

## **Attachment 4b - 2020 Q3 NHIS 2020 Q3 COVID-19 Items - Concepts Measured, Duