

# The Health Information National Trends Survey (HINTS): Data Users' Conference

## Overview

*Bradford W. Hesse*

*May 22, 2019*

# Celebrating Pioneers: Early, Current, & Future

## A Year After SpaceX's 1st Falcon Heavy Launch, Starman (and a Tesla) Sail On

By [Mike Wall](#) February 06, 2019 [Spaceflight](#)



# The Right Stuff: Rimer, Croyle, Nelson, Viswanath, Hiatt, Willis, Kreps



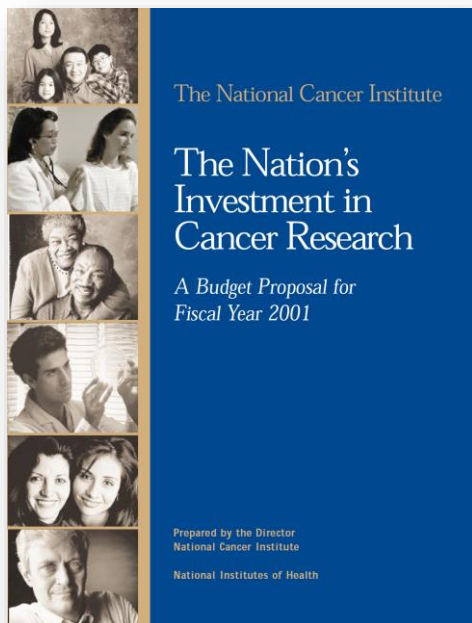


# First Step in Extraordinary Opportunity: Track & Surveil



## Expand data collection.

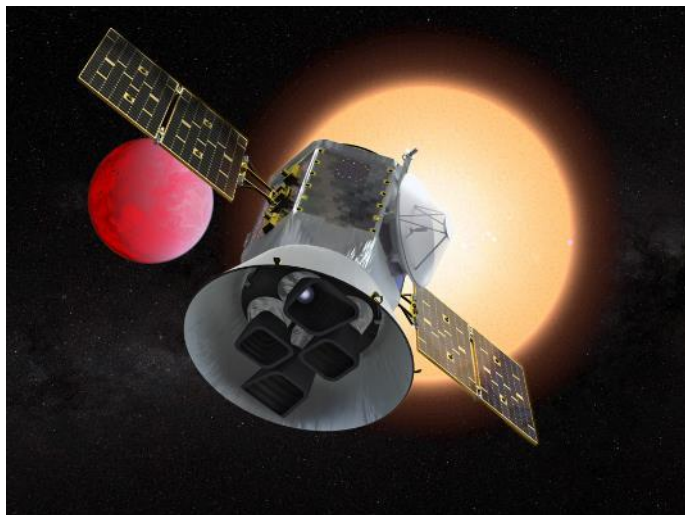
- Sponsor a nationally representative triennial survey and make results publicly available.
- Add questions to established surveys to monitor national trends in cancer communication.
- Track promising new product development.



Establish 6-8 Cancer Communication Centers of Excellence.	\$12.0 M
Develop an integrated cancer knowledge management strategy.	\$10.0 M
<ul style="list-style-type: none"> <li>■ Integrate new media technologies into NCI information services; link to external resources.</li> <li>■ Support new research methods/approaches and disseminate best processes.</li> <li>■ Integrate new information technologies for easier, more efficient, and less costly organization, packaging, and communication of cancer information for users with diverse needs.</li> <li>■ Foster relationships with public health agencies, advocacy groups, and industry.</li> <li>■ Expand communication choices available through CIS.</li> <li>■ Integrate the restructure of PDQ and the CIS activities into NCI's clinical research program.</li> </ul>	
Develop practical tools for cancer communications.	\$3.5 M
<ul style="list-style-type: none"> <li>■ Develop toolkits for media, public, patients, underserved populations, advocacy organizations, health professionals, and cancer communicators to improve cancer communications.</li> <li>■ Support development of decision tools, appropriate for underserved populations.</li> </ul>	
Identify, create, and support promising communications technologies.	\$1.5 M
<ul style="list-style-type: none"> <li>■ Expand JOLI (Joining Organizations with Leading Technologies).</li> <li>■ Co-sponsor state-of-the-art meetings on emerging technologies.</li> </ul>	
Foster interdisciplinary training and educational programs.	\$6.0 M
<ul style="list-style-type: none"> <li>■ Develop interdisciplinary training programs to prepare needed personnel in cancer-related consumer health informatics and cancer communications.</li> <li>■ Fund existing health communications research laboratories to conduct short- or longer-format training programs for research professionals.</li> <li>■ Develop a Master's Program in health communications and media technology delivery.</li> </ul>	
Develop NCI infrastructure in cancer communications research.	\$4.0 M
<ul style="list-style-type: none"> <li>■ Recruit staff expert in health communications and media development, use, and research.</li> <li>■ Create an in-house laboratory for testing cancer communications.</li> <li>■ Implement freestanding science bureau to improve reporting in cancer communications.</li> </ul>	
Management and support.	\$1.0 M
<b>TOTAL</b>	<b>\$43.0 M</b>

Opportunities

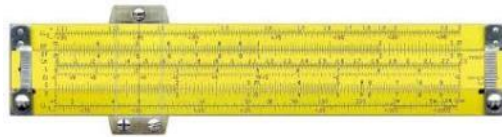
# MISSION OBJECTIVES



- ☐ Foster scientific discovery
- ☐ Function as a monitor for national communication goals
- ☐ Serve as a sentinel for change in a rapidly changing cancer communication environment
- ☐ Support practitioners in translating findings into practice
- ☐ Become a rallying point for solving the “wicked problems” of cancer communication

# Foster scientific discovery

## Technical Support Manuals



## Dedicated Journal Issues, Book



## Scientific Conferences (5)



## 481+ Peer Reviewed Articles

### Published Articles Using HINTS Data

Narrow your results by section...

