24           | Warren         | 32           |
| Chesterfield     | 145          | Henrico        | 167          | Patrick            | 28           | Washington     | 60           |
| Clarke           | 8            | Henry          | 70           | Petersburg         | 98           | Waynesboro     | 18           |
| Clifton Forge    | 0            | Highland       | 1            | Pittsylvania       | 64           | Westmoreland   | 21           |
| Colonial Heights | 18           | Hopewell       | 25           | Poquoson City      | 4            | Williamsburg   | 0            |
| Covington        | 10           | Isle of Wight  | 20           | Portsmouth         | 106          | Winchester     | 24           |
| Craig            | 4            | James City     | 27           | Powhatan           | 15           | Wise           | 59           |
| Culpeper         | 25           | King and Queen | 7            | Prince Edward      | 27           | Wythe          | 31           |
| Cumberland       | 11           | King George    | 20           | Prince George      | 9            | York           | 18           |

## Who calls Quit Now Virginia?

The Quitline fielded **5,913 calls** from Virginians from August 1, 2015 – July 31, 2016.

- The Quitline reaches tobacco users in need who may have limited access to other resources:
  - 52.0% were either uninsured (27.8%) or Medicaid-insured (24.2%).
  - 57.7% did not have education beyond high school.
- Callers were primarily tobacco users (89.5%; n = 5,295); the general public, friends/family members of tobacco users, and healthcare providers also called the Quitline.
- Services were provided in English (99.7%) and Spanish (0.3%, 16 callers); translation services were also available for callers who speak other languages.
- Most participants sought help to quit cigarettes (93.5%), but also cigars (3.1%), smokeless tobacco (2.1%), pipes (0.4%), and other tobacco products (0.8%).
- More than half of callers learned about the Quitline through TV commercials or news (52.9%). Other callers learned of the Quitline through a health professional (18.3%), family or friends (4.6%), a website (3.0%), a brochure or flyer (2.2%), or the radio (2.8%).

**Demographics of Tobacco Users Helped by Quit Now Virginia**



## Pregnancy and Tobacco Use

- From August 1, 2015 – July 31, 2016, **4.3% of women served by the Quitline were pregnant** (86), planning pregnancy in the next 3 months (34), or breastfeeding (10).
- 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.<sup>23,24</sup>
- The Quitline continues to provide the enhanced 10-call pregnancy program 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.
- During this evaluation period, **4 out of 12 pregnant women who responded to the follow-up survey had been quit for at least 30 days** at 7 months post-enrollment with the VAQL.



## How do we know the Quit Now Virginia program works?

### What are the program outcomes?

**Almost one in four respondents successfully quit; continued tobacco users also made important reductions in their use and dependence, increasing their likelihood of future success.**

**23%** were quit at the 7-month follow-up evaluation survey (30-day responder quit rate)

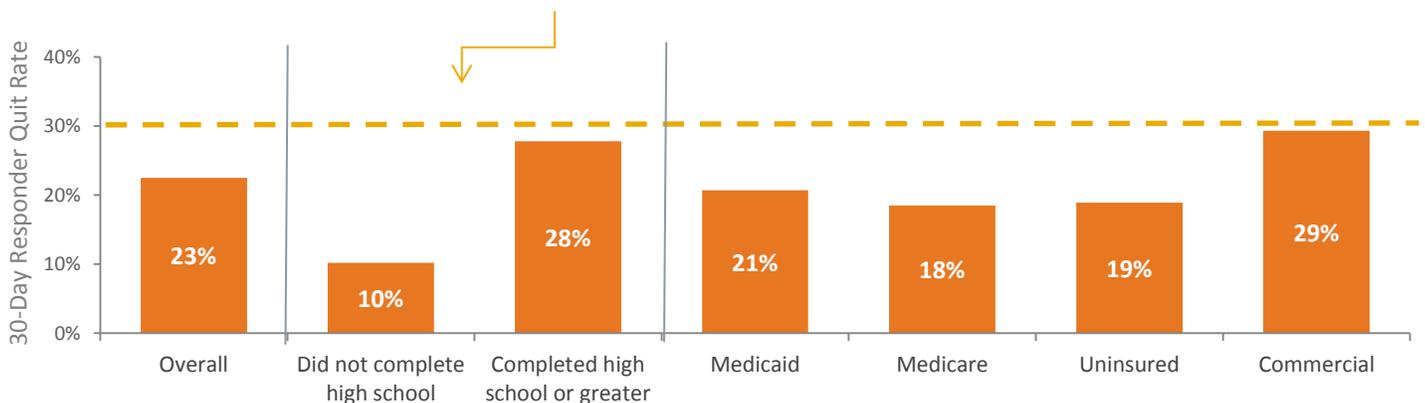
- Since enrolling with the VAQL, 78% had stopped using tobacco for 24 hours or longer because they were trying to quit.

