# Division of Cancer Control and Population Sciences 

## Cancer Communication

## Health Information National Trends Survey 2003 and 2005

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# Cancer Communication Health Information National Trends Survey 2003 and 2005 

We began HINTS to fill a huge void in our understanding of the information environment in which the public, patients and people who care about cancer exist. Information is available from more sources than ever before. Thus, it is more important than ever before to understand how people get information about cancer and how they are affected by the information they find. HINTS is important for people at the NCI, but also for many audiences, including researchers, voluntary health organizations, advocates and other government agencies that develop and disseminate cancer information.

—Barbara K. Rimer, Dr PH, Dean<br>University of North Carolina at Chapel Hill Former Director, DCCPS, NCI<br>Former Chair, National Cancer Advisory Board

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## How to Use This Report

## CONTENT:

The contents of this report were developed with guidance from health communication researchers and public health professionals. The content's purpose is twofold: to offer a snapshot at two different points in time of how the American public (18 years and older) is responding to changes in the health information environment, and to offer a suggestive look at how the public responds within that environment to questions about cancer prevention, diagnosis, and treatment.

## AUDIENCE:

This report was designed with two primary audiences in mind. It is intended for use by health communication researchers who wish to use descriptive findings to generate new hypotheses for studying health communication and its influence on cancer-related knowledge, attitudes, and behaviors. It is also intended for use by trained health communication professionals as a complement to other sources of surveillance data which help steer strategic planning efforts.

## PURPOSE:

This report is not intended to describe a comprehensive picture of the health information environment at these two points in time, nor is it intended to offer irrefutable evidence of causal relationships that are best studied under the controlled environment of the laboratory. Rather, the snapshots presented herein are intended to offer "hints" of where the opportunities exist to make a difference in population health through communication-related research and intervention.

## SUGGESTED CITATION:

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## Abstract

## OBJECTIVES

This report summarizes data from the 2003 and 2005 Health Information National Trends Survey (HINTS) on health communication and cancer communication, including an examination of the American public's:

- Media exposure
- Exposure to health information
- Internet usage for health
- Information seeking about cancer
- Perceptions of barriers to cancer information seeking
- Evaluation of information efficacy, recognition, and use of cancer information sources
- Cancer knowledge

The descriptive data summarized in this document are intended to inform public health practitioners of current trends in cancer communication and provide health researchers with a foundation for exploring and conducting research using HINTS data.

## SOURCE OF DATA

Data for this report are from HINTS 2003 and HINTS 2005. HINTS is a cross-sectional health communication survey of the U.S. civilian, noninstitutionalized, adult population. The primary objective of the HINTS survey is to assess trends in health information usage over time and provide data for conducting fundamental research to assess the basic relationships among cancer-related communication, knowledge, attitudes, and behavior at the population level.

## PRINCIPAL RESULTS

Population estimates of key health communication and cancer communication constructs from HINTS 2003 and 2005 are summarized in tabular, graphic, and geographic form. These results are highlighted in the text and describe estimates of media exposure, Internet usage for health information, cancer-related information seeking, sources of cancer information, trust in sources of cancer information, experiences with cancer information seeking, and cancer-related knowledge.

Keywords: cancer communication, health communication, cancer information, health behavior

## Introduction

## This report summarizes data from the 2003 and 2005 Health Information National Trends Survey (HINTS).

HINTS is a national health communication survey conducted biennially by the National Cancer Institute (NCI), which has the vital mission of developing and implementing programs that prevent and reduce the incidence of cancer. The task of planning, developing, and coordinating research on health communication relevant to cancer control falls within the realm of the Health Communication and Informatics Research Branch (HCIRB), in the Behavioral Research Program (BRP) in the Division of Cancer Control and Population Sciences (DCCPS) at the NCI. HINTS was designed to support the mission of the Branch and the Institute by providing a means to systematically evaluate the public's knowledge, attitudes, and behaviors relevant to health communication, which have not adequately been studied through other national data collection efforts prior to HINTS. HINTS aims to assess the public's use of health information in an environment of rapidly changing communication and informatics options, and to allow the NCI extramural community access to the data for conducting hypoth-esis-generating research into the relationship between health information, knowledge, attitudes, and behaviors.

HINTS was conceived during an NCI-sponsored risk communication conference in 1998. Attendees spanned a range of disciplines including communication, psychology, public health, health education, health behavior, journalism, and medicine. Prior risk communication research was reviewed and recommendations for future research were made. During this conference, attendees discussed the lack of popula-tion-level data about health information and health communication variables and encouraged the NCI to develop a national communication population survey to provide baseline and follow-up data on the populations' access to, need for, and use of cancer information.

This call for the development of a national cancer communication survey coincided with NCI launching a set of initiatives aimed at advancing the science of cancer control through basic science, surveillance, knowledge synthesis, and program delivery. Out of this set of initiatives, NCI designated an Extraordinary Opportunity in Cancer Communication in the fiscal year 2001 budget. Identification of cancer communication as an extraordinary opportunity allowed NCI to support scientific research to advance the discipline of cancer communication. A key component of the initiative was HINTS. Building upon the interdisciplinary recommendations of the 1998 risk communication conference, NCI developed a national survey to assess trends in health information usage over time and to periodically conduct fundamental research to assess the basic relationships among cancer-related communication, knowledge, attitudes, and behavior. The HINTS acronym suggests its purpose: to provide important insights (hints) into the health information needs and practices of the American public. Prominent constructs and resultant item development for HINTS were informed by the emerging theories of health communication (Glanz, Lewis, \& Rimer, 1997), media usage (Viswanath \& Finnegan, 1996), risk information processing (Croyle \& Lerman, 1999; Fischhoff, Bostrom, \& Quadrel, 1993), diffusion of innovations (Rogers, 1995) and behavior change (Weinstein, 1993). A more detailed discussion of the conceptual framework underlying item selection is published elsewhere (Nelson et al., 2004).

The HCIRB of the NCI has invested in a number of initiatives aimed at improving the ways in which the population becomes aware of and adopts cancer prevention and control messages. HINTS provides a mechanism for a population-level assessment of the efficacy of such messages in improving awareness, encouraging behavior change and in reducing death and suffering due to cancer.

NCI with its funded partner, Westat, created the first two administrations of what has become an ongoing, cross-sectional survey of the U.S. civilian, noninstitutionalized, adult population. The HINTS survey strives to use the most scientifically rigorous and cutting edge methods of data collection. In 2003 and 2005, HINTS employed a random digit dialing (RDD) approach to obtain a probability sample of telephone numbers in the U.S. The HINTS instrument includes several established measures from other surveys; furthermore, the items included in HINTS are rigorously examined through extensive cognitive testing and field testing of the HINTS instruments.

The purpose of funding a national probability survey to assess health communication processes was to provide communication researchers, cancer centers, social scientists, and state cancer planners with research that has been conducted with exacting performance in order to minimize errors in coverage, sampling, and measurement (Dillman, 2000). The rigor with which HINTS has been developed and implemented places population scientists and health planners in a more effective position for refining the scientific knowledge base and planning population-based interventions.

HINTS was developed to assess cancer-relevant
behavior (e.g., prevention, screening, treatment, etc.) in the population in order to evaluate the association of key communication constructs with behavioral outcomes and to monitor changes in the rapidly evolving field of health communication. To this end, HINTS stakes out a middle ground between large-scale epidemiological surveillance and smaller scale, non-nationally representative surveys of health communication. HINTS is not intended to be a large-scale epidemiological surveillance tool for health behaviors in the population; rather it aims to complement existing health surveillance tools, such as the Behavioral Risk Factor Surveillance System (BRFSS) and the National Health Interview Survey (NHIS). The HINTS instrument includes some key behavioral items adopted from BRFSS and NHIS to allow for comparison of estimates obtained in HINTS with those obtained from the larger samples drawn in BRFSS and NHIS.

This report summarizes estimates of health communication and cancer communication, including an examination of the American public's exposure to various media, exposure to health information, Internet usage for health, information seeking about cancer, perceptions of barriers to cancer information seeking, evaluation of information efficacy, and recognition and use of cancer information sources from HINTS 2003 and HINTS 2005. Estimates presented in this report are from health communication, cancer communication, and cancer knowledge items surveyed in HINTS 2003 and/or HINTS 2005. Some of the items used in 2003 were repeated in 2005. Estimates are given for sociodemographically defined subgroups according to age, gender, race/ethnicity, educational attainment, and annual household income. These estimates are summarized in tabular, graphic, and geographic form. The geographic distributions of selected HINTS 2003 and 2005 items are shown in Geographic Information Systems (GIS) maps.

## Methods

## DATA SOURCE

Data for this report are from HINTS 2003 and HINTS 2005. The primary objective of the HINTS survey is to assess trends in health information usage over time and provide data for conducting fundamental research to assess the basic relationships among cancer-related communication, knowledge, attitudes, and behavior. HINTS is a cross-sectional health communication survey of the U.S. civilian, noninstitutionalized, adult population.

## DATA COLLECTION PROCEDURES

Data for HINTS 2003 were collected from October 2002 through April 2003 and the data for HINTS 2005 were collected from February 2005 through August 2005. A list-assisted method was used to obtain the samples. This method draws a random sample of telephone numbers from all working Abanks@ ${ }^{1}$ of telephone numbers within the U.S. Only banks with one or more working numbers ( $1+$ banks) were sampled. Pre-screening was used to eliminate as many business, fax, and cell phone numbers as possible from the sample of telephone numbers given that these numbers were not intended for inclusion in the sampled banks. One adult was selected at random per household; for households with three or more eligible adults, the adult who had the most recent birthday was selected. In 2003, non-Hispanic Blacks and Hispanics were oversampled. Data were collected by trained interviewers using the BlaiseJ computer-assisted telephone interviewing (CATI) system, which automated the processes of call scheduling, interviewing, and data collection for quality control purposes. To improve data quality, ongoing review and editing of data was conducted throughout the data collection phase. After the English language version of the instrument was finalized, a Spanish language version of the questionnaire was developed by a team of bilingual translators who translated from English into Spanish first, and then back-translated from Spanish to English as a quality control check.

## ESTIMATION PROCEDURES

Sampling weights and replicate sampling weights were assigned to every sampled adult who completed the HINTS questionnaire. The nationally-representative estimates in this report were produced using these weights. All standard errors for these estimates were produced utilizing the jackknife variance estimation technique. This technique was compatible with the complex sample design and weighting procedures used for HINTS. Further documentation of the sampling plan and sample weights for HINTS 2003 and 2005 have been published elsewhere (Nelson et al., 2004; HINTS 2003 and HINTS 2005 Final Report, http://cancercontrol.cancer.gov/hints/index.jsp).

## LIMITATIONS OF DATA

## Cross-sectional Data

Since HINTS is a cross-sectional survey, it is not possible to assess change over time at the level of the individual. However, the biennial administration of HINTS does allow for examination of trends over time at the population level.

## Response Rates

The final response rate for the HINTS 2003 household screener was $55 \%$ and the final response rate for extended interview was $62.8 \%$. In 2005, these numbers were somewhat lower (screener $34.0 \%$, extended $61.3 \%$ ). These rates are comparable to other national telephone surveys (Nelson, Powell-Griner, Town, \& Kovar, 2003) and reflect a trend in survey research (de Leeuw \& de Heer, 2002; Goyder, Warriner, \& Miller, 2002). Low response rates that reflect systematic differences between those who respond and those who do not may limit the generalizability of the results to populations represented by responders. Non-response analyses of the HINTS 2005 data are under way to assess the extent to which low response rates have contributed to response bias. Furthermore, future itera-

[^0]tions of the HINTS survey will explore design options and methodological approaches that may result in improved response rates. HINTS 2007, which is currently under development, will utilize a mixed-mode data collection method using dual sampling frames. An RDD telephone survey as well as a mailed questionnaire will be implemented. With declining response rates in telephone surveys, it is crucial that alternative methodological approaches be explored.

## Estimation Error

The size of samples drawn from HINTS does not support the calculation of population estimates with the degree of accuracy found in larger epidemiological health surveys such as the BRFSS or NHIS. The sample sizes drawn for BRFSS and NHIS allow for the generation of population estimates with a small degree of error, whereas the degree of error associated with estimates from HINTS is somewhat larger due to the smaller sample size.

## STRENGTHS OF HINTS DATA

HINTS is unique among other national survey efforts in its surveillance of health communication constructs in the population. HINTS is the first general population survey designed to provide researchers with a continuing source of surveillance data from which to compare trends in health information usage over time. Cancer-relevant communication has been shown to play a key role in the reduction of cancer burden (Hiatt \& Rimer, 1999; Viswanath, 2005). For example, information seeking has been shown to be important in effective coping, stress reduction, improved understanding of the cancer disease process, and social support (see van Der Molen, 2003 for review). Furthermore, the complexity of cancer-related information about prevention, early detection, treatment, recovery, and end-of-life challenges the public to remain abreast of the rapidly growing scientific and clinical understanding of this disease. These findings, coupled with the recent "explosion" of available cancer-related information through various media including television coverage, print coverage, and the Internet (Viswanath, 2005) underscore the important contribution of the HINTS survey. HINTS provides a means to systematically evaluate the public's knowledge, attitudes, and behaviors relevant to health communication, which have not adequately been studied through other nationally representative data collection efforts (Nelson et al., 2004).

## FURTHER INFORMATION ABOUT HINTS

The latest updates on HINTS can be obtained from the HINTS Web site: http://hints.cancer.gov

Health Information National Trends Survey (HINTS) Web site (http://hints.cancer.gov)

[^1]- View HINTS Findings

Seatch HINTS Ouestions Sumey questions \& responses Respondent characteristics
U.S. adulk population estimates

Indwidual question responses displayed in
charts
Question source
HINTS Briefs
Special reports
Factsheets
Brochures
Learn About HINTS About HiNTS
What HINTS does
How HiNTS data are used
NCl presertations
Schedule of events

Conduct HINTS Research Public Use Dataset - 0609 2006 Downloadable SAS, SPSS formats Registration required 2005 and 2003 Datasets

Survey lustruments
Sampling plan
Survey instruments
Screening \& interiew codebooks
Survey administration
Research Using HINTS Data
Presentations \& publications

The updated website reflects NCl's
 commitment to public data sharing by making the science of cancer communication easily accessible to multiple audiences.

—Robert Croyle, PhD National Cancer Institute

The HINTS Web site provides users with easily-accessible and timely information to support research and program planning. The site facilitates learning about HINTS, provides a mechanism for viewing HINTS findings, and provides the necessary tools for conducting research using HINTS data. Features include:
Learn about HINTS: The HINTS site summarizes the key aims of the HINTS survey and describes how the data are used. In addition, the site archives prior NCI presentations to provide background to the survey and the analytic methodologies appropriate for nationally weighted probability samples. The site also summarizes the schedule of events related to the HINTS survey.

View HINTS Findings: The HINTS Web site provides survey data in a customized, searchable format that allows visitors to retrieve summarized weighted and unweighted data in a variety of tabular or graphical formats. Specifically, the Web site facilitates examination of HINTS findings through this mechanism, which allows users to examine HINTS results for each survey item in tabular and graphic form.

## Conduct HINTS Research: The interactive HINTS

 Web site allows public health professionals and scientists to access the HINTS data and related documents. The Web site features downloadable public-use data and associated documentation in both $\mathrm{SAS}^{\circledR}$ and SPSS ${ }^{\circledR}$ formats. Prior HINTS instruments and related survey materials including sampling plans, and survey implementation documentation are also available. Instructions for using HINTS data are also included on the site. Prior publications and presentations of HINTS data also are documented.Data Summaries: Summary descriptions of HINTS data are available at the Web site including electronic HINTS brochures, fact sheets, and HINTS Briefs that highlight findings from the HINTS data. These materials summarize key findings for HINTS analyses and document presentations and publications that have used HINTS data.

HINTS Briefs have featured such topics as population knowledge of human papilloma virus (HPV), cancer screening, and physical activity.

HINTS Electronic Codebook - Tabular Output


HINTS Electronic Codebook - Graphic Output (Pie Chart)


Health infomaton National Trends Suver, 2003 (HINTS, 2003X, URL Cancercontrol cancer govtirst, HNTS 2003 datatase, Natonai Cancer insithte, DCCPS, Behavicrai Research Program, Heath Communicaton and informabics Research Branch. Data colecton February August, 2003; Putic data retease February 2004

HINTS Electronic Codebook - Graphic Output (Bar Chart)


## Results

## OVERVIEW

## This section provides brief, bulleted summaries highlighting top level estimates summarized in tabular, graphic, and geographic form.

## Analysis

To account for the multistage sample design of HINTS, SUDAAN was used to calculate population estimates and confidence intervals (CIs). Estimates were weighted using sample weights to produce nationally-representative values for the adult, non-institutionalized population of the United States. Every sampled adult who completed a questionnaire in the HINTS received a final sample weight. These sample weights were used in aggregating survey questionnaire answers for the purpose of computing nationally representative estimates.

A CI for a population parameter is the interval between two numbers with an associated probability generated from a random sample of the underlying population. If repeated samples were drawn and the CI recalculated for each sample according to the same method, a proportion of the CIs would contain the population parameter.

For additional information about the weighting methods used with HINTS data, see the HINTS Final Report, Chapter 3.

Table I Sociodemographic Characteristics


Smoothed continuous-surface (isopleth) maps were used to visualize regional geographic variation in a 'weather-map' fashion. These maps used weighted estimates and employed a "head-banging" algorithm that borrows information from neighboring states for those with relatively small sample sizes (for more information see: http://srab.cancer.gov/headbang/).

Note: Alaska and Hawaii are not included in the resulting maps because they are not contiguous neighbors of other states.

These maps are used to provide visual data for possible geographic relationships with HINTS cancer-related knowledge variables and also media exposure and usage to inform potential health interventions. Another potential use of the maps is to generate hypotheses, perhaps by examining the geographic distribution of HINTS data with other demographic data (e.g., level of education) found on the Census data site (see: http://factfinder.census.gov).

The maps are not intended to provide specific statelevel estimates of HINTS variables due to instability in some state values from relatively small sample sizes. All analyses reported are intended to be purely exploratory and descriptive in nature and are not intended to test hypotheses.
The results presented are organized into the following three main content areas: 1) Health Communication;
2) Cancer Communication; and 3) Cancer Knowledge.

## Sample Characteristics

Demographics (HINTS 2003 and HINTS 2005)

- Table 1 on page 11 summarizes the HINTS 2003 ( $\mathrm{n}=6369$ ) and HINTS $2005(\mathrm{n}=5586)$ samples in terms of sex, age, race/ethnicity, income, and education.


## HEALTH COMMUNICATION

This section describes estimates of media exposure and Internet use for health from HINTS 2003 and 2005.

## Media Exposure

Exposure to Television, Radio, and Newspaper (2003 and 2005)

Estimates of average exposure to television, radio, and newspaper for 2003 and 2005 are summarized in Figure 1.

## Television

- Hours spent watching television per weekday were similar in both 2003 (3.2 hours/day) and 2005 (3.1 hours/day).


## Radio

- Hours spent listening to the radio per weekday were similar in both 2003 ( 2.5 hours/day) and 2005 (2.7 hours/day).


## Newspaper

- Days spent reading the newspaper per week were similar in both 2003 (3.4 days/week) and 2005 (3.7 days/week).

Figure I Exposure to Television, Radio, and Newspaper (2003 and 2005)
On a typical weekday, about how many hours do you watch TV (listen to the radio)? In the past seven days, how many days did you read a newspaper?


## Internet Usage for Health

Using the Internet for Health (2003 and 2005)
Estimates of using the Internet for health-related reasons in 2003 and 2005 are summarized in Figure 2.

## Look for Medical Information on Internet for Self

- In 2003, 50.7\% of respondents reported looking for health or medical information on the Internet for themselves; in $2005,58.4 \%$ of respondents reported looking for health or medical information on the Internet for themselves.

Look for Medical Information on Internet for Others

- In 2003, $45.8 \%$ of respondents reported looking for health or medical information on the Internet for others; in $2005,59.5 \%$ of respondents reported looking for health or medical information on the Internet for others.

