



Academy for Educational Development

Feasibility of Conducting a Communications Evaluation  
of the Health Information National Trends Survey (HINTS) Program

**Situational Analysis  
And Feedback from Stakeholders**

**Final Report**

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## Background and Introduction

The National Cancer Institute's Health Information National Trends Survey (HINTS) is a national health communication survey conducted biennially since 2003. HINTS aims to assess the public's use of health information in an environment of rapidly changing communication and informatics options, and to encourage the NCI extramural community to access the data to conduct hypothesis-generating research into the relationship between health information, knowledge, attitudes, and behaviors.

HINTS is designed to support the Public Health Services Act's mission by systematically evaluating the public's knowledge, attitudes, and behaviors relevant to health communication. The survey was developed to assess cancer-relevant behavior in the population to evaluate the association of communication constructs with behavioral outcomes. The goals of HINTS are:

- Provide updates on patterns, needs, and information opportunities in health
- Identify changing communications trends and practices
- Assess cancer information access and usage
- Provide information about how cancer risks are perceived
- Offer a platform for researchers to test new theories in health communication.

Under a task order from NCI, AED was asked to conduct a qualitative feasibility study to assess whether and how to evaluate the dissemination and use of HINTS. Specifically, NCI described the purpose of the feasibility study to systematically assess whether conducting a formal *communication evaluation* is appropriate for HINTS, and to determine whether this evaluation can be completed at a reasonable cost.

The first step in this process was to review relevant literature, resources, data, and performance measures to inform the evaluation design. Then, AED staff contacted 35 stakeholders, both users of HINTS data and public health experts who have not used HINTS, but may benefit from using it. AED corresponded with 22 stakeholders by telephone and email about how they use data sets and the value of the HINTS survey.

Type of organization	Invited	Participated in telephone/email discussion
University (researchers and graduate students)	9	5
State health dept.	7	5
Cancer center	5	4
CDC	5	2
Cancer organization	4	2
Research company/vendor	3	3
NCI	1	1
Total	35	22

Areas of interest of participating stakeholders:

- Risk perceptions
- Tobacco, smoking epidemiology
- Obesity, nutrition epidemiology, eating behaviors, fruit and vegetable intake

- Physical activity
- Cervical and breast cancer, and disparities/minorities
- Prostate cancer
- Skin cancer
- Colorectal screening
- Media and cancer
- Latino health

This report summarizes the results from the situational analysis and the telephone discussions. It should be noted that the findings from this report are limited in that the situational analysis was a desk review of key HINTS administration and planning documents, a brief review of relevant published literature, and short discussions with a convenience sample of HINTS stakeholders. This review was neither a complete process evaluation nor an extensive interview research study. However, the findings from these small efforts are internally consistent and in line with findings from how other national surveys are used in the public health field, especially the Behavioral Risk Factor Surveillance System (BRFSS).

## Key Findings and Recommendations

AED conducted a limited desk review of HINTS documents and published literature, and conducted short discussions with key stakeholders of HINTS data.

This analysis showed the following:

- *HINTS value:* HINTS provides data that links consumer use of media and communications with cancer behaviors, attitudes and perceptions. No other publicly available, national survey is capturing these trends.
- *Users see value:* Data users tend to be in the academic and research arenas. They heard about HINTS through involvement in the survey development, or via word of mouth. Data users who are familiar with trends find the survey valuable, and want it to continue so that they can analyze trends and changes over time.
- *Non-users have low awareness:* Non-users were often public health practitioners who are not data-savvy. These “results” users are designing programs at the state and local level, for which they are trying to make links between communication and cancer behaviors. These potential users had either never heard of HINTS, or were not aware of the value and content of the survey.
- *Timing and opportunity:* The latest HINTS data is to be released within the next 12 months. This offers an opportunity to reach out to current users, as well as develop ways to reach out to potential users. In addition, the HINTS data set can be useful to a wide range of users, many of whom have not been reached out to directly.

AED does not recommend a full communication evaluation at this time. Given that the timing is more critical for reaching out to potential users, AED recommends planning communications and promotions for the next year. Because many potential users have not yet heard of HINTS (it has only been available since 2003), an evaluation after a more strategic promotional period would offer better findings about the usefulness and use of HINTS data.

This report details the findings from the situational analysis and discussions with users and non-users of the survey.