**81%** would recommend the phone program to other tobacco users

**77%** were satisfied with the phone program

- Although the goal is tobacco abstinence, important health improvements were made among continued tobacco users in the phone program:<sup>25</sup>
  - **Reduction in use:** 67% of continued smokers reduced the number of cigarettes they smoked per day **by a half pack** (10 cigarettes), on average.
  - **Reduction in dependence level:** There was a 38% decrease in the number of continued smokers who reported smoking their first cigarette within 5 minutes of waking (46% at enrollment compared to 28% at 7-month follow-up).
  - **Reduction in frequency of use:** There was a 26% decrease in the number of continued smokers who reported smoking every day (94% at enrollment compared to 70% at 7-month follow-up).
  - The majority (78%) of continued tobacco users intended to quit within the next 30 days.
- Participants of lower socioeconomic status (i.e., education level and insurance status) with access to fewer resources had significantly lower quit rates than those of higher socioeconomic status.

**Quit Rate Target for State Quitlines = 30%**



## Improving Quit Rates

Quitting tobacco is a difficult process. A person will often have to try quitting several times and use a variety of treatment methods to be successful.<sup>2</sup> Effective treatments can greatly increase the odds of successfully quitting tobacco.

Virginia could take several steps to increase quit rates and reduce tobacco use in the state:

- Offer a more robust NRT benefit (e.g., a 4- or 8-week supply) to all participants through the Quitline. Offering NRT through the Quitline makes it easier to access and encourages participants to use the program more.
- Use NRT to encourage participants to take their coaching calls by offering split shipments of NRT (e.g., one shipment of NRT after call one and one shipment of NRT after call two or three). Previous research has shown that multiple calls combined with NRT yield the highest quit rates and is a cost effective way of promoting public health.<sup>2</sup>
- Continue to train health care providers to ask about tobacco use and refer smokers to the VAQL. Eighteen percent of VAQL participants reported hearing about the Quitline through a health care provider. Research has shown that these provider trainings increase the number of smokers referred by a provider and result in higher quit rates.<sup>5</sup>
- Consider promotional campaigns to raise the profile of the VAQL. Research shows that evidence-based education campaigns increase the number of tobacco users who use the quitline and make a quit attempt.<sup>5</sup>
- Continue working with lawmakers to increase the the cigarette excise tax by \$1.00 per pack, and raise taxes on other tobacco products up to the level of cigarettes. A portion of the resulting tax revenue could be earmarked to fund these VAQL service enhancements.

## 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.<sup>26</sup>
- **Assessment of outcomes** 7 months following callers’ enrollment in services, utilizing NAQC methodology and measurement guidelines.<sup>27</sup>
- 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.<sup>27</sup>

Quit Now Virginia has a 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. The findings on page 11 come from the VAQL’s **tenth annual evaluation** and represent 7-month outcome data from a sample of August 2015 through July 2016 registrants who received empirically supported treatment (i.e., completed one or more coaching calls) through the program (survey response rate was 43.4%).

### Is the program cost-effective?

**\$6.63 saved in Virginia in medical expenditures, lost productivity, and other costs for every \$1 spent on the Quitline and tobacco cessation media in 2015/2016**

| Return on Investment (ROI) – Phone Program 2015/2016  |               |
|---|---------------|
| <b>Quit Rate</b> <ul style="list-style-type: none"> <li>• 30-day respondent quit rate for August 2015 – July 2016 phone program registrants</li> </ul>  | <b>23%</b>    |
| <b># Quit</b> <ul style="list-style-type: none"> <li>• .225 x 3,610 tobacco users received intervention</li> </ul>  | <b>812</b>    |
| <b>Total \$ Saved</b> <ul style="list-style-type: none"> <li>• Medical expenses:<sup>28, 29, 30</sup> \$3,345 x 812 = \$2.7M</li> <li>• Lost productivity:<sup>31</sup> \$1,066 x 812 = \$866K</li> <li>• Worker’s compensation:<sup>32</sup> \$146 x 812 = \$119K</li> <li>• Secondhand smoke:<sup>33,34</sup> \$384 x 812 = \$312K</li> </ul> | <b>\$4M</b>   |
| <b>Total \$ Spent</b> <ul style="list-style-type: none"> <li>• VAQL operating (\$550,000) and tobacco cessation media (\$55,000) tagged with Quitline number<sup>35</sup></li> </ul>  | <b>\$605K</b> |
| <b>Return On Investment</b> <ul style="list-style-type: none"> <li>• Ratio of Total \$ Saved / Total \$ Spent</li> </ul>  | <b>\$6.63</b> |

