

THE IMPACT OF RE-PHRASING QUESTIONS ON HEALTH INDICATORS OVER TIME

March 2015

The Community Health Data Base (CHDB) is currently fielding the 2014/2015 Southeastern Pennsylvania Household Health Survey. Over the past year, similar to past surveys, CHDB staff reviewed previous Household Health Surveys and decided which questions to include, which to remove, and whether any questions needed to be altered or updated. The impact of re-phrasing questions on health indicators over time is an important topic to explore because small changes to question wording can occasionally have the apparent effect of disrupting data findings or long term trends. The following article highlights the impact of re-phrasing questions.

The Community Health Data Base and Southeastern Pennsylvania Household Health Surveys

- The Community Health Data Base (CHDB) provides population-based data to health and human service organizations, government agencies, and academic institutions interested in gaining a better understanding of the communities they serve and how best to meet their needs.
- The CHDB collects primary data through its Southeastern Pennsylvania (SEPA) Household Health Survey and provides access to secondary data sets such as U.S. Census and Pennsylvania vital statistics.
- The SEPA Household Health Survey is a biennial, random digit dial telephone survey of over 10,000 households. It is conducted in the five counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia.
- While clinical and program data provide a picture of those receiving care and those attending sessions or receiving services, respectively, population data provides a picture of, and extensive information on, the *entire* population.
- Many questions included in the Household Health Survey are drawn from national and state surveys, including the National Health Interview Survey, the National Health and Nutrition Examination Survey, and the Behavioral Risk Factor Surveillance System, among other sources.
- The Survey covers the following topics: mental and physical health status, chronic conditions, access to care, personal health behaviors, preventive care, social capital, and social determinants of health.

Reasons for Changes in Survey Question Wording

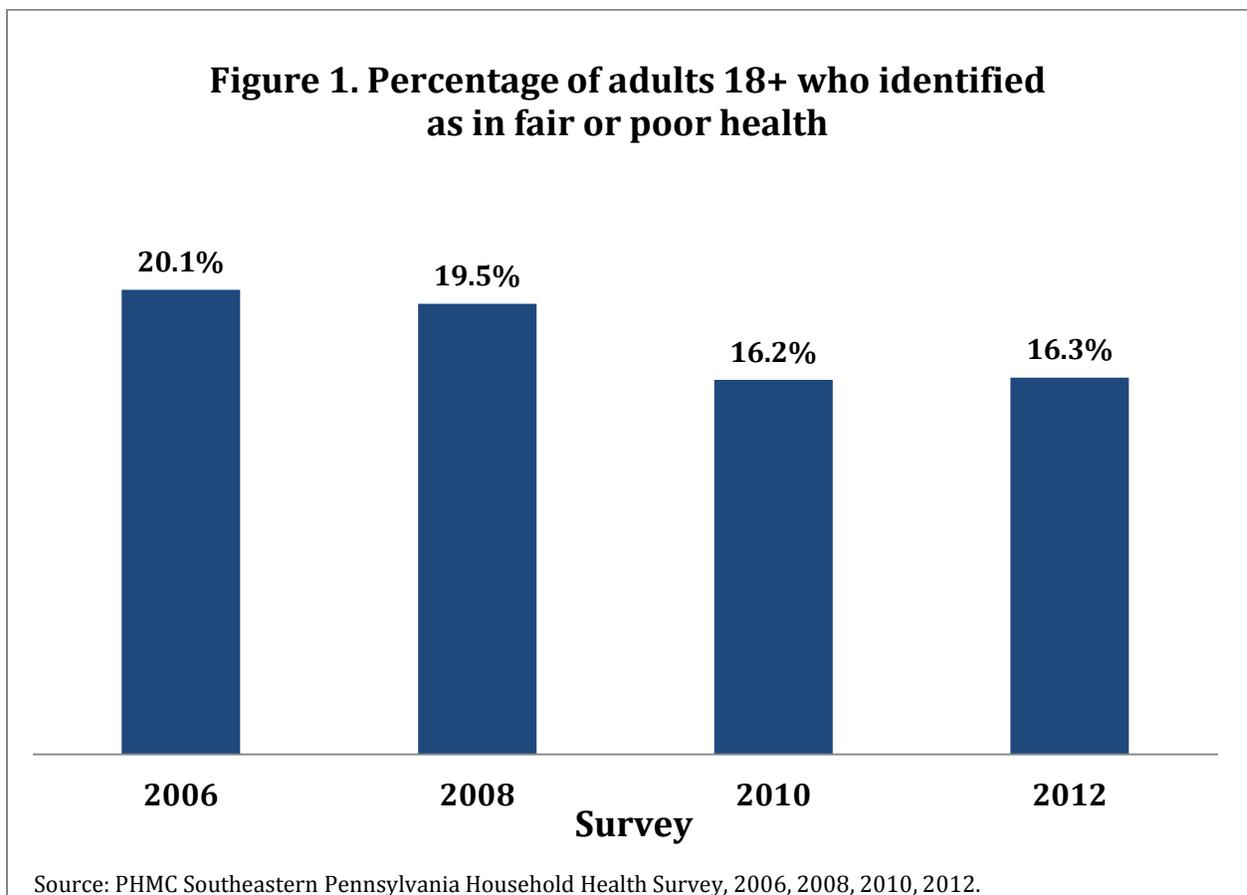
There are a variety of reasons why survey questions are changed over time. As changes in public health theory occur, or when new thresholds are established, the survey must adapt itself accordingly so that these developments are accurately reflected in the data collected. Moreover, survey questions will very often be altered or updated if the responses do not appear to be appropriate, representative, or useful. If respondents are not answering questions as intended, it is usually the result of poorly worded or outdated questions. If questions are confusing, perceived as offensive, commonly result in misunderstandings, do not produce relevant information, or