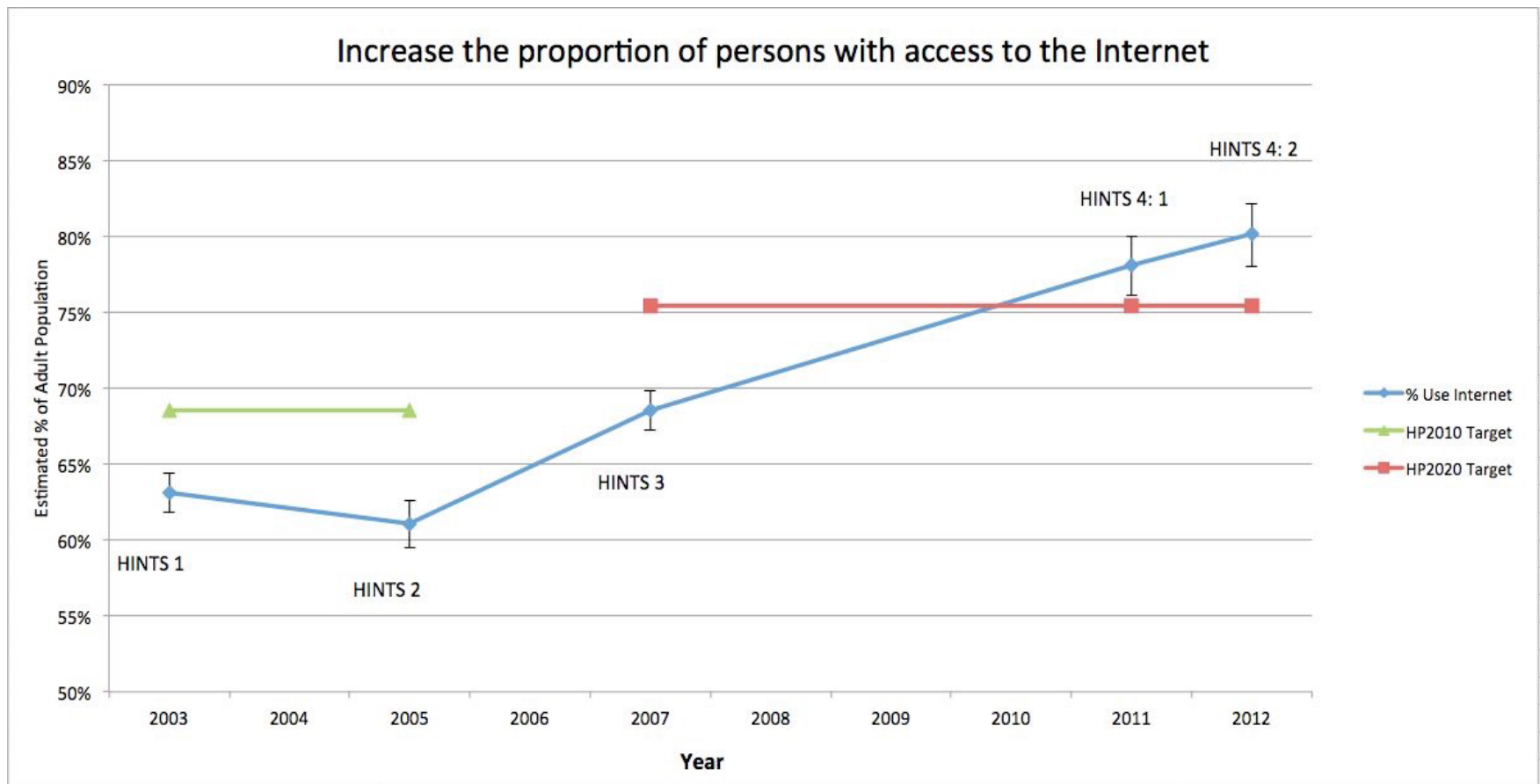
Section Name:

2018

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# □ Function as a monitor for national health communication goals