## In the Words of Quitline Callers...

*"The material was great. [It shows you] where to start, how to start, changing your way, preparing yourself."*

*"Because when I talked to the [coach] she was very nice. Once you accept the fact that you actually have a problem you are well on your way. Talking to someone on the phone gave me willpower."*

*"At first I didn't have much stock that it would work but as I set my mind to it I noticed that I was smoking less and less."*

*"Based on my experience, that I know you are all committed. You ask the right questions, making it a joint effort and make helpful suggestions like ways to keep your hands busy and other behavior changes."*

*"It is effective and the way you stay in touch, stay connected through coaching. The product (NRT) offer makes it worth your time."*

*"You all are nice and know how hard it is, and you know to try different things like sucking or biting on a straw. You guys are awesome. I already did recommend someone. She's trying to quit, so I hope she gives you a call."*

*"Because I believe it really helped me [having] somebody to talk to. I was the only one in my family that smoked."*

*"Because I know the first time I used the program it was beneficial. But this most recent time I didn't get the same support like coaches. We talked about reasons I was smoking and how to stop. The first time I got aides (NRT) to assist quitting but this last time they told me that they don't do that anymore. It was a real letdown because those devices are expensive but they really help."*

*"If you are struggling the program provides answers and encouragement; that was the good thing about it."*



*"[The program] always checks in on me. And, if you didn't check on me, then I knew I had a number I could call if I felt the need for a cigarette."*

## References and Notes

- <sup>1</sup> Kaiser Family Foundation (2015). State Health Facts Health Status Indicators: Smoking. Retrieved from: <http://kff.org/state-category/health-status/smoking/>.
- <sup>2</sup> Fiore, M. C. (2008). Treating tobacco use and dependence: 2008 update. Rockville, Md., U.S. Dept. of Health and Human Services, Public Health Service.
- <sup>3</sup> Stead LF, Perera R, Lancaster T. (2006). Telephone counseling for smoking cessation. *Cochrane Database of Systemic Reviews*, 3:CD002850.
- <sup>4</sup> Lichtenstein E, Glasgow RE, Lando HA, Ossip-Klein DJ, Boles SM. (1996). Telephone Counseling for Smoking Cessation: Rationales and Meta-Analytic Review of Evidence. *Health Education Research*, 11(2):243-57.
- <sup>5</sup> Community Preventative Services Task Force. (2015). Reducing Tobacco Use and Secondhand Smoke Exposure: Quitline Interventions. Retrieved from: <http://www.thecommunityguide.org/tobacco/quitlines.html>.
- <sup>6</sup> American Lung Association. (2016). State of Tobacco Control 2016. Retrieved from: <http://www.lung.org/our-initiatives/tobacco/reports-resources/sotc/state-grades/>
- <sup>7</sup> U.S. Department of Health and Human Services. (2014). The Health Consequences of Smoking – 50 Years of Progress. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
- <sup>8</sup> Calculated from: United States Census Bureau. (2015). Retrieved from: <http://www.census.gov/quickfacts/table/PST045215/00>
- <sup>9</sup> Nguyen, K, Marshall, L, Hu, S, & Neff, L. (2015) State Specific Prevalence of Current Cigarette Smoking and Smokeless Tobacco Use Among Adults Aged ≥18 Years – United States, 2011-2013. Retrieved from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6419a6.htm>.
- <sup>10</sup> Campaign for Tobacco Free Kids. (2016). State Cigarette Excise Tax Rates and Rankings. Retrieved from: <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>
- <sup>11</sup> Centers for Disease Control and Prevention (2015). Vital Signs: Disparities in Nonsmokers' Exposure to Secondhand Smoke — United States, 1999–2012. Retrieved from: [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6404a7.htm?s\\_cid=mm6404a7\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6404a7.htm?s_cid=mm6404a7_w)
- <sup>12</sup> Tobacco Free Kids. (2016). Cigarette Tax Increases By State Per Year 2000-2016. Retrieved from <https://www.tobaccofreekids.org/research/factsheets/pdf/0275.pdf>
- <sup>13</sup> Campaign for Tobacco Free Kids. (2016). Raising Cigarette Taxes Reduces Smoking, Especially Among Kids (and the Cigarette Companies Know It). Retrieved from: <http://www.tobaccofreekids.org/research/factsheets/pdf/0146.pdf>
- <sup>14</sup> Community Preventative Services Task Force. (2014) Reducing Tobacco Use and Secondhand Smoke Exposure: Interventions to Increase the Unit Price for Tobacco Products. Retrieved from: <http://www.thecommunityguide.org/tobacco/RRincreasingunitprice.html>
- <sup>15</sup> Centers for Disease Control and Prevention. (2015). *Smoking and Tobacco Use: Smoking Cessation*. Retrieved from: [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/cessation/quitting/index.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/cessation/quitting/index.htm)
- <sup>16</sup> U.S. Department of Health and Human Services. (1990) *The Health Benefits of Smoking Cessation: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. DHHS Publication No. (CDC)90–8416.
- <sup>17</sup> Anderson, C. M. & S. H. Zhu (2007). Tobacco quitlines: looking back and looking ahead. *Tobacco Control*, 16 (Suppl 1), i81-86.
- <sup>18</sup> Orleans C.T., Schoenbach V.J., Wagner E., et al. (1991). Self-help quit smoking interventions: Effects of self-help materials, social support instructions, and telephone counseling. *Journal of Consulting and Clinical Psychology*, 59(3):439-448.
- <sup>19</sup> Curry S.J., Grothaus L.C., McAfee T., Pabiniak C. (1998). Use and cost effectiveness of smoking-cessation services under four insurance plans in a health maintenance organization. *New England Journal of Medicine*, 339(10):673-679.
- <sup>20</sup> Swan G.E., McAfee T., Curry S.J., et al. (2003). Effectiveness of bupropion sustained release for smoking cessation in a health care setting: a randomized trial. *Archives of Internal Medicine*, 163(19):2337-2344.
- <sup>21</sup> Hollis J.F., McAfee T., Fellows J.L., Zbikowski S.M., Stark M. K. R. (2007). The effectiveness and cost effectiveness of telephone counseling and the nicotine patch in a state tobacco quitline. *Tobacco Control*, 16 (Suppl 1), i53-59.

