2018 Project Filter Outcomes Report

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Executive Summary

Key Findings

Cessation

In Fiscal Year 2018, the Idaho Quitline (IDQL) offered a comprehensive tobacco cessation program with telephone-based coaching and a web-based interactive cessation resource, both operated by National Jewish Health (NJH), to provide support for Idahoans who want to quit using tobacco. NJH conducted the IDQL evaluation using a survey six months after enrollment with callers who agreed to follow-up, regardless of their readiness to quit. Key highlights from the survey are:

- 20% of participants who engaged in the web-only program quit.
- 33% of participants who engaged in the phone-based cessation program quit.
- 40% of participants who completed at least 3 coaching calls quit.
- Overall, 25% of IDQL participants quit using tobacco.

The full survey results are presented in this report, and survey methodology details are included in Appendix A.

Return on Investment

A return on investment (ROI) analysis compared the savings in medical and reduced productivity costs for the estimated total number of participants who quit using tobacco and the operational and media costs related to the IDQL program.

- Overall, each $1 spent resulted in $3.46 savings in medical and productivity costs.
- Phone-based program savings were $4.09 per $1 spent.
- Web-only program savings were $2.93 per $1 spent.
- For Medicaid-insured phone-based program participants, savings were $2.88 per $1 spent.

Idaho Quitline Program

Program Description

The Idaho Quitline (IDQL) program provides free cessation support to Idahoans trying to stop using tobacco. IDQL offers coaching to quit tobacco by phone, through an interactive web portal, and by providing FDA-approved tobacco cessation medications. Individuals may enroll in IDQL services by calling 1-800 QUIT NOW, completing an enrollment form on the web portal, or by a provider fax, web, or electronic referral. The IDQL also recognizes that some populations require additional support to stop, and offers tailored programs for both pregnant and American Indian participants to meet this need.

Phone-based Program:
The phone-based program provides coaching to quit tobacco over the phone to any Idahoan age 13 years or older trying to quit tobacco, whether or not they have set a quit date. Telephone coaching includes strategies to increase the motivation to quit, setting a quit date, overcoming triggers to smoke, and provides interpersonal support to become tobacco-free. Participants in telephone coaching receive up to five proactive calls from the IDQL, information tailored to their unique medical or demographic characteristics, and can receive motivational text and e-mail messages. Phone program participants may also use the website to supplement their quit attempt.

Web-based Program:
An interactive web portal is available to all Idahoans thinking about quitting tobacco (idaho.quitlogix.org). Participants can view information about quitting, engage with interactive calculators, design quit plans, and build a community with others trying to stop tobacco. The web-based program allows enrolled participants to order quit medications through the website, without participating in the phone-based services. In this report, web-based participants only enrolled on the website and did not take part in phone-based services.

Medications:
All Idahoans age 18 years or older who are enrolled in phone-coaching and are trying to quit tobacco can receive up to eight weeks of nicotine replacement therapy, including nicotine patches, gum or lozenges. Idahoans enrolling in web-only services can receive up to six weeks of medication support.

NJH conducted the IDQL evaluation in August and September 2018, using a six-month participant evaluation survey that sampled participants who completed an intake from January-April, 2018. A total of 1,049 individuals consented to a follow-up survey, and 216 completed the survey for a 21% response rate.

Tobacco Cessation Rates

The following section describes the quit rate for survey respondents based on their program enrollment type, tobacco use patterns, demographics, and behavioral health condition. Throughout this evaluation report, quitting tobacco is defined as no self-reported tobacco use for the past 30 days during the six-month evaluation survey. Tobacco use includes any form of conventional tobacco (cigarettes, cigars, pipes, and smokeless) and electronic cigarettes. Quit rates were calculated based on the proportion of evaluation survey respondents who reported not using any tobacco in the past 30 days.

NJH does not consider a respondent using an electronic nicotine delivery system (ENDS; e.g., e-cigarette, vape pens, or JUUL) as being free from tobacco for several reasons. First, ENDS are considered tobacco products by the FDA and are not approved for cessation. Additionally, observational research shows that most people who use ENDS continue to smoke simultaneously, or return to tobacco conventional tobacco products completely. At NJH, individuals who use ENDS and want to quit their use of ENDS receive the same type of personalized cessation intervention that other tobacco users receive.

In the following tables, “Participants” refers to the overall survey sample, “Survey Respondents” refers to the number of completed the survey, and “Quit” refers to the number of participants that have reported having quit, based on the criteria described above.