## **HINTS Logic Model**

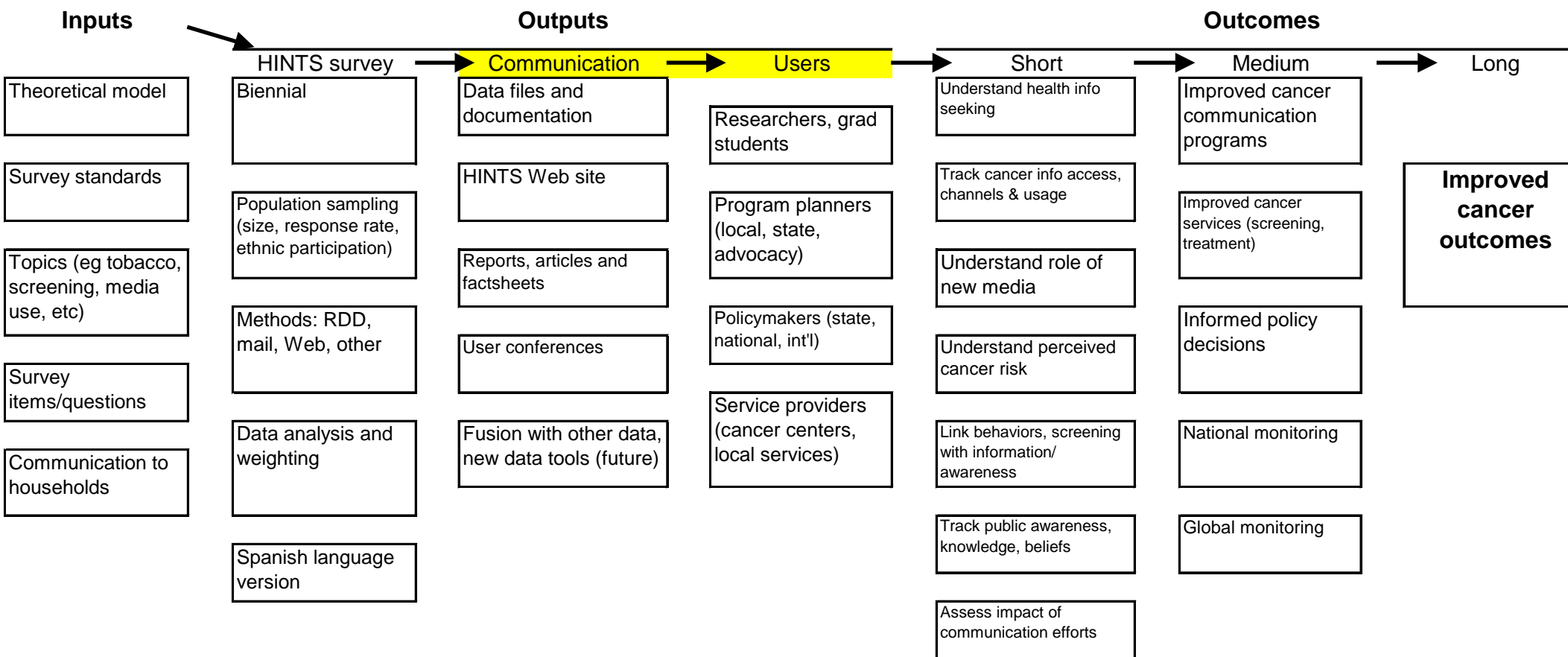
To guide the evaluation plan and to organize this analysis, AED constructed a logic model to describe the HINTS survey, including its inputs and outcomes (see next page). This logic model was helpful for AED analysts to better understand how the goals of HINTS could be reached through inputs and communication activities. In addition, the logic model was also used to identify a variety of stakeholders to contact.

This document follows this logic model. In addition, each section of the model includes implications for communications and outreach, as well as implications for communication evaluation, should NCI decide to conduct an evaluation at a future date.

## COMMUNICATION LOGIC MODEL

**SITUATION:** Biennial, national survey of cancer information

**PRIORITIES:** Increase use of HINTS data



## **HINTS Survey Inputs**

The first column of the model describes the design elements of the HINTS survey. The development of the HINTS survey is described in detail in Nelson and others (2004). Nelson and his colleagues describe the design and planning process to reach the HINTS goals prior to the launch of the first survey. The HINTS survey is based on a theoretical model of how consumers access and use health information. In addition, HINTS survey designers followed accepted survey standards.

The topics and survey questions covered by HINTS are designed to link cancer information, perceived risk and behaviors to access and use of information channels, as depicted in the theoretical model (Nelson and others 2004). However, many cancer prevention behaviors overlap with behaviors for prevention of chronic illness, and screening behaviors overlap with health services use measures, resulting in HINTS measures duplicating data found in other surveys. Several researchers have compared the validity of measures from different surveys (see Nelson and others 2002; Nelson and others 2001; Troiano and others 2001; Ainsworth and others 2006). However, AED has not identified any published literature comparing HINTS measures, specifically.

