Surveillance & Evaluation Webinar Series Presents:

EVALUATING MULTIMODAL QUITLINE SERVICES: ASSESSING REACH, UTILIZATION, AND OUTCOMES

Thursday, April 4, 2019

The findings and conclusions in this presentation are those of the author and do not necessarily represent those of the Centers for Disease Control and Prevention.

EVALUATING MULTIMODAL QUITLINE SERVICES: ASSESSING REACH, UTILIZATION, AND OUTCOMES

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Professional Data Analysts, Inc
Quitlines and evaluation – setting the stage

**NAQC:**
- non-profit membership organization that seeks to promote evidence based quitline services across diverse communities in North America.

**Mission is to:**
- Maximize the access, use, and effectiveness of quitlines;
- Provide leadership and a unified voice to promote quitlines;
- Offer a forum to link those interested in quitline operations.

Key NAQC resources on evaluation and quitline metrics
- **Calculating Quit Rates, 2015 Update**
  - Quit rate for conventional tobacco
  - Quit rate for conventional tobacco + ENDS
- **Measuring Reach of Quitline Programs**
  - Promotional reach
  - Treatment reach
- **Minimal Data Set Intake and Follow-up Questionnaires**
- **NAQC Annual Survey of State Quitlines**
Quitline services evolving

- Phone counseling
- FDA-approved cessation medications

Mode of entry

Quitline services

Individual/Ancillary Services:
- Text messaging
- Web/online information & support
- NRT starter kits
Evaluation of Multimodal Quitlines: Process Measures

LAURA A. BEEBE, PHD

Process Evaluation Questions

- **How many** tobacco users are calling the quitline?
- **Who** is the quitline reaching?
- How do they **learn about** the quitline?
- **What services** are they using?
- **How many calls** are they receiving? **How much** NRT are they receiving?

What is the quitline **treatment reach**?
Multi-modal Quitline Evaluation Questions: Process

How many tobacco users are registering with the quitline? By entry mode? By service/program selected?

What are the characteristics of tobacco users registering for quitline services? Do they differ by entry mode? By service/program selected?

Is the quitline attracting a more diverse pool of tobacco users?

Is utilization of quitline services increasing? Are the patterns of utilization changing?

Are registrants re-engaging in quitline services? Do Individual Services serve as a “gateway” to more intensive, evidence-based services?

Did utilization, registration mode, service utilization and tobacco user characteristics change after launch of Individual Services?
How do we address these evaluation questions?

**DATA**

**NAQC Minimal Data Set (MDS)**

- Offers a standard approach to collecting consistent data across quitlines at intake and follow-up
- Focus on improving quality
- Facilitates evaluation across quitlines
- High degree of implementation across quitlines
- MDS evolves over time to reflect new topics and issues of importance
MDS Intake Questions

How heard about the quitline
First time to call
Assessment of tobacco use including ENDS
Intent to quit in next 30 days
Sex
Age
Zipcode
Educational attainment
Race/Ethnicity

Optional Questions at Intake

Insurance status
Income
Mental health/substance abuse disorders
Public Housing
Menthol
Time to first tobacco
# past quit attempts
Age at initiation
# days used tobacco products
MDS Intake Administrative Data

Caller ID
Date of first contact with quitline
Result of first contact
Mode of entry to quitline
Services received

Balance between data collection and timely service delivery

Tailor intake questions to mode of registration?

Limit intake questions for those registering for Individual Services?
Example: WebCoach

Intake questions limited – may not be able to compare these participants to call program participants on all variables of interest

# initial log-ins after registration – not every tobacco user who registers for WebCoach actually follows through with an initial log-in (~50%)

# unique log-in days (preferred primary measure of program use)

# web pages viewed

# visits to each content area

# minutes spent on site

# requests for 2-week NRT starter kit

Use to derive Intensity of Services and Duration of Program Use

Example: Individual Services

What services are participants enrolling in?

C=Coaching
NRT=Nicotine replacement therapy
T=Text messages
E=Emails
W=Web support
Recommendation: Focus on Evidence-based services

How many tobacco users are registering for coaching calls?
  ◦ What other services are they receiving?
    ◦ NRT
    ◦ Some combination of text, email and web support
  How many calls are completed?
  How much NRT is received?

How many tobacco users are registering for NRT without coaching calls?
  ◦ What other services are they receiving?
    ◦ Some combination of text, email and web support
  How much NRT is received?

NAQC Measures: Treatment Reach

Defined as “the proportion of the target population who receives an evidence-based treatment from a quitline.”

