Awareness and Use of National Quitlines:
Evidence from the Health Information National Trends Survey (HINTS)

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Introduction

- Progress has been made in decreasing smoking prevalence in the U.S. However, tobacco remains one of the most avoidable causes of morbidity and mortality resulting in 440,000 deaths annually and an additional 8.6 million people suffering tobacco-related illness (1,2).

- Smoking quitlines have been recommended as an intervention that can significantly reduce the U.S. smoking prevalence and have become essential in tobacco control and prevention efforts. Unfortunately, quitlines are grossly underutilized with only 1-2% of smokers in North America reporting calling a quitline over the course of a year (3).

- Quitline call volume mirrors promotion efforts (4,5). This is challenging because it is difficult for states to manage quitline resources with fluxes in call volume. To understand underutilization of quitlines, it is necessary to assess the current levels of awareness and use in the U.S. , but there is lack of national level data with basic information related to national quitline use.

Purpose

- The purpose of this study is to use a nationally representative data set to examine basic characteristics of those who are aware of and use national quitlines.

Methods

Data

How Americans find and use cancer information
Health Information National Trends Survey

Data were from the 2008 administration of the Health Information National Trends Survey (HINTS). HINTS evaluates public knowledge, attitudes and behaviors relevant to health communication. Data collection occurred from January-April 2008.

Measures

Outcome Variables:

- Awareness of quitlines
  Before being contacted for this survey, had you ever heard of toll free quitlines? (yes/no)

- Use of quitlines
  Have you ever called a telephone quitline (yes/no)

Predictor Variables:

- Sociodemographic variables
  Gender, Age, Ethnicity, Education, Household income, Healthcare access (Do you have any kind of healthcare coverage)

- Smoking status
  Current smokers, former smokers never smokers

Methods Continued

Measures Continued

Predictor Variables Continued:

- Health Information
  Have you ever looked for health information from any source? The most recent time you looked for health information where did you go first?

- Trust in Sources of health information
  In general how much would you trust information about health and medical topics from the following…?

- Access to care
  Is there a particular doctor, nurse, or health professional you see most often?

- Patient -centered communication
  Series of questions about communication with doctors, nurses, or other health professionals during the past 12 months Asked about extent to which health care professionals "…give you the chance to ask all the health-related question you had;" "…give the attention you needed to your feelings and emotions;" "…involve you in decisions about your health care as much as you wanted;" …make sure you understood the things you needed to do to take care of your health;" and "…help you deal with feelings of uncertainty about your health or health care." A summed composite was created for these items ($\alpha=0.89$)

- Cancer History
  Have you ever been diagnosed as having cancer? Have any of your family members ever had cancer?

- Psychological Distress
  Psychological distress was assessed with the question "How often did you feel each of the following during the past 30 days:"…so sad that nothing could cheer you up"; "…nervous"; "…restless or fidgety"; "…hopeless"; …"that everything was an effort"; and "…worthless". Higher scores indicate more distress.

Data Analyses

SAS and SUDAAN were used to estimate appropriate standard errors of point estimates for the complex survey data. All data were weighted to provide representative estimates to the adult U.S. population.

* Individuals who had not searched for cancer information (n=2949) were not asked about experiences of seeking cancer information and were therefore not included in analyses using this survey item.

Descriptive analyses were conducted for all variables. Two multivariate logistic regression models were conducted to predict awareness and use of national quitlines. Variables significantly associated (at p<.05) with outcome variables in bivariate analyses were included in the models. Response categories for some variables were collapsed to avoid over-parameterizing the models.