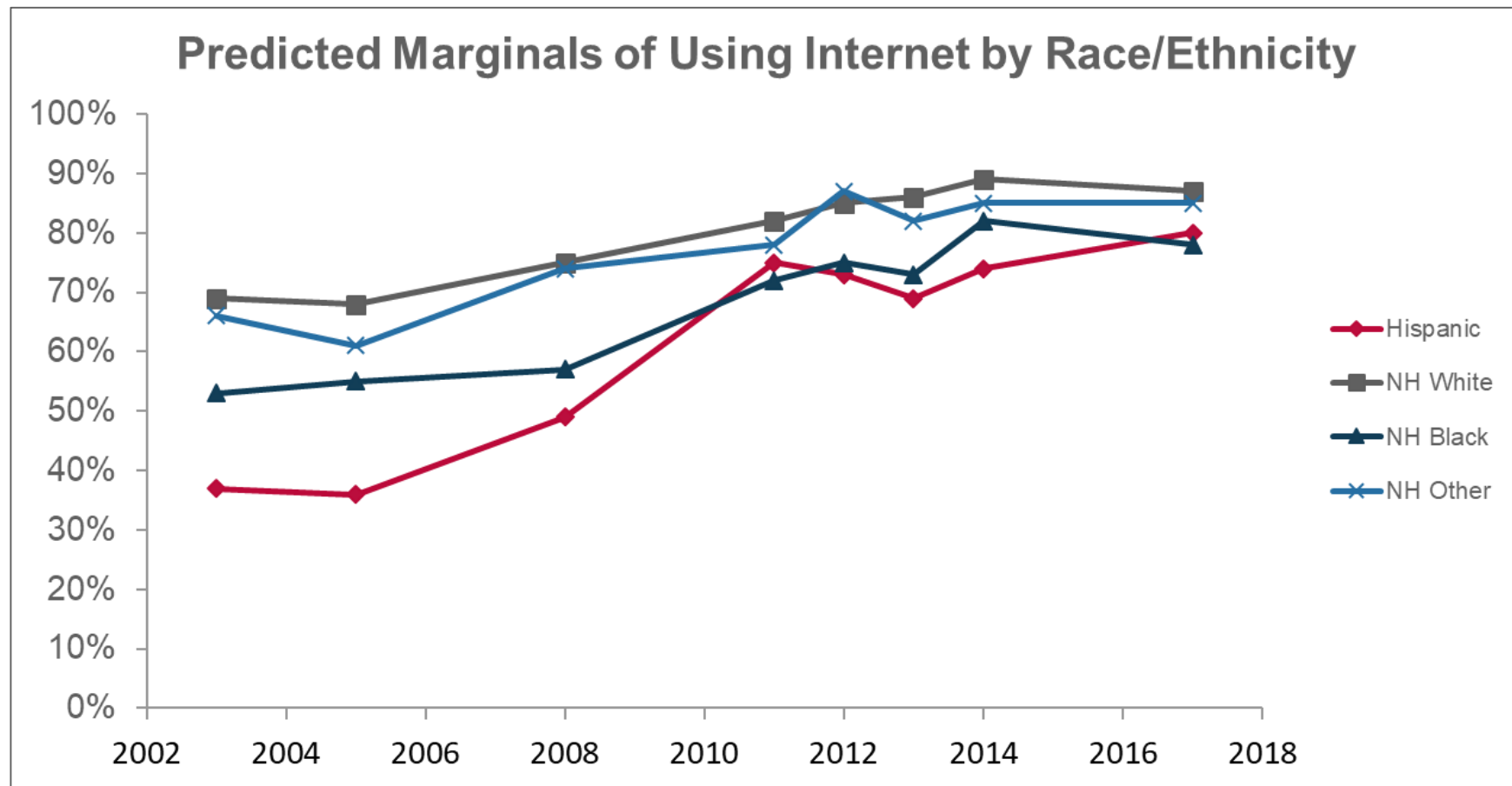
## Example: Healthy People 2010, 2020, & 2030