are themselves no longer relevant, CHDB staff adjust or re-phrase the survey questions accordingly. This is an iterative process that takes place from one survey to the next as policies change and discrepancies are identified, and every updated question is evaluated for its effectiveness in a live test in the weeks prior to the start of the official survey.

It is important to be aware, though, of the incidental effects of re-phrasing questions to improve the quality of the survey. New phrasing will, in certain instances, produce data that is seemingly inconsistent with long term trends. This is unavoidable, but it should not pose any major issues so long as certain factors are taken into consideration and accounted for. The following two examples do well to illustrate this.

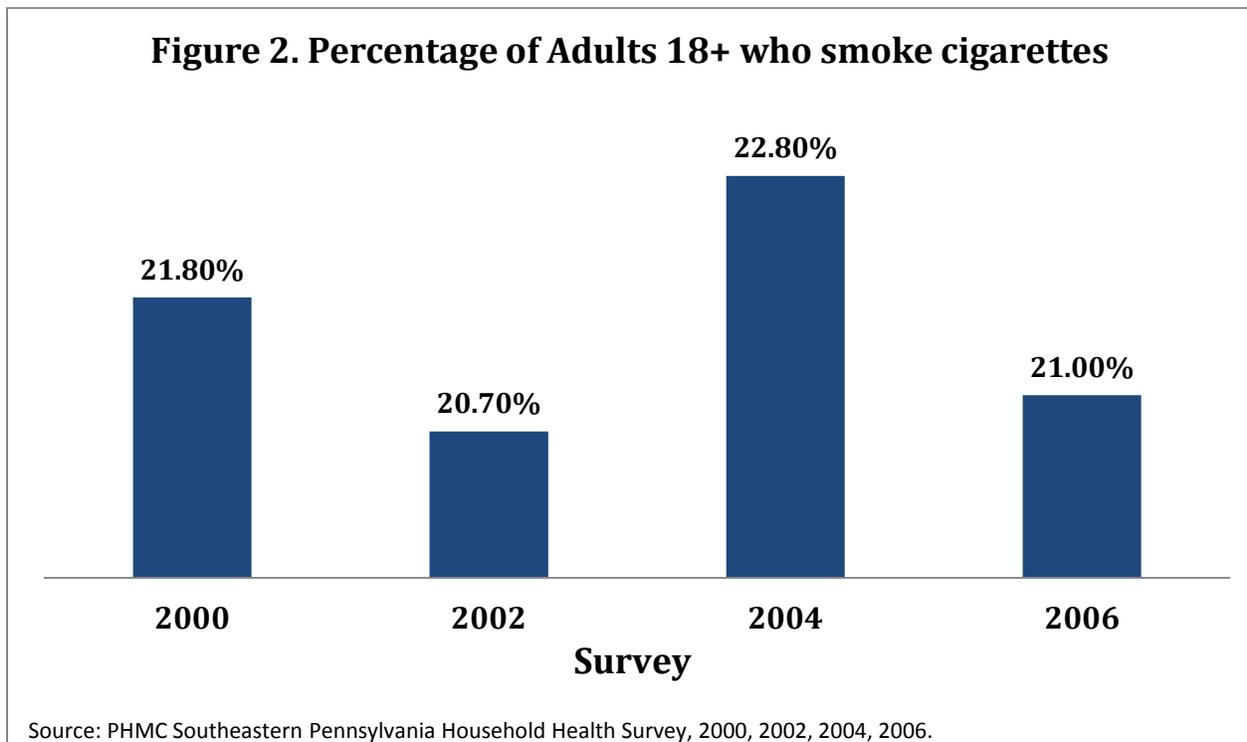
Example One: Health Status

In the 2010 Household Health Survey, the question on self-identified health status, in accordance with the National Center for Health Statistics, changed slightly from “Would you say your health is excellent, good, fair or poor?” to “Would you say your health is excellent, **very good**, good, fair or poor?” Although this may seem insignificant, the addition of “very good” to the response options may have had a modest effect on individuals’ responses. The data in 2008 and 2010 indicate a 3.3% decrease in the percentage of adults 18 years of age and older who identify themselves as in fair or poor health (19.5% in 2008 and 16.2% in 2010) while from 2006 to 2008 and from 2010 to 2012 (years when the question remained the same from survey to survey) there was at most a 0.6% variation.



Example Two: Smoking

From 1991 to 2002, the Household Health Survey asked respondents: “Do you now smoke cigarettes?” In 1991 the percentage of adults 18 years of age and older who responded ‘yes’ to this question was 27%, decreasing to 21.7% by 2002. However, in 2004, again in accordance with the National Center for Health Statistics, the CHDB re-phrased the question: “Have you smoked at least 100 cigarettes in your entire life?” If the respondent answers “yes,” they are then asked: “Do you NOW smoke cigarettes every day, some days, or not at all?” As a result, in 2004, 22.8% of adults (18+) reported smoking at least 100 cigarettes in their lifetime in addition to smoking at least every day or some days.