Communication researchers who are users are familiar with the theoretical model and believe this increases the value of the survey. It is the only publicly available survey that links behavior, information and media/channels that is designed to capture trends from year to year (that is, the elements do not change drastically from one survey to the next, as in most omnibus or marketing surveys). Those who have used HINTS and recognize its value would like to see the continuation of the survey and more rounds of HINTS surveys to get a better handle on the trends through more data points.

AED found no recent reports or articles that describe if users are satisfied with the HINTS topics and indicators. From the interviews conducted for this situation analysis, a few more suggestions from data users emerged as to what they would find useful in HINTS data. Suggestions included asking HINTS respondents about specific treatments, like chemotherapy, as that information would be useful for those who work with cancer patients. Another user suggested oversampling cancer survivors, to get more meaningful data on cancer survivor patterns. Another data user would like to see HINTS questions on mental and psychological models linked to behaviors. Through another project for NCI, AED heard from organizations working on clinical trials that they wished HINTS tracked public awareness and perceptions of cancer clinical trials.

## **Implications for communication and outreach**

The design of HINTS and its theoretical model are key values to communicate to users and to potential users. Potential users need outreach to explain this value and to introduce them to HINTS, because it is still new, especially compared with other national surveys (such as BRFSS and the National Health Interview Survey). The value to the current users, such as well-known communications researchers and publications in peer-reviewed journals, brings credibility and additional value to HINTS data, that can further its promotion. However, HINTS should not rely solely on published articles that use HINTS data to get the word out. The peer-reviewed

publication process is lengthy: two recently published articles used HINTS data from 2003 (in 2008 issues of *Journal of Health Communications* and *Journal of the Society for Public Health Education*).

### **Implications for communication evaluation**

AED assumes that the statistical standards used in the design of HINTS continue to be followed, and the appropriateness of statistical methods is not an area to be included in a communication evaluation. However, users' perception of the data quality can be further assessed.

Westat reports in the 2005 final report that survey participants find the survey quite long and are frequently frustrated by the seemingly redundant questions. Future HINTS surveys must continually balance the need to capture trends, explore new theoretical models and changes in the environment, while keeping the survey to a manageable length.

HINTS must meet the needs of data and results users by providing measures for health issues that they study or for which they create programs or policies, as well as being based in a theory of change that is still valid.

Finally, measures that overlap with other surveys must be presented in a comparable manner or users must be provided with a way to understand how best to compare and/or use various data sets together.

#### *Potential evaluation questions:*

- Are users aware of the theoretical model? Do users support the theoretical model? Is the model still valid?
- How well does HINTS offer an opportunity to test other communication theories?
- What is the perception of the quality of the data, as the data relates to the content of the survey?
- What are the survey participants' quit rates related to redundancy and/or length of the survey? How can the HINTS indicators be streamlined and still reach the objectives of supporting the theoretical model and the testing of theories?
- Do the content/topics meet the needs of the users? Which ones, specifically? Which topics are missing?
- How are the measures similar/different from those of other surveillance studies, and do differences affect how data are used?
- What is the unique contribution of HINTS as one of many surveys?



## HINTS Survey Implementation

The next column of the logic model describes the HINTS survey and how it is implemented. The HINTS survey has been implemented twice (in 2003 and 2005) and a third data collection recently has been completed by Westat (an NCI contractor). The survey uses a random-digit dial method to reach about 6,000 American adults. A Spanish-language survey is available for respondents who prefer to respond in Spanish. The data sampling and implementation information is available in detail through administrative reports from Westat.

There are several publications that report how other survey designs, sampling methods and implementation have been evaluated and re-tooled (see for example NCHS 1999; NHIS, 1995-2004; CDC 2003). These evaluations have focused on reviewing sampling data taking into account new Census data; changes in communication technology; moving from paper and pencil instruments to computer assisted ones; participant privacy concerns; dealing with population diversity and a variety of languages spoken; improving reliability of statistics for ethnic, economic and geographic domains; rewriting questions or adding items; streamlining data analysis and release as well as other implementation issues.

Data users we spoke with highlighted a few concerns about the survey sample. For example, one data user had trouble publishing his analysis of HINTS data due to perceived limitations of the survey by peer-reviewed journals, as there were questions about the response rate. Other data users also shared concerns about HINTS' response rate and how representative the sample is. In one user's opinion, even though for some critical questions, HINTS has the largest sample available from any other survey, the sample overall is not very large. Researchers shared that it would be beneficial for them to get updates on why the response rates are lower from one set of HINTS to another (e.g., a minority response rate was lower in HINTS II than HINTS I), or what the reasons are behind changes to the data sets. Lastly, one HINTS data user suggested that the same people could be sampled longitudinally over time. NCI should continue to invest in exploring alternative surveying methods for HINTS surveys.