# Function as a monitor for national health communication goals

## Digital Divide: Race, Ethnicity



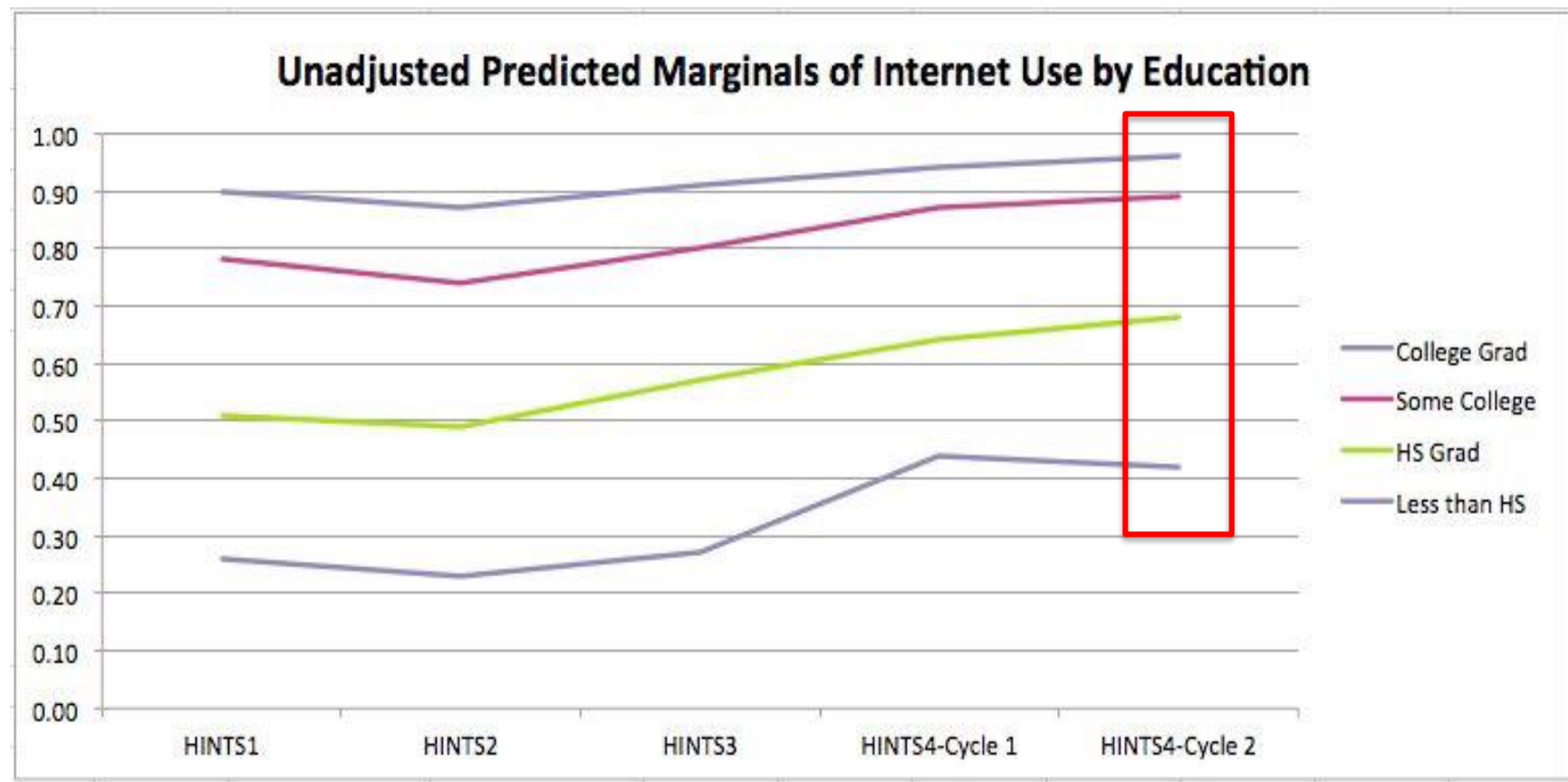


# ❑ Function as a monitor for national health communication goals

Digital Divide: Education



**WARNING!**

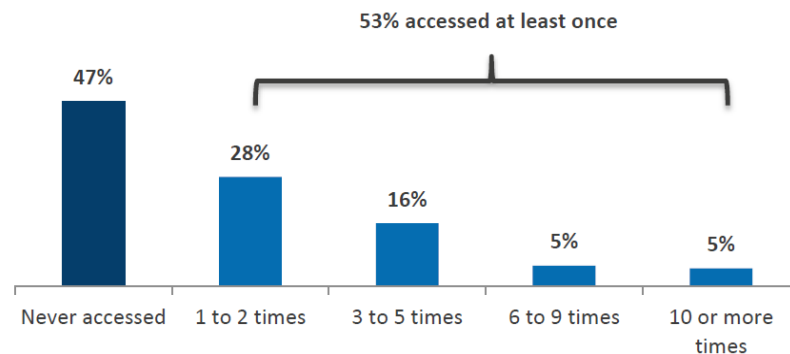


**Source:** Hesse, B. W., Greenberg, A. J., & Rutten, L. J. (2016). The role of Internet resources in clinical oncology: promises and challenges. *Nat Rev Clin Oncol*, 13(12), 767-776.

# ❑ Function as a monitor for national health communication goals

**Among those offered access to an online medical record, more than half viewed their record at least once within the past year.**

Figure 2: Frequency of viewing an online medical record within the past year among those who had been offered an online medical record by a health care provider or insurer, 2017.



SOURCE: HINTS 5, Cycle 1, 2017

NOTE: Numbers do not add up to 53% due to rounding. Denominator represents individuals who were offered access to their online medical record.

Source: Office of the National Coordinator for Health Information Technology. ONC Data Brief No. 40. 2018

# ❑ Function as a monitor for national health communication goals



## WARNING!

Health IT Activity	Rural	Urban	$\chi^2$	p-value
<b>Information Seeking &amp; Communication</b>				
Looked for info for yourself	57.8%	72.7%	13.63	0.0006
Looked for info for others	46.9	60.6	9.43	0.0035
Emailed a provider	23.3	36.7	16.95	0.0001
<b>Healthcare Maintenance &amp; Tracking</b>				
Made an appt	30.4	41.1	6.37	0.0149
Tracked health care costs	29.2	34.6	1.82	0.1836
Looked up test results	24.4	34.3	7.92	0.0070
<b>Electronic Health Records Use</b>				
Provider maintains EHR	75.1	76.7	0.16	0.6893
Offered access to EHR	47.1	54.2	2.39	0.1284
Encouraged access to EHR	29.9	40.7	7.67	0.0079
Accessed EHR	19.9	30.5	13.61	0.0006

**Source:** Melinda Krakow, PhD MPH. (See also: Greenberg, A. J., Haney, D., Blake, K. D., Moser, R. P., & Hesse, B. W. (2017). Differences in Access to and Use of Electronic Personal Health Information Between Rural and Urban Residents in the United States. *J Rural Health*, epub ahead of print)

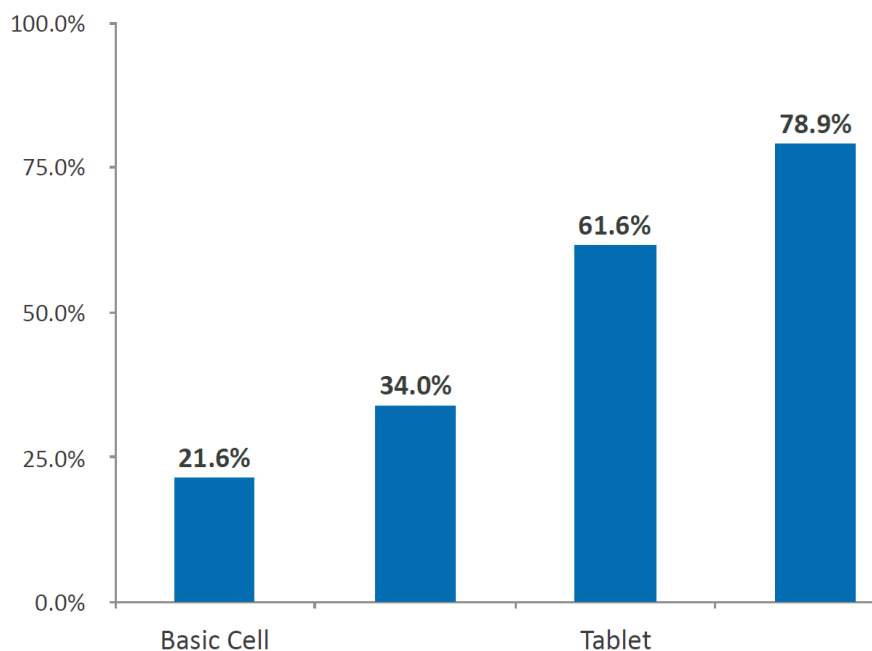
- ❑ Serve as a sentinel for change in a rapidly evolving cancer communication environment