<sup>22</sup> McAfee T.A., Bush T., Deprey T.M., Mahoney L.D., Zbikowski S.M., Fellows J.L., McClure J.B. (2008). Nicotine patches and uninsured quitline callers. A randomized trial of two versus eight weeks. *American Journal of Preventive Medicine*, 35(2):103-10.

<sup>23</sup> DiFranza J.R., Lew R.A. (1995). Effect of maternal cigarette smoking on pregnancy complications and sudden infant death syndrome. *Journal of Family Practice*, 40(4):385-94

<sup>24</sup> Adams E.K., Miller V.P., Ernst C., Nishimura B.K., Melvin C.L., Merritt R. (2002). Neonatal health care costs related to smoking during pregnancy. *Health Economics*, 11(3):193-206

<sup>25</sup> Results referenced in this section refer to survey respondents in the phone program. The Web-Only program was not assessed during this evaluation period.

<sup>26</sup> Centers for Disease Control and Prevention. (2014). *Best practices for comprehensive tobacco control programs - 2014*. Atlanta, GA, Centers for Disease Control and Prevention.

<sup>27</sup> An, L, Betzner, A, Luxenberg, M, Rainey, J, Capesius, T, & Subialka, E. (2009). *Measuring Quit Rates. Quality Improvement Initiative*. North American Quitline Consortium. Phoenix, AZ.

<sup>28</sup> U.S. Census Bureau, Population Division. Table 1. Estimates of the Resident Population by Selected Age Groups for the United States, States, and Puerto Rico: July 1, 2009 (SC-EST2009-01). Retrieved April 18, 2017, from: <https://www.census.gov/data/datasets/time-series/demo/popest/intercensal-2000-2010-state.html>

<sup>29</sup> Centers for Disease Control and Prevention. *Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) 2005-2009: Adult Smoking-Attributable Expenditures for Virginia*. Retrieved May 3, 2017, from: <https://chronicdata.cdc.gov/Health-Consequences-and-Costs/Smoking-Attributable-Mortality-Morbidity-and-Econo/ezab-8sq5/data>.

<sup>30</sup> State-Specific Prevalence of Cigarette Smoking and Smokeless Tobacco Use Among Adults—United States, 2009, CDC MMWR 2010; 59(43):1400-1406. Retrieved May 1, 2017, from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5943a2.htm#tab1>

<sup>31</sup> Berman M, Crane R, Seiber E, et al. Estimating the cost of a smoking employee. *Tob. Control* 2014; 23(5):428-433

<sup>32</sup> Sherman B, Lynch W. The Relationship between Smoking and Health Care, Workers Compensation, and Productivity Costs for a large Employer JOEM 2013 Vol 55 No 8, August 2013

<sup>33</sup> Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999, CDC MMWR 2002;51(14):300-03.

<sup>34</sup> Strunk BC, Gabel JR, Ginsburg PB. Tracking Health Care Costs: hospital spending spurs double-digit increase in 2001. *Health System Change*; data bulletin no. 22; last accessed 6/2011. <http://www.hschange.org/CONTENT/472/>

<sup>35</sup> State anti-tobacco media campaign expenditures provided by the State; costs are from a one year period.