From AED's review of HINTS documents, we identified two areas of communication that may benefit from further research.

### *Invitation letters*

Surveys are routinely preceded by an invitation letter. Some published research examines the effect invitation letters have on the public's response to surveys. For example, Dillman (2000) applies the social exchange theory as a framework to survey responses, and includes three elements that can affect individual response. Before undertaking any given action individuals consider the action's rewards, costs and trust. Trust refers to the expectation that in the long run, in a cost-benefit analysis of a given action or situation, the benefits will be greater than the costs.

Dillman (2000), in a summary of research in the field, described how the language and information that is incorporated in a survey invitation letter may work toward influencing the public's view of the reward, cost and trust. For example, in providing monetary rewards, research has shown that a token incentive is more powerful than the promise of a greater reward.

Beyond economic rewards, there are other ways to reward a potential respondent. For example, the communication with the potential respondent can reward him/her by showing positive regard. This can be accomplished by giving the respondents the reasons why the survey is being conducted, providing a number for them to call with questions, and personally addressing correspondence. Verbal appreciation is shown to also have a reward effect and can be accomplished, for example, through a follow-up postcard of expressing appreciation in the letter itself. Also, asking respondents for advice or help, achieves the purpose of them knowing that they helped with meeting a larger goal. Research has also focused on ways of making a survey interesting, from improving the layout and design to the order or the questions to increase the response rate. Lastly, language used in the letter should be clear and understandable.

In order to avoid the cost to the respondent, research has suggested to avoid using subordinating language or language that would cause embarrassment or anxiety. Also, it has been suggested that requests for personal information be kept to a minimum. Inconvenience to the respondent should be avoided and the time commitment required to participate should be short to the extent possible and easy.

Trust can be built by providing an incentive or token of appreciation in advance, and label it as “a token of appreciation” as opposed to a “payment”. Respondents also tend to trust surveys that are sponsored by a legitimate authority. Government-sponsored surveys are generally trusted, but the legitimacy of a request can be questioned if for example the return address is that of a processing center as opposed to headquarters, or the packaging of the letter or survey reflects private sector marketing orientation.

Westat and HINTS staff have been conducting formative research around incentive payments and invitation letters. The focus group research around the invitation letter for the 2007 HINTS survey was limited in scope and number of messages tested. This research could be further expanded to better understand the benefits messages in coordination with other incentives.

### *Trends in telephone surveys*

Several studies have found that telephone surveys result in lower risk measures than household interviews. For example, Nelson and his colleagues (2003) confirmed that the BRFSS telephone surveys yield lower smoking rates and lower BMIs than the NHIS household survey, attributable to the lower participation rates of minorities and other at-risk Americans.

A random-digit dial method does not include phone numbers dedicated to cellular phones. As the U.S. population increasingly uses cell phones, any random-digit dial survey will miss people whose primary phone is a cell phone. Although research indicates that people who only have a cell phone are significantly different than those who can be reached on a landline [this estimated 7%-9% of the population are younger, less affluent, less likely to be married or to own their home (Pew 2006)], for now that bias is small enough to not influence the results of RDD studies.

As far as minority populations are concerned, the issue of any telephone coverage may be of more concern than reaching people with only cellular phones. A paper on the limitations of the BRFSS (Powell-Griner for CDC) reported that the percentage of the population that can be

reached by phone varies by region (e.g., lower in the South than in other regions), and by population subgroup (e.g., Native Americans households and Black households are without telephones at higher rates than White households). It also varies depending on the languages spoken in a county or region with a general with minority race and ethnicity and linguistic isolation negatively correlated with participation rates (Link and others 2006). These results were of particular interest as they showed that in specifically Spanish-language isolated households had low participation rates despite the fact that the BRFSS is offered in both Spanish and English.

Increasing participation rates and increasing minority participation in survey research is an ongoing area of study. Evaluations and redesign efforts of other surveys have identified methods for improving inclusion, such as:

- Geographical stratification by minority population density (NHIS)
- Oversampling by block with screening questions to identify minority households (NHIS)
- Sampling from Medicare lists (NHIS)
- Oversampling geographic areas or ethnic groups (CHIS)
- Network sampling (NHIS)
- Mailing a survey using a sample from a frame of addresses can achieve a higher response rate (especially when 2 mailings are sent) (BRFSS).