Results

Table 1. Sample Characteristics

	Aware of Quitline Yes % (N)	Aware of Quitline No % (N)	Called Quitline Yes % (N)	Called Quitline No % (N)
Total	49.8 (3452)	50.2 (3897)	3.5 (113)	96.5 (3252)
Gender				
Male	49.67 (1392)	47.63 (1472)	44.51 (40)	50.21 (1322)
Female	50.33 (2059)	52.37 (2424)	55.49 (73)	49.79 (1929)
	p=.25		p=.41	
Age				
18-34	35.92 (614)	26.06 (454)	24.07 (16)	36.54 (585)
35-49	28.88 (869)	30.30 (898)	29.61 (28)	28.79 (819)
50-64	23.26 (1147)	23.39 (1233)	40.27 (54)	22.74 (1066)
65+	11.95 (788)	20.25 (1282)	6.05 (15)	11.93 (749)
	p<0.01		p<0.01	
Ethnicity				
White	71.81 (2607)	66.87 (2782)	74.69 (79)	71.36 (2454)
Black	9.45 (277)	13.38 (399)	7.67 (9)	9.67 (264)
Latino	12.33 (258)	13.25 (354)	9.51 (9)	12.49 (244)
Other	6.40 (198)	6.50 (222)	8.13 (11)	6.47 (184)
	p<.05		p=.77	
Education				
Less than High School	14.26 (314)	13.25 (352)	22.48 (17)	14.14 (292)
High School Graduate	24.03 (726)	29.01 (1048)	23.77 (30)	24.18 (683)
Beyond High School	61.71(2357)	57.73(2424)	53.74(65)	61.68 (2224)
	p< 0.05		p = 0.41	
Household Income				
<20K	20.01 (524)	19.36 (595)	35.57 (34)	19.31 (473)
20-35K	15.81 (474)	17.52 (569)	17.75 (20)	15.76 (446)
35-50K	14.25 (422)	13.63 (441)	7.81 (10)	14.35 (400)
50-75K	19.93 (598)	18.40 (597)	11.05 (14)	20.57 (573)
75-100K	11.69 (368)	12.07 (401)	13.75 (11)	18.35 (583)
100K or more	18.32 (615)	19.02 (647)	14.07 (10)	14.07 (10)
Health Care	p=.66		p<.05	
Yes	82.66 (2997)	82.85 (3423)	83.49 (95)	82.58 (2829)
No	17.34 (410)	17.15 (422)	16.51 (16)	17.42 (386)
	p=.90		p=.85	
Smoking Status				
Current Smoker	28.10 (829)	15.12 (420)	65.91 (71)	27.18 (751)
Former Smoker	24.36 (1009)	26.19 (1202)	21.84 (28)	24.59 (963)
Never	47.54 (1575)	58.69 (2223)	12.25 (13)	48.23 (1508)
	p< 0.01		p< 0.01	
Trust Doctor				
A lot/Some	94.33 (3249)	94.21 (3671)	93.82 (102)	94.29 (3065)
A little/Not at all	5.67 (176)	5.79 (197)	6.18 (9)	5.71 (164)
	p=.91		p=.86	
Trust Internet				
A lot/Some	70.88 (2304)	71.70 (2431)	69.23 (70)	70.99 (2175)
A little/Not at all	29.12 (844)	28.30 (1030)	30.77 (31)	29.01 (793)
	p=.63		p=.80	
Trust Government				
A lot/Some	77.06 (2580)	72.70 (2710)	69.99 (78)	77.43 (2443)
A little/Not at all	22.94 (770)	27.30 (1025)	30.01 (32)	22.57 (717)
	p<.01		p=.30	
Health Professional seen most often				
Yes	69.62 (2697)	68.76 (3034)	83.02 (96)	69.41 (2539)
No	30.38 (730)	31.24 (827)	16.98 (17)	30.59 (689)
	p=.56		p<.05	
Health Professional Communication				
Never	3.92 (79)	2.86 (85)	4.97 (4)	3.87 (72)
Sometimes	12.98 (325)	12.82 (346)	19.97 (18)	12.64 (297)
Usually	29.92 (841)	29.47 (977)	36.34 (31)	29.80 (791)
Always	53.19 (1675)	54.85 (1876)	38.72 (45)	53.68 (1588)
	p = 0.53		p = 0.15	
Cancer History				
Personal	6.21 (405)	8.46 (580)	7.93 (13)	6.20 (384)
Family	66.32 (2154)	63.10 (2321)	80.85 (77)	65.51 (2018)
None	27.47 (785)	28.43 (879)	11.22 (16)	28.29 (752)
	p<.001		p<.01	
Psychological Distress				
No	91.72 (3116)	92.63 (3521)	77.00 (88)	92.50 (2956)
Yes	8.28 (210)	7.37 (201)	23.00 (22)	7.50 (182)
	p = 0.45		p < 0.05	
Aware of 1-800-Quit-Now				
No	43.38 (1378)	84.28 (3235)	34.97 (33)	43.94 (1317)
Yes	56.52 (1959)	15.72 (590)	65.03 (78)	56.06 (1831)
	p< 0.01		p = 0.17	

Table 2. Logistic Regression of quitline awareness

	OR	95% Confidence Interval	p-value
Age			
18-34	2.10	1.65-2.66	
35-49	1.42	1.21-1.66	0.0000
50-64	1.50	1.25-1.78	
65+	1.00		
Ethnicity			
White	1.00		
Black	0.59	0.42-0.83	0.0187
Latino	0.80	0.60-1.08	
Other	0.87	0.56-1.34	
Education			
Less than High School	1.35	1.02-1.79	
High School Graduate	0.86	0.68-1.08	0.0245
Beyond High School	1.00		
Smoking Status			
Current	2.28	1.89-2.75	
Former	1.22	1.06-1.40	0.0000
Never	1.00		
Looked for health or medical information from any source?			
Yes	1.40	1.14-1.73	0.0021
No	1.00		
Trust Government			
A lot/Some	1.25	1.05-1.48	0.0118
A little/Not at all	1.00		
Cancer History			
Personal	0.88	0.71-1.08	0.3126
Family	1.03	0.86-1.22	
None	1.00		

Table 3. Logistic Regression predicting quitline use

	OR	95% Confidence Interval	p-value
Smoking Status			
Current	9.25	3.18-26.85	0.0002
Former	3.81	1.19-12.23	
Never	1.00		
Looked for health or medical information from any source?			
Yes	3.86	1.65-9.04	0.0025
No	1.00		
Cancer History			
Personal	2.73	0.83-8.93	0.0493
Family	2.85	1.23-6.62	
None	1.00		
Psychological Distress			
No	0.42	0.21-0.83	0.0138
Yes	1.00		

Summary:

- Current and former smokers were significantly more likely to be aware of quitlines than never smokers
- Age, ethnicity and education were significantly related to quitline awareness.
- Looking for health information and having more trust in the government as a source of health information were associated with awareness.
- The greatest predictor of quitline use was being a current cigarette smoker.
- Respondents who looked for health and medical information from any source, had a personal or family history of cancer, and reported psychological distress were more likely to have used a quitline.

Conclusions:

While awareness of quitlines appears to be high, especially in high risk groups, quitline utilization is low. Quitline awareness campaigns that address motivation and engagement might be useful in these populations.

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