

## Extending the US Health Information National Trends Survey to China and Beyond: Promoting Global Access to Consumer Health Information Needs and Practices

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**Abstract**—The US-based Health Information National Trends Survey (HINTS) conducted every other year since 2003 by the National Cancer Institute (NCI) has become a major source for relevant data about the public's access to and use of relevant health information for cancer prevention and control. These data have been used to guide the development of evidence-based health communication intervention programs to reduce health information gaps and promote informed health decision making in the US. An innovative collaboration has been established between the NCI, George Mason University's Center for Health and Risk Communication, and Renmin University of China's Public Opinion Research Institute to conduct a biennial representative national HINTS survey in China, under the auspices of the Chinese Ministry of Health. Pilot data are currently be collected in two major Chinese cities, with full national administration of the first biennial HINTS-China research program to be conducted in 2013. Data gathered from the HINTS-China surveys will be used to guide evidence-based health promotion interventions across China to promote public health. This exciting international research program opens the door to expanding the HINTS research program to many other countries around the world to help promote global health.

**Keywords**—*health information; HINTS; National Cancer Institute; China; health communication.*

### I. INTRODUCTION

Access to and effective use of relevant, accurate, and timely health information is critically important for guiding the important health-related decisions that consumers and providers must make across the continuum of care to promote health and well-being [1]. This includes decisions about the prevention of health risks, health promotion behaviors, the detection and diagnosis of health problems, the treatment of health problems, and strategies for living with health threats (survivorship) [2]. The National Cancer Institute (NCI) introduced the Health Information National Trends Survey (HINTS) research program in 2003 to track the American public's access to and use of relevant health information, as well as their preferred ways to receive needed health information [3]. Data from the HINTS research program has helped health promotion leaders to identify serious public health information gaps and to guide targeted health education intervention programs to reduce

these gaps for enhancing informed health decision making, especially concerning cancer prevention and control [4]. The HINTS survey has been conducted roughly every other year since 2003 by the NCI and has become a major source for relevant data about past, current, and evolving public access to and use of relevant health information [4, 5, 6]. The HINTS research program provides health promotion experts with critical information about both the most glaring public health information deficits that need to be addressed and the best ways to communicate needed health information to key audiences.

The lessons learned from the HINTS research program about access to health information in the US can be profitably extended to other nations and regions of the world to promote global health. Global health experts have learned that while there are often major differences in the ways health problems and solutions are expressed in different parts of the world, there are also many similarities in health threats and there is strong demand for cooperation in addressing these threats [7]. There have been calls to expand the HINTS research program to other parts of the globe [8]. In response to these calls, HINTS-China will be the first major expansion of the HINTS research program beyond the US (and its territories). HINTS-China is an active and innovative international collaboration between the NCI (in the US), the Chinese Ministry of Health, George Mason University's Center for Health and Risk Communication, and Renmin University of China's Public Opinion Research Institute. We are currently gathering pilot data in two major cities in China (Beijing and Hefei) during 2012 and early 2013 to refine Chinese language HINTS questions and delivery strategies, in preparation to begin national administration of the first biennial HINTS survey in China in late 2013.

## II. THE NEED FOR HINTS RESEARCH IN CHINA

This exciting new research program is especially relevant in China, where there are serious public health concerns about cancer prevention and control. Cancers are now the leading cause of death in urban China and the second leading cause of death in rural China [9, 10]. Current evidence suggests there is a serious and growing cancer burden in China, with increasing levels of cancer incidence, morbidity, and mortality [10, 11]. To reduce the cancer burden in China there is a concerted need to encourage cancer screening and early detection to promote timely cancer treatments, as well as to facilitate increased focus on cancer prevention activities [9, 12, 13]. Achieving these cancer prevention and control goals in China, as in other parts of the world, depends to a large extent on disseminating relevant and strategic health information about cancer prevention and control to key audiences to inform and motivate health decision making by health care consumers, providers, and policy makers [14]. The HINTS-China research program has the potential to establish the evidence-base for guiding strategic health communication programs for promoting cancer prevention and control in China.

The HINTS-China research program builds upon the NCI's well-established US national HINTS research program [3, 4, 5, 6]. The HINTS-China research program is adapting the latest HINTS questionnaire items, using similar core questions, adapted to the unique health issues and communication characteristics of the Chinese public. The focus of the HINTS-China survey will be on access to and use of cancer information.