Andersen, Diehr and Luke (2004) similarly reported that surveys that used the electronic white pages reported better response rates as these listings permitted mailing approach letters in advance.

NCI staff have been working with Westat to explore other survey methods, such as a pilot survey on the Web.

### **Implications for communication and outreach**

AED did not identify any implications for outreach to users in this area, but did hear concerns from data users on HINTS response rates, as described above. In addition, some non-users who are interested in results for their local programs may be interested more sampling of minority groups or local areas than is currently possible in HINTS.

More formative research around the invitation letter may offer NCI an opportunity to contribute to the field. While there is some research around how to mail out invitation letters, and comparing response rates to telephone invitations (or voicemail messages), there is limited research on persuasive messages, benefits of participation from the householder's point of view, and segmenting of households based on appeal of or willingness to participate. NCI examination of these issues, as well as improvement in response rates through further examination of alternative methods, may help allay concerns from data users.

### **Implications for communication evaluation**

The issue of reaching people who only have a cell phone will become more pertinent as the percentage of the population that only uses cell phones increases. The bias concern may be more

technological in nature and should continue to be examined, however it may be out of the scope of a communication evaluation of the HINTS survey.

*Potential evaluation questions:*

- What is the perception of the timeliness of HINTS (related to the administration schedule)?
- How would other frequency options appeal to users (such as rolling surveys, shorter timed marketing surveys, less or more frequent than biennial)?
- Are the data analysis and reporting released in timely manner?
- Do perceived implementation or timeliness limitations affect usefulness?
- Do users require more minority or geographic breakdowns or data for analysis and for what purposes? What other surveillance mechanisms are comparable/currently used for these analyses?

## HINTS Communication Products

The next column in the logic model describes the communication products that help promote the use of HINTS. NCI produces a number of printed summaries of the data, as well as an extensive Web site for users of HINTS data and results. Data can be visualized through user-friendly fact sheets, bar charts and maps. Data files can be downloaded for secondary analysis. A series of HINTS briefs summarize key findings for HINTS analyses, and the Web site highlights publications that have used HINTS data.

From our discussions with data users, the HINTS products are meeting their needs. Data users find the code book clear, the data set-up in a way that was useful to them, the variables well-labeled and the database overall user-friendly. Users say they can easily download data and manuals, and can find what they need to conduct analyses. One thing that data users would like to see on the HINTS Web site is a more comprehensive list of research that has used HINTS data to avoid any research overlap. There is also the potential for the data users who are comfortable with data analysis to use HINTS products more creatively. One data and results user reported that she has modified questions from HINTS and fielded them in a state questionnaire to make comparisons with national data. The information was also used to decide on the best venue for their cancer prevention messages, and inform where to target and promote their programs.

Because non-users are unfamiliar with HINTS, we have limited feedback from this audience. Most are “results” users, and are not skilled in downloading and manipulating data to answer their programmatic questions. Many of the interviewees who were not familiar with HINTS, reported that they had staff (e.g., epidemiologists, statisticians) who conducted the data analysis for them. One interview participant who was vaguely familiar with HINTS shared that they had two staff members who used HINTS data, but when they left the organization, they were left without someone who was familiar with the survey, and stopped using it. While state public health officials have some access to their BRFSS coordinators to help them with BRFSS data, there is no counterpart for assistance with other data sets. Even an epidemiologist at CDC was limited to how much time she had available to conduct analyses of data. She often uses published data for programmatic decisions, and uses data sets minimally for checking statistics. Another state program data user suggested that it would be useful to have some variables, like ethnicity, already calculated and available, since even a simple variable like that one takes programming to extract it from HINTS data. A few data surveys already offer simple variable analyses tools on their Web sites, such as C-STATS (County and Statewide Archive of Tobacco Statistics).

A couple of non-users shared what they find useful in a dataset, listing ease of access and presentation of the data as important due to lack of time to sort through data, and also datasets that have state, regional, county and even city level data. One interviewee shared that the most useful thing about the datasets they use is the ability to do some geographic mapping to locate where certain behaviors are lacking and to inform where they need to invest in resources and programs.

A few results users who are familiar with HINTS found the factsheets (briefs) very helpful. One used them for distribution to community partners, to explain the rationale behind program plans, as well as to compare to their local data to what is happening around cancer nationally.

Some uses of the data that non-users gather are for such things as reporting purposes, presentations, and grant proposals on topics like physical activity, obesity rates, fruit and vegetable consumption, BMI/weight self report, cancer incidence and mortality data, research that can influence direct patient care, information for underrepresented patients, breast feeding, television viewing/screen time, sweet and beverage consumption, and portion sizing. One non-user said that if HINTS shared findings that were relevant to what they are doing, they would most likely find a way to use that information.