Quit Rate by Program Offering

In this section, the proportion of respondents reporting having quit using tobacco are described by insurance, NRT offering, referral type, text program participation, and number of coaching calls received.

Overall, 4,203 Idahoans engaged in the web-only program and 2,888 engaged in the telephone-coaching program during fiscal year 2018. However, more telephone-coaching participants completed the evaluation survey, and we adjusted the total IDQL quit rate to reflect this difference. While 25% of all IDQL participants quit using tobacco, quit rates were higher for telephone-coaching participants, 33%, compared to of web-only participants, 20%, at six months.

Quit Rate by Insurance and Program

Individuals with Medicaid health insurance who enrolled in the phone-based program reported a lower quit rate of 23%, compared to a quit rate of 36% for participants with all other types of insurance. Medicaid-insured participants accounted for 8% of the overall program. The low number of Medicaid participants who responded to the survey (phone program 23%, web program 0%) is a limitation in understanding cessation rates by insurance type.

In the table below, IDQL participants are displayed by program type and insurance status, with the number of callers who agreed to an evaluation survey (Participants), the number who completed the survey (Survey Respondents), and the number who reported having quit.

Program	Insurance Type	Participants	Survey Respondents	Quit	Quit Rate
Phone-based	Medicaid	152	39	9	23%
	Other Insurance	368	124	44	35%
	Uninsured	3	0	0	N/A
	No response	23	2	1	50%
	All Phone-based	546	165	54	33%
Web-only	Medicaid	38	2	0	0%
	Other Insurance	247	32	7	22%
	Uninsured	209	16	3	19%
	No response	9	1	0	0%
	All Web-only	503	51	10	20%

Quit Rate by NRT and Program

Use of nicotine replacement therapy (NRT) is an evidence-based strategy to increase successful tobacco cessation. IDQL participants are recommended to use NRT for 8 – 12 weeks, and are provided with up to 8 weeks of medication at no cost. In the table below, "Dual NRT" represents participants who received two forms, usually a nicotine patch combined with nicotine gum or lozenge. Research demonstrates that combining the patch with gum or lozenges is more effective than one-product alone.

In the phone program, individuals who received all 8 weeks of NRT reported the highest quit rate for both single and combination NRT products. The observation that web-only participants who did not receive NRT had the highest reported quit rate is intriguing. This could represent highly motivated individuals who needed minimal support to quit, as well as individuals who were using the web program to supplement other counseling and medications received outside of the IDQL.

Program	NRT Offering	Participants	Survey Respondents	Quit	Quit Rate
Phone-based	Dual NRT (2 shipments)	138	55	16	29%
	Dual NRT	139	31	6	19%
	8 weeks	82	39	19	49%
	4 weeks	82	19	6	32%
	No NRT	105	21	7	33%
	All Phone-based	546	165	54	33%
Web-only	8 weeks	1	0	0	N/A
	4 weeks	235	33	5	15%
	No NRT	267	18	5	28%
	All Web-only	503	51	10	20%

Quit Rate by Referral Type

Participants who self-referred contacted the IDQL program on their own by calling 1-800-QUIT-NOW or enrolling on the website. Provider-referred participants had a referral sent by fax, through the online web referral portal, or directly from the electronic health record ('eReferral'), and were proactively contacted by the IDQL. Self-referred participants had a higher reported quit rate than provider-referred participants, which likely reflects higher motivation to stop using tobacco.

Referral Type	Participants	Survey Respondents	Quit	Quit Rate
Self-referred	1,006	197	60	30%
Provider-referred	43	19	4	21%

Quit Rate by Text Program Participation

The text program of motivational and interactive messages is available to both web-only participants and phone-based participants. An 'opt-in' to the program is required, and Idahoans who opted-in reported a higher quit rate than those who did not opt-in.

Text Program	Participants	Survey Respondents	Quit	Quit Rate
Took part in Text2Quit	528	119	38	32%
Didn't take part in Text2Quit	505	95	26	27%

Quit Rate by Call Completed (Phone Program Only)

Coaching over the phone increases the chances of cessation, and research suggests that completing three or more calls is best for cessation. Idahoans who completed more coaching calls achieved higher quit rates, and participants who completed three or more coaching calls had a combined quit rate of 40%.

The average number of completing coaching calls for enrolled participants was 2.5 in FY 2018. More than half (57%) of enrolled phone program participants competed two coaching calls, 42% completed at least three calls, 29% completed four calls, and 20% completed 5 or more coaching calls.