## Use of Mobile to Monitor Health



## HINTS 2017 Data

Percent of individuals who have a basic cell phone, electronic monitoring device, smartphone, or tablet, 2017.

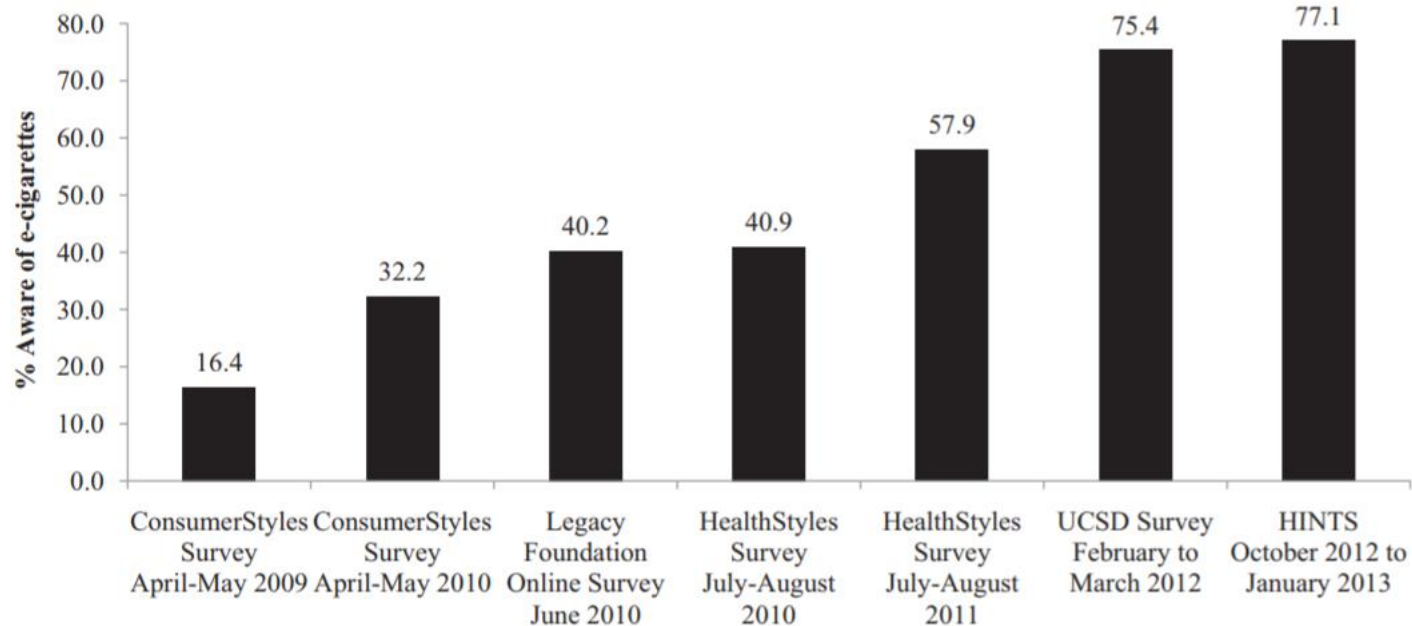


**Note:** Examples of an electronic monitoring device include Fitbit, blood glucose meters, and blood pressure monitors.



- ❑ Serve as a sentinel for change in a rapidly evolving cancer communication environment

## E-Cigarette Awareness & Use



**Figure 1.** Population awareness of e-cigarettes, 2009–2013

Note: Population awareness data from 2009 to 2011 were obtained from separate national surveys.<sup>23,26,27</sup>

**Source:** Tan, A. S., & Bigman, C. A. (2014). E-cigarette awareness and perceived harmfulness: prevalence and associations with smoking-cessation outcomes. *Am J Prev Med*, 47(2), 141-149. doi:10.1016/j.amepre.2014.02.011

# Support practitioners in translating findings into practice: [36 Briefs]



## Beliefs About Nicotine and Low Nicotine Cigarettes Among US Adults

### Introduction

Research suggests that the public may have a poor understanding of the health effects of nicotine. For instance, studies show that many people mistakenly believe that nicotine causes cancer or that reducing nicotine levels makes cigarettes and other tobacco products less dangerous. This is concerning because smokers who believe that nicotine is a key cause of tobacco-related disease may be less willing to use nicotine replacement therapies (NRT) in their quit attempts, hesitant to switch to potentially less harmful tobacco products if they contain nicotine, and may switch to lower nicotine (but equally harmful) products instead of quitting altogether. Additionally, the belief that a product is lower risk because it contains less nicotine could encourage experimentation among susceptible non-smokers.