As the CHDB continues to update and improve the SEPA Household Health Survey, there will be additional examples that illustrate the impact of re-phrasing survey questions on health indicators over time. In addition to a variety of new questions, the 2014/2015 SEPA Household Health Survey includes a number of small alterations of existing questions. For example, the 2012 Household Health Survey asked respondents: “Over the past 30 days, on average how many hours per day did you sit and watch TV or videos in or during your leisure time?” This was followed by a separate question that asked: “Over the past 30 days, on average how many hours per day did you use a computer or play computer games in or during your leisure time?” In the 2014/2015 Household Health Survey, these questions were combined and now include video games and smart phones: “Over the past 30 days, on average how many hours per day did you sit and watch TV or videos; use a computer or smart phone; or play video games during your leisure time?” Any effects that re-phrasing questions may have on long term data trends should be considered corrective. Changes are made to improve the accuracy of individual responses or to reflect changes in policy; as such, when a newly worded question appears to have had an effect on certain trends, it is only an upshot of having collected more precise and representative data.

For information regarding PHMC's Community Health Data Base 2014/2015 Southeastern Pennsylvania Household Health Survey, or to learn more about the impact of re-phrasing questions on health indicators over time, please contact the CHDB Manager of Operations Lisa R. Kleiner (215.985.2576 - lisa@phmc.org) or CHDB Project Assistant Kyle B. Loder (215.985.2525 – kloder@phmc.org)

