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**RECOMMENDATIONS REGARDING THE PROPOSED 2018
REDESIGN OF THE NHIS
POPULATION ASSOCIATION OF AMERICA
JUNE 30, 2016**

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The National Health Interview Survey (NHIS) has long been the principal source of information on the health of the civilian noninstitutionalized population of the United States. Because of its very large sample size and linkage to the National Death Index (NDI), it has also long been the principal data source for studying demographic, socioeconomic, and behavioral differences in US health and mortality outcomes, both in the current time period and across time. Moreover, the NHIS has been used to examine the influence of family structure and characteristics of household and family members on the health and mortality of other household and family members. We are very thankful to the National Center for Health Statistics (NCHS) for their continued leadership in producing such a treasured and well-utilized data set.

At present, the NCHS is working on a redesign of the NHIS, planned for 2018, that aims to cut respondent burden and produce even better data. We applaud these efforts. However, the Population Association of America (PAA) continues to be concerned with some key dimensions of the proposed redesign. Most important, we are concerned with the elimination of the longstanding Family Questionnaire, given that the family is such a critical context for understanding the health and well-being of the American public. The remainder of this memo lists our two key recommendations looking forward in the NHIS redesign process. Each recommendation is accompanied by supporting text.

Recommendation 1: Collect Basic Information on All Household Members

The NHIS has been and will continue to be a household-based survey. Thus, it makes great sense that the NCHS plans to continue to collect essential characteristics regarding all members of the household. Right now, our understanding (based on the NHIS website as of June 8th) is that these items are limited to the age, sex, race, ethnicity, and armed forces status of all members in



each household and the employment status of all adults in each household.

Given the proposed elimination of the family questionnaire, we recommend that the NCHS expand its collection of information on all household members. This strategy will allow the NHIS to continue to be used to understand how the health, health care, and mortality patterns of American individuals are influenced by other household members (both family and non-family members) who are residing in the same household. Specifically, we recommend that the NHIS expand the set of information collected on all household members to also include the following:

- 1) Information necessary to define family structure and composition. This includes: detailed relationships of all household members to the household respondent and marital status of each household member, including cohabitation and whether the spouse is present in the household. For the minority of households with more than one family, we recommend the additional collection of relationship of sample adult to other family members and relationship of sample adult to sample child.
- 2) Completed educational attainment of all household members.
- 3) Country of birth of all household members.
- 4) Citizenship status of all household members.
- 5) General health status of all household members and whether or not each household member is limited in any way due to a physical, mental, or emotional problem.
- 6) Whether each household member has public health insurance, private health insurance, or is uninsured.

The following paragraphs provide justification for collecting this key information on all NHIS household members and provides some recommendations for measurement of these variables.

1) Information Necessary from Each Member of the Household to Define Family Structure and Composition

Family structure and composition are particularly important because of changing family dynamics and complex household structures that can impact the health of children and adults. There is a rich history of using the NHIS to examine the effects of family composition on individual-level health and mortality. For example, Krueger et al. (2015) recently used the 1997-2013 NHIS to show that family structure affects multiple domains of child well-being. Compared to children living with married couples, children in many other family structures—including those living with cohabiting couples, single mothers, and grandparents—generally experience greater barriers to healthcare and worse health outcomes. As the US population ages, it is imperative to understand whether and how family structure and composition influence health and longevity. Rogers (1996), for example, showed that the family can protect its members against the risk of death by providing social, instrumental, and financial support. The ability to identify not only the caregivers of children, but also of aging adults, is of vital importance for understanding US health and mortality patterns (see Rogers, Hummer, and Nam 2000).



Societal changes have resulted in increasingly complex living arrangements, patterns of family formation, and household relationships (e.g., cohabitation, same sex relationships, divorce and remarriage). To investigate the impact of these complex family patterns on the health and well-being of children and adults necessitates that information on marital and partnership status of all adult members of the household be collected. Collecting information on the relationship of all household members to the household respondent (alongside their sex, age, and marital status) will allow data users to flexibly define family structure, family composition, and living arrangements in a way that meets their reporting and research needs. Additionally, asking these measures of all household members will eliminate the need to ask family structure items on the sample adult and child questionnaires, except in the minority of households containing more than one household.

2) Educational Level of Each Household Member

It is important that the NHIS collect data on the educational level of each household member. A large body of work in recent years, much of it using NHIS data, has documented widening individual-level educational disparities in health outcomes. These studies have contributed to a national debate on widening health inequality. Researchers have also used NHIS data to show that the educational attainment of one's spouse is strongly associated to individual-level health outcomes, net of one's own education. For example, Brown and associates (2014) demonstrated that individuals' own education and spousal education *combine* to strongly influence self-rated health. Spousal education was obtained by combining self-reported marital status with information on each family member's relationship to an interviewer-designated family reference person. The results highlight the importance of shared resources in marriage for producing health and suggest that educational differences in health in the United States may actually be wider than typically documented because individuals are increasingly marrying partners with similar levels of education. The influence of spousal education on individual level adult health has long been recognized in Europe, but has only recently been recognized in the United States. Given the national debate on widening health inequality by educational attainment in the US, it seems like the worst possible time for the NHIS to stop collecting data on the educational attainment of all household members. Again, this is an easy item to collect and for respondents to report.

3) Country of Birth of Each Household Member

It is very important for the NHIS to continue the collection of data on the country of birth (COB) of all household members. As US society becomes progressively more diverse not only by race/ethnicity but also by country of origin, this information is increasingly vital because immigrants from different countries arrive to the US with unique histories, health behaviors, and patterns of health selectivity. COB tells us something about the contexts that immigrants were exposed to prior to migration, which in turn can influence immigrants' health in the United States. Much of the new work on immigrant health goes beyond documenting that immigrants are positively selected on health (i.e., the immigrant paradox). Sending country contexts are related to exposures to infectious diseases, nutritional environments, and social factors that shape health and health



behaviors, such as opportunities for education. For example, Hendi and colleagues (2015) showed that Black children's health in the United States varies considerably depending upon not only whether their mothers were US- or foreign-born, but also upon the region of birth from which the women migrated. Additionally, COB can tell us something about the circumstances under which immigrants come to the United States. For example, refugees are of particular interest to the US government right now. Refugee status is not directly identified in most US surveys but it is possible to develop a good proxy of refugee status based on a combination of year of arrival and country of birth.

Many prominent studies use the NHIS to document health disparities by COB. Studies of immigrant health, which are critical to the nation's understanding of health disparities, could no longer be done if country of origin information about all household members is no longer available. If researchers do not know the COB of all household members, then racial/ethnic estimates of health disparities that are stratified by nativity are vague; there would be no information about where the foreign-born sample members came from. Simply relying on the sample adult or sample child samples for estimates of race/ethnic and nativity differences in health and healthcare utilization often results in cell size problems because the foreign-born population, while rapidly increasing, is still much smaller than the native-born population.

4) Citizenship Status of Each Household Member

A strong case can also be made for gathering citizenship from all household members (US-born citizen, born in US outlying areas, FB—born abroad of American parents, FB—naturalized citizen, FB—noncitizen). This information is useful for classifying households as "mixed status" whereby some members are non-citizens and others are US citizens. Household citizenship composition is important for understanding why some groups have low participation rates in social and healthcare services and, potentially, poor health. For example, a study on SNAP receipt and food insecurity (Van Hook and Balistreri 2006) found that US-born children living in mixed-status immigrant households were at greater risk of food insecurity than other US-born children. This disparity was partially attributable to rules that considered non-citizens ineligible for SNAP, leading to mixed status households receiving lower levels of SNAP benefits compared with otherwise similar households. Studies like this one led to a revision of the SNAP/TANF policy in the mid-2000s to improve access to benefits for US-born children of immigrants.

Information on citizenship of the sample adult and child is insufficient for identifying mixed status households because immigrant households often contain a mixture of US- and foreign-born children and extended family members. Without information about citizenship of all household members, influential studies of the relationship between citizenship, program participation, and health outcomes would not be possible. Country of birth and citizenship status of all household members is also easy to collect and to report.

5) General Health Status and Any Disability of Each Household Member



With changes in population health such as the growth of the older adult population and increases in complex emotional and behavioral disabilities like ADHD and autism among children, caregiving for family members in poor health or with disabilities is becoming an increasingly important topic of study. Without collecting basic information about health status and disability of all household members, studies of caregiving arrangements and burden will not be possible. For most purposes, a basic measure of general health (e.g., excellent, very good, good, fair, poor) and a basic measure of disability (e.g., a question asking whether the person is limited in any way due to a physical, mental, or emotional problem) would be sufficient and easy to collect for every member of the household.

6) Health Insurance Status of Each Household Member

Health insurance coverage, whether through an employer or a public program, is often based on family relationships. An individual with access to employer-sponsored coverage may be able to cover his or her spouse and children through that policy. Public coverage often considers family ties in determining program eligibility, especially for children and families. Many analysts and researchers have adopted the use of a “health insurance unit” (HIU) in studying insurance coverage so as to focus on those individuals who would likely be considered a “family unit” in determining eligibility for either private or public coverage. We advocate for a limited measure of insurance that allows us to determine whether each individual has private health insurance, public health insurance, or is uninsured. Retaining the measurement of both relationships between everyone in the household and health insurance status will allow NHIS data users to continue to use the NHIS to study the impacts of the Affordable Care Act (ACA) on health insurance and care outcomes.

Recommendation 2: Continue to Collect Information Necessary to Link As Many NHIS Records as Possible to Administrative Data, Including the National Death Index. This Will Best Be Accomplished in the Context of the Household-Based Data Collection.

In the planned redesign, it is unclear to us whether all individuals in the NHIS, or only those who will be in the Sample Adult and/or Sample Child files, or none of them will have enough identifying information collected to be linked with administrative records, including the NDI. We are aware of plans to use administrative data to supplement the information available on the NHIS, making it absolutely critical that we maximize the number of linkages we can make between NHIS household members and various administrative sources. Successful linkages to the NDI and other administrative records requires age, sex, date of birth, first and last name, middle initial, father’s surname, and social security number (http://www.cdc.gov/nchs/data/ndi/ndi_flyer_inclusion_matching_criteria.pdf). Collecting this identifying information within the context of household file provides the NHIS with the greatest analytic potential for mortality analysis.

The rationale for collecting identifying information for all individuals in the NHIS is clear: hundreds and hundreds of studies over the last 25 or so years have used NHIS data linked with administrative NDI data to best understand US mortality patterns and trends.



But because mortality is a relatively rare event, particularly for young people, large sample sizes are necessary. And sample sizes for mortality analyses will be largest if this information is collected within the context of the household. This is the case for both adult mortality and, given the current NICHD-supported project of Richard Rogers and Robert Hummer, for child/adolescent mortality as well. While we think that the collection of sufficient identifying information in the future versions of the Sample Adult and Sample Child questionnaires is a minimum, we also think that the collection of as much of this information as possible for each individual in the household is important and potentially time efficient, given that the redesign already plans to be collecting data on age and sex for each member of the household.

References

- Brown, D., R.A. Hummer, and Hayward, M.D. 2014. Spousal education and self-rated health in the United States. *Population Research and Policy Review* 33, pp.127-151.
- Hendi, A.S., N.K. Mehta, and Elo, I.T. 2015. Health among Black Children by Maternal and Child Nativity. *American Journal of Public Health* 105(4), pp.703-710.
- Frank, R. and Akresh, I.R., 2013. Social patterning in body mass index (BMI) among contemporary immigrant groups: the emergence of a gradient. *Demography*, 50(3), pp.993-1012.
- Krueger, P.M., D. Jutte, L. Franzini, I. Elo, and Hayward, M.D. 2015. Family structure and multiple domains of child wellbeing in the United States: A cross sectional study. *Population Health Metrics*, 13(6), pp.1-11.
- Rogers, R.G. 1996. The effects of family composition, health, and social support linkages on mortality. *Journal of Health and Social Behavior* 37(4), p.326-338.
- Rogers, R.G., E.M. Lawrence, and Hummer, R.A. 2016. Racial/ethnic differences in early life mortality in the United States. Presented at the 2016 Population Association of America annual meetings, Washington, DC, March 31, 2016.
- Rogers, R.G., R.A. Hummer, and Nam, C.B. 2000. *Living and dying in the USA: Behavioral, health, and social differentials of adult mortality*. NY: Academic Press.
- Van Hook, J. and Balistreri, K.S., 2006. Ineligible parents, eligible children: Food stamps receipt, allotments, and food insecurity among children of immigrants. *Social Science Research*, 35(1), pp.228-251.