An accurate understanding of the public's understanding of nicotine and its role in addiction and tobacco-related disease is vital for the development of effective public health messaging on this topic, as well as successful

### Quick Facts

- Nicotine is the primary agent of addiction in cigarettes, but most smoking-related disease is caused by other chemicals present in tobacco or formed by combustion.
- Many people hold incorrect beliefs about nicotine and potentially inaccurate beliefs about low nicotine cigarettes.
- There is no substantial evidence to suggest that reducing the nicotine level in a conventional cigarette will make it less harmful to the user if smoked in the same manner and at the same frequency.
- FDA is considering a rule that would reduce the nicotine in cigarettes to "minimally or non-addictive" levels.

smoking cessation programs. Furthermore, the Food and Drug Administration (FDA) is considering a rule that would lower nicotine levels in combustible cigarettes to "minimally or non-addictive" levels, noting that lowering nicotine levels could decrease the number of youths who become addicted to cigarettes in the future and help currently addicted smokers quit. Assessing the public's perceptions of nicotine and low nicotine cigarettes (LNCs) will be vital to informing these regulatory efforts. This HINTS Brief provides a snapshot of beliefs about nicotine and LNCs among U.S. adults.

### Nicotine addiction beliefs

83 percent of Americans correctly believe that nicotine is the main substance in cigarettes that makes people want to smoke, 5 percent do not think this is true, and 12 percent are unsure.



### Nicotine harm beliefs

About one quarter of Americans (27 percent) correctly disagree that nicotine is the cause of most smoking-related cancers, but 49 percent of Americans incorrectly believe that nicotine causes most smoking-related cancers, and 24 percent are unsure.



### Beliefs about the harmfulness of low nicotine cigarettes

Only 7 percent of Americans rate LNCs as more harmful than typical cigarettes, and while most people rate them as equally harmful (64 percent), a substantial minority (30 percent) believe LNCs are less harmful.



In this HINTS Brief, we examine beliefs about nicotine and low nicotine cigarettes among U.S. adults.

## Beliefs About Nicotine and Low Nicotine Cigarettes by Demographic Characteristics and Smoking Status

In a recently published study, investigators analyzed data from HINTS-FDA (2015) to examine beliefs about nicotine and LNCs among various demographic groups, as well as current, former, and never smokers.\* Although most people are aware that nicotine is the main substance responsible for addiction to tobacco products, about three quarters of Americans either incorrectly believe that nicotine causes smoking-related cancer or are unsure about the relationship between nicotine and smoking-related cancer. People who are non-white, less educated, over 65 years old, and never smoked are most likely to believe that nicotine is chiefly responsible for smoking-related cancers. Additionally, about 30 percent of Americans believe that LNCs are less harmful than typical cigarettes (which may not be true when these cigarettes are smoked in the same way and at the same frequency as regular cigarettes). White adults were more likely than black adults to believe LNCs are less harmful than typical cigarettes, and people who never smoked were more likely to believe this than former smokers.

\*These data were collected before the FDA issued an advance notice of proposed rulemaking for reducing the nicotine level in cigarettes.

### How Can This Inform Your Work?

HINTS data suggest a need to correct misperceptions about nicotine and LNCs among the public to ensure more accurate harm perceptions of various tobacco products, thereby enabling individuals to make informed decisions about their use. This could be accomplished through mass media campaigns, targeted communication efforts aimed at specific subgroups (e.g., racial minorities, those over 65, and those with less educational attainment), or one-on-one counseling by healthcare providers on the effects of nicotine and the harms of other substances found in cigarettes.

Data on the public's potentially incorrect beliefs about nicotine (especially among certain subgroups) could also help improve smoking cessation interventions. For example, if smokers are less motivated to quit because they incorrectly believe that the low nicotine products they use are not harmful, they may benefit from cessation messages that highlight the other dangerous chemicals these products contain. Similarly, because smokers who believe that nicotine causes smoking-related cancer may be less willing to use NRT when quitting, providing resources explaining the effects of nicotine and the safety and efficacy of NRT (e.g., the NRT myths fact sheet available at [Smokefree.gov](http://Smokefree.gov)) through quitlines and healthcare providers may increase the number of smokers who quit successfully by using NRT as recommended.

### About HINTS

[hints.cancer.gov](http://hints.cancer.gov)

The National Cancer Institute (NCI) created the Health Information National Trends Survey (HINTS) to monitor changes in the rapidly evolving field of health communication. The survey data can be used to understand how adults use communication channels to obtain health information for themselves and their loved ones. It can also help practitioners create more effective health communication strategies.

The HINTS survey has been fielded 10 times to date: HINTS 1 (2003) surveyed 6,369 Americans; HINTS 2 (2005) surveyed 5,586 Americans; HINTS 3 (2008) surveyed 7,674 Americans; HINTS 4 Cycle 1 (2011) surveyed 3,959 Americans; HINTS 4 Cycle 2 (2012) surveyed 3,630 Americans; HINTS 4 Cycle 3 (2013) surveyed 3,185 Americans; HINTS 4 Cycle 4 (2014) surveyed 3,677 Americans; HINTS FDA (2015) surveyed 3,787 Americans; HINTS 5 Cycle 1 (2017) surveyed 3,285 Americans; and HINTS FDA Cycle 2 (2017) surveyed 1,736 Americans.

HINTS Briefs provide a snapshot of noteworthy, data-driven research findings. They introduce population-level estimates for specific questions in the survey and summarize significant research findings resulting from analyses of how certain demographic characteristics influence specific outcomes. Many Briefs summarize research findings from recent peer-reviewed journal articles that have used HINTS data.