Call Reached	Participants	Survey Respondents	Quit	Quit Rate
Intake	28	1	1	100%
1	224	44	9	20%
2	77	24	6	25%
3	68	23	8	35%
4	44	14	7	50%
5+	105	59	23	39%

Quit Rate by Tobacco Use Characteristics

In this section, the proportion of respondents reporting having quit using tobacco are delineated by tobacco use type and duration of tobacco use.

Quit Rate by Tobacco Use Type

Most IDQL participants report smoking cigarettes as the primary form of tobacco use, with a reported quit rate of 28% overall. Because participants may use more than one form of tobacco, individuals may be represented in multiple categories.

Tobacco type	Participants	Survey Respondents	Quit	Quit Rate
Cigarettes	507	149	42	28%
Cigars	22	3	3	100%
e-Cigarettes	46	13	4	31%
Pipe	6	1	0	0%
Smokeless	38	11	5	45%

Years of Tobacco Use

Most IDQL participants have used tobacco for 10 or more years. Those who have used tobacco for less than 10 years had an overall quit rate of 50%.

Years of Tobacco Use	Participants	Survey Respondents	Quit	Quit Rate
< 5 years	15	3	0	0%
6-10 years	33	7	5	71%
10+ years	499	154	49	32%

Quit Rate by Demographics

In this section, the proportion of respondents reporting having quit using tobacco are described by gender, age, education level, race and ethnicity.

Gender Distribution

Over 60% of IDQL participants identified as female, while males had a higher quit rate. These results are consistent with trends in tobacco cessation research and quitlines overall. Due to the low number of responses, transgender-identified individuals have been excluded.

Gender	Participants	Survey Respondents	Quit	Quit Rate
Female	655	125	29	23%
Male	388	90	34	38%
Missing/unspecified	4	1	1	100%

Age Distribution

83% of IDQL participants were evenly distributed between ages 25 and 64. The 25-34 and 55-64 age groups had the highest quit rates, likely representing both success with shorter duration of tobacco (age 25-34), and the increase in motivation following the onset of tobacco-related diseases (age 55-64). Due to the low number of responses, individuals under 18 years of age have been excluded.

Age at Intake	Participants	Survey Respondents	Quit	Quit Rate
18-24	59	6	2	33%
25-34	218	32	12	38%
35-44	221	36	7	19%
45-54	202	50	11	22%
55-64	226	53	20	38%
65+	120	38	11	29%

Education Distribution

Most IDQL participants reported their highest education level was a high school diploma, GED, or lower and is consistent with national data for the prevalence of tobacco use. No clear trend could be observed for education level and quit outcomes, which is counter to national data that shows individuals with higher levels of education are more successful in stopping their tobacco use.

Highest Level of Education	Participants	Survey Respondents	Quit	Quit Rate
Less than grade 9	27	6	1	17%
Grade 9 to 11, no diploma	96	14	7	50%
High school diploma	271	55	18	33%
GED	111	17	4	24%
Some college or university	353	77	18	23%
College or university degree	179	45	15	33%

Racial Distribution

Each participant could identify with more than one race or ethnic identity. Though the number of responses was low, Black or African-American participants and Hispanic or Latino/a participants had the highest quit rates.

Race/Ethnicity	Participants	Survey Respondents	Quit	Quit Rate
American Indian or Alaska Native	32	9	3	33%
Black or African American	8	4	2	50%
Hispanic or Latino/a	30	9	4	44%
White	505	152	49	32%
Some Other Race	22	7	0	0%

Quit Rate for Behavioral Health Population

IDQL participants during their intake call were asked questions regarding current behavioral health (BH) problems, including depression, anxiety, and substance abuse among several others. Idahoans who reported a BH condition had lower cessation rates than those who did not report a BH condition. NJH is currently evaluating a pilot program to increase engagement in quitline calls and cessation for BH populations.

BH Challenge	Yes		No	
	Survey Respondent	Quit Rate	Survey Respondent	Quit Rate
Any BH Condition	112	25%	103	35%

The following table refers only to those who have reported having a BH condition. Participants were asked about the degree to which their BH condition impacts their life and their attempts to quit tobacco. Participants who stated their BH condition caused them emotional challenges, negatively impacted their life had lower quit rates than participants who felt it did not.