### **Implications for communication and outreach**

The data sets and associated materials and tools appear to be a strength of the HINTS program for data users. These materials can be further promoted to other graduate schools and research institutes with data analysis capabilities.

Results users may need a variety of other tools and easy to access results menus to easily take advantage of the HINTS data. Program planners often need data at decision points, and the HINTS Web site has results scattered through various publications and reports, as well as tools to quickly look at data graphically.

### **Implications for communication evaluation**

NCI's contractor MMG has created a communication plan to help promote the Web site. Key to users finding and using the data is communication and promotion of the site and the data tools to users and potential users. In addition, tools must be easy to use and appealing to the users. This is a key area for the communications evaluation.

Communication theory can help guide how to assess if users are hearing about and using the HINTS products and tools. For example, diffusion of innovation (Rogers 1995) may provide simple indicators to assess how accessible and appealing the tools are (i.e., relative advantage, compatibility with current needs, complexity, ability to try out, and sharing results).

#### *Potential evaluation questions:*

- How have users heard about HINTS, its Web site, and its products and tools?
- Who supports or endorses the use of HINTS data? Who does not support it? Who else uses HINTS?
- How have users tried to use HINTS, that is, tried it and chose not to use it, or tried it and failed to reach their goal?

- What HINTS tools and services (products, conferences, and Web site) have been used, and what feedback can users provide about the quality of these?
- What are users' preferences for types of channels to learn more about HINTS? Which channels, if any, do users never use?
- How easy or difficult are the Web tools and downloads to use? How do they compare with other surveillance sites?
- What other tools or products would users like to have and use? How do these meet their needs (see next evaluation section related to users and their needs)?

## **HINTS Data and Results Users**

NCI's goal is for HINTS data to be used by researchers, program managers and policy makers. HINTS data is available as raw data for analysis by researchers, as well as actionable summary presentations (HINTS briefs) for use by officials making decisions in health programming.

Key HINTS users and stakeholders include:

- Other Federal agencies and offices, including the CDC, Department of Health and Human Services, the National Institute on Drug Abuse, and NIH's Office of Behavioral and Social Sciences Research
- Academia, including faculty and students at Harvard University, Brown University, University of Minnesota, University of Pennsylvania, and Rutgers University, and other schools of public health or with cancer research or communication programs
- Non-profit and advocacy organizations, including the American Cancer Society and the Pew Internet and American Life Foundation
- Users and potential users of HINTS data, including local, state, and national public health program planners, cancer centers, private industry, and policymakers.

NCI collects the contact information for the data users via their Web site and user conferences. NCI encourages researchers to submit their articles and presentation to be listed on the HINTS Web site.

### *HINTS Data in Published Research*

HINTS data appear to be often used in research articles on cancer-related topics. The cancer topics that have been researched using HINTS data are varied and include: risk perceptions; health disparities; information needs; information seeking disparities; health behaviors in survivors; information seeking; nutrition-related prevention attitudes; prevention behaviors; screening (mammography, prostate-specific antigen, breast cancer, colorectal cancer, HPV and cervical cancer); knowledge about prevention; and communication inequalities.

A smaller number of articles have used HINTS data to look at tobacco-related topics. Some examples included individual factors associated with smoking, the effect of media on smoking, or a national population sample study to gauge interest in trying a less harmful cigarette.

Other uses of HINTS data have been in nutrition or obesity related research. For example, an article published in 2007 focused on the socio-demographic and communication factors that correlate with ignoring fruit and vegetable consumption recommendations, an another study looked at the awareness, use and perceptions of low carbohydrate diets and nutritional recommendations. Another study looked more broadly at improving the community's health through obesity prevention programs.

Other researchers have used HINTS data to examine topics on communication behaviors (e.g., communication behaviors of ePatients, perceptions of health care providers' communication behaviors, racial and socioeconomic disparities in satisfaction with provider communications, social networks in health communications, diversity dimensions and their implications for health



communication, as well as patient-provider communication). Other general topics have been explored using HINTS data, such as eHealth information seeking, perceptions of information sources (traditional *versus* WWW), and health inequalities.

A few of the articles from the above categories that have been published using HINTS data have focused further on special populations like African Americans, Asian Americans, Hispanics, women, men, cancer survivors, or the uninsured.

Lastly, topics research using HINTS data may include other categories. One such article focused the use of sunless tanning products and the correlates and prevalence of sunless tanning use.