### For More Information on Cancer

- Call the NCI Cancer Information Service at 1-800-4-CANCER
- Visit <https://www.cancer.gov>
- Order NCI publications at <https://pubs.cancer.gov/ncip/home.aspx>
- Visit [Facebook.com/cancer.gov](https://www.facebook.com/cancer.gov) and <https://www.youtube.com/ncicgov>



NATIONAL CANCER INSTITUTE  
Division of Cancer Control  
& Population Sciences

### References Used in This HINTS Brief

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July 2018

# □ Support practitioners in translating findings into practice.

**Fake News**

## Up-to-date Interpretations of Data

The screenshot shows the NIH National Cancer Institute HINTS website. The header includes the NIH logo and the text "NATIONAL CANCER INSTITUTE". Below this is the "hints" logo and the text "Health Information National Trends Survey" and "Part of NCI's Division of Cancer Control and Population Sciences". A search bar is present with the text "Search Questions" and "enter keyword...". The main navigation bar includes links for "About HINTS", "Data", "View Questions/Topics", "Publications/Reports", and "Meetings/Trainings". The main content area features a large image of a woman reading a newspaper with the text "HINTS May Data Focus" and "Using calorie information on restaurant menus". To the right of this image is a "Social Media" section with links to Twitter, Facebook, and YouTube, and a "New HINTS Publication?" section with a "Submit Here" button. Below the main image is a "What's New" section with links to "Register for the HINTS Data Users Conference", "New HINTS data available for download!", "Save the Date: The Fifth HINTS Data Users Conference", "Check out the HINTS-ASL Project", and "Current HINTS Briefs". The "Current HINTS Briefs" section lists "Brief 35: Lost in Transition? Cancer Survivorship and Patient-Centered Communication" and "Brief 34: Calorie Labels on Restaurant Menus: Who Uses Them and Do They Find Them Helpful?". The footer includes links for "Site Home", "Contact Us", "Policies", "Accessibility", "Viewing Files", "FOIA", and "Connect" with social media icons.

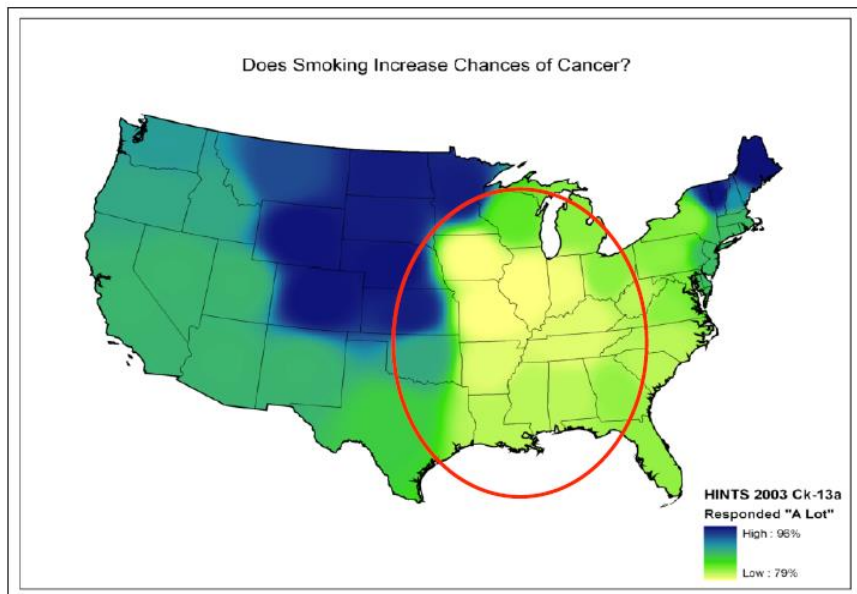
## Social Media Presence

The screenshot shows the NCI HINTS Twitter profile. The header includes the "hints" logo and the text "at NCI". The profile statistics show 5,096 Tweets, 470 Following, 2,214 Followers, and 123 Likes. The bio states: "The official account of NCI's Health Information National Trends Survey. Privacy Policy: oWlyyZMHu30zWQY". The location is "Bethesda, MD" and the website is "hints.cancer.gov". The join date is "April 2011". The "Tweets" tab is selected, showing two tweets. The first tweet is from NCI HINTS (@NCHINTS) and says: "In 2017, about 50% of Americans claimed to be 'not sure' if HPV can cause penile cancer. hints.cancer.gov/view-questions...". The second tweet is from NCI HINTS (@NCHINTS) and says: "ADYK in 2017, over 35% of Americans believed you can get Cancer from drinking too much alcohol. hints.cancer.gov/view-questions...". Below the tweets are four pie charts showing survey results: "Cancer", "Heart Disease", "Diabetes", "High Cholesterol", "Liver Disease", and "Being overweight or obese". The "Who to follow" section lists "NCI Biospecimens", "NCI Epidemiology", and "NCI Supportive Care". The "Trends for you" section lists "President Obama", "Elon Musk", "BarackObama", "FridayFeeling", "FlashbackFriday", "NationalBeetLoversDay", "Tesla", "John Dean", and "ArchivesBackToSchool".

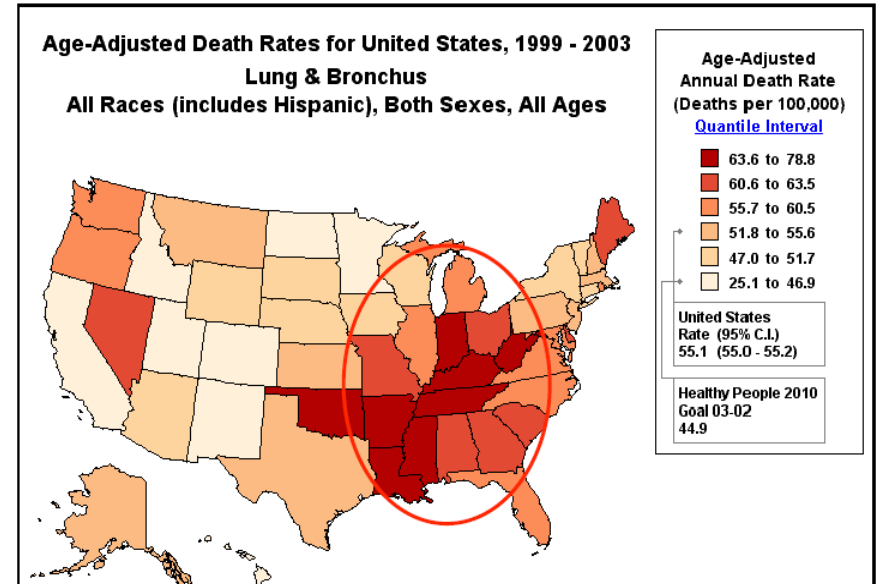


# □ Become a rallying point for solving the “wicked problems” of cancer communication

Available at [hints.cancer.gov](https://hints.cancer.gov)



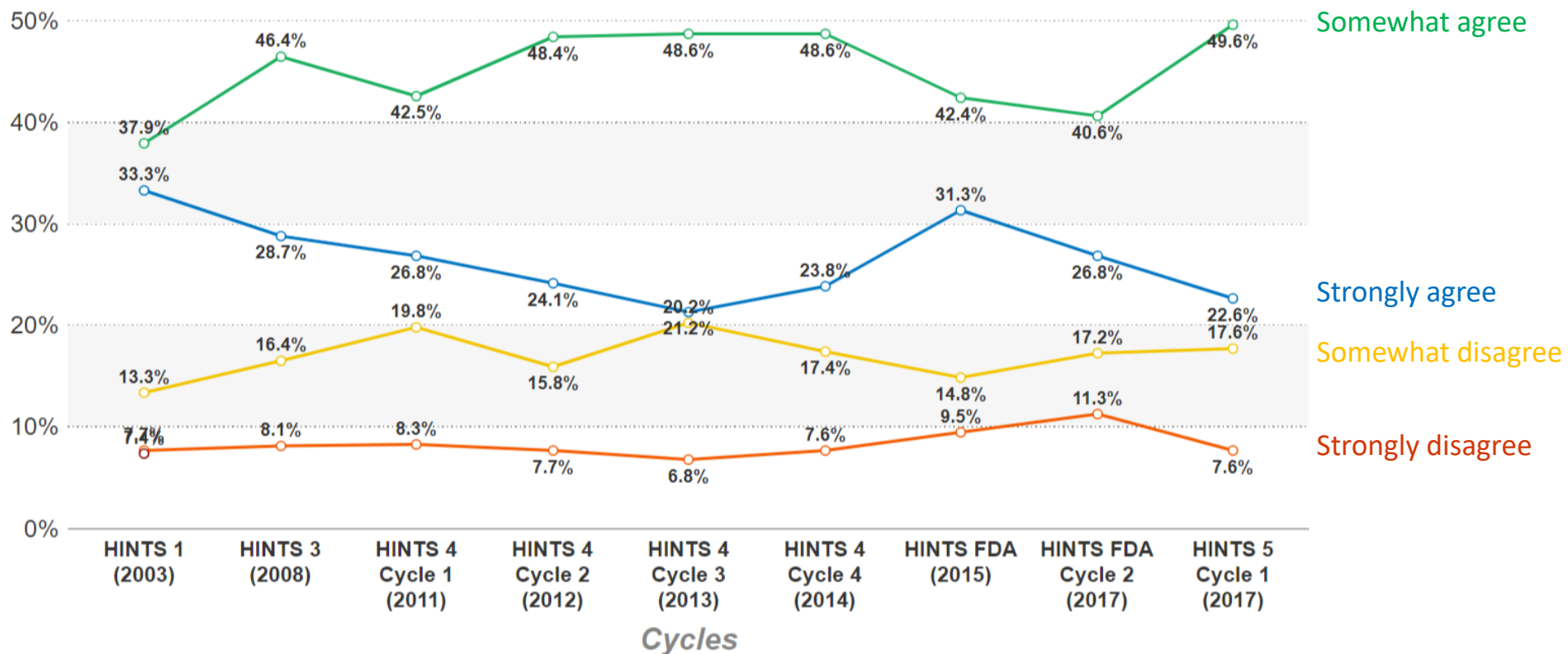
Available at [seer.cancer.gov](https://seer.cancer.gov)





# ❑ Become a rallying point for solving the “wicked problems” of cancer communication

Would you say you strongly agree, somewhat agree, somewhat disagree, strongly disagree with the following statements or do you have no opinion:  
There are so many recommendations about preventing cancer, it's hard to know which ones to follow.



# TODAY'S MISSION



- ☐ Begin with the goal of reducing cancer burden at scale
- ☐ Consider scientific implications of data being presented
- ☐ Formulate a path between mechanism and action
- ☐ Working together, stand up to cancer



# With Gratitude



## Mission Control



## The Right Stuff



## Primary Operations



## Pillars of the program





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[www.cancer.gov](http://www.cancer.gov)

[www.cancer.gov/espanol](http://www.cancer.gov/espanol)