Figure 2 Using the Internet for Health (2003 and 2005)
In the past 12 months, have you done the following things while using the Internet?


[^2]
## Buy Medicine or Vitamins Online

- In 2003, 9.1\% of respondents reported buying medicine or vitamins online; in 2005 12.8\% of respondents reported buying medicine or vitamins online


## Participate in Online Support Groups

- The percentage of respondents who reported participation in online support groups were the same in 2003 (3.9\%) and 2005 (3.9\%).


## Communicate with Doctor or Doctor's Office via

 the Internet- In 2003, 7.0\% of respondents reported online communication with a doctor or doctor's office; in 2005, $10.0 \%$ of respondents reported online communication with a doctor or doctor's office.

The survey is not only a surveillance tool, but can be used to study relationships of how knowledge about health care is dependent on channels of communication.
—Bradford Hesse, PhD National Cancer Institute

Table 2 Typical Exposure to TV, Radio, and Newspaper, by Sociodemographics
Weighted Averages and 95\% Confidence Intervals

|  | TYPICAL EXPOSURE TO MEDIA SOURCES <br> TV (Hrs per Weekday) |  |  | Radio (Hrs per Weekday) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 <br> \% (95\% CI) |  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  |
| TOTAL | 3.2 (3.1, 3.2) | 3.1 | (3.0, 3.2) | 2.5 | (2.4, 2.6) | 2.7 | $(2.6,2.8)$ |
| GENDER |  |  |  |  |  |  |  |
| Male | 3.0 (2.9, 3.1) | 3.0 | (2.9, 3.2) |  | (2.5, 2.7) |  | $(2.6,3.0)$ |
| Female | 3.3 (3.2, 3.4) | 3.2 | (3.0, 3.3) | 2.4 | (2.3, 2.5) |  | $(2.4,2.7)$ |
| AGE GROUP |  |  |  |  |  |  |  |
| 18-34 | 3.0 (2.8, 3.1) | 2.9 | (2.7, 3.2) | 3.0 | (2.8, 3.2) | 2.8 | (2.6, 3.0) |
| 35-49 | 2.8 (2.7, 3.0) | 2.7 | $(2.6,2.8)$ | 2.5 | $(2.4,2.7)$ | 3.0 | (2.8, 3.2) |
| 50-64 | 3.3 (3.1, 3.4) | 3.4 | $(3.2,3.6)$ | 2.1 | $(2.0,2.3)$ | 2.4 | (2.2, 2.7) |
| 65-79 | 4.0 (3.7, 4.2) | 3.6 | $(3.5,3.8)$ | 1.9 | (1.7, 2.1) |  | (2.0, 2.5) |
| 80+ | 3.9 (3.6, 4.2) |  | $(3.6,4.3)$ | 1.8 | (1.5, 2.1) | 2.4 | (1.8, 2.9) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |
| White, non-Hispanic | 3.0 (2.9, 3.1) |  | (2.8, 3.0) | 2.3 | (2.3, 2.4) |  | (2.5, 2.7) |
| Black, non-Hispanic | $4.1 \quad(3.9,4.4)$ | 4.5 | (4.0, 5.0) | 2.8 | (2.5, 3.2) |  | (2.5, 3.6) |
| Hispanic | 3.1 (2.8, 3.3) |  | (2.5, 3.0) | 2.5 | $(2.3,2.8)$ |  | (2.2, 2.9) |
| Non-Hispanic Other | 3.5 (2.7, 4.2) |  | (3.0, 4.3) | 2.9 | (2.4, 3.4) | 3.2 | (2.5, 3.9) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |
| Less than \$25,000 | 3.9 (3.7, 4.1) | 3.8 | (3.6, 4.1) | 2.5 | (2.2, 2.7) |  | (2.5, 3.1) |
| \$25,000 to < \$50,000 | 3.2 (3.0, 3.3) | 3.1 | (2.9, 3.2) | 2.7 | (2.6, 2.9) |  | (2.5, 3.1) |
| \$50,000 to < \$75,000 | 2.7 (2.5, 2.8) | 3.0 | (2.7, 3.2) | 2.5 | (2.3, 2.8) | 2.8 | (2.6, 3.1) |
| \$75,000 or more | 2.4 (2.3, 2.5) |  | $(2.3,2.6)$ | 2.1 | $(2.0,2.3)$ |  | (2.2, 2.7) |
| EDUCATION |  |  |  |  |  |  |  |
| Less than High School | 3.7 (3.5, 4.0) |  | $(3.6,4.3)$ |  | (2.2, 2.8) |  | (2.7, 3.3) |
| High School Graduate | 3.5 (3.4, 3.7) |  | (3.2, 3.5) |  | $(2.5,2.8)$ |  | (2.7, 3.3) |
| Some College | 3.1 (2.9, 3.2) |  | (2.9, 3.2) | 2.6 | $(2.5,2.8)$ |  | (2.5, 2.9) |
| College Graduate or Beyond | 2.3 (2.3, 2.4) |  | (2.2, 2.4) | 1.9 | $(1.8,2.0)$ |  | (2.0, 2.2) |

Newspaper (Days per Week)

| HINTS 2003 | HINTS 2005 |
| :--- | :--- |
| \% (95\% CI) | \% (95\% CI) |

$3.4(3.3,3.5) \quad 3.7(3.5,3.8)$

| 3.6 | $(3.4,3.7)$ | 3.7 | $(3.5,3.9)$ |
| :--- | :--- | :--- | :--- |
| 3.3 | $(3.2,3.4)$ | 3.6 | $(3.5,3.7)$ |


| 2.5 | $(2.3,2.6)$ | 2.3 | $(2.0,2.5)$ |
| :--- | :--- | :--- | :--- |
| 3.1 | $(3.0,3.3)$ | 3.4 | $(3.2,3.6)$ |
| 4.0 | $(3.9,4.2)$ | 4.4 | $(4.2,4.6)$ |
| 4.9 | $(4.7,5.2)$ | 5.3 | $(5.1,5.6)$ |
| 4.8 | $(4.4,5.2)$ | 5.6 | $(5.3,6.0)$ |

$3.7 \quad(3.6,3.8) \quad 4.0 \quad(3.8,4.1)$
$3.1 \quad(2.9,3.4) \quad 3.2(2.7,3.6)$
2.0 (1.7, 2.2) $2.3(2.0,2.6)$
$2.9(2.5,3.2) \quad 3.7 \quad(3.1,4.3)$
$2.8 \quad(2.6,3.0) \quad 3.2(2.9,3.4)$
$3.4(3.3,3.6) \quad 3.8(3.6,4.1)$
$3.9(3.7,4.1) \quad 3.7(3.4,4.0)$
3.9 (3.8, 4.I)
3.9 (3.7, 4.1)
2.2 (1.9, 2.4)
3.0 (2.7, 3.3)
$3.5(3.3,3.6)$
3.8 (3.5, 4.1)
3.6 (3.4, 3.8)
3.5 (3.3, 3.7)
4.0 (3.9, 4.2)
$4.1(3.9,4.3)$
Estimates of media exposure suggest that use of media source differs by sociodemographic variables; in particular, education.

Table 3 Internet Health Information Seeking and Communication, by Sociodemographics
Weighted Averages and 95\% Confidence Intervals

| TOTAL | HEALTH INFORMATION SEEKING (INT <br> Did You Use the Internet to... <br> Look for Medical Information for Self <br> HINTS 2003 <br> HINTS 2005 <br> \% (95\% CI) <br> \% (95\% CI) |  |  |  |  | SERS ONLY) <br> for Medical <br> NTS 2003 <br> (95\% CI) | mation for Other <br> HINTS 2005 <br> \% (95\% Cl) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 50.7 | (48.8, 52.6) | 58.4 | (55.6, 61.2) | 45.8 | $(43.8,47.9)$ | 59.5 | $(57.3,61.6)$ |
| GENDER |  |  |  |  |  |  |  |  |
| Male | 43.0 | (40.1, 46.1) |  | (46.2, 55.3) |  | (36.0, 42.9) |  | (48.7, 56.6) |
| Female | 58.1 | (55.4, 60.8) | 65.5 | (61.8, 69.1) | 52.2 | $(49.6,54.7)$ | 65.8 | (63.0, 68.5) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 52.9 | (50.2, 55.5) | 56.6 | (51.4, 61.7) | 44.3 | (40.9, 47.8) | 56.4 | (51.1, 61.5) |
| 35-49 | 50.1 | (46.7, 53.5) | 60.4 | (56.5, 64.2) | 50.4 | $(46.8,54.0)$ | 66.6 | (63.1, 69.9) |
| 50-64 | 51.6 | (47.5, 55.7) | 61.0 | (56.9, 64.9) | 44.7 | (40.4, 49.1) | 59.3 | (55.2, 63.3) |
| 65-79 | 39.0 | (33.4, 45.0) | 51.7 | (44.0, 59.3) | 33.3 | $(27.6,39.6)$ | 45.4 | (39.6, 51.3) |
| 80+ | 19.4 | (8.4, 38.7) | 35.8 | (17.6, 59.3) | 13.7 | $(4.9,32.8)$ | 20.1 | $(8.4,40.6)$ |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 52.0 | (49.8, 54.2) | 59.5 | (56.8, 62.1) | 48.1 | $(45.9,50.2)$ | 61.3 | (58.6, 63.8) |
| Black, non-Hispanic | 47.5 | (41.3, 53.8) | 53.3 | (43.0, 63.3) | 36.3 | (29.5, 43.8) | 49.4 | (39.0, 60.0) |
| Hispanic | 42.8 | (35.8, 50.0) | 53.5 | (43.1, 63.7) | 40.0 | (33.4, 47.0) | 55.1 | (45.1, 64.7) |
| Non-Hispanic Other | 54.1 | $(44.4,63.5)$ | 62.7 | (50.4, 73.5) | 50.5 | $(41.8,59.3)$ | 61.7 | (49.2, 72.8) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than $\$ 25,000$ | 45.5 | (39.8, 51.2) | 60.4 | (53.7, 66.7) | 39.5 | (34.7, 44.5) | 62.3 | (55.1, 69.0) |
| \$25,000 to < \$50,000 | 48.6 | (44.4, 52.8) | 53.5 | (47.5, 59.3) | 41.9 | $(38.6,45.3)$ | 55.2 | (49.2, 61.1) |
| \$50,000 to < \$75,000 | 54.2 | (50.3, 58.1) | 55.6 | (49.8, 61.4) | 49.6 | (45.1, 54.1) | 59.9 | (55.2, 64.4) |
| \$75,000 or more | 55.5 | (52.1, 58.9) | 64.3 | (59.6, 68.7) | 54.3 | (50.9, 57.7) | 65.4 | (60.9, 69.7) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 37.9 | (29.9, 46.6) | 33.8 | (21.6, 48.6) | 28.3 | (19.1, 39.8) | 44.7 | (31.1, 59.1) |
| High School Graduate | 42.8 | (39.3, 46.3) | 49.6 | (43.9, 55.2) | 37.9 | $(35.0,40.8)$ | 50.5 | $(45.6,55.5)$ |
| Some College | 52.1 | $(48.9,55.2)$ | 58.2 | (53.2, 63.1) | 46.8 | $(43.3,50.2)$ | 59.5 | (54.7, 64.2) |
| College Graduate or Beyond | 58.5 | $(55.4,61.5)$ | 69.0 | (65.1, 72.6) | 56.1 | $(53.5,58.7)$ | 68.3 | (64.8, 71.6$)$ |


| Buy Medicine or Vitamins |  | Participate in Online Support Group |  |  |  | Communicate with Doctor or Doctor's Office |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HINTS 2003 <br> \% (95\% CI) | HINTS 2005 <br> \% (95\% CI) | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  |  | NTS 2003 (95\% CI) |  | $\begin{aligned} & \text { JTS } 2005 \\ & (95 \% \text { CI) } \end{aligned}$ |
| 9.1 (8.0, 10.3) | 12.8 (11.6, 14.1) | 3.9 | (3.0, 5.1) | 3.9 | $(3.2,4.7)$ | 7.0 | (6.1, 8.0) | 9.6 | (8.3, II.I) |
| 10.0 (8.4, 11.9) | 11.7 (9.6, 14.1) | 2.6 | (1.7, 3.8) | 3.2 | (2.1, 4.8) | 7.6 | (6.2, 9.4) | 7.9 | (6.0, 10.2) |
| 8.2 (7.2, 9.3) | 13.8 (12.1, 15.7) | 5.3 | (4.0, 7.0) | 4.6 | (3.8, 5.5) | 6.4 | (5.5, 7.4) | 11.2 | (9.5, 13.2) |
| 5.5 (4.2, 7.1) | 7.2 (5.7, 9.0) | 4.1 | (2.9, 5.7) | 3.1 | (1.9, 5.0) | 6.4 | (4.9, 8.2) | 10.2 | (7.3, 14.1) |
| 9.1 (7.4, II.I) | 14.7 (12.0, 17.8) | 4.1 | (2.7, 6.I) | 4.9 | $(3.6,6.7)$ | 6.8 | (5.4, 8.4) | 9.3 | (7.3, 11.8) |
| 15.4 (12.9, 18.2) | 18.8 (15.9, 22.0) | 3.8 | $(2.6,5.7)$ | 4.4 | (3.2, 5.9) | 9.3 | (7.3, II.9) | 10.1 | (7.7, 13.1) |
| 11.9 (7.6, 18.1) | 16.5 (12.2, 22.1) | 2.5 | (1.1, 5.8) | 2.5 | (1.1, 5.6) | 4.6 | (2.7, 7.6) | 6.9 | (4.5, 10.5) |
| 9.0 (2.5, 27.1) | 4.2 (0.8, 18.3) | 5.2 | $(0.6,32.2)$ | 0.0 | (0.0, 0.0) | 10.7 | (2.3, 38.1) | 2.7 | (0.3, 18.4) |
| 9.8 (8.5, 11.4) | 13.2 (11.7, 14.9) | 4.0 | (2.9, 5.4) | 3.7 | (2.9, 4.8) | 7.3 | (6.2, 8.5) | 9.5 | (7.8, I 1.5) |
| 5.2 (3.1, 8.4) | 12.1 (7.6, 18.6) | 4.8 | (2.9, 7.7) | 5.3 | (2.0, 13.3) | 6.1 | (3.9, 9.7) | 11.3 | $(6.6,18.9)$ |
| 6.6 (4.3, 10.0) | 8.7 (4.7, 15.4) | 2.1 | (0.9, 4.7) | 3.1 | (1.1, 8.0) | 6.4 | $(3.8,10.7)$ | 5.9 | (2.6, 13.2) |
| 11.6 (7.6, 17.4) | 12.7 (8.0, 19.7) | 5.8 | (2.9, II.4) | 4.3 | (1.7, 10.3) | 7.2 | (3.9, 13.0) | 13.5 | (8.4, 21.0) |
| 5.6 (3.8, 8.1) | 10.2 (7.1, 14.4) | 6.2 | (3.9, 9.8) | 7.2 | (3.8, 13.1) | 7.9 | $(5.5,11.3)$ | 7.6 | (5.0, 11.3) |
| 7.9 (6.4, 9.6) | 13.4 (10.3, 17.4) | 4.7 | (3.0, 7.2) | 4.5 | (3.0, 6.8) | 5.9 | (4.5, 7.7) | 8.4 | (6.1, II.5) |
| 10.2 (7.3, 14.0) | 16.5 (12.8, 21.0) | 4.0 | (2.7, 5.9) | 3.5 | (2.2, 5.5) | 6.5 | (4.7, 9.0) | 8.4 | (5.9, 11.8) |
| 12.5 (10.6, 14.7) | 12.0 (9.7, 14.7) | 2.4 | (1.5, 3.8) | 3.3 | (2.3, 4.5) | 9.2 | (7.3, II.5) | 12.8 | (9.7, 16.6) |
| $2.4(0.9,6.8)$ | 7.8 (3.4, 17.0) | 4.2 | (1.5, 11.5) | 2.3 | (0.4, II.6) | 3.2 | (1.2, 8.0) | 8.3 | (3.1, 20.3) |
| 8.1 (5.8, 11.2) | 12.0 (9.3, 15.5) | 3.5 | (2.4, 5.1) |  | (2.1, 6.1) | 3.5 | (2.5, 4.9) | 6.6 | (4.6, 9.5) |
| 9.7 (8.0, 11.8) | 12.4 (10.3, 15.0) | 5.0 | (3.2, 7.9) |  | (2.8, 6.1) | 7.3 | (5.7, 9.2) | 10.1 | (7.6, 13.3) |
| 11.1 (9.6, 12.8) | 14.5 (12.7, 16.5) | 3.3 | (2.4, 4.6) |  | (3.3, 5.4) | 10.3 | (8.7, 12.1) | 11.7 | (10.0, 13.6) |

## CANCER COMMUNICATION

This section summarizes estimates of cancer information seeking, information sources, trust in information sources, and confidence in one's ability to obtain information.

## Information Seeking About Cancer

Cancer Information Seeking (2003 and 2005)
Estimates of looking for cancer-related information in 2003 and 2005 are summarized in Figure 3.

## Looked for Information about Cancer

- In 2003, 44.9\% of respondents reported looking for cancer information for themselves; in 2005, 48.7\% of respondents reported looking for cancer information for themselves.
Someone Else Looked for Cancer Information for You
- The percentage of respondents who reported that someone else looked for cancer information for them was fairly similar in 2003 (16.8\%) and 2005 (16.6\%).

Figure 3 Cancer Information Seeking (2003 and 2005)
Have you ever looked for information about cancer from any source?


[^3]
## Average Time (in days) Since Last Search for Cancer Information

- In 2003, 541 days was the average time since last search for cancer information; this average was 639.7 in 2005.


## Sources of Cancer Information: Use, Preference, Awareness

Sources of Cancer Information (2003 and 2005)
Estimates of the sources that Americans turn to for cancer information in 2003 and 2005 are summarized in Figure 4.

## Printed Material

- In 2003, 27.9\% of respondents reported printed material as the source for their most recent search for cancer information; in 2005, $15.5 \%$ of respondents reported printed material as the source for their most recent search for cancer information.


## Interpersonal Source

- In 2003, $2.9 \%$ of respondents reported interpersonal sources (e.g., friends, coworkers) as the source for their most recent search for cancer information; in

Figure 4 Actual Sources of Cancer Information (2003 and 2005)

The most recent time you wanted information on cancer, where did you go first?


[^4]$2005,5.0 \%$ of respondents reported interpersonal sources as the source for their most recent search for cancer information.

## Health Care Provider

- In 2003, $10.9 \%$ of respondents reported a health care provider as the source for their most recent search for cancer information; in 2005, 23.5\% of respondents reported a health care provider as the source for their most recent search for cancer information.


## Information Specialist

- The percentage of respondents who reported an information specialist as the source for their most recent search for cancer information was similar in 2003 (7.2\%) and 2005 (7.5\%).


## Internet

- The percentage of respondents who reported the Internet as the source for their most recent search for cancer information was similar in 2003 (48.6\%) and 2005 (47.6\%).


## Preferred Source for Cancer Information (2003 and 2005)

Estimates of the preferred source for cancer information in 2003 and 2005 are summarized in Figure 5.

## Printed Material

- The percentage of respondents who reported printed material as their preferred source of cancer information was similar in 2003 ( $2.9 \%$ ) and 2005 (2.8\%).


## Interpersonal Source

- The percentage of respondents who reported an interpersonal source as their preferred source of cancer information was similar in 2003 ( $4.6 \%$ ) and 2005 (5.6\%).


## Health Care Provider

- In 2003, 49.5\% of respondents reported a healthcare professional as their preferred source of cancer information; in 2005, $55.0 \%$ of respondents reported a health care professional as their preferred source of cancer information.

Figure 5 Preferred Source for Cancer Information (2003 and 2005)


## Information Specialist

- The percentage of respondents who reported an information specialist as their preferred source of cancer information was similar in 2003 (8.1\%) and 2005 (5.6\%).


## Internet

- Overall, there was a significant decrease in the percentage of respondents who reported the Internet as their preferred source of cancer information from 2003 ( $34.2 \%$ ) to 2005 ( $27.8 \%$ ).


## Surrogate Sources of Cancer Information (2003 and 2005)

Estimates of cancer information seeking by surrogate source in 2003 and 2005 are summarized below.

## Spouse or Other Family

- In 2003, among respondents who indicated that someone else sought cancer information for them, $72.5 \%$ of respondents identified their spouse or other family member as the person who sought cancer information on their behalf; in 2005, $82.2 \%$ of respondents identified their spouse or other family member as the person who sought cancer information on their behalf.


## Friend or Co-Worker

- In 2003, among respondents who indicated that someone else sought cancer information for them, $21.5 \%$ of respondents identified a friend or co-worker as the person who sought cancer information on their behalf; in 2005, $15.9 \%$ of respondents identified a friend or co-worker as the person who sought cancer information on their behalf.

Figure 6 Surrogate Sources of Cancer Information (2003 and 2005)
Not including your doctor or other health care provider, has someone else ever looked for information about cancer for you? Who was that? [that looked for information about cancer for you?]


Spouse/Other Family $\quad$ Friend/Coworker Information Specialist/Other

## Information Specialist or Other ${ }^{2}$

- In 2003, among respondents who indicated that someone else sought cancer information for them, $6.0 \%$ of respondents identified an information specialist or other as the person who sought cancer information on their behalf; in 2005, $1.9 \%$ of respondents identified an information specialist or other as the person who sought cancer information on their behalf.

Cancer Information Seeking and Usefulness of Information on the Internet

## Looked for Cancer Information on the Internet

- In 2003, 20.5\% of respondents reported looking for cancer information on the Internet; in 2005, 28.2\% of respondents reported looking for cancer information on the Internet.

Map I Regional Estimates of Internet Use for Health Information (2003)
Have You Used the Internet to Look for Health Information for Self in Last 12 Months?


Note: State Level Estimates are Unstable.

## Internet Use for Health Information

Maps 1 and 2 suggest that there was an increase in the use of the Internet to look for health information across most of the United States; for example, in the Southern and Southeastern parts of the country.

Rating of Information Usefulness among those who Sought Cancer Information on the Internet

- Ratings of usefulness of cancer information obtained from Internet were the same in 2003 (average rating on a 4 point scale=1.66) and 2005 (average rating on a 4 point scale=1.66).


## Map 2 Regional Estimates of Internet Use for Health Information (2005)

Have You Used the Internet to Look for Health Information for Self in Last 12 Months?


Note: State Level Estimates are Unstable.

[^5]
## Awareness of National Cancer Organizations (2003 and 2005)

Estimates of Americans' awareness of national cancer organizations in 2003 and 2005 are summarized in Figure 7.

NCI

- The percentage of respondents who reported awareness of NCI was similar in 2003 (76.7\%) and in 2005 (76.9\%).
NCI's Cancer Information Service
- In 2003, $25.8 \%$ of respondents reported awareness of NCI's Cancer Information Service; in 2005, 29.3\% of respondents reported awareness of NCI's Cancer Information Service.


## 1-800-4-Cancer

- The percentage of respondents who reported awareness of the 1-800-4-CANCER information number was similar in 2003 (19.5\%) and 2005 (19.1\%).

Figure 7 Awareness of National Cancer Organizations (2003 and 2005)
Now, l'm going to read you a list of organizations. Before being contacted for this study, had you ever heard of ( NCl , Cancer Information Service, I-800-4-CANCER)?


## Trust in Health Information

Trust in Sources of Information (2003 and 2005)
Estimates of Americans' trust in various sources of information in 2003 and 2005 are summarized in Figure 8.

## Doctor/Healthcare Professional

- In 2003, 62.4\% of respondents reported that they trusted information from their doctor a lot; in 2005, (67.2\%) of respondents reported that they trusted information from their doctor a lot.


## Internet

- In 2003, $23.9 \%$ of respondents reported that they trusted information from the Internet a lot; in 2005, $18.9 \%$ of respondents reported that they trusted information from the Internet a lot.

Figure 8 Trust in Sources of Information (2003 and 2005)
How much would you trust information about health or medical topics from $\qquad$ ? Would you say a lot, some, a little, or not at all?


## Television

- The percentage of respondents who reported that they trusted information from the television a lot was similar in 2003 (20.0\%) and 2005 (20.8\%).
Family
- In 2003, $18.9 \%$ of respondents reported that they trusted information from their family a lot; in 2005, $22.8 \%$ of respondents reported that they trusted information from their family a lot.


## Magazine

- In 2003, $15.9 \%$ of respondents reported that they trusted information from magazines a lot; in 2005, $19.7 \%$ of respondents reported that they trusted information from magazines a lot.


## Newspaper

- In 2003, $13.1 \%$ of respondents reported that they trusted information from the newspaper a lot; in $2005,18.9 \%$ of respondents reported that they trusted information from the newspaper a lot.


## Radio

- The percentage of respondents who reported that they trusted information from the radio a lot was similar in 2003 (9.9\%) and 2005 (12.3\%).


## Confidence in and Experiences with Information Seeking

## Confidence in Obtaining Cancer Information

- In 2003, $62.6 \%$ of respondents indicated that they were completely or very confident that they could obtain needed cancer information; in 2005, $68.1 \%$ of respondents indicated that they were completely or very confident that they could obtain needed cancer information.

Health care professionals far surpassed the Internet, print media, and family as the number one source of trusted health information.

Experiences with Information Seeking (2003 and 2005)

Estimates of experiences with searching for cancer information in 2003 and 2005 are summarized in Figure 9.

## Ratings of Last Cancer Information Search

## Took a lot of Effort

- In 2003, 48.4\% of respondents strongly or somewhat agreed with the statement that their last search for cancer information took a lot of effort; in 2005, $37.3 \%$ of respondents strongly or somewhat agreed with the statement that their last search for cancer information took a lot of effort.


## Felt Frustrated During Search

- In $2003,41.9 \%$ of respondents strongly or somewhat agreed with the statement that they felt frustrated during their last search for cancer information; in 2005, 26.7\% of respondents strongly or somewhat agreed with the statement that they felt frustrated during their last search for cancer information.

Figure 9 Experiences with Information Seeking (2003 and 2005)
Based on the results of your search for information on cancer from all sources, how much do you agree or disagree with the following statements? Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?


## Concerned about Information Quality

- In 2003, $58.3 \%$ of respondents strongly or somewhat agreed with the statement that they were concerned about information quality during their last search for cancer information; in 2005, 47.5\% of respondents strongly or somewhat agreed with the statement that they were concerned about information quality during their last search for cancer information.


## Difficult-to-Understand Information

- In 2003, $37.7 \%$ of respondents strongly or somewhat agreed with the statement that the information they obtained during their last search for cancer information was difficult to understand; in 2005, $23.7 \%$ of respondents strongly or somewhat agreed with the statement that the information they obtained during their last search for cancer information was difficult to understand.

Cancer information seeking in 2003 and 2005 was associated with certain sociodemographic characteristics

Table 4 Cancer Information Seeking, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals


Table 5 Average Time Since Last Search for Cancer Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals
TIME IN DAYS SINCE LAST SEARCH FOR CANCER INFORMATION
Respondents who reported ever seeking cancer information

HINTS 2003 Mean time in Days ( $95 \% \mathrm{Cl}$ )

HINTS 2005 Mean time in Days ( $95 \% \mathrm{Cl}$ )

TOTAL
GENDER
541.0 (489.0, 593.0)
599.0 (505.5, 692.6)
502.2 (453.2, 55I.3)
639.7 (591.3, 688.I)
639.6 (557.1, 722.1)
639.7 (579.6, 699.9)

| AGE GROUP |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 18-34 | 424.7 | (361.3, 488.1) | 420.3 | (354.6, 486.0) |
| 35-49 | 624.2 | (516.2, 732.2) | 581.9 | (493.3, 670.5) |
| 50-64 | 548.0 | (466.7, 629.2) | 760.7 | (613.1, 908.2) |
| 65-79 | 597.4 | (452.5, 742.4) | 904.2 | (740.2, 1068.1) |
| 80+ | 619.9 | (368.1, 87I.7) | 1551.1 | (906.1, 2196.1) |
| RACE/ETHNICITY |  |  |  |  |
| White, non-Hispanic | 554.6 | (494.4, 614.7) | 659.3 | (603.5, 715.0) |
| Black, non-Hispanic | 444.2 | (296.6, 591.9) | 536.5 | (305.6, 767.5) |
| Hispanic | 371.6 | (281.6, 461.6) | 559.1 | (288.6, 829.5) |
| Non-Hispanic Other | 619.8 | (407.1, 832.4) | 644.5 | (449.3, 839.8) |
| HOUSEHOLD INCOME |  |  |  |  |
| Less than \$25,000 | 514.2 | (412.4, 616.0) | 707.0 | (537.5, 876.4) |
| \$25,000 to < \$50,000 | 562.5 | (464.3, 660.7) | 664.8 | (549.0, 780.5) |
| \$50,000 to < \$75,000 | 539.4 | (431.6, 647.1) | 622.6 | (509.4, 735.7) |
| \$75,000 or more | 536.6 | (438.5, 634.6) | 577.5 | (486.7, 668.4) |
| EDUCATION |  |  |  |  |
| Less than High School | 556.3 | (380.4, 732.2) | 634.9 | (439.1, 830.7) |
| High School Graduate | 539.9 | (455.5, 624.2) | 699.3 | (567.1, 83I.4) |
| Some College | 498.8 | (413.5, 584.1) | 610.9 | (517.2, 704.6) |
| College Graduate or Beyond | 575.3 | (489.9, 660.6) | 623.4 | (548.6, 698.2) |



HINTS tracks trends in the public's rapidly changing use of new communication technologies while charting progress in meeting health communication goals.
—David Nelson, MD, MPH
Centers for Disease Control and Prevention

Table 6 Sources of Cancer Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

|  | SOURCE FOR MOST RECENT SEARCH FOR CANCER INFORMATION <br> Respondents who reported ever seeking cancer information <br> Printed Material ${ }^{[1]}$ <br> Interpersonal Source ${ }^{[2]}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 <br> \% (95\% CI) |  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
| TOTAL | 27.9 (25.7, 30.3) | 15.5 | (14.1, 16.9) | 2.9 | $(2.3,3.8)$ | 5.0 | (4.1, 6.0) |
| GENDER |  |  |  |  |  |  |  |
| Male | 25.7 (22.3, 29.4) | 12.6 | (10.2, 15.6) |  | (1.2, 3.2) |  | $(2.8,6.6)$ |
| Female | 29.4 (26.9, 32.0) | 17.4 | (15.9, 19.1) | 3.6 | (2.6, 4.8) | 5.4 | $(4.4,6.7)$ |
| AGE GROUP |  |  |  |  |  |  |  |
| 18-34 | 18.4 (14.9, 22.5) | 11.6 | (8.5, 15.5) |  | (1.4, 3.8) | 4.5 | (3.0, 6.6) |
| 35-49 | 26.7 (23.2, 30.5) | 14.8 | (12.2, 17.7) | 3.2 | (2.1, 5.0) | 5.7 | $(3.8,8.4)$ |
| 50-64 | 33.6 (29.6, 37.8) | 16.3 | (13.4, 19.8) |  | (1.6, 4.7) | 4.3 | $(2.7,6.6)$ |
| 65-79 | 42.3 (36.3, 48.5) | 21.6 | (17.0, 26.9) |  | (2.2, 7.0) | 5.3 | $(3.6,7.9)$ |
| 80+ | $51.9 \quad(39.3,64.2)$ | 38.4 | (25.2, 53.5) | 5.8 | (2.3, 13.8) | 7.1 | (3.7, 13.4) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |
| White, non-Hispanic | 26.6 (23.9, 29.4) | 14.8 | (13.0, 16.8) |  | (2.0, 3.8) | 4.9 | (4.1, 5.9) |
| Black, non-Hispanic | 38.3 (32.0, 44.9) | 14.0 | (8.9, 21.4) |  | (0.6, 4.6) | 6.3 | (3.5, 11.1) |
| Hispanic | 32.7 (25.4, 41.0) | 21.6 | (14.0, 31.8) |  | (3.0, 14.0) | 1.7 | $(0.5,5.6)$ |
| Non-Hispanic Other | 24.1 (17.4, 32.4) | 17.2 | $(10.6,26.8)$ | 3.2 | (1.1, 9.1) | 3.6 | (1.2, 10.2) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |
| Less than \$25,000 | 35.2 (30.1, 40.8) | 16.8 | (13.5, 20.8) |  | (3.1, 8.3) | 5.3 | (3.4, 8.2) |
| \$25,000 to < \$50,000 | 30.9 (26.8, 35.4) | 16.6 | (12.7, 21.3) |  | (2.3, 5.4) | 5.2 | (3.7, 7.3) |
| \$50,000 to < \$75,000 | 23.4 (19.3, 28.2) | 17.5 | (13.4, 22.4) |  | $(0.9,4.4)$ | 6.1 | (4.0, 9.2) |
| \$75,000 or more | 22.0 (18.9, 25.4) | 10.9 | (8.3, 14.2) |  | (I.1, 2.9) | 3.0 | (1.9, 4.7) |
| EDUCATION |  |  |  |  |  |  |  |
| Less than High School | 37.3 (28.2, 47.4) | 21.1 | (15.7, 27.7) |  | (3.1, I3.4) |  | (4.8, 16.4) |
| High School Graduate | 30.0 (25.7, 34.7) | 16.8 | (13.4, 20.9) |  | (1.7, 4.4) | 3.7 | $(2.5,5.5)$ |
| Some College | 26.4 (22.6, 30.5) | 13.6 | (11.1, 16.5) |  | (1.5, 4.1) | 5.5 | (3.9, 7.7) |
| College Graduate or Beyond | 25.3 (22.4, 28.4) | 14.6 | (12.4, 17.2) |  | (1.8, 3.8) | 3.7 | (2.7, 5.1) |

${ }^{[1]}$ For HINTS 2003 and HINTS 2005 this category includes books, brochures, pamphlets, magazines, and newspaper.
${ }^{[2]}$ For HINTS 2003 includes family, friend/co-worker; for HINTS 2005 includes family, friend/co-worker, and someone with cancer.
${ }^{[3]}$ For HINTS 2003 includes library, info. phone number, and cancer organizations; for HINTS 2005 includes library and info. phone number.

(continued on next page)

Table 6 Sources of Cancer Information, by Sociodemographics (continued)
Weighted Percentages and $95 \%$ Confidence Intervals

|  | SOURCE FOR MOST RECENT SEARCH FOR CANCER INFORMATION <br> Respondents who reported ever seeking cancer information <br> Internet |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% Cl) | HINTS 2005 <br> \% (95\% CI) |  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  |
| TOTAL | 48.6 (46.1, 5I.0) | 47.6 | (45.3, 50.0) | 2.4 | (1.8, 3.3) | 1.0 | (0.5, I.7) |
| GENDER |  |  |  |  |  |  |  |
| Male | 53.1 (48.9, 57.3) | 51.7 | (46.8, 56.5) | 3.1 | (2.0, 4.6) | 1.2 | $(0.5,2.7)$ |
| Female | 45.7 (42.8, 48.6) | 44.8 | (42.3, 47.4) | 2.0 | (1.5, 2.9) | 0.8 | (0.3, 1.9) |
| AGE GROUP |  |  |  |  |  |  |  |
| 18-34 | 63.7 (59.7, 67.5) | 66.2 | (61.8, 70.4) | 1.5 | (0.8, 2.7) | 0.4 | (0.1, 1.8) |
| 35-49 | 50.7 (46.5, 54.9) | 48.6 | (43.9, 53.3) | 2.5 | (1.4, 4.5) | 1.6 | (0.7, 4.1) |
| 50-64 | 42.3 (37.7, 47.0) | 40.8 | (36.4, 45.5) | 2.8 | (1.7, 4.6) | 1.0 | (0.4, 2.2) |
| 65-79 | 17.7 (13.8, 22.6) | 20.8 | (17.1, 25.0) | 4.3 | (2.6, 7.1) | 0.4 | (0.1, 1.6) |
| 80+ | 8.3 (2.9, 21.4) | 3.6 | (1.2, 10.3) | 3.0 | (1.0, 8.3) | 0.0 | (0.0, 0.0) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |
| White, non-Hispanic | 50.5 (47.5, 53.6) | 49.6 | $(46.6,52.7)$ | 2.1 | (1.4, 3.0) | 0.9 | (0.5, I.7) |
| Black, non-Hispanic | 44.7 (37.8, 51.7) | 43.2 | (33.1, 53.9) | 2.3 | (1.0, 5.6) | 0.0 | (0.0, 0.0) |
| Hispanic | 36.0 (28.0, 44.8) | 36.3 | (25.2, 49.0) | 2.1 | (0.7, 5.7) | 1.3 | (0.2, 9.1) |
| Non-Hispanic Other | 52.2 (43.1, 61.1) | 48.2 | (37.0, 59.5) | 5.8 | $(2.5,12.7)$ | 3.2 | (0.7, 13.5) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |
| Less than \$25,000 | 33.3 (28.1, 39.0) | 38.0 | (31.8, 44.6) | 3.4 | (2.1, 5.2) | 1.5 | (0.5, 4.4) |
| \$25,000 to < \$50,000 | 44.6 (40.3, 49.0) | 43.3 | (37.6, 49.2) | 2.1 | (1.2, 3.9) | 0.3 | (0.1, I.3) |
| \$50,000 to < \$75,000 | 55.2 (50.9, 59.4) | 45.6 | (39.7, 51.6) | 2.3 | (1.3, 4.2) | 2.4 | (0.9, 6.2) |
| \$75,000 or more | 63.0 (58.8, 67.0) | 60.4 | (55.7, 64.8) | 1.7 | (0.9, 3.4) | 0.4 | (0.1, 1.2) |
| EDUCATION |  |  |  |  |  |  |  |
| Less than High School | 30.1 (21.5, 40.4) | 17.2 | (11.2, 25.5) | 1.5 | (0.7, 3.3) | 0.8 | (0.1, 5.8) |
| High School Graduate | 42.0 (37.6, 46.5) | 37.7 | (31.9, 43.8) | 2.8 | (1.5, 5.1) | 1.6 | (0.6, 3.9) |
| Some College | 52.8 (47.9, 57.5) | 52.8 | (48.1, 57.5) | 2.3 | (1.4, 3.8) | 1.0 | (0.3, 3.1) |
| College Graduate or Beyond | 56.6 (52.7, 60.5) | 58.5 | $(54.5,62.4)$ | 2.4 | (1.5, 3.8) | 0.6 | (0.2, I.3) |

${ }^{[4]}$ For HINTS 2003 includes radio, television, and other; for HINTS 2005 includes other.


Estimates measuring respondents' most recent source of cancer information suggest that the Internet is the predominant source.

Table 7 Preferred Source for Cancer Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

|  | PREFERRED SOURCE FOR CANCER INFORMATION All Respondents |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Printed Material ${ }^{[1]}$ |  | Interpersonal Source ${ }^{[2]}$ |  |  |  |
|  | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 \% (95\% CI) | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 \% (95\% CI) |  |
| TOTAL | $2.9(2.5,3.4)$ | 2.8 (2.3, 3.5) | 4.6 | (4.0, 5.3) | 5.6 | (4.7, 6.6) |
| GENDER |  |  |  |  |  |  |
| Male | 2.6 (2.0, 3.4) | 2.7 (1.9, 3.8) | 5.1 | (4.1, 6.2) | 7.0 | (5.2, 9.3) |
| Female | 3.3 (2.6, 4.0) | 2.9 (2.3, 3.7) | 4.2 | (3.4, 5.0) | 4.3 | $(3.7,5.0)$ |
| AGE GROUP |  |  |  |  |  |  |
| 18-34 | 2.8 (2.0, 3.9) | 2.0 (1.2, 3.3) | 4.3 | (3.2, 5.8) | 8.2 | (5.9, 11.4) |
| 35-49 | 2.4 (1.9, 3.1) | 3.3 (2.2, 5.0) | 5.8 | (4.8, 7.1) | 4.2 | (3.0, 5.8) |
| 50-64 | 4.5 (3.4, 5.9) | 3.1 (2.2, 4.2) | 4.2 | (3.2, 5.4) | 5.1 | $(3.7,6.9)$ |
| 65-79 | 2.3 (1.4, 3.8) | 3.1 (2.2, 4.3) | 2.9 | (1.9, 4.4) | 4.1 | $(3.0,5.5)$ |
| 80+ | 0.7 (0.2, 2.9) | 3.5 (1.2, 9.4) | 4.8 | $(2.6,8.4)$ | 2.6 | $(1.3,4.9)$ |
| RACE/ETHNICITY |  |  |  |  |  |  |
| White, non-Hispanic | 2.8 (2.4, 3.2) | 2.6 (2.0, 3.4) | 4.9 | (4.2, 5.8) | 5.7 | $(4.7,6.8)$ |
| Black, non-Hispanic | 5.0 (3.3, 7.3) | 2.8 (1.3, 6.1) | 3.6 | (1.9, 6.7) | 6.0 | $(2.8,12.3)$ |
| Hispanic | 3.0 (2.0, 4.7) | 4.3 (2.7, 6.8) | 3.9 | (2.7, 5.5) | 3.5 | $(1.4,8.6)$ |
| Non-Hispanic Other | $2.9 \quad(1.3,6.4)$ | 2.9 (1.2, 6.8) | 4.4 | (2.3, 8.1) | 5.5 | (1.8, 15.9) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |
| Less than \$25,000 | $3.1 \quad(2.2,4.3)$ | 3.6 (2.5, 5.0) | 4.2 | (3.3, 5.5) | 4.3 | (3.0, 6.1) |
| \$25,000 to < \$50,000 | $3.1 \quad(2.2,4.3)$ | 3.4 (2.0, 5.9) | 4.2 | (3.3, 5.4) | 4.5 | (2.6, 7.5) |
| \$50,000 to < \$75,000 | $3.1 \quad(2.0,4.7)$ | 3.4 (2.2, 5.0) | 3.9 | (2.6, 5.9) | 7.0 | (5.0, 9.8) |
| \$75,000 or more | $3.1 \quad(2.3,4.2)$ | 1.6 (1.0, 2.6) | 5.7 | (4.2, 7.6) | 6.1 | $(4.0,9.3)$ |
| EDUCATION |  |  |  |  |  |  |
| Less than High School | 2.8 (1.5, 5.1) | 3.0 (1.8, 5.1) | 3.6 | (2.1, 6.0) | 3.5 | (2.1, 5.9) |
| High School Graduate | 2.7 (2.0, 3.7) | 3.4 (2.2, 5.0) | 4.7 | $(3.6,6.2)$ | 5.9 | (4.4, 8.0) |
| Some College | 2.6 (1.8, 3.7) | 2.6 (1.8, 3.6) | 5.4 | $(4.3,6.8)$ | 6.0 | (4.3, 8.3) |
| College Graduate or Beyond | 4.0 (3.0, 5.4) | 2.5 (1.7, 3.7) | 4.3 | $(3.3,5.5)$ | 5.5 | (4.1, 7.3) |

[^6]| Health Care Provider |  |  |  | Information Specialist ${ }^{[3]}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 \% (95\% CI) |  | HINTS 2003\% (95\% CI) |  | HINTS 2005 \% (95\% CI) |  |
| 49.5 | (48.1, 50.8) | 55.0 | (53.5, 56.5) | 8.1 | (7.2, 9.I) | 5.6 | (4.8, 6.6) |
| 48.6 | (46.3, 50.9) | 55.2 | (52.4, 58.0) | 7.1 | (5.7, 8.8) | 4.8 | (3.7, 6.1) |
| 50.2 | (48.4, 52.1) | 54.9 | (52.8, 56.9) | 9.0 | $(7.8,10.4)$ | 6.3 | (5.2, 7.6) |
| 39.4 | (36.9, 42.0) | 46.7 | (43.1, 50.4) | 7.6 | (6.0, 9.6) | 3.4 | (2.2, 5.4) |
| 42.4 | (40.0, 45.0) | 49.9 | (46.4, 53.3) | 8.1 | (6.1, 10.6) | 5.9 | $(4.6,7.7)$ |
| 53.5 | (49.9, 57.0) | 56.3 | (53.4, 59.3) | 8.7 | (7.5, 10.2) | 7.7 | (6.1, 9.6) |
| 76.2 | (72.8, 79.3) | 76.7 | (73.5, 79.7) | 8.7 | (6.9, II.0) | 6.5 | (4.9, 8.7) |
| 84.4 | (78.8, 88.7) | 85.9 | (80.7, 89.9) | 5.9 | (3.0, 11.3) | 5.5 | (3.2, 9.4) |
| 47.0 | (45.1, 48.9) | 52.9 | (5I.I, 54.6) | 7.6 | (6.5, 8.8) | 5.2 | (4.1, 6.4) |
| 52.0 | (47.1, 56.8) | 55.9 | (49.3, 62.4) | 14.1 | (10.7, 18.4) | 6.0 | (4.3, 8.5) |
| 62.7 | (58.1, 67.1) | 65.7 | (59.4, 71.5) | 5.5 | (3.8, 8.0) | 5.0 | (3.2, 7.6) |
| 43.2 | (36.2, 50.5) | 53.7 | (45.4, 61.7) | 8.8 | (5.0, 15.0) | 8.8 | (5.5, 13.7) |
| 61.8 | (58.4, 65.1) | 64.9 | (60.9, 68.7) | 12.0 | (9.6, 14.9) | 8.6 | (6.5, 11.3) |
| 49.3 | (46.4, 52.2) | 58.2 | (54.2, 62.2) | 8.1 | $(6.3,10.4)$ | 5.6 | (4.2, 7.6) |
| 42.8 | (39.0, 46.7) | 50.1 | (45.8, 54.5) | 6.5 | (4.7, 9.0) | 3.8 | $(2.6,5.5)$ |
| 35.5 | (32.9, 38.1) | 44.9 | (40.4, 49.4) | 4.0 | (3.0, 5.4) | 3.8 | $(2.4,6.0)$ |
| 69.7 | (66.1, 73.0) | 73.6 | (68.8, 77.9) | 8.3 | (6.0, II.6) | 6.5 | (4.6, 9.2) |
| 57.5 | (54.9, 60.0) | 60.8 | (57.9, 63.7) | 8.1 | (6.7, 9.6) | 6.1 | (4.6, 8.1) |
| 39.9 | (37.0, 42.8) | 50.4 | (46.5, 54.3) | 10.1 | (7.9, 13.0) |  | (3.5, 6.9) |
| 35.2 | (32.7, 37.8) | 42.3 | (39.4, 45.3) | 5.8 | (4.6, 7.2) |  | (3.7, 5.8) |

(continued on next page)

Table 7 Preferred Source for Cancer Information, by Sociodemographics (continued)
Weighted Percentages and 95\% Confidence Intervals


[^7]

The percentage of respondents who reported health care professionals as their preferred source of cancer information increased from 2003 to 2005, while the percentage of respondents who reported the Internet as their preferred source decreased.

Table 8 Surrogate Sources of Cancer Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

| TOTAL | WHO LOOKED FOR CANCER INFORMATION FOR YOU? <br> Respondents who reported that another person looked for information for them Spouse or Other Family <br> Friend or Co-worker |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 |  | HINTS 2003 |  | HINTS 2005 |  |
|  |  |  | 5\% CI) |  | 5\% CI) |  | 5\% CI) |
|  | 72.5 (68.9, 75.9) | 82.2 | (79.3, 84.8) | 21.5 | (18.5, 24.8) | 15.9 | (13.3, 18.9) |
| GENDER |  |  |  |  |  |  |  |
| Male | 78.0 (70.0, 84.4) | 88.5 | (83.3, 92.2) | 17.4 | (12.2, 24.1) | 9.5 | (6.0, 14.7) |
| Female | 68.6 (64.2, 72.7) | 77.8 | (73.2, 81.8) | 24.4 | (20.9, 28.2) | 20.4 | (16.5, 24.9) |
| AGE GROUP |  |  |  |  |  |  |  |
| 18-34 | 67.4 (57.9, 75.7) | 84.7 | (75.4, 90.9) | 25.7 | (18.7, 34.2) | 14.4 | (8.4, 23.6) |
| 35-49 | 74.4 (69.6, 78.7) | 81.1 | (76.1, 85.2) | 18.5 | (14.7, 23.0) | 16.8 | (12.7, 21.9) |
| 50-64 | 69.7 (62.6, 76.0) | 77.1 | (72.6, 81.1) | 25.5 | (19.6, 32.5) | 21.4 | (17.2, 26.4) |
| 65-79 | 81.7 (73.6, 87.8) | 89.8 | (84.0, 93.7) | 14.0 | (8.6, 22.0) | 6.3 | (3.6, 10.9) |
| 80+ | 95.4 (78.6, 99.1) | 94.2 | (84.3, 98.0) | 4.6 | (0.9, 21.4) | 4.4 | (1.4, 13.1) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |
| White, non-Hispanic | 75.7 (72.0, 79.0) | 82.3 | (79.4, 84.9) | 19.1 | (15.9, 22.7) | 15.6 | (13.0, 18.5) |
| Black, non-Hispanic | 57.1 (42.5, 70.5) | 81.8 | (69.2, 90.0) | 35.3 | (22.1, 51.2) | 16.7 | $(8.6,30.0)$ |
| Hispanic | 68.8 (54.2, 80.4) | 79.6 | (65.3, 89.0) | 26.5 | (16.3, 40.0) | 16.9 | (8.9, 29.7) |
| Non-Hispanic Other | 71.0 (53.8, 83.7) | 80.4 | (63.9, 90.5) | 21.3 | (11.2, 36.6) | 19.6 | (9.5, 36.1) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |
| Less than \$25,000 | 73.6 (65.6, 80.2) | 88.7 | (80.9, 93.6) | 19.8 | (14.1, 27.2) | 10.3 | (5.7, 17.8) |
| \$25,000 to < \$50,000 | 65.6 (57.3, 73.0) | 82.4 | (74.5, 88.3) | 28.9 | (21.5, 37.6) | 16.4 | (10.7, 24.3) |
| \$50,000 to < \$75,000 | 73.6 (65.7, 80.2) | 83.3 | (75.8, 88.9) | 18.9 | (13.5, 25.7) | 15.0 | (9.9, 22.0) |
| \$75,000 or more | 78.3 (73.1, 82.8) | 75.1 | (68.3, 80.9) | 17.0 | (12.7, 22.5) | 21.6 | (15.6, 29.2) |
| EDUCATION |  |  |  |  |  |  |  |
| Less than High School | 71.2 (51.6, 85.1) | 87.5 | (74.2, 94.4) | 22.8 | (12.2, 38.5) | 12.5 | $(5.6,25.8)$ |
| High School Graduate | 72.9 (66.9, 78.1) | 84.5 | (78.4, 89.2) | 21.8 | (16.5, 28.2) | 14.6 | (10.2, 20.5) |
| Some College | 73.3 (66.0, 79.5) | 82.2 | (76.3, 86.8) | 20.2 | (14.8, 26.9) | 15.9 | (11.3, 21.8) |
| College Graduate or Beyond | 71.8 (67.5, 75.7) | 77.9 | (71.8, 83.0) | 23.5 | (19.5, 28.0) | 18.4 | (13.7, 24.4) |

[^8]| Information Specialist or Other |  |  |  |
| :---: | :---: | :---: | :---: |
| HINTS 2003 |  | HINTS 2005 |  |
| \% (95\% CI) |  | \% (95\% CI) |  |
| 6.0 (4.5, 7.9) $\quad 1.9 \quad(1.1,3.2)$ |  |  |  |
| $\begin{array}{ll} 4.6 & (2.6,8.0) \\ 7.0 & (4.9,9.8) \end{array}$ |  | 2.0 | (1.1, 3.9) |
|  |  | 1.8 | (0.9, 3.6) |
| 6.9 (3.7, 12.5) |  | 0.9 | (0.1, 6.7) |
| 7.1 | (4.5, 11.0) | 2.1 | (1.0, 4.5) |
| 4.8 | $(2.2,9.8)$ | 1.5 | $(0.6,3.5)$ |
|  | (2.0, 8.8) | 3.8 | (1.4, 9.7) |
|  | (0.0, 0.0) | 1.4 | (0.2, 10.3) |
| 5.3 | $(3.8,7.3)$ | 2.1 | (1.2, 3.5) |
| 7.6 | $(3.5,15.8)$ | 1.5 | (0.5, 4.3) |
| 4.77.8 | (1.0, 19.4) | 3.4 | (0.4, 23.0) |
|  | (1.9, 26.6) | 0.0 | (0.0, 0.0) |
| 6.6 | (3.6, 11.9) | 1.0 | (0.3, 3.3) |
| 5.5 | (3.0, 9.7) | 1.2 | $(0.4,3.7)$ |
|  | (4.2, 13.1) | 1.7 | $(0.5,5.9)$ |
| 4.6 | (2.0, 10.4) | 3.3 | $(1.5,6.8)$ |
|  | (1.7, 19.2) | 0.0 | (0.0, 0.0) |
|  | (3.0, 9.1) | 0.9 | $(0.3,2.6)$ |
|  | (3.7, II.3) | 2.0 | $(0.8,4.6)$ |
| 4.7 | (2.8, 7.8) | 3.7 | $(2.0,6.7)$ |

Table 9 Cancer Information Seeking and Usefulness of Information on the Internet, by Sociodemographics Weighted Percentages and 95\% Confidence Intervals

| TOTAL | PERCENT OF INFORMATION SEEKING AND <br> Rating Scale of Usefulness: I=Very useful, 2=Son <br> Looked for Cancer Information on the Internet <br> HINTS 2003 <br> HINTS 2005 <br> \% (95\% CI) <br> \% (95\% CI) |  |  |  | RATINGS OF INFORMATION USEFULNESS ewhat useful, $3=A$ little useful, $4=$ Not at all useful <br> Rating of Information Usefulness <br> HINTS 2003 <br> HINTS 2005 <br> \% (95\% CI) <br> \% (95\% CI) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20.5 | (19.3, 21.8) | 28.2 | (26.9, 29.7) | 1.66 | (1.61, 1.70) | 1.66 | (1.60, 1.72) |
| GENDER |  |  |  |  |  |  |  |  |
| Male |  | (16.1, 19.6) |  | (22.5, 28.2) | 1.62 | (1.56, 1.69) |  | (1.57, 1.80) |
| Female | 23.1 | (21.3, 24.9) | 31.0 | (29.3, 32.8) | 1.68 | (1.62, 1.74) | 1.65 | (1.59, 1.70) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 24.4 | (21.9, 27.1) | 32.6 | (29.6, 35.7) | 1.69 | (1.60, 1.77) | 1.69 | (1.56, 1.81) |
| 35-49 | 24.4 | (22.1, 27.0) | 32.5 | (29.4, 35.8) | 1.62 | (1.57, 1.67) | 1.65 | (1.58, 1.73) |
| 50-64 | 21.1 | (18.7, 23.7) | 30.0 | (27.4, 32.7) | 1.65 | (1.57, 1.73) | 1.63 | (1.55, 1.70) |
| 65-79 | 5.7 | (4.4, 7.3) | 12.0 | (10.2, 14.0) | 1.77 | (1.64, 1.91) | 1.74 | (1.61, 1.86) |
| 80+ | 0.6 | (0.1, 3.1) | 1.1 | (0.4, 3.0) | 1.22 | (-0.36, 2.81) | 2.00 | (2.00, 2.00) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 24.0 | (22.5, 25.5) | 33.3 | (31.2, 35.4) | 1.68 | (1.63, 1.73) | 1.69 | (1.62, 1.76) |
| Black, non-Hispanic | 14.5 | (11.5, 18.2) | 23.3 | (17.2, 30.6) | 1.50 | (1.33, 1.66) | 1.28 | (1.16, 1.41) |
| Hispanic | 7.6 | $(5.8,9.8)$ | 11.2 | (7.8, 15.9) | 1.57 | (1.34, 1.80) | 1.62 | (1.34, 1.91) |
| Non-Hispanic Other | 24.2 | (19.4, 29.6) | 28.2 | (21.5, 36.0) | 1.65 | (1.49, 1.81) | 1.79 | (1.60, 1.97) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than $\$ 25,000$ | 10.5 | (8.8, 12.5) | 18.0 | (15.2, 21.2) | 1.69 | (1.58, 1.80) | 1.71 | (1.54, 1.87) |
| \$25,000 to < \$50,000 | 17.3 | (15.0, 19.9) | 25.6 | (22.1, 29.4) | 1.65 | (1.54, 1.76) | 1.66 | (1.56, 1.77) |
| \$50,000 to < \$75,000 | 28.1 | (25.0, 31.4) | 30.4 | (26.7, 34.4) | 1.76 | (1.67, 1.86) | 1.62 | (1.52, 1.73) |
| \$75,000 or more | 38.0 | (34.5, 41.7) | 44.6 | (40.4, 48.8) | 1.58 | (1.53, 1.63) | 1.68 | (1.57, 1.79) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 6.7 | (4.5, 10.0) | 6.4 | (4.6, 8.9) | 1.51 | (1.19, 1.84) | 1.59 | (1.30, 1.88) |
| High School Graduate | 12.9 | (11.1, 15.0) | 19.9 | (17.0, 23.2) | 1.70 | (1.59, 1.81) | 1.64 | (1.54, 1.74) |
| Some College | 25.0 | (22.5, 27.6) | 34.7 | (30.9, 38.6) | 1.68 | (1.59, 1.77) | 1.70 | (1.59, 1.81) |
| College Graduate or Beyond | 37.0 | (34.5, 39.6) | 46.5 | $(43.3,49.7)$ | 1.64 | (1.59, 1.68) | 1.65 | (1.58, 1.72) |

Respondents who reported using the Internet as a source for cancer information rated the information, on average, as useful.

Table IO Awareness of National Cancer Organizations, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

|  | AWARENESS OF NATIONAL CANCER ORGANIZATIONS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NCl |  |  |  | NCl's Cancer Information Service |  |  |  |
|  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
| TOTAL | 76.7 | (75.4, 77.8) | 76.9 | (75.2, 78.5) | 25.8 | (24.2, 27.5) | 29.3 | (27.6, 3I.0) |
| GENDER |  |  |  |  |  |  |  |  |
| Male | 76.4 | (74.5, 78.2) | 77.0 | (74.3, 79.5) | 24.6 | (22.5, 26.7) | 26.7 | (23.5, 30.2) |
| Female | 76.9 | (75.3, 78.4) | 76.8 | (74.8, 78.6) | 27.0 | (24.9, 29.2) | 31.6 | (29.7, 33.6) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 73.2 | (70.8, 75.5) | 70.9 | (67.0, 74.6) | 20.4 | (18.1, 23.0) | 21.2 | (18.0, 24.8) |
| 35-49 | 79.5 | (77.1, 81.6) | 79.8 | (76.8, 82.5) | 24.5 | (22.2, 26.9) | 29.5 | (25.6, 33.7) |
| 50-64 | 79.8 | (77.4, 82.1) | 81.0 | (78.7, 83.1) | 30.7 | (27.4, 34.3) | 33.4 | (30.6, 36.2) |
| 65-79 | 75.6 | (72.3, 78.7) | 76.9 | (73.0, 80.3) | 33.5 | (29.1, 38.1) | 39.9 | (35.2, 44.7) |
| 80+ | 66.7 | (58.9, 73.7) | 80.6 | (74.7, 85.5) | 29.1 | (21.4, 38.1) | 31.6 | (25.1, 39.0) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 78.2 | (76.8, 79.5) | 80.3 | (78.5, 81.9) | 20.3 | (18.6, 22.1) | 25.9 | (24.0, 27.8) |
| Black, non-Hispanic | 77.8 | (73.4, 81.6) | 71.8 | (63.8, 78.6) | 33.6 | (28.0, 39.8) | 34.6 | (26.5, 43.8) |
| Hispanic | 69.6 | (65.0, 73.9) | 66.8 | (61.1, 72.0) | 52.3 | (47.2, 57.4) | 43.0 | $(35.6,50.8)$ |
| Non-Hispanic Other | 70.7 | (62.7, 77.7) | 75.3 | (67.5, 81.8) | 25.2 | (18.5, 33.4) | 35.3 | (26.6, 45.2) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 74.6 | (72.1, 77.0) | 70.7 | (67.0, 74.2) | 40.1 | (36.3, 44.0) | 39.7 | (34.4, 45.2) |
| \$25,000 to < \$50,000 | 77.3 | (74.5, 79.8) | 79.7 | (75.3, 83.4) | 24.4 | (22.1, 26.9) | 29.7 | (25.5, 34.3) |
| \$50,000 to < \$75,000 | 78.6 | (75.0, 81.8) | 80.3 | (76.9, 83.3) | 20.7 | (17.9, 23.7) |  | (25.5, 35.0) |
| \$75,000 or more | 80.4 | (77.7, 82.8) | 82.0 | (78.7, 85.0) | 13.3 | (10.8, 16.2) |  | (18.3, 24.2) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 70.8 | (66.1, 75.1) | 66.6 | (62.4, 70.6) | 45.2 | (39.2, 51.3) |  | (38.3, 51.2) |
| High School Graduate | 76.6 | (74.6, 78.5) | 78.1 | (75.1, 80.8) | 29.0 | (26.3, 31.9) | 28.4 | (24.8, 32.4) |
| Some College | 78.3 | (76.1, 80.3) | 80.0 | (76.7, 82.9) | 19.7 | (17.0, 22.6) |  | (27.1, 33.2) |
| College Graduate or Beyond | 78.9 | (76.7, 81.0) | 78.9 | (76.2, 81.3) | 15.5 | (13.4, 17.8) | 21.0 | (18.4, 24.0) |

[^9]| I-800-4-Cancer Information Number |  |  |  | Bogus Organizations* |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
| 19.5 | (18.4, 20.8) | 19.1 | (17.4, 20.9) | 32.6 | (31.0, 34.3) | 10.5 | (9.1, I2.0) |
| 17.3 | (15.6, 19.2) | 16.6 | (14.1, 19.4) | 32.1 | (29.7, 34.6) | 10.2 | (8.2, I2.6) |
| 21.6 | (19.9, 23.5) | 21.5 | (19.8, 23.2) | 33.1 | (31.2, 35.I) | 10.7 | (9.4, I2.1) |
| 17.9 | (15.3, 20.7) | 18.3 | (15.2, 21.8) | 39.9 | $(36.8,43.0)$ | 14.9 | (11.9, 18.6) |
| 18.3 | (16.4, 20.3) | 18.9 | (15.9, 22.2) | 32.3 | (29.5, 35.2) | 8.5 | $(6.3,11.2)$ |
| 24.1 | (21.6, 26.7) | 21.8 | (18.8, 25.1) | 25.8 | (23.4, 28.4) | 7.4 | (5.7, 9.5) |
| 20.9 | (18.1, 23.9) | 17.9 | (15.1, 21.1) | 28.8 | (25.4, 32.4) | 8.9 | (6.7, 11.8) |
| 12.8 | (8.8, 18.4) | 16.1 | (11.4, 22.3) | 26.1 | (20.8, 32.2) | 13.4 | $(8.6,20.3)$ |
| 16.7 | (15.2, 18.3) | 16.7 | (15.1, 18.4) | 30.7 | (28.8, 32.6) | 5.6 | (4.4, 7.0) |
| 29.3 | $(24.6,34.5)$ | 26.3 | (20.6, 32.9) | 41.8 | (36.9, 46.9) | 16.7 | (12.8, 21.4) |
| 30.0 | (26.5, 33.7) | 28.0 | (23.1, 33.6) | 34.2 | (30.4, 38.3) | 26.7 | (20.8, 33.5) |
| 17.1 | (12.0, 23.8) | 20.1 | (12.8, 30.1) | 33.8 | $(27.8,40.4)$ | 15.7 | (10.2, 23.3) |
| 28.2 | (25.3, 31.3) | 24.6 | (21.3, 28.1) | 37.5 | (34.2, 40.8) | 19.1 | (15.1, 23.7) |
| 18.6 | (16.2, 21.2) | 19.8 | $(16.8,23.3)$ | 32.2 | (29.3, 35.2) | 10.2 | (8.0, 12.8) |
| 17.9 | (15.0, 21.1) | 17.8 | $(14.8,21.3)$ | 33.0 | (29.2, 37.1) | 5.7 | (3.9, 8.2) |
| 11.1 | (9.3, 13.2) | 14.5 | (11.8, 17.8) | 26.2 | (22.7, 30.1) | 4.3 | $(2.7,6.6)$ |
| 29.4 | (26.1, 33.0) | 27.4 | (23.0, 32.3) | 37.9 | (33.8, 42.2) | 25.6 | (20.9, 30.9) |
| 21.5 | (19.2, 23.9) |  | (16.8, 23.1) | 32.9 | (30.2, 35.7) | 10.1 | (7.7, 13.0) |
| 18.6 | (16.2, 21.1) |  | (15.8, 23.5) | 34.3 | (31.3, 37.4) | 7.8 | (5.9, 10.3) |
|  | (10.4, 13.6) |  | (11.3, 17.1) |  | (24.0, 28.5) |  | $(2.8,5.3)$ |

Table II Trust in Sources of Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals


(Table II continued on next page)

Table II Trust in Sources of Information, by Sociodemographics (continued)
Weighted Percentages and 95\% Confidence Intervals


|  | HOW MUCH WOULD YOU TRUST INFORMATIO <br> Newspaper |  |  |  | N ABOUT HEALTH OR MEDICAL TOPICS FROM. <br> Magazine |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  | HINTS 2003\% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
|  | 16.2 | (14.0, 18.8) | 15.3 | (11.7, 19.7) | 18.0 | (15.3, 20.9) | 15.3 | (13.0, 18.0) |
|  | 40.1 | (37.3, 43.1) | 44.5 | (38.9, 50.2) | 40.9 | (37.8, 44.1) | 45.5 | (40.6, 50.4) |
|  | 43.6 | (40.8, 46.5) | 40.3 | (34.6, 46.2) | 41.2 | (38.4, 43.9) | 39.2 | (34.3, 44.4) |
| $\begin{array}{r} \$ 25,000 \text { to }<\$ 50,000 \text { A lot } \\ \text { Some } \\ \text { A little/not at all } \end{array}$ | 12.7 | (10.6, 15.2) | 18.3 | (15.3, 21.6) | 15.9 | (13.9, 18.1) | 18.6 | (15.6, 22.1) |
|  | 50.4 | (47.3, 53.5) | 53.3 | (48.9, 57.7) | 50.3 | (47.1, 53.4) | 50.7 | (46.4, 55.0) |
|  | 36.9 | (34.2, 39.6) | 28.4 | (24.7, 32.5) | 33.8 | (31.2, 36.6) | 30.7 | $(26.6,35.0)$ |
| $\begin{array}{r} \$ 50,000 \text { to }<\$ 75,000 \text { A lot } \\ \text { Some } \\ \text { A little/not at all } \end{array}$ | 11.1 | (9.4, 13.2) | 22.7 | (18.7, 27.2) | 15.8 | (13.4, 18.5) | 23.3 | (19.4, 27.8) |
|  | 59.0 | (54.3, 63.5) | 52.8 | (47.3, 58.3) | 59.7 | (55.1, 64.1) | 52.5 | (46.8, 58.2) |
|  | 29.9 | (25.8, 34.3) | 24.5 | (20.3, 29.2) | 24.5 | (20.9, 28.6) | 24.2 | (20.6, 28.1) |
|  | 10.8 | (9.1, 12.7) | 24.0 | (20.6, 27.8) | 13.5 | (11.7, 15.4) | 24.2 | (2I.I, 27.7) |
|  | 58.9 | $(56.1,61.6)$ | 54.5 | $(50.2,58.7)$ | 58.7 | $(56.1,61.3)$ | 53.6 | $(49.2,57.8)$ |
|  | 30.4 | (27.9, 32.9) |  | (18.0, 25.5) | 27.8 | (25.6, 30.1) |  | (18.5, 26.4) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School A lot Some A little/not at all | 15.0 | (I2.I, I8.4) | 15.9 | (12.2, 20.5) | 17.3 | (13.9, 21.3) | 16.0 | (11.4, 21.9) |
|  | 35.5 | (30.9, 40.3) | 42.5 | (35.5, 49.9) | 33.0 | (28.9, 37.4) | 36.5 | (29.6, 43.9) |
|  | 49.5 | (45.0, 54.0) | 41.5 | (35.2, 48.2) | 49.8 | (45.7, 53.9) | 47.6 | (40.5, 54.8) |
| High School Graduate A lot Some <br> A little/not at all | 13.3 | (11.6, 15.2) | 20.4 | (17.2, 24.0) | 16.0 | (14.4, 17.7) | 21.6 | (18.3, 25.4) |
|  | 47.7 | (44.7, 50.8) | 47.3 | (43.3, 51.4) | 47.6 | $(45.0,50.2)$ | 47.1 | $(43.6,50.6)$ |
|  | 39.0 | (36.5, 41.4) | 32.3 | (28.3, 36.5) | 36.4 | (34.2, 38.7) | 31.3 | (27.5, 35.3) |
| Some College $\begin{array}{r}\text { A lot } \\ \text { Some } \\ \text { A little/not at all }\end{array}$ | 14.4 | (11.9, 17.3) | 17.7 | (15.4, 20.2) | 16.6 | (13.9, 19.7) | 18.2 | (15.8, 20.9) |
|  | 53.8 | (51.0, 56.6) | 56.3 | $(52.8,59.7)$ | 56.3 | (53.4, 59.1) | 56.7 | (52.9, 60.5) |
|  | 31.8 | (29.4, 34.3) | 26.0 | (22.9, 29.4) | 27.1 | (24.8, 29.5) | 25.1 | (21.9, 28.5) |
| College Graduate $\begin{array}{r}\text { A lot } \\ \text { Some } \\ \text { A little/not at all }\end{array}$ | 10.7 | (9.3, 12.3) | 21.2 | (18.6, 24.0) | 14.5 | (13.0, 16.1) | 21.6 | (18.6, 25.0) |
|  |  | (58.4, 62.9) | 57.1 | $(53.5,60.7)$ | 60.4 | $(57.8,63.0)$ |  | (52.1, 60.3) |
|  |  | (26.0, 31.4) | 21.7 | (18.9, 24.9) | 25.1 | $(22.6,27.7)$ |  | (18.4, 26.3) |

(Table II continued on next page)

Table I I Trust in Sources of Information, by Sociodemographics (continued)
Weighted Percentages and $95 \%$ Confidence Intervals
HOW MUCH WOULD YOU TRUST INFORMATION ABOUT HEALTH OR MEDICAL TOPICS FROM...

|  | Radio |  | Internet |  |
| :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 <br> \% (95\% CI) | HINTS 2003 <br> \% (95\% CI) | HINTS 2005 \% (95\% CI) |
| TOTAL A lot | 9.9 (8.9, II.0) | 12.3 (10.9, 13.8) | 23.9 (22.5, 25.4) | 18.9 (16.7, 21.4) |
| Some | 44.0 (42.2, 45.9) | 45.7 (44.2, 47.3) | 40.9 (39.3, 42.6) | 53.8 (51.1, 56.5) |
| A little/not at all | 46.1 (44.3, 47.8) | 42.0 (39.9, 44.2) | 35.1 (33.7, 36.6) | 27.3 (25.4, 29.2) |
| GENDER |  |  |  |  |
| Male A lot | 9.9 (8.4, II.7) | 13.0 (10.8, I5.6) | 23.2 (21.3, 25.1) | 15.8 (12.8, 19.4) |
| Some | 42.4 (39.9, 44.9) | 43.0 (40.0, 46.0) | 40.2 (38.0, 42.5) | $51.2(47.4,55.0)$ |
| A little/not at all | 47.7 (45.3, 50.1) | 44.0 (39.9, 48.2) | 36.6 (34.3, 39.0) | 33.0 (29.4, 36.8) |
| Female A lot | 9.9 (8.8, II.I) | 11.5 (I0.1, I3.2) | 24.6 (22.7, 26.7) | 21.8 (19.2, 24.6) |
| Some | 45.6 (43.5, 47.7) | 48.4 (46.4, 50.3) | 41.6 (39.5, 43.7) | 56.2 (52.5, 59.8) |
| A little/not at all | 44.5 (42.5, 46.6) | 40.1 (38.4, 4I.8) | 33.8 (32.I, 35.5) | 22.0 (19.6, 24.7) |
| AGE GROUP |  |  |  |  |
| 18-34 A lot | 11.8 (9.8, 14.1) | 11.4 (8.6, 15.0) | 27.9 (25.5, 30.5) | 14.6 (11.2, 18.8) |
| Some | 45.0 (41.8, 48.2) | 43.3 (39.6, 47.1) | 46.1 (43.1, 49.1) | 55.8 (50.0, 61.4) |
| A little/not at all | 43.2 (40.3, 46.1) | 45.3 (40.8, 49.8) | 26.0 (23.5, 28.7) | 29.6 (26.0, 33.6) |
| 35-49 A lot | 10.0 (8.2, 12.2) | 15.7 (13.4, 18.3) | 27.7 (25.2, 30.4) | 22.4 (18.3, 27.0) |
| Some | 48.7 (46.2, 51.2) | 49.6 (45.8, 53.5) | 46.4 (43.5, 49.4) | 53.2 (49.1, 57.3) |
| A little/not at all | 41.2 (38.5, 44.1) | 34.7 (31.1, 38.4) | 25.9 (23.7, 28.1) | 24.4 (20.9, 28.2) |
| 50-64 A lot | 9.5 (7.5, II.8) | 10.6 (8.6, 13.2) | 24.2 (21.3, 27.4) | 21.1 (17.8, 24.8) |
| Some | 45.7 (42.6, 48.7) | 49.6 (46.5, 52.6) | 40.7 (37.7, 43.8) | 55.1 (51.3, 58.8) |
| A little/not at all | 44.9 (42.0, 47.9) | 39.8 (36.3, 43.4) | 35.1 (31.9, 38.4) | 23.8 (20.8, 27.2) |
| 65-79 A lot | 6.2 (4.2, 8.9) | 10.2 (7.4, 13.9) | 9.0 (7.3, II.I) | 20.8 (15.8, 26.7) |
| Some | 33.3 (29.3, 37.5) | 38.4 (34.4, 42.6) | 21.6 (18.4, 25.1) | 41.4 (35.7, 47.4) |
| A little/not at all | 60.5 (55.9, 65.0) | 51.3 (46.4, 56.2) | 69.4 (65.4, 73.2) | 37.8 (32.2, 43.7) |
| 80+ A lot | 8.2 (4.7, I4.1) | 4.6 (2.3, 8.8) | 5.8 (3.1, I0.8) | 12.0 (5.2, 25.5) |
| Some | 21.5 (15.9, 28.5) | 29.9 (22.1, 39.2) | 15.2 (10.4, 21.6) | 38.7 (16.5, 66.9) |
| A little/not at all | 70.3 (64.1, 75.8) | 65.5 (56.8, 73.3) | 79.0 (72.1, 84.6) | 49.3 (26.3, 72.6) |
| RACE/ETHNICITY |  |  |  |  |
| White, non-Hispanic $\begin{aligned} & \text { A lot } \\ & \text { Some }\end{aligned}$ | 8.0 (6.7, 9.5) | 11.3 (9.9, 12.8) | 23.1 (21.4, 24.9) | 17.5 (15.4, 19.8) |
|  | 46.3 (44.2, 48.3) | 46.8 (44.7, 49.0) | 43.3 (41.4, 45.2) | 54.7 (51.6, 57.8) |
| A little/not at all | 45.8 (43.6, 47.9) | 41.9 (39.4, 44.4) | 33.6 (31.9, 35.5) | 27.8 (25.4, 30.4) |
| Black, non-Hispanic $\begin{array}{r}\text { A lot } \\ \text { Some }\end{array}$ | 15.4 (12.1, 19.5) | 15.7 (10.9, 22.1) | 29.4 (24.9, 34.2) | 25.8 (18.0, 35.3) |
|  | 41.0 (36.1, 46.2) | 46.2 (39.9, 52.5) | 36.6 (31.2, 42.3) | 48.9 (37.7, 60.1) |
| A little/not at all | 43.5 (38.8, 48.3) | 38.1 (31.3, 45.5) | 34.0 (29.7, 38.7) | 25.4 (17.5, 35.3) |
| Hispanic A lot | 16.3 (13.6, 19.4) | 15.9 (11.2, 22.2) | 24.4 (20.4, 28.9) | 25.4 (17.3, 35.6) |
| Some | 38.4 (34.8, 42.0) | 39.2 (32.1, 46.7) | 33.0 (28.7, 37.6) | 45.4 (34.5, 56.9) |
| A little/not at all | 45.3 (40.9, 49.9) | 44.9 (37.5, 52.5) | 42.6 (38.3, 47.0) | 29.2 (19.7, 40.9) |
| Non-Hispanic OtherA lotSomeA little/not at all | 14.0 (10.0, 19.4) | 11.8 (7.7, 17.7) | 27.2 (21.2, 34.2) | 21.3 (15.3, 28.9) |
|  | 40.8 (33.6, 48.4) | 43.7 (34.2, 53.8) | 38.4 (31.7, 45.5) | 58.5 (48.3, 68.1) |
|  | 45.2 (37.9, 52.6) | 44.4 (35.2, 54.0) | 34.4 (28.2, 41.2) | 20.1 (13.1, 29.7) |


(Table II continued on next page)

Table II Trust in Sources of Information, by Sociodemographics (continued)
Weighted Percentages and 95\% Confidence Intervals

|  |  |  |  |  |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- |
|  |  | HOW MUCH WOULD YOU TRUST INFORMATION |  |  |
|  |  | ABOUT HEALTH OR MEDICAL TOPICS FROM... |  |  |


|  | HOW MUCH WOULD YOU TRUST INFORMATION |
| ---: | :--- | ---: | :--- | :--- | :--- |
|  | ABOUT HEALTH OR MEDICAL TOPICS FROM... |

Table I2 Confidence in Obtaining Cancer Information, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals
HOW CONFIDENT ARE YOU THAT YOU COULD GET ADVICE OR INFORMATION ABOUT CANCER IF YOU NEEDED IT?

Completely/Very

| HINTS 2003 | HINTS 2005 | HINTS 2003 | HINTS 2005 |
| :--- | :--- | :--- | :--- |
| $\%(95 \% \mathrm{CI})$ | $\%(95 \% \mathrm{CI})$ | $\%(95 \% \mathrm{CI})$ | $\%(95 \% \mathrm{CI})$ |


| TOTAL | 62.6 | (61.1, 64.1) | 68.1 | (66.0, 70.1) | 35.8 | (34.4, 37.2) | 29.8 | (28.0, 31.7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| GENDER |  |  |  |  |  |  |  |  |
| Male | 62.1 | (59.9, 64.3) | 66.6 | (63.2, 69.8) | 35.9 | (33.9, 37.9) | 30.8 | (27.8, 34.0) |
| Female | 63.0 | (61.0, 65.0) | 69.4 | (67.2, 71.6 ) | 35.7 | (33.7, 37.7) | 28.9 | (26.8, 31.2) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 63.3 | (60.7, 65.8) | 72.5 | (68.3, 76.3) | 35.7 | (33.4, 38.0) | 25.8 | (22.4, 29.5) |
| 35-49 | 61.9 | (59.1, 64.6) | 65.8 | $(62.5,68.9)$ | 36.7 | (34.1, 39.4) | 31.4 | (28.3, 34.7) |
| 50-64 | 62.7 | (59.0, 66.3) | 69.7 | (66.1, 73.1) | 35.7 | (32.1, 39.5) | 28.4 | (25.3, 31.8) |
| 65-79 | 63.5 | (59.3, 67.5) | 63.2 | (59.2, 67.0) | 33.4 | (29.6, 37.5) | 34.9 | (31.0, 39.0) |
| 80+ | 58.2 | (50.4, 65.7) | 56.2 | (49.3, 62.8) | 37.7 | (30.0, 46.1) | 43.0 | $(36.4,49.9)$ |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 65.7 | (64.0, 67.4) | 71.7 | (69.4, 74.0) | 33.2 | (31.5, 34.9) | 27.2 | (24.9, 29.6) |
| Black, non-Hispanic | 65.4 | (60.8, 69.9) | 68.7 | (61.8, 74.8) | 32.5 | (28.3, 36.9) | 28.5 | (22.7, 35.0) |
| Hispanic | 48.1 | (43.6, 52.5) | 54.1 | (49.2, 59.0) | 48.5 | (43.8, 53.3) | 40.5 | (36.2, 45.0) |
| Non-Hispanic Other | 53.1 | (45.5, 60.5) | 67.6 | (59.2, 75.0) | 44.5 | (37.1, 52.1) | 30.1 | (23.0, 38.4) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 58.2 | (54.9, 61.5) | 60.5 | (55.6, 65.2) | 38.4 | (35.2, 41.7) | 35.7 | (31.5, 40.3) |
| \$25,000 to < \$50,000 | 61.4 | (58.3, 64.4) | 66.6 | (63.1, 70.0) | 37.4 | (34.4, 40.6) | 32.1 | (29.1, 35.3) |
| \$50,000 to < \$75,000 | 65.6 | (62.1, 69.0) | 72.0 | (67.6, 76.1) | 33.4 | (30.1, 36.9) | 26.6 | $(22.8,30.8)$ |
| \$75,000 or more | 69.5 | (66.2, 72.6) | 77.2 | (73.5, 80.6) | 30.1 | (27.0, 33.4) | 21.7 | (18.9, 24.8) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 53.2 | (48.5, 57.9) | 59.8 | (54.8, 64.7) | 42.2 | (37.4, 47.1) | 35.9 | (31.3, 40.7) |
| High School Graduate | 59.3 | (56.7, 61.9) | 67.2 | (63.3, 70.9) | 39.5 | (37.0, 42.1) | 31.2 | (27.7, 35.0) |
| Some College | 67.4 | (64.2, 70.3) | 69.3 | (65.6, 72.8) | 31.6 | (28.7, 34.6) | 28.5 | (25.1, 32.3) |
| College Graduate or Beyond | 68.7 | (65.9, 71.4) | 75.7 | (72.4, 78.8) | 30.7 | (28.1, 33.5) | 23.7 | (20.7, 27.0) |


| Not At All |  |  |  |
| :---: | :---: | :---: | :---: |
| HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
| 1.6 | (1.3, 2.0) | 2.1 | (1.5, 2.8) |
| 2.0 | (1.4, 2.8) | 2.6 | (1.6, 4.1) |
| 1.3 | (0.9, I.8) | 1.6 | (1.2, 2.2) |
| 1.0 | (0.6, 1.9) | 1.8 | (0.8, 4.1) |
| 1.4 | (0.9, 2.2) | 2.8 | $(1.6,4.7)$ |
| 1.6 | (1.0, 2.5) | 1.9 | (1.1, 3.1) |
| 3.1 | $(2.0,4.7)$ | 1.9 | (1.2, 2.9) |
| 4.0 | (2.0, 8.0) | 0.8 | (0.3, 2.1) |
| 1.1 | (0.8, I.6) | 1.0 | (0.7, I.5) |
| 2.1 | (1.0, 4.4) | 2.9 | $(0.6,12.5)$ |
| 3.4 | (2.1, 5.6) | 5.4 | $(3.2,8.7)$ |
| 2.5 | (1.2, 4.9) | 2.3 | $(0.8,5.9)$ |
| 3.4 | $(2.4,4.8)$ | 3.8 | $(2.4,5.8)$ |
| 1.2 | (0.7, 1.9) | 1.3 | (0.7, 2.4) |
| 0.9 | (0.4, 2.1) | 1.3 | (0.6, 3.0) |
| 0.4 | (0.1, I.0) | 1.0 | (0.2, 6.0) |
| 4.6 | (3.2, 6.6) |  | (2.5, 7.3) |
| 1.2 | (0.8, I.7) |  | (0.9, 2.7) |
| 1.0 | $(0.6,1.8)$ |  | (1.1, 4.4) |
| 0.6 | (0.3, I.I) |  | (0.3, I.0) |

Table I 3 Barriers to Information Seeking, by Sociodemographics
Weighted Percentages and $95 \%$ Confidence Intervals

## BARRIERS TO INFORMATION SEEKING:

| TOTAL | BARRIERS TO INFORMATION SEEKING: <br> Do you Agree Strongly or Somewhat that the Information... <br> Took a Lot of Effort to Find <br> Was Frustrating to Obtain |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  | HINTS 2003\% (95\% CI) |  | HINTS 2005\% (95\% CI) |  |
|  | 48.4 | (46.2, 50.5) | 37.3 | $(34.4,40.3)$ | 41.9 | (39.7, 44.1) | 26.7 | (24.4, 29.1) |
| GENDER |  |  |  |  |  |  |  |  |
| Male | 46.9 | (43.2, 50.8) |  | (31.9, 43.6) | 40.2 | (36.5, 44.0) | 26.0 | (21.5, 31.1) |
| Female | 49.3 | (46.3, 52.3) | 37.1 | (34.7, 39.6) | 43.0 | (40.4, 45.6) | 27.1 | (24.9, 29.5) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 44.7 | (40.5, 48.8) | 35.7 | (29.0, 43.0) | 39.9 | (35.7, 44.3) | 22.1 | (16.7, 28.7) |
| 35-49 | 46.1 | (42.4, 49.9) | 34.4 | (30.2, 39.0) | 41.2 | (37.7, 44.7) | 25.2 | (21.6, 29.2) |
| 50-64 | 51.7 | (47.9, 55.6) | 39.1 | (34.5, 43.8) | 45.9 | (41.5, 50.4) | 30.7 | (26.7, 35.0) |
| 65-79 | 55.7 | (50.5, 60.8) | 44.8 | $(39.4,50.3)$ | 39.5 | (33.4, 45.9) | 30.8 | (25.8, 36.3) |
| 80+ | 59.1 | (45.8, 71.1 ) |  | $(32.3,62.2)$ | 45.3 | (34.7, 56.4) |  | (28.2, 55.8) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 47.5 | (44.5, 50.5) | 33.4 | (30.0, 37.0) | 42.0 | (39.5, 44.6) | 24.8 | (22.1, 27.7) |
| Black, non-Hispanic | 55.0 | (47.6, 62.1) | 41.8 | (34.8, 49.3) | 45.5 | (39.2, 51.8) | 29.6 | (21.6, 39.2) |
| Hispanic | 53.3 | (46.0, 60.5) | 52.6 | $(42.0,63.0)$ | 41.7 | (34.0, 49.7) | 31.6 | (21.9, 43.3) |
| Non-Hispanic Other | 49.3 | (39.2, 59.5) | 49.8 | (41.5, 58.0) | 39.0 | $(30.0,48.7)$ | 38.7 | (30.4, 47.6) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 53.6 | (48.2, 58.9) | 47.8 | (41.5, 54.1) | 47.4 | (42.0, 52.8) | 34.1 | (29.4, 39.1) |
| \$25,000 to < \$50,000 | 52.7 | (48.1, 57.2) | 40.0 | (34.1, 46.1) | 45.4 | (41.2, 49.7) | 27.1 | (22.1, 32.9) |
| \$50,000 to < \$75,000 | 46.8 | (41.6, 52.1) | 32.5 | $(26.4,39.2)$ | 41.8 | (36.5, 47.3) | 24.3 | (19.1, 30.4) |
| \$75,000 or more | 41.1 | (36.1, 46.4) | 29.4 | (24.3, 35.1) | 34.7 | (31.1, 38.4) | 22.6 | (18.2, 27.7) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 64.5 | (54.6, 73.3) | 56.6 | (47.1, 65.8) | 56.7 | (48.0, 65.0) | 44.6 | (34.5, 55.2) |
| High School Graduate | 53.1 | (48.3, 57.9) |  | (36.7, 47.7) | 45.0 | (40.3, 49.9) | 29.5 | (25.2, 34.2) |
| Some College | 46.0 | (42.2, 49.8) |  | (30.0, 40.9) | 39.9 | (36.6, 43.3) | 23.3 | (19.3, 27.9) |
| College Graduate or Beyond | 42.3 | $(37.8,46.8)$ | 29.1 | (25.2, 33.3) | 36.9 | (33.4, 40.5) | 23.7 | (19.7, 28.2) |


| Quality Causes you Concern |  |  |  | Was Too Hard to Understand |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HINTS 2003 <br> \% (95\% CI) |  | HINTS 2005\% (95\% CI) |  | HINTS 2003\% (95\% CI) |  | HINTS 2005 <br> \% (95\% CI) |  |
| 58.3 | (56.4, 60.1) | 47.5 | (45.2, 49.8) | 37.7 | $(35.4,40.0)$ | 23.7 | (22.0, 25.6) |
| 59.1 | $(56.3,61.8)$ |  | (43.6, 52.3) | 38.0 | (35.1, 41.1) | 23.4 | (20.3, 26.8) |
| 57.7 | (55.1, 60.3) | 47.2 | (44.5, 49.8) | 37.4 | (34.4, 40.5) | 24.0 | (21.7, 26.4) |
| 61.0 | $(56.4,65.5)$ | 47.3 | (41.2, 53.4) | 37.0 | (32.8, 4I.5) | 17.2 | (13.7, 21.5) |
| 54.4 | (5I.I, 57.6) |  | (41.6, 49.3) |  | (33.3, 4I.2) | 23.9 | (20.4, 27.8) |
| 59.7 | (55.6, 63.6) | 45.9 | (41.5, 50.4) | 37.5 | (33.9, 4I.3) | 27.0 | (22.9, 31.5) |
| 58.0 | (52.1, 63.7) | 57.6 | (52.1, 63.0) | 38.8 | $(33.2,44.7)$ | 29.1 | (24.1, 34.7) |
| 62.3 | $(50.6,72.7)$ | 52.0 | (39.4, 64.3) | 50.2 | $(38.6,61.7)$ | 41.0 | $(27.7,55.8)$ |
| 56.7 | (54.5, 58.9) | 43.8 | (41.0, 46.7) | 36.1 | (33.5, 38.7) | 21.5 | (19.3, 23.9) |
| 63.6 | $(57.6,69.3)$ | 61.0 | (51.6, 69.6) | 42.6 | (35.4, 50.1) | 23.7 | (16.8, 32.3) |
| 69.2 | (63.2, 74.7) | 59.2 | $(46.6,70.7)$ | 45.2 | $(38.8,51.7)$ | 36.1 | (25.3, 48.5) |
| 59.6 | (50.1, 68.4) | 52.3 | $(42.6,61.8)$ | 42.8 | (34.5, 51.6) | 26.3 | (19.4, 34.7) |
| 64.7 | $(60.6,68.7)$ | 63.6 | (57.4, 69.3) | 50.4 | (45.1, 55.8) | 34.9 | (29.3, 40.9) |
| 60.1 | (55.9, 64.1) | 49.2 | (44.1, 54.4) | 42.9 | $(39.3,46.6)$ | 25.0 | (21.0, 29.4) |
| 59.6 | $(54.4,64.6)$ | 41.1 | (35.2, 47.2) | 32.5 | (28.1, 37.3) | 20.4 | $(16.4,25.0)$ |
| 52.2 | $(47.6,56.7)$ | 38.9 | (33.3, 44.8) | 26.2 | $(22.6,30.2)$ | 14.8 | (11.1, 19.5) |
| 70.3 | (63.0, 76.7) |  | (55.6, 73.1) |  | $(49.5,65.0)$ | 43.8 | (36.3, 51.5) |
| 60.9 | $(56.8,65.0)$ |  | (49.7, 61.0) | 46.9 | $(41.3,52.6)$ | 32.8 | (28.7, 37.2) |
| 59.7 | (55.9, 63.5) |  | (38.5, 47.5) |  | (33.3, 40.5) | 21.3 | (18.3, 24.6) |
| 51.7 | $(48.5,54.8)$ |  | (36.1, 45.4) |  | (21.4, 28.4) | 12.3 | (10.3, 14.6) |

## CANCER AWARENESS, KNOWLEDGE, AND BELIEFS

This section explores cancer awareness, knowledge, and beliefs from select items from HINTS 2003 and 2005.

## Prevention

Prevention Knowledge Among the American Public
Estimates of Americans' prevention awareness are summarized in Figure 10.

- In 2003, over half of respondents offered behavioral strategies to this open-ended item ( $51.3 \%$ said "Eat better/better nutrition"; $59.0 \%$ said "Don't smoke/ quit smoking"; and $60.8 \%$ gave other behavioral responses). However, $16.0 \%$ of respondents did not name a strategy to reduce their chances of getting cancer ("No/nothing").

Figure 10 Prevention Knowledge Among the American Public (2003)
Can you think of any thing people can do to reduce their chances of getting cancer?


Note: Respondents could give multiple responses

## Cancer Prevention Knowledge Among American Smokers

Estimates of American smokers' prevention knowledge with regard to exercise and vitamin use are summarized in Figures 11 and 12, respectively.

- In 2003, repondents who reported they were current smokers were asked about the effects of specific health behaviors (exercise, vitamin use) on their cancer risk. Nearly half ( $49.7 \%$ ) responded with either no opinion, don't know, or agree with the statement that "Exercise can undo most of the effects of smoking." Over one-third ( $35.1 \%$ ) responded either no opinion, don't know, or agree to the statement that "Vitamins can undo most of the effects of smoking."


## Figure II Prevention Knowledge Among

American Smokers: Exercise (2003)
Exercise can undo most of the effects of smoking. Would you say you strongly agree, somewhat agree, somewhat disagree, strongly disagree or you have no opinion?


Figure 12 Prevention Knowledge Among American Smokers: Vitamin Use (2003)
Vitamins can undo most of the effects of smoking. Would you say you strongly agree, somewhat agree, somewhat disagree, strongly disagree or you have no opinion?


## Cancer-Specific Knowledge

## Breast Cancer

- In 2003, women without a personal history of breast cancer were asked about the recommended age at which to begin mammography screening and the frequency at which mammograms should be received. Figure 13 shows that less than half of the women ( $42.9 \%$ ) correctly identified age 40 as the age at which most women should begin receiving mammograms; most incorrect responses were for ages younger than 40.
- Map 3 provides converging evidence that most women across the United States were not able to correctly identify the age at which they should start

Figure I3 Knowledge of Age at Which to Begin Mammography (2003)
A mammogram is an x-ray of each breast to look for breast cancer. At what age are women supposed to start having mammograms?

$\square$ Correct Answer (Age 40) Incorrect Answer

Map 3 Knowledge of Age at Which to Begin Mammogram (2003)
What age Should Women Start Getting Regular Mammograms?


[^10]getting regular mammograms, with areas in the South and Southeast showing the lowest values.

- Figure 14 shows that most HINTS 2003 respondents (73.1\%) correctly identified every 1 to 2 years as the recommended frequency at which mammograms should be received. The most common incorrect response indicated more frequent screening (More than once a year; $10.1 \%$ ).
- In contrast to knowledge of the age at which women should start getting regular mammograms, Map 4 shows that most women across the United States were able to correctly identify how often they should get mammograms.

Figure 14 Knowledge of Recommended Mammography Frequency (2003)
In general, once women start having mammograms, about how often should they have them?


Map 4 Knowledge of Mammography Screening Frequency (2003)
How Often Should Women Be Getting Mammograms?


## Colon Cancer

- In 2003 and 2005, respondents were asked to name any tests that are used for secondary prevention of colon cancer. Figure 15 shows that $41.7 \%$ of the American public correctly identified either Fecal Occult Blood Tests or colonoscopy or sigmoidoscopy as a colon cancer screening test in 2003 while Figure 16 shows that this percentage increased to $48.9 \%$ in 2005. In $200351.2 \%$ of respondents were not able to name a colon cancer screening test. This percentage decreased to $45 \%$ in 2005.

Figure 15 Knowledge of Tests to Detect Colon Cancer (2003)
Can you think of any tests that detect colon cancer? Anything Else? (2003)


Colonoscopy/Sigmoidoscopy/FOBT
$\square$ No/Don't Know/Refused/Not Ascertained Other

Figure 16 Knowledge of Tests to Detect Colon Cancer (2005)
Can you think of any tests that detect colon cancer?


[^11]- Colonoscopy was the most commonly named test to detect colon cancer in 2003 and 2005; however, in 2003 and 2005, more Americans responded with no/ nothing when asked to name a test that detects colon cancer (48.0\% [2003]; 40.5\%[2005]) than responded with colonoscopy.
- Awareness of sigmoidoscopy or colonoscopy was assessed in HINTS 2003. A majority (75.3\%) of the respondents reported that they were aware of sigmoidoscopy or colonoscopy.
- Figure 17 suggests that across the United States, most people have heard of a sigmoidoscopy or colonoscopy; however, Map 5 seems to show that people

Figure 17 Awareness of Sigmoidoscopy/Colonoscopy (2003)
Have you ever heard of a sigmoidoscopy or colonoscopy?


Yes No/Don't Know/Refused

Map 5 Regional Estimates of Awareness of Sigmoidoscopy/Colonoscopy (2003)
Have you ever heard of sigmoidoscopy and colonoscopy?

in the South are less aware while those in the upper Midwest and Northeast are more aware of these procedures.

- Awareness of FOBT was assessed in HINTS 2003. Figure 18 shows that just over half ( $56.9 \%$ ) of the respondents reported that they were aware of FOBT.
- Map 6 suggests that, as compared with awareness of a sigmoidoscopy or colonoscopy, awareness of FOBT is relatively low across the United States, for example, in the South and Southwestern areas.
- In 2003 , respondents without a personal history of

Figure 18 Awareness of Fecal Occult Blood Tests (FOBT) (2003)
Have you ever heard of a fecal occult or stool blood test?


Yes No/Don't Know/Refused

Map 6 Regional Estimates of Awareness of Fecal Occult Blood Test (2003)
Have you ever heard of FOBT?

colon cancer were asked about the recommended age at which to begin colon cancer screening with sigmoidoscopy or colonoscopy. Figure 19 shows that less than one-third of Americans ( $32.2 \%$ ) correctly identified age 50 as the age at which most people should begin receiving sigmoid- or colonoscopies; most incorrect respondents gave ages younger than 50 as an answer, and nearly 1 in 5 (19.2\%) responded with don't know.

- Map 7 shows that across the United States, most people do not know the recommended age to begin colorectal cancer screening, with relatively lower values in the South and Southeast.

Figure 19 Knowledge of Age at Which to Begin Sigmoidoscopy/Colonoscopy (2003)
At what age are people supposed to start having sigmoidoscopy or colonoscopy exams?


Correct Answer (Age 50) Incorrect Answer

Map 7 Regional Estimates of Knowledge of Age at Which to Begin Sigmoidoscopy/Colonoscopy (2003)

At what age are people supposed to start having sigmoidoscopy or colonoscopy exams?


## Cervical Cancer

- In 2005, women without a personal history of cervical cancer were asked about their knowledge of cervical cancer and Human Papillomavirus (HPV). Figure 20 shows that most women (61.1\%) had never heard of HPV.
- Figure 20 provides evidence that the percentage of women who have ever heard of HPV is low across the United States. Map 8 simultaneously suggests that reported awareness is relatively higher in the upper Midwest, the Northeast, and the lower Atlantic states.

Figure 20 Awareness of Human Papillomavirus (HPV) (2005)
Have you ever heard of HPV? HPV stands for Human Papillomavirus.

$\square$ Yes No/Don't Know/Refused

Map 8 Regional Estimates of Awareness of Human Papillomavirus (HPV) (2005)
Have you ever heard of HPV?


Note: State Level Estimates are Unstable.

- Respondents who had heard of HPV ( $38.4 \%$ of women) were asked whether they knew that HPV is a necessary cause of cervical cancer (Figure 21). Less than half ( $47.0 \%$ ) correctly identified HPV as a cause of cervical cancer; nearly as many women (43.8\%) said don't know.

Figure 21 Knowledge that Human Papillomavirus (HPV) Causes Cervical Cancer (2005)
Do you think that HPV causes cervical cancer?


## Lung Cancer

- When asked to identify the leading cause of cancer death, HINTS 2003 respondents tended to confuse incidence with mortality; nearly half ( $47.8 \%$ ) of American men and women named the most incident gender-specific cancer (breast/prostate) as the type of cancer that caused the highest number of deaths annually. As Figure 22 shows, less than one-third ( $27.9 \%$ ) correctly identified lung cancer as the leading cause of cancer death.

Figure 22 Cancer Mortality Knowledge (2003)
Which type of cancer do you think will cause the most deaths in (women/men) this year in the U.S.? Would you say: lung cancer, (breast/prostate) cancer, colon cancer, (cervical/testicular) cancer, or skin cancer?

(Note: For female respondents, the HINTS 2003 question about cancer mortality asked about cancer deaths in women from lung, breast, colon, cervical, and skin cancers; for male respondents, the question asked about cancer deaths in men from lung, prostate, colon, testicular, and skin cancers).

- Map 9 indicates that, across the United States, knowledge that lung cancer would cause the most deaths varies by region of the country, with greater knowledge seen in the West and upper Midwest.

Map 9 Regional Estimates of Cancer Mortality Knowledge (\% of Respondents Correctly Identifying Lung Cancer) (2003)
Which type of cancer do you think will cause the most deaths this year in the United States?


Note: State Level Estimates are Unstable.

- Awareness of the smoking-cancer link was assessed in HINTS 2003 (see Figure 23). A majority of respondents ( $84.4 \%$ ) reported that smoking increases a person's chances of getting cancer a lot.
- Though Figure 23 suggests that knowledge of the link between smoking and cancer is high across the United States, Map 10 offers some evidence that this knowledge differs by region of the country. For example, high knowledge is seen in the West and upper Midwest, while there is relatively low knowledge in the Mid-Atlantic region and Southern states.

Figure 23 Knowledge of Smoking and Lung Cancer Link (2003)
I'm going to read you some things that may affect a person's chances of getting cancer. Do you think that smoking increases a person's chances of getting cancer a lot, a little, or not at all or do you have no opinion?


A lot A little Not at all/No opinion/Don't Know/Refused

Drawing on the Health Information National Trends Survey, we can examine the relationship between publicity and knowledge gaps.
—K. "Vish" Viswanath, PhD School of Public Health, Harvard University

Map 10 Regional Estimates of Knowledge of Smoking-Cancer Link (2003)
Does smoking increase chances of cancer?


[^12]Table I4 General Cancer Prevention Knowledge, by Sociodemographics (HINTS 2003)

| TOTAL | GENERAL PREVENTION KNOWLEDGE <br> Can you think of anything people can do to |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Quit Smoking \% (95\% CI) |  | Eat Better/Better Nutrition\% (95\% CI) |  | No/Nothing \% (95\% CI) |  | $\begin{gathered} \text { Other } \\ \text { \% ( } 95 \% \mathrm{Cl} \text { ) } \end{gathered}$ |  |
|  | 60.0 | (58.5, 61.4) | 52.1 | (50.4, 53.8) | 16.0 | (14.5, 17.6) | 60.8 | (59.0, 62.5) |
| GENDER |  |  |  |  |  |  |  |  |
| Male |  | (59.3, 64.1) |  | (46.0, 50.7) | 15.7 | (13.6, 18.2) | 57.2 | (54.2, 60.2) |
| Female | 58.3 | $(56.4,60.2)$ | 55.6 | (53.5, 57.8) | 16.2 | (14.6, 17.9) | 64.1 | $(62.2,66.0)$ |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 60.6 | (57.1, 64.0) | 40.4 | (36.9, 44.1) | 19.2 | (16.4, 22.3) | 58.5 | (55.1, 61.9) |
| 35-49 | 62.4 | (59.3, 65.3) |  | (56.7, 62.1) | 13.0 | (10.7, 15.8) | 64.5 | (61.2, 67.6) |
| 50-64 | 62.7 | (59.2, 66.1) |  | $(59.6,65.7)$ | 11.0 | (9.0, 13.4) | 64.7 | (61.4, 67.9) |
| 65-79 | 52.2 | (47.5, 56.8) |  | (45.2, 52.7) | 19.8 | (16.4, 23.7) | 54.2 | (50.2, 58.2) |
| 80+ | 44.2 | $(37.8,50.8)$ | 34.5 | (28.4, 41.0) | 31.5 | (24.5, 39.5) | 47.5 | (40.5, 54.6) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, Non-Hispanic | 63.3 | $(61.5,65.0)$ |  | (55.7, 59.5) | 13.8 | (12.4, 15.5) | 63.5 | $(61.4,65.6)$ |
| Black, Non-Hispanic | 54.4 | (49.6, 59.0) | 46.5 | (41.9, 5I.2) | 18.4 | (15.2, 22.2) | 51.8 | $(47.3,56.3)$ |
| Hispanic | 49.6 | (44.7, 54.6) | 28.0 | (24.6, 31.7) | 25.5 | (21.3, 30.2) | 55.0 | (50.0, 59.9) |
| Non-Hispanic Other | 53.6 | (46.8, 60.3) | 49.5 | (42.1, 57.0) | 14.2 | (9.6, 20.5) | 62.1 | (55.2, 68.6) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 54.7 | (51.5, 57.9) | 36.6 | (33.9, 39.4) | 24.5 | (21.9, 27.4) | 50.7 | (47.3, 54.2) |
| \$25,000 to < \$50,000 | 55.9 | (53.5, 58.2) | 51.4 | (48.3, 54.6) | 16.8 | (14.3, 19.6) | 60.2 | $(56.5,63.9)$ |
| \$50,000 to < \$75,000 | 67.2 | (63.0, 71.1) | 62.3 | (58.0, 66.4) | 9.2 | (7.2, 11.7) | 67.8 | (64.4, 71.0) |
| \$75,000 or More | 70.7 | (67.7, 73.7) | 67.4 | (64.0, 70.6) | 6.9 | (5.0, 9.3) | 73.6 | (70.6, 76.4) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 50.9 | (46.4, 55.5) |  | (26.3, 35.6) | 29.9 | (26.0, 34.1) | 40.9 | (36.5, 45.6) |
| High School Graduate | 57.2 | (54.6, 59.9) |  | (42.9, 49.4) | 18.8 | (16.3, 21.5) | 55.1 | (51.1, 59.0) |
| Some College | 60.2 | (57.2, 63.1) |  | $(54.7,61.8)$ | 12.5 | (10.3, 15.0) | 66.3 | (63.2, 69.2) |
| College Graduate or Beyond |  | (68.2, 71.9) |  | (66.7, 72.5) |  | (4.6, 7.5) | 77.2 | (74.6, 79.7) |

Table I5 Prevention Knowledge Among Smokers (HINTS 2003)
Weighted Percentages and $95 \%$ Confidence Intervals


Table I 6 Mammography Knowledge, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

| TOTAL | MAMMOGRAPHY KNOWLEDGE <br> Female respondents who have never had breast cancer <br> At what age are women supposed to start having mammograms? <br> Correct Answer (Age 40) <br> Incorrect Answer* |  |  |  | and have had or thought about having a mammogram. <br> In general, once women start having mammograms, about how often should they have them? <br> Correct Answer (I to < 2 years) <br> Incorrect Answer** |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 42.9 | (40.9, 44.9) | 57.1 | (55.1, 59.1) | 73.1 | (71.0, 75.2) | 26.9 | (24.8, 29.0) |
| GENDER |  |  |  |  |  |  |  |  |
| Male <br> Female | 42.9 | $\begin{aligned} & \text { NA } \\ & (40.9,44.9) \end{aligned}$ | 57.1 | NA (55.I, 59.1) | 73.1 | NA (7I.0, 75.2) | 26.9 | NA $(24.8,29.0)$ |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 29.9 | (26.6, 33.4) | 70.1 | (66.6, 73.4) | 72.6 | (68.1, 76.6) | 27.4 | (23.4, 31.9) |
| 35-49 | 56.8 | (53.2, 60.4) | 43.2 | (39.6, 46.8) | 73.6 | (70.4, 76.5) | 26.4 | (23.5, 29.6) |
| 50-64 | 47.8 | (43.8, 5I.8) | 52.2 | (48.2, 56.2) | 74.8 | (70.7, 78.6) | 25.2 | (21.4, 29.3) |
| 65-79 | 37.0 | (32.3, 42.0) | 63.0 | (58.0, 67.7) | 73.1 | (68.0, 77.7) | 26.9 | (22.3, 32.0) |
| 80+ | 28.2 | (19.9, 38.2) | 71.8 | (61.8, 80.1) | 64.6 | (55.7, 72.6) | 35.4 | (27.4, 44.3) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 47.6 | (45.4, 49.8) | 52.4 | (50.2, 54.6) | 75.8 | (73.5, 77.9) | 24.2 | (22.1, 26.5) |
| Black, non-Hispanic | 33.8 | (28.5, 39.4) | 66.2 | (60.6, 71.5) | 67.5 | (61.5, 73.1) | 32.5 | (26.9, 38.5) |
| Hispanic | 29.2 | (24.0, 35.1) | 70.8 | (64.9, 76.0) | 65.0 | (59.6, 70.0) | 35.0 | (30.0, 40.4) |
| Non-Hispanic Other | 29.4 | (20.4, 40.3) | 70.6 | (59.7, 79.6) | 68.4 | (57.6, 77.5) | 31.6 | (22.5, 42.4) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 33.6 | (30.1, 37.3) | 66.4 | (62.7, 69.9) | 69.3 | (65.0, 73.4) | 30.7 | (26.6, 35.0) |
| \$25,000 to < \$50,000 | 41.7 | (37.7, 45.7) | 58.3 | $(54.3,62.3)$ | 75.3 | (71.4, 78.8) | 24.7 | (21.2, 28.6) |
| \$50,000 to < \$75,000 | 50.6 | (45.1, 56.2) | 49.4 | (43.8, 54.9) | 75.1 | (69.0, 80.4) | 24.9 | (19.6, 31.0) |
| \$75,000 or more | 57.3 | (53.1, 61.4) | 42.7 | (38.6, 46.9) | 78.2 | (74.7, 81.3) | 21.8 | (18.7, 25.3) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 29.8 | (24.6, 35.6) | 70.2 | (64.4, 75.4) | 67.1 | (60.7, 73.0) | 32.9 | (27.0, 39.3) |
| High School Graduate | 40.7 | (37.7, 43.7) | 59.3 | (56.3, 62.3) | 72.3 | (68.2, 76.1) | 27.7 | (23.9, 31.8) |
| Some College | 45.2 | (41.1, 49.3) | 54.8 | (50.7, 58.9) | 77.1 | (73.8, 80.2) | 22.9 | (19.8, 26.2) |
| College Graduate or Beyond | 52.2 | (49.0, 55.4) | 47.8 | (44.6, 51.0) | 74.0 | (70.5, 77.3) | 26.0 | (22.7, 29.5) |

[^13]Table I7 Colon Cancer Prevention Knowledge, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

## COLON CANCER PREVENTION KNOWLEDGE

In 2003, respondents who have had colon cancer were excluded.
Can you think of any tests that detect colon cancer? HINTS 2003

| Colonoscopy/ | No/Don't Know/ <br> Refused/Not Ascertained | Other |
| :---: | :---: | :---: | :---: |
| Sigmoidoscopy/ FOBT | Res |  |


| TOTAL | 41.7 | (40.2, 43.2) | 51.2 | (49.7, 52.6) | 16.1 | (15.3, 17.0) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| GENDER |  |  |  |  |  |  |
| Male | 32.1 | (30.3, 34.0) | 59.9 | (58.0, 61.8) | 16.1 | (14.8, 17.5) |
| Female | 50.6 | (48.6, 52.6) | 43.1 | (41.3, 44.9) | 16.2 | (14.9, 17.5) |
| AGE GROUP |  |  |  |  |  |  |
| 18-34 | 25.2 | (22.8, 27.8) | 69.6 | (66.7, 72.3) | 10.3 | (8.7, 12.2) |
| 35-49 | 41.5 | (38.9, 44.1) | 50.0 | (47.1, 52.9) | 18.3 | (16.4, 20.4) |
| 50-64 | 59.1 | (56.3, 61.9) | 33.1 | (30.3, 36.0) | 21.0 | (18.5, 23.7) |
| 65-79 | 54.3 | $(50.6,57.9)$ | 38.3 | (34.7, 42.1) | 17.5 | (15.0, 20.3) |
| 80+ | 36.8 | (30.8, 43.2) | 55.5 | (48.4, 62.4) | 14.0 | (9.6, 20.0) |
| RACE/ETHNICITY |  |  |  |  |  |  |
| White, non-Hispanic | 50.0 | (48.4, 5I.7) | 42.1 | (40.4, 43.8) | 18.5 | (17.4, 19.7) |
| Black, non-Hispanic | 26.5 | (22.1, 31.3) | 66.8 | (61.8, 71.4) | 12.2 | (9.6, 15.4) |
| Hispanic | 14.8 | (11.9, 18.3) | 80.4 | (77.0, 83.4) | 8.0 | (6.1, 10.4) |
| Non-Hispanic Other | 29.0 | (23.5, 35.2) | 64.6 | $(58.9,69.8)$ | 12.1 | (8.8, 16.5) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |
| Less than \$25,000 | 27.7 | (24.4, 31.2) | 66.0 | (62.9, 69.0) | 10.9 | (9.4, 12.6) |
| \$25,000 to < \$50,000 | 38.8 | (36.0, 41.7) | 54.1 | (51.1, 57.0) | 16.2 | (14.5, 18.1) |
| \$50,000 to < \$75,000 | 52.5 | (49.3, 55.7) | 40.2 | (36.7, 43.8) | 18.2 | (15.0, 21.8) |
| \$75,000 or more | 59.1 | (55.8, 62.3) | 32.0 | (29.0, 35.1) | 22.7 | (20.1, 25.5) |
| EDUCATION |  |  |  |  |  |  |
| Less than High School | 18.4 | (15.0, 22.3) | 75.9 | (72.2, 79.2) | 8.7 | (6.4, 11.8) |
| High School Graduate | 35.4 | (33.0, 37.8) | 57.3 | (54.8, 59.9) | 14.7 | (12.8, 16.9) |
| Some College | 48.4 | (45.4, 5I.4) | 44.6 | (41.8, 47.4) | 17.0 | (14.9, 19.2) |
| College Graduate or Beyond | 60.9 | (58.5, 63.4) | 30.5 | (28.4, 32.8) | 23.2 | (21.1, 25.4) |


| In 2005, all respondents are included. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Can you think of any tests to detect colon cancer? HINTS 2005 |  |  |  |  |  |
| Colonoscopy/ <br> Sigmoidoscopy/ FOBT |  | No/Don't Know/ Refused/Not Ascertained |  | Other |  |
| 48.9 | (47.6, 50.3) | 45.0 | (43.4, 46.6) | 17.9 | (16.6, 19.3) |
| 39.9 | (37.5, 42.4) | 51.9 | (48.8, 54.9) | 18.5 | (16.4, 20.9) |
| 57.3 | (55.3, 59.2) | 38.6 | (36.7, 40.5) | 17.3 | (15.8, 18.9) |
| 31.0 | (27.7, 34.6) | 63.0 | (59.0, 66.9) | 13.3 | (10.8, 16.3) |
| 49.8 | (47.1, 52.5) | 43.8 | (40.5, 47.3) | 19.1 | (16.1, 22.5) |
| 65.9 | (62.7, 69.0) | 27.1 | (24.3, 30.2) | 23.9 | (20.5, 27.7) |
| 61.9 | (58.1, 65.5) | 33.1 | (29.2, 37.4) | 18.0 | (15.0, 21.5) |
| 43.2 | (35.4, 51.3) | 53.2 | (45.7, 60.6) | 9.0 | $(6.2,12.9)$ |
| 59.3 | (57.2, 61.5) | 34.6 | (32.3, 36.9) | 20.8 | (19.1, 22.6) |
| 35.3 | (29.9, 41.0) | 58.6 | (51.8, 65.1) | 11.9 | (8.1, 17.0) |
| 20.4 | (17.0, 24.2) | 74.2 | (69.6, 78.3) | 10.4 | (7.7, 13.9) |
| 32.9 | (26.2, 40.3) | 58.7 | (49.8, 67.1) | 17.0 | (11.9, 23.6) |
| 32.2 | (29.1, 35.5) | 60.8 | (57.2, 64.4) | 12.8 | (10.3, 15.8) |
| 51.0 | (47.5, 54.5) | 42.6 | (39.3, 46.0) | 18.4 | (15.8, 21.3) |
| 59.5 | (54.7, 64.2) | 35.1 | (30.5, 40.1) | 20.2 | (16.5, 24.6) |
| 58.8 | (54.1, 63.4) | 33.5 | (29.0, 38.4) | 23.5 | (20.4, 26.8) |
| 22.5 | (18.8, 26.6) | 71.7 | (66.9, 76.1) | 8.2 | (6.0, 11.2) |
| 41.7 | (38.9, 44.5) | 53.1 | (49.9, 56.2) | 12.8 | (10.6, 15.3) |
| 55.8 | (53.1, 58.5) | 37.2 | (33.9, 40.7) | 20.5 | (17.7, 23.6) |
| 69.1 | (66.2, 71.8) | 24.4 | (21.9, 27.0) | 28.6 | (26.1, 31.4) |