### **Implications for communication and outreach**

From our discussions with data and results users as well as non-users, we can summarize the audiences as in the chart below:

	<b>Data Users</b>	<b>Results Users</b>
<b>High awareness</b>	<ul style="list-style-type: none"> <li>▪ Researchers</li> <li>▪ Graduate students</li> </ul>	<ul style="list-style-type: none"> <li>▪ A few program planners</li> <li>▪ CDC</li> </ul>
<b>Low awareness</b>	<ul style="list-style-type: none"> <li>▪ Epidemiologists (state and CDC)</li> </ul>	<ul style="list-style-type: none"> <li>▪ State and local program planners</li> <li>▪ CDC</li> <li>▪ National cancer organizations</li> <li>▪ Other funders</li> </ul>

Each of these audiences will have different needs as far as channels for outreach, key value of the HINTS survey and other messaging, and tools or technical assistance for ease of use of the data and/or results.

### **Implications for communication evaluation**

Data such as the above will be important for health care providers and public health officials who seek to provide better risk communication to the general public and to vulnerable populations. This is the second key area for the communications evaluation.

*Potential evaluation questions:*

- Who are the key users of the HINTS data, both data users and results users?
- Who should be using the data, but are not? Why not? What other data are they using?
- What are users' past experience using the data, and how compared with other data?

## **HINTS Outcomes**

The last three columns of the logic model lay out the short, medium and long-term goals of the HINTS survey. These reflect the objectives that HINTS data can help plan, monitor and affect the outcome of cancer programs.

### **Implications for communication and outreach**

AED did not assess these outcomes in this feasibility study. Given that many program planners are still unaware of HINTS, communication and promotion can only help NCI reach the outcomes and potential impact of the HINTS program.

### **Implications for communication evaluation**

Given the short amount of time that HINTS has been fielded, a communication evaluation may not seek to try to show outcome measures. However, the evaluation can document if these are in line with users' expectations and their own research objectives.

#### *Potential evaluation questions:*

- How are the short-term outcomes reflective of users' goals and objectives?
- Are users using HINTS data for the outcome objectives or other objectives?
- Which other surveillance mechanisms are used for these goals?
- Do users have adequate data analysis skills to meet these objectives?

## Comparison with Other National Health Surveys

Understanding how HINTS compares with and complements other national health surveys is important to put the HINTS evaluation in the context of the users' environment. Researchers and users of HINTS results also have other data sets available to help with decisions or to reach other goals and objectives. (A summary of other national surveys, not including HINTS or BRFSS, is available at [www.cdc.gov/nchs/data/NCHS\\_Survey\\_Matrix.pdf](http://www.cdc.gov/nchs/data/NCHS_Survey_Matrix.pdf))

Interviewees who were not familiar with HINTS, reported using information from other datasets, including: NHIS, BRFSS, the Youth Tobacco Survey, the Youth Risk Factor Behavioral Survey, the National Health and Nutrition Examination Survey, state cancer registries, C-Change, and the Pregnancy Risk Assessment Monitoring System. They also reported using specialized datasets on topics such as breastfeeding, hospital discharge data, or using data from organizations like C-Change, the American Cancer Society, or state health departments, or even collected their own data.

There are two main areas of overlap of survey items. Several behavioral indicators on HINTS (such as smoking, physical activity and eating) overlap with the BRFSS and other surveys, and occasionally with HealthStyles (depending on the questions submitted to that marketing survey). The HINTS survey items that include media use and channels overlap with HealthStyles items. However, HINTS items are repeated each year, and HINTS data is freely available.

Another area of learning from other surveys are how data is shared with users. For example, the SEER program offers similar tools and materials on its Web site (Hankey, Ries and Edwards 1999). Given that data and results users may overlap with audiences for SEER and other data, understanding how these products are used and valued may offer insights for HINTS. For example, the BRFSS researchers conducted a qualitative study of its intended users (state-level health program managers), and found that:

- BRFSS data was valued by state-level planners
- Data was used for public education, trend analyses, planning, policy support, and program evaluation
- Users wanted more county- and subpopulation-level data
- Barriers to use included lack of analysis skills and resources (including staff) (Bloom and others 2000).

AED's discussions with other survey managers (at tobacco supplement of the Current Population Survey and the National Center for Health Statistics) found that they are grappling with similar issues around training, promotion, and dissemination of data to results users. HINTS staff have participated in training sessions with other survey teams to introduce HINTS and offer technical assistance to potential users.

NCI staff are looking ahead to the future to find tools and other ways to help users integrate findings and compare data sets with HINTS. For example, overlaying SEER data over HINTS data can help compare morbidity with behavior by geographic area.