## III. FOCUS OF THE HINTS-CHINA RESEARCH PROGRAM

The HINTS-China survey will recruit a large representative national sample in China across both urban and rural areas representing all of the major regions of the country. Special sections of the HINTS-China questionnaire will focus on relevant Chinese health issues, such as the link between smoking and lung cancer (the leading cause of death from cancer in China), immunization for hepatitis B, and screening for colorectal, breast, and cervical cancers [9]. We plan to adapt the NCI's comprehensive HINTS data dissemination program for providing information from the HINTS-China research program to health care researchers, consumers, providers, and policy makers.

Several of the unique features in the HINTS-China research program include the translation of the latest HINTS questionnaire into Chinese languages and adjusting the wording of the questions to adapt to unique Chinese respondent cultural issues. HINTS-China data will be collected through standardized personal interviews to ensure a good response rate and full collection of data. Sampling strategies will be employed to ensure a representative national sample of the Chinese public across all regions of the country, as well as both urban and rural areas of China. HINTS-China questions will examine the public's health information seeking practices, current levels of health information (including information deficits and misinformation), utilization and preference for different channels of communication, uses of health information acquired, and the source preferences of different segments of the Chinese public.

Current HINTS-China research activities include the translation and adaptation of the HINTS questionnaire for effective use with Chinese respondents. We are asking Chinese health professionals and policy makers to help us evaluate and refine the HINTS-China questions to make sure they are appropriate, understandable, and relevant for the Chinese public. We are pilot testing early versions of the HINTS-China questionnaire with diverse samples of respondents in Beijing and Hefei. Based upon these formative research activities we plan to carefully evaluate the HINTS-China pilot data, refine the HINTS-China research instruments, refine our administrative plan for collecting national HINTS-China data, develop plans for HINTS-China data analysis, data reports, results dissemination, and applications of the data for promoting public health, as well as to plan future biennial HINTS-China survey

administrations. We will also be comparing the pilot data we collect with other surveys and research findings from studies conducted in the US, China, and other parts of the world. We expect the HINTS-China research program to build upon an expanding body of communication research being conducted in China and elsewhere about public access and use of health information.

#### IV. APPLICATIONS OF THE HINTS-CHINA DATA

The HINTS-China research program will help provide the first comprehensive description of the current state of cancer-related health knowledge among different segments of the public across China. The research will identify important information needs and gap, as well as areas where the Chinese public is seriously misinformed about important health issues. The research will provide a general assessment about levels of public health and biological literacy in China, which will be critically important for guiding the development of public health education programs and media [15]. Data from the HINTS-China research program will help identify what the Chinese public knows about relevant health issues and what they need to know to promote cancer prevention and control.

Findings from the HINTS-China research program will help Chinese public health officials evaluate the influences and effectiveness of current health information and education programs in China, identifying what is working and where more work is needed for communicating relevant health information to key public audiences. The data will let these public health officials know what topics need to be included in future health education programs, what channels of communication are likely to reach different segments of the Chinese population, what messages strategies are likely to resonate with different public audiences, and which information sources are most preferred by different audiences for providing them with relevant health information. Data from the HINTS-China research program will be essential for guiding the development of targeted evidence-based health promotion intervention programs in China.

The HINTS-China research program will also provide relevant data for comparison with the US HINTS research program to identify similarities and differences in the ways that Chinese and American publics' access and use relevant health information. There are likely to be important lessons learned about which health communication programs have worked well and which programs have not worked so well in these countries. This information will be used to identify the best health promotion programs to be emulated and the least effective health communication practices that should be improved. These data will provide a basis for international collaboration between the US and China for conjoint health promotion efforts, activities, and policies, as well as provide a basis for encouraging global collaborations between many different countries concerning public health promotion [7, 13]

The longitudinal, repeated administration design of the HINTS-China research program will provide an important source of new data about the changing information and health environments in China. This is particularly important as the rate of change, technological innovation, and international exchanges expand in China. The successive administrations of the HINTS-China questionnaire will help track changes in public access to information, use of communication channels, increases in public knowledge about health issues, as well as identify emergent new health trends and issues that need to be addressed. The survey will also provide baseline data and biennial update comparisons to evaluate health promotion progress in China for promoting cancer prevention and control. Finally, this exciting international research collaboration opens the door to expanding the HINTS research program to many other countries around the world to help promote global health.

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