In a given year....

\[
\frac{\text{# unique tobacco users who received at least one call and/or NRT}}{\text{Estimated number of tobacco users in the state}} = \text{Treatment Reach}
\]

Many quitline users will not be included in this calculation.
Recommendation: Compare quitline registrants

Before & after introduction of Individual Services
By quitline service/program selected

Do Individual Services appeal to different types of tobacco users?
- Compare demographic characteristics
- Compare tobacco use behaviors

Recommendation: Monitor association between registration mode and service selection

Telephone may not be the preferred mode of communication for many tobacco users.
Are those registering by phone different from online?
Are those registering by phone more likely to enroll in the phone program?
Recommendation: Monitor re-enrollments and service “upgrades”

Most quitlines allow tobacco users to re-enroll for additional services.

Are tobacco users who initially enroll in Individual Services more likely to re-enroll or “upgrade” to a more intensive quitline program?

What factors predict re-enrollment?

Anticipate limitations in the data

May not have all sociodemographic characteristics and tobacco use behaviors for ALL registrants: comparison of registrants by program/service will be incomplete.

May not have residential address for significant proportion of registrants: limits ability to map total registrants and link to Public Housing Authority addresses.

The amount and complexity of registration and service utilization data can be overwhelming. Don’t get lost in the weeds!
Evaluation of Multimodal Quitlines: Outcome Measures

Julie Rainey
Vice President
Outcome Evaluation Questions

1. How successful is the program in helping people quit?
2. Do quit rates differ by the level of engagement with services?
3. Do quit rates differ by the service or combination of services received?
4. To what extent are participants satisfied with the services received?
5. What are the cost per participant and cost per quit?

How do we answer these questions?

MDS Intake data + Administrative data + MDS Follow-up data
How do we answer these questions?

**Collect participant follow-up data**

Select a sample of participants

Conduct a follow-up survey 7 months post registration

The survey collects:
- pharmacotherapy use
- quit attempts
- current tobacco use / abstinence
- e-cigarette use (vaping/electronic nicotine delivery systems)
- satisfaction with services

**NAQC Minimal Dataset (MDS)**

Standard follow-up survey questions, 2 quit rate calculations

\[
\frac{\text{# abstinent from } \text{conventional tobacco}}{\text{# participants received evidence-based treatment}} = \text{Quit rate}
\]

\[
\frac{\text{# abstinent from conventional tobacco} + \text{ENDS}}{\text{# participants received evidence-based treatment}} = \text{Quit rate}
\]
Then....

Most cessation programs would produce quit rates for the quitline program

<table>
<thead>
<tr>
<th></th>
<th>30-day point prevalence abstinence rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional tobacco</td>
<td>34.3%</td>
</tr>
<tr>
<td>Conventional tobacco + ENDS</td>
<td>31.3% *</td>
</tr>
<tr>
<td></td>
<td>28.3%</td>
</tr>
<tr>
<td></td>
<td>27.4% *</td>
</tr>
<tr>
<td></td>
<td>23.4%</td>
</tr>
</tbody>
</table>

Now....

With multi-modal quitlines, which services or service combinations should be included in the quit rate?

Calls
NRT
Web
Text
Email
One option:
Focus on evidence-based treatment

Only participants who received calls and/or NRT

Majority of service combinations and participants will be included

NAQC standard quit rates are calculable

Potential priorities
Services / combinations of services which are:
• Used by the most people
• Promoted by media
• Supported by physician referral systems
• Used by populations with high burden of tobacco use
• New or have not been evaluated yet
• Innovative but unproven, or have a strong evidence base?
Another option:
Tobacco Free Florida example

Start by including those who received evidence-based treatment.

Simplify the evaluation by collapsing service combinations into three categories: 1) Quitline, 2) Web+NRT, 3) NRT

Categorize based on the most intensive service each participant accessed.

Downside of this: Programs fund some services for which no outcomes will be available. Web only, Text only, email only, NOT INCLUDED in quit rates.

Tobacco Free Florida example

Using these 3 categories, we categorized each participant's services based on the most intensive service they accessed.

1) Quitline with or without other services
2) Web Coach + NRT with or without other services
3) NRT with or without other services

<table>
<thead>
<tr>
<th>Service</th>
<th>Quitline</th>
<th>Web Coach + NRT</th>
<th>NRT</th>
<th>Not included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calls</td>
<td></td>
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<tr>
<td>NRT</td>
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<td>Text</td>
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<td>o</td>
<td></td>
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<tr>
<td>Email</td>
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<td>o</td>
<td></td>
</tr>
</tbody>
</table>
Tobacco Free Florida example

We produced 3 quit rates:

1) **Quitline** with or without other services
2) **Web Coach + NRT** with or without other services
3) **NRT** with or without other services

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Sampling considerations

**Random sample** of all eligible participants, which will produce a group of respondents that mirrors the enrollment levels of your program.

Aim for 400 completed surveys; at least 100 for smaller quitlines or limited resources.
Sampling considerations

**Stratified sample** in which you set quotas for each service combination of interest. Randomly sample from each group monthly until you reach your quota.

In this example, our quota was 200 surveys for each service.

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**In summary, which service(s) need a quit rate?**

Depends on the priorities of your program

Find the right balance between not enough and too much information
Questions?