## Implications for communication and outreach

AED did not identify any specific competition between HINTS and other surveys. Indeed, many results users do not seem to be using much data at all for decision making purposes. Communicating the value of HINTS along with its unique strengths can be presented in the larger context of how other surveys offer different strengths and fulfill a variety of purposes. Continued coordination with other survey staff may benefit all the participating surveys in reaching out to new users.

### **Implications for communication evaluation**

As included in each section above, the communication evaluation should assess how HINTS compares with other surveys in each indicator area, to identify opportunities, areas for comparison, and unique qualities.

#### *Potential evaluation questions:*

- How is value of HINTS data and content seen as compared with other surveys?
- How are the various surveys used together or in complementary ways?
- What are the unique features of other surveys and tools that are appealing to users?
- How can data tools offer ways to integrate data sets and address users' needs for cross analyses?

## Conclusions and Recommendations

The HINTS program offers researchers, state program planners, and national funders a unique and rich data set that links media and other communication, to consumer attitudes and perceptions, to behaviors around cancer prevention and screening. While many indicators and measures can be found in other surveys, HINTS is designed to continue to track these over time, to capture changes in the media environment as well as changes in cancer behaviors.

Because HINTS has not been available for as long as other national surveys, it is no surprise that many local program planners are not familiar with either its purpose or its data. And as some users themselves say they have only heard about it through a direct relationship or word of mouth, additional promotion and communication is needed to reach out beyond current HINTS users.

The HINTS data collection for 2007-8 has recently been completed, and a new year of data will be released in about 12 months. This offers users a chance to further examine trends, and potential users a chance to explore the data for the first time. Both types of users should be reached out to at this critical time.

AED recommends developing a strategic communication plan for reaching out to the audiences that are skilled to use the new data set, and audiences who need results to make programmatic decisions at local and national levels.

In addition, AED suggests that NCI conduct formative research with these audiences to identify key messages and benefits to HINTS to help in these promotional efforts. Yet equally important, NCI should identify solutions to barriers to using HINTS, so that new users with fewer data analysis skills can benefit from the richness of the data. Such solutions may be beyond promotional materials, such training, direct technical assistance, or new tools for the Web site.

Once HINTS has become better known, a more thorough evaluation can then track how the data is used, how program planners have implemented decisions based on data, and how data users disseminate their findings to the field.

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## Appendix: Potential Sources of Secondary Data for HINTS Communication Evaluation

Area from logic model	Sources of data	Relevancy to communication evaluation
<b>HINTS Inputs</b>		
Theoretical model	Published literature on theories of change and health information seeking behavior (since 2003)	Are users concerned or support theoretical model; ie is model still valid?
Survey standards	<ul style="list-style-type: none"> <li>▪ Published survey standards</li> <li>▪ Westat and NCI internal documents</li> <li>▪ Health survey conferences (such as CDC)</li> </ul>	Perception of quality
Topics and survey items	<ul style="list-style-type: none"> <li>▪ Published literature on validity of specific survey items</li> <li>▪ Comparison with other surveys and review of how other surveys developed items</li> <li>▪ Westat and NCI internal documents</li> </ul>	Perception of quality; effect of differences in results on data use; unique contributions as health surveillance system
<b>HINTS Survey Implementation</b>		
Frequency (biennial)	Comparison with other surveys	Perception of timeliness
Population sample/size		Perception of quality and/or limitations; effect of limitations on data use
Respondent participation (ethnic, low SES, RDD limitations/ changes in phone line usage, Spanish language, US mail/Web pilot)	<ul style="list-style-type: none"> <li>▪ Published literature on participation and methods</li> <li>▪ Comparison with other surveys</li> <li>▪ Westat and NCI internal documents</li> <li>▪ Results of Web and incentives pilot tests</li> </ul>	Perception of quality and/or limitations; effect of limitations on data use
Data analysis and weighting	Westat and NCI internal documents	Perception of quality and/or limitations
<b>Communication Products</b> Public use data files Data presentations on Web Reports, articles, fact sheets, special issue of <i>J of H Comm</i> User conferences Future data tools (fusion)	<ul style="list-style-type: none"> <li>▪ User data (from Web)</li> <li>▪ Usability research</li> <li>▪ Westat, MMG and NCI internal documents</li> <li>▪ Comparison with other surveys</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identifying key audiences; additional audiences not aware</li> <li>▪ Past experience with data and intentions to use</li> <li>▪ Experience with other data sets</li> <li>▪ Feedback on data tools, conferences and Web site</li> </ul>
<b>Short term outcomes</b>	HINTS publications/journals Publications/presentations by data users	Issues addressed by researchers How data reaches and is used by results users
<b>Medium term outcomes</b>		N/A
<b>Long term outcomes</b>		N/A