BH Impact	Yes		No	
	Survey Respondent	Quit Rate	Survey Respondent	Quit Rate
Causes Emotional Challenges	75	27%	22	32%
Interferes with Life	50	26%	47	30%
Interferes with Quitting	58	29%	34	26%

Program Satisfaction

IDQL program participants were surveyed about their satisfaction with the overall service of the quitline program, the materials they received, and the quality of coaching. In this section, the proportion of respondents who reported satisfaction are reported for each content type, as well as divided by program type, medication receipt, Medicaid insurance, and referral type.

Level of Satisfaction: Overall Service, Provided Materials, Coaches and Counselors

The table below shows the result of follow-up surveys conducted during the reporting period regarding satisfaction with services. Neutral responses (don't know or no answer) are excluded from the denominator. High satisfaction was noted for all content types.

Satisfied with…	Survey Respondents	Satisfied	Percent Satisfied
Overall Service	210	196	93%
Provided Materials	129	126	98%
Coaches and Counselors	162	151	93%

Service Satisfaction Level by Population Group

The following table details satisfaction with the overall service provided to target population groups highlighted by Project Filter. Individuals who did not receive NRT on the web were least satisfied with the program.

Population Type	Survey Respondents	Satisfied	Percent Satisfied
Web-only Program Participants			
4-Week NRT Recepients	33	31	94%
Non-recepients of NRT	15	10	67%
Medicaid-insured participants	2	2	100%
Phone-based Program Participants			
4-Week NRT Recepients	18	17	94%
8-Week NRT Recepients	39	39	100%
Dual NRT Recepients (2 shipments)	55	53	96%
Medicaid-insured Participants	38	34	89%
Provider-referred Participants	18	18	100%
All Program Participants			
Text2Quit Participants	116	108	93%
Participants with BH Condition	110	105	95%
Medicaid-insured Participants	40	36	90%
Self-referred Participants	192	178	93%

Return on Investment Analysis

A return on investment analysis for this evaluation reports the savings from medical, worker's compensation, lost productivity, and second hand smoke costs for each dollar spent by Project Filter and the IDQL program. Savings were calculated in 2018 dollars using the quit rate obtained from the evaluation survey sample applied to the program population. The Idaho Department of Health provided actual program expenses for Fiscal Year 2018. The proportion of non-specific expenses (NRT, Personnel, Media) allotted to each program type were estimated based on the proportion of participants engaged by the respective program (e.g., $\$1{,}894{,}132\ total\ media\ expense\ \mathrm{X}\ \frac{2{,}888\ phone\ participants}{7{,}091\ total\ participants} = \$771{,}436\ phone\ media\ expense$).

Overall, estimated savings for Idaho businesses and government spending exceeded $9 million from total IDQL spending of just over $2.6 million to help Idahoans quit tobacco: an **ROI of $3.46**. A larger ROI ($4.09) was estimated for the phone-based program versus the web-only program ($2.93) because the phone-based program generated a higher success rate for quitting. Savings for the Idaho Medicaid program were an estimated $653,706.

	All IDQL	Phone-based	Web-only	Medicaid Phone-based
Savings for Fiscal Year 2018				
# Participants	7,091	2,888	4,203	556
Responder quit rate	24.9%	32.7%	19.6%	23.1%
# Quit (# participants x quit rate)	1,769	945	824	128
Medical expenses ($3,354 per smoker)[1,5]	$5,933,881	$3,169,880	$2,764,001	$429,359
Lost productivity ($1,130 per smoker)[2,5]	$1,998,563	$1,067,633	$930,930	$144,611
Worker's compensation ($201 per smoker)[3,5]	$356,047	$190,200	$165,846	$25,763
Secondhand smoke ($422 per smoker)[4,5]	$745,934	$398,478	$347,456	$53,974
Total smoker costs saved	**$9,034,425**	**$4,826,191**	**$4,208,234**	**$653,706**

	All IDQL	Phone-based	Web-only	Medicaid Phone-based
Expenses for Fiscal Year 2018				
IDQL Phone Expenses	$264,689	$264,689	$0	$50,958
IDQL Web Expenses	$103,000	$0	$103,000	$0
IDQL NRT Expenses	$334,177	$136,103	$198,074	$26,203
DP14-1410 Public Health Approaches for Ensuring Quitline Capacity Grant Personnel Expenses	$17,250	$7,026	$10,224	$1,353
Statewide anti-tobacco cessation and prevention, media, marketing and promotion:	$1,894,132	$771,436	$1,122,696	$148,517
Total expenses for Idaho QuitLine	**$2,613,248**	**$1,179,253**	**$1,433,995**	**$227,031**
ROI for each $1 spent	**$3.46**	**$4.09**	**$2.93**	**$2.88**

[1] Berman M, Crane R, Seiber E, et al.: Estimating the cost of a smoking employee. Tob. Control 2014; 23(5):428-433.