Table 18 Colon Cancer Screening Knowledge, by Sociodemographics (HINTS 2003)
Weighted Percentages and 95\% Confidence Intervals

|  | COLON CANCER SCREENING KNOWLEDGE <br> Respondents who never had colon cancer <br> Have you ever heard of a sigmoidoscopy or colonoscopy? |  |  |  | Have you ever heard of a fecal occult or stool blood test? |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Yes | No/Don | 't Know/Refused | Yes |  | No/Don't Know/Refused |  |
| TOTAL | 75.3 | (74.0, 76.6) | 24.7 | (23.4, 26.0) | 56.9 | (55.3, 58.4) | 43.1 | (41.6, 44.7) |
| GENDER |  |  |  |  |  |  |  |  |
| Male | 68.4 | (66.2, 70.6) | 31.6 | (29.4, 33.8) | 49.1 | (46.9, 5I.2) | 50.9 | (48.8, 53.1) |
| Female | 81.7 | (80.3, 83.0) | 18.3 | (17.0, 19.7) | 64.2 | $(62.3,66.0)$ | 35.8 | (34.0, 37.7) |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 60.1 | (57.5, 62.8) | 39.9 | (37.2, 42.5) | 34.5 | (31.3, 37.8) | 65.5 | (62.2, 68.7) |
| 35-49 | 79.3 | (76.7, 81.8) | 20.7 | (18.2, 23.3) | 56.4 | (54.0, 58.8) | 43.6 | (41.2, 46.0) |
| 50-64 | 86.0 | (84.0, 87.8) | 14.0 | (12.2, 16.0) | 77.7 | (74.7, 80.4) | 22.3 | (19.6, 25.3) |
| 65-79 | 84.5 | (81.1, 87.3) | 15.5 | (12.7, 18.9) | 75.8 | $(72.6,78.7)$ | 24.2 | (21.3, 27.4) |
| 80+ | 76.0 | (70.4, 80.8) | 24.0 | (19.2, 29.6) | 65.7 | (59.7, 71.2) |  | (28.8, 40.3) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 85.4 | (83.8, 86.9) | 14.6 | (13.1, 16.2) | 63.4 | (61.7, 65.1) | 36.6 | (34.9, 38.3) |
| Black, non-Hispanic | 56.3 | (51.2, 61.2) | 43.7 | (38.8, 48.8) | 53.1 | (48.2, 58.0) | 46.9 | (42.0, 51.8) |
| Hispanic | 41.1 | (36.5, 46.0) | 58.9 | (54.0, 63.5) | 30.0 | (25.6, 34.9) | 70.0 | (65.1, 74.4) |
| Non-Hispanic Other | 61.0 | (54.2, 67.4) | 39.0 | (32.6, 45.8) | 45.4 | (39.5, 51.5) | 54.6 | (48.5, 60.5) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 58.3 | (54.4, 62.2) | 41.7 | (37.8, 45.6) | 49.7 | (46.0, 53.4) | 50.3 | (46.6, 54.0) |
| \$25,000 to < \$50,000 | 76.6 | (73.5, 79.4) | 23.4 | (20.6, 26.5) | 56.4 | (53.3, 59.4) | 43.6 | $(40.6,46.7)$ |
| \$50,000 to < \$75,000 | 87.2 | (84.1, 89.8) | 12.8 | (10.2, 15.9) | 64.1 | $(59.4,68.6)$ | 35.9 | (31.4, 40.6) |
| \$75,000 or more | 91.0 | (88.6, 92.9) | 9.0 | (7.1, II.4) | 64.5 | (61.2, 67.7) | 35.5 | $(32.3,38.8)$ |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School |  | (45.4, 53.5) | 50.6 | (46.5, 54.6) | 41.6 | (37.2, 46.1) | 58.4 | (53.9, 62.8) |
| High School Graduate | 74.0 | (71.3, 76.4) |  | $(23.6,28.7)$ | 57.8 | $(55.5,60.0)$ |  | (40.0, 44.5) |
| Some College |  | (76.2, 82.1) |  | (17.9, 23.8) | 59.1 | (56.2, 61.8) |  | $(38.2,43.8)$ |
| College Graduate or Beyond | 92.5 | (91.0, 93.7) |  | (6.3, 9.0) | 66.3 | $(64.0,68.5)$ | 33.7 | (31.5, 36.0) |


| At what age are people supposed to start having sigmoidoscopy or colonoscopy exams? <br> Correct Answer (Age 50) Incorrect Answer |  |  |  |
| :---: | :---: | :---: | :---: |
| 32.2 | $(30.6,33.8)$ | 67.8 | $(66.2,69.4)$ |
| 31.6 | (28.8, 34.5) |  | $(65.5,71.2)$ |
| 32.6 | (30.7, 34.6) | 67.4 | $(65.4,69.3)$ |
| 17.8 | (15.0, 21.1) | 82.2 | (78.9, 85.0) |
| 31.8 | $(29.5,34.3)$ | 68.2 | $(65.7,70.5)$ |
| 51.1 | $(47.6,54.7)$ | 48.9 | $(45.3,52.4)$ |
| 28.5 | (24.4, 33.0) | 71.5 | (67.0, 75.6) |
| 18.1 | (13.2, 24.3) | 81.9 | (75.7, 86.8) |
| 35.4 | (33.6, 37.1) | 64.6 | $(62.9,66.4)$ |
| 21.0 | (16.6, 26.2) | 79.0 | $(73.8,83.4)$ |
| 18.0 | (13.2, 24.1) | 82.0 | (75.9, 86.8) |
| 21.4 | $(14.8,29.8)$ | 78.6 | (70.2, 85.2) |
| 22.6 | $(19.6,26.0)$ | 77.4 | (74.0, 80.4) |
| 27.5 | (25.3, 29.9) | 72.5 | (70.1, 74.7) |
| 36.7 | (32.3, 41.2) | 63.3 | $(58.8,67.7)$ |
| 41.3 | (37.8, 44.8) | 58.7 | (55.2, 62.2) |
| 15.6 | (12.1, 19.9) | 84.4 | (80.1, 87.9) |
| 32.0 | (29.2, 34.9) | 68.0 | (65.1, 70.8) |
| 33.8 | (30.1, 37.7) | 66.2 | $(62.3,69.9)$ |
| 38.1 | $(35.6,40.6)$ | 61.9 | (59.4, 64.4) |

Table 19 Cervical Cancer Knowledge, by Sociodemographics (HINTS 2003)
Weighted Percentages and $95 \%$ Confidence Intervals

| TOTAL | Have you ever heard of HPV? HPV stands for Human Papillomavirus. <br> Yes <br> No/Don't Know/Refused |  |  |  | Do you think that HPV causes cervical cancer? * <br> Yes <br> No/Don't Know/Refused |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 38.4 | (36.7, 40.0) | 61.6 | (60.0, 63.3) | 47.0 | (43.5, 50.6) | 53.0 | (49.4, 56.5) |
| GENDER |  |  |  |  |  |  |  |  |
| Male Female | 38.4 | $\begin{aligned} & \text { NA } \\ & (36.7,40.0) \end{aligned}$ |  | $\begin{aligned} & \text { NA } \\ & (60.0,63.3) \end{aligned}$ | 47.0 | NA <br> (43.5, 50.6) | 53.0 | NA $(49.4,56.5)$ |
| AGE GROUP |  |  |  |  |  |  |  |  |
| 18-34 | 44.3 | (40.6, 48.0) | 55.7 | (52.0, 59.4) | 48.7 | (40.8, 56.6) | 51.3 | (43.4, 59.2) |
| 35-49 | 44.9 | (40.9, 48.9) | 55.1 | (51.1, 59.1) | 48.6 | (43.0, 54.3) | 51.4 | (45.7, 57.0) |
| 50-64 | 36.7 | (33.0, 40.6) | 63.3 | (59.4, 67.0) | 47.5 | (40.3, 54.7) | 52.5 | (45.3, 59.7) |
| 65-79 | 20.8 | (17.2, 25.0) | 79.2 | (75.0, 82.8) | 37.2 | (27.1, 48.5) | 62.8 | (51.5, 72.9) |
| 80+ | 16.5 | (11.6, 22.8) | 83.5 | (77.2, 88.4) | 23.8 | (11.2, 43.5) | 76.2 | (56.5, 88.8) |
| RACE/ETHNICITY |  |  |  |  |  |  |  |  |
| White, non-Hispanic | 42.0 | (40.1, 44.0) | 58.0 | (56.0, 59.9) | 44.0 | (39.8, 48.3) | 56.0 | (51.7, 60.2) |
| Black, non-Hispanic | 32.5 | (26.4, 39.4) | 67.5 | $(60.6,73.6)$ | 41.4 | (28.1, 56.1) | 58.6 | (43.9, 71.9) |
| Hispanic | 27.5 | (21.1, 35.0) | 72.5 | (65.0, 78.9) | 63.4 | (48.9, 75.7) | 36.6 | (24.3, 51.1) |
| Non-Hispanic Other | 34.9 | (26.7, 44.1) | 65.1 | (55.9, 73.3) | 66.5 | (45.7, 82.4) | 33.5 | (17.6, 54.3) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |  |  |
| Less than \$25,000 | 25.4 | (21.8, 29.4) | 74.6 | (70.6, 78.2) | 48.0 | (38.3, 57.8) | 52.0 | (42.2, 61.7) |
| \$25,000 to < \$50,000 | 36.8 | (32.6, 41.1) | 63.2 | (58.9, 67.4) | 45.4 | (38.2, 52.7) | 54.6 | (47.3, 61.8) |
| \$50,000 to < \$75,000 | 44.3 | (38.6, 50.1) | 55.7 | (49.9, 61.4) | 50.2 | (42.0, 58.3) | 49.8 | (41.7, 58.0) |
| \$75,000 or more | 53.5 | (48.6, 58.4) | 46.5 | (41.6, 5I.4) | 51.1 | (44.9, 57.3) | 48.9 | (42.7, 55.1) |
| EDUCATION |  |  |  |  |  |  |  |  |
| Less than High School | 15.5 | (11.3, 21.1) | 84.5 | (78.9, 88.7) | 46.5 | (31.8, 61.8) | 53.5 | (38.2, 68.2) |
| High School Graduate | 26.0 | (22.0, 30.3) |  | (69.7, 78.0) | 36.2 | $(27.8,45.7)$ | 63.8 | (54.3, 72.2) |
| Some College | 45.8 | (41.8, 49.8) | 54.2 | (50.2, 58.2) | 46.3 | (40.5, 52.2) | 53.7 | (47.8, 59.5) |
| College Graduate or Beyond | 59.4 | (55.8, 62.9) | 40.6 | (37.1, 44.2) | 53.4 | (47.7, 59.0) | 46.6 | (41.0, 52.3) |

*Only respondents who had heard of HPV were asked whether or not they believed HPV causes cervical cancer.

## $\square$

More than 50 percent of female respondents had never heard of HPV.
Among women who were aware of HPV, 53 percent were unaware that HPV causes cervical cancer.

Table 20 Lung Cancer Knowledge, by Sociodemographics
Weighted Percentages and 95\% Confidence Intervals

## LUNG CANCER KNOWLEDGE

How much do you think that smoking increases a person's chances of getting cancer?

|  | A lot |  | A little |  | Not at all/ No Opinion/ Don't Know/Refused |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL | 84.4 | (82.3, 86.4) | 9.3 | (8.0, 10.8) | 6.3 | (5.1, 7.6) |
| GENDER |  |  |  |  |  |  |
| Male | 84.1 | (80.9, 86.8) |  | (7.5, II.4) |  | (4.8, 9.2) |
| Female | 84.8 | (82.4, 86.9) | 9.4 | (7.7, I 1.4) | 5.9 | (4.7, 7.2) |
| AGE GROUP |  |  |  |  |  |  |
| 18-34 | 87.1 | (83.2, 90.2) |  | (6.6, 12.1) | 3.9 | (2.7, 5.6) |
| 35-49 | 86.3 | (83.1, 88.9) | 8.8 | (6.8, 11.4) | 4.9 | $(3.6,6.6)$ |
| 50-64 | 83.3 | (80.1, 86.1) | 9.6 | (7.4, 12.5) | 7.1 | (4.9, 10.0) |
| 65-79 | 75.9 | (69.1, 81.7) | 10.9 | (7.7, 15.2) | 13.2 | (8.5, 19.8) |
| 80+ | 82.5 | (70.8, 90.2) | 7.6 | (3.9, 14.5) | 9.9 | (4.0, 22.5) |
| RACE/ETHNICITY |  |  |  |  |  |  |
| White, non-Hispanic | 85.2 | (82.7, 87.4) | 8.9 | (7.5, 10.4) | 5.9 | (4.5, 7.7) |
| Black, non-Hispanic | 82.4 | (77.5, 86.4) | 9.2 | $(5.5,14.8)$ | 8.5 | $(5.9,12.0)$ |
| Hispanic | 82.8 | (77.7, 86.9) | 11.3 | (7.7, 16.2) | 6.0 | (3.7, 9.5) |
| Non-Hispanic Other | 80.6 | (69.2, 88.5) | 14.6 | (8.2, 24.8) | 4.8 | (2.3, 9.8) |
| HOUSEHOLD INCOME |  |  |  |  |  |  |
| Less than \$25,000 | 79.9 | (75.1, 83.9) | 10.3 | (7.5, 14.1) | 9.8 | (7.7, 12.4) |
| \$25,000 to < \$50,000 | 82.9 | (79.4, 85.9) | 11.6 | (9.3, 14.4) | 5.5 | (3.7, 8.2) |
| \$50,000 to < \$75,000 | 86.5 | (81.7, 90.2) | 8.3 | (6.1, II.2) | 5.2 | (2.8, 9.2) |
| \$75,000 or more | 91.7 | (89.3, 93.6) | 6.2 | (4.5, 8.5) | 2.0 | (1.2, 3.4) |
| EDUCATION |  |  |  |  |  |  |
| Less than High School | 75.9 | (68.7, 81.9) |  | (8.1, 16.6) | 12.4 | (8.4, 17.9) |
| High School Graduate | 81.1 | (77.6, 84.2) | 12.0 | (9.4, 15.1) | 6.9 | (5.4, 8.9) |
| Some College | 86.7 | (82.6, 89.9) |  | (6.4, 11.8) | 4.6 | (2.9, 7.3) |
| College Graduate or Beyond | 92.3 | (90.2, 93.9) |  | (4.0, 7.1) |  | (1.5, 3.9) |



## Conclusions

## Implications for Planning, Research, and Practice

The HINTS data collection program was created to monitor changes in the rapidly evolving field of health communication. HINTS provides a distinct set of interdisciplinary measures including cancer-relevant communication, information, knowledge, beliefs, attitudes, and behaviors. The survey provides a unique opportunity to examine the interrelationships across measures in each of these domains, and the biennial administration of HINTS permits the tracking of important trends over time. HINTS is intended to be an ongoing mechanism for gathering data on the nation's progress in conveying cancer-related health information to the U.S. adult population. With the mounting prominence and importance of health communication, and rapid changes in communication technology, HINTS data will be useful to practitioners, researchers, and policy makers in many disciplines and practice settings, possibly including those outside of cancer.

Survey researchers are using the data to understand how adults use different communication channels to obtain health and cancer information for themselves and for others. Program planners are using the data to overcome barriers to health information usage across populations, and to obtain the necessary data to create more effective communication strategies. Finally, social scientists are using the data to refine their theories of health communication in the information age and to offer new and better recommendations for reducing the burden of cancer throughout the population.

## FUTURE HINTS CYCLES

## Methodological Considerations

With careful attention to the methodological rigor and comparability of the HINTS surveillance items to other established national health surveys, HINTS has the potential to make a unique contribution to the U.S.'s emerging National Health Information Infrastructure (USDHHS, 2001). To this end, continued efforts will be undertaken to protect the methodological integrity of repeated items across future administrations of the survey and routine psychometric analyses and documentation of the reliability and validity of items will be conducted (Nelson et al., 2004). Furthermore, evaluation and comparison of items in HINTS with other national surveys, including the Behavioral Risk Factors Surveillance System (BRFSS), and the National Health Interview Survey (NHIS) will be made (e.g., Nelson et al., 2003).

Although RDD telephone surveys have long been used to collect national data from the general population, response rates from RDD surveys have become increasingly more difficult and more expensive to execute. Based on speculation in the survey research community that for certain types of research questions it may be possible to use aspects of new media to supplement or even replace traditional modes of data collection (Couper, 2000; Kraut, Olson, Banaji, Bruckman, Cohen, Couper, 2003; de Leeuw \& de Heer, 2002; Goyder, Warriner, \& Miller, 2002; Nelson et al., 2004; Williams, Rice, Rogers, 1988), the first wave of HINTS 2005 attempted to test the utility of a hybrid approach to data collection. Specifically, an embedded methodological experiment to assess the feasibility of
using the traditional RDD telephone sampling frame during the screening portion of a national survey was followed by an extended interview provided through the Internet. Although this approach may overcome some of the sampling bias problems associated with Internet-only surveys (Krosnick \& Chang, 2001), results of the embedded experiment were disappointing and the hybrid approach was abandoned in the second wave of the HINTS 2005 data collection cycle. As previously mentioned, continuing efforts are being made to utilize HINTS to evaluate the effectiveness of alternative methodological approaches to data collection and to assess the costs and benefits of such approaches in terms of analytical power due to coverage, response rate, or sampling error (Dillman, 2000; Dillman, Phelps, Tortora, Swift, Kohrell, \& Berck, 2002; Nelson et al., 2004).

## CONTENT

To serve its intended surveillance function and permit the tracking of trends, half of the items in the HINTS instrument will necessarily remain unchanged over time. The remaining survey content will be available for collection of information on special topics as needed. Future versions of HINTS may also address focused research on specific cancer communication topics (Nelson et al., 2004). To facilitate the relevance and timeliness of topics to be addressed in HINTS, an external Consultation Committee of experts in communication, health research, and survey methodology has been formed. This committee will guide the development and implementation of future iterations of HINTS. The content of future iterations of HINTS may span the continuum of cancer care including traditional communication research topics, as well as
emerging issues in prevention, early detection, treatment, survivorship, and end-of-life. Future cycles of HINTS may examine various communication channels including the influence of traditional mass media, provider-patient interactions, social networks, and dynamic new digital media (Nelson et al., 2004).

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## CANCER INFORMATION AND RESOURCES

## PATIENT-ORIENTED INFORMATION

NCI's Cancer Information Service (CIS)
http://cis.nci.nih.gov/ with links to NCI-published fact sheets and other resources
Phone: I-800-4-CANCER (I-800-422-6237)
TDD: I-800-332-86I5
Other NCI or DHHS Sources of Cancer Information
National Cancer Institute: www.cancer.gov
Office of Education and Special Initiatives (OESI): www.cancer.gov/aboutnci/oesi
Office of Communications: www.cancer.gov/aboutnci/office-of-communications/page3

## American Cancer Society (ACS)

www.cancer.org/docroot/home/index.asp

## FEDERALLY-SPONSORED PROGRAM PLANNING RESOURCES

## Cancer Control P.L.A.N.E.T.

http://cancercontrolplanet.cancer.gov/

## Research-tested Intervention Programs (RTIPs)

http://rtips.cancer.gov/rtips/index.do

## Guide to Community Preventive Services

www.thecommunityguide.org/

## RESEARCH TOOLS AND RESOURCES

## Behavioral Risk Factor Surveillance System (BRFSS)

www.cdc.gov/brfss/
National Health Interview Survey (NHIS)
www.cdc.gov/nchs/nhis.htm

## Current Population Survey (CPS)

www.census.gov/cps/

## Surveillance, Epidemiology, and End Results (SEER)

http://seer.cancer.gov/

## Pew Internet and American Life Project

http://www.pewinternet.org/data.asp
hints.cancer.gov



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[^0]:    ' Abanks@ are groupings of telephone numbers based on the first five digits available for customer assignment; the Abanks@ for HINTS were obtained from a vendor that supplies telephone numbers for sample surveys.

[^1]:    How Americans find and use cancer information
    Health Information National Trends Survey

[^2]:    Look for Medical Information for Self

    - Look for Medical Information for Someone Else

    Buy Medicine or Vitamins

    - Participate in On-Line Support Group
    - Communicate with Healthcare Professional

[^3]:    - Sought Cancer Information for Self

    Sought Cancer Information for Other

[^4]:    $\square$ Printed Material Interpersonal Source Health Care Provider
    $\square$ Information Specialist Internet Other

[^5]:    2 "Other" refers to all responses not otherwise coded; For HINTS 2003, this category also includes the following response category, which was not part of the coding scheme for HINTS 2005: "Cancer Organizations."

[^6]:    ${ }^{[1]}$ For HINTS 2003 and HINTS 2005 this category includes books, brochures, pamphlets, magazines, and newspaper.
    ${ }^{[2]}$ For HINTS 2003 includes family, friend/co-worker; for HINTS 2005 includes family, friend/co-worker, and someone with cancer.
    ${ }^{[3]}$ For HINTS 2003 includes library, info. phone number, and cancer organizations; for HINTS 2005 includes library and info. phone number.

[^7]:    ${ }^{[4]}$ For HINTS 2003 includes radio, television, and other; for HINTS 2005 includes other.

[^8]:    Estimates in 2003 and 2005 may not be comparable. In 2003 respondents were allowed only one response. In 2005 multiple responses were allowed; however, estimates given in this table for 2005 are based only on respondents first response.

[^9]:    *The name of bogus organizations differ by survey year and therefore are not necessarily comparable. 2003: "United States Center for Cancer Prevention Research" 2005: "Cancer Control of America"

[^10]:    Note: State Level Estimates are Unstable

[^11]:    - Colonoscopy/Sigmoidoscopy/FOBT
    $\square$ No/Don't Know/Refused/Not Ascertained Other

[^12]:    Note: State Level Estimates are Unstable.

[^13]:    *Includes ages other than 40, when a health care provider says, refused, not ascertained or didn't know.
    **Includes intervals other than every I to <2 years, when a health care provider says, other responses, refused, not ascertained or didn't know.