[2] 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,

[3] Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs – United States, 1995-1999, CDC MMWR 2002;51(14):300-03.

[4] 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/

[5] Expense and productivity loss costs were adjusted for inflation based on the publication date compared to January 2018.https://data.bls.gov/cgi-bin/cpicalc.pl

Conclusions and Opportunities

Overall, the IDQL and Project Filter assisted an estimated 1,769 Idahoans quit using tobacco in Fiscal Year 2018, and generated more than $9 million in medical and productivity savings for the state. Every dollar spent to support cessation in Idaho resulted in $3.46 in savings.

The personalized telephone-based intervention was most effective in helping people in their efforts to quit tobacco, with 33% of phone-based program participants reporting no tobacco use at six months. Approximately 40% of Idahoans who completed three or more coaching calls with the IDQL successfully quit tobacco. By comparison, about 20% of Idahoans who used only the web-based program to quit reported success at six months. Corresponding with these quit rates, the return on investment for each $1 IDQL spent for phone-based programs was also higher at $4.09, compared to $2.93 for web-only participants.

In the evaluation survey sample, approximately 52% of respondents indicated that they had a behavioral health condition, and fewer reported cessation. National Jewish Health is currently evaluating a pilot program that directly addresses two major categories of behavioral health issues: depression and anxiety disorder. Results of this pilot to help these individuals deal with their tobacco use are forthcoming.

There are limitations to the cessation rates reported in this evaluation. The surveys in this report comprise participants who enrolled in the program from January – April 2018, when motivation to quit tobacco is higher corresponding with New Year's resolutions, and quitline volume increases. In addition, in 2018, the CDC's *Tips From Former Smokers* media campaign began running in late-April and continued into October. Previous research has shown that the Tips campaign generates higher call volumes and increases intention to quit tobacco at the population level. The evaluation sample for this report does not capture the *Tips* population and thus may not represent a true sample of the quitline population. We recommend that the IDQL conduct a continuous evaluation program throughout the year to capture any changes that occur in the program and its participants throughout the year. NJH is happy to work with IDQL to sample a monthly group of participants in order to provide more representative survey results.

At National Jewish Health, we are honored and excited to continue our partnership with the Idaho Quitline program to serve the residents of the state with evidence-based treatment. We continue our efforts in finding new ways to reach disparate populations and meet the mutual goals of decreasing tobacco use among all Idaho participants.

Acknowledgements

Implementation of the services provided is a coordinated and collaborative effort by many individuals at National Jewish Health and our clients. We would like to acknowledge the extensive efforts of the QuitLine coaches, management team and survey staff that provide guidance, enrollment and tobacco treatment services to the QuitLine callers.

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Appendix A – Survey Methodology

The surveys in this report were conducted during August – September 2018 by phone, representing intakes from January – April 2018. All outcomes data are derived from self-reported data submitted in participant surveys collected by an independent survey agency, Westat Inc. Four participants stated Spanish as their preferred language and were surveyed by a Spanish speaker from NJH using a translated survey.

Callers are asked about their tobacco use and assigned a current status of “Quit” if the participant indicates that they have not used tobacco — even a puff — in the 30 days prior to the call, and included e-cigarettes in the same period, as recommended by the North American Quitline Consortium (NAQC). This definition of abstinence is referred to as the point prevalence rate, and is the industry standard for determining follow-up quit rate. Due to the low number of survey responses, some demographic breakdowns yielded limited results.

Of the individuals identified and contacted for a follow-up survey, a percentage were not successfully contacted for a survey. Some are not contacted because they cannot be reached after multiple attempts and others because they choose not to participate in the survey despite consenting during the intake process. A total of 1,049 individuals consented to a follow-up survey during intake, and 216 completed the survey for a 21% response rate.

NAQC/ Professional Data Analysts Inc. (PDA) recommend calculating responder rates and not intention to treat (ITT) rates, because calculating ITT assumes that all non-responders are using tobacco and includes them in the sample. In this evaluation report, responder quit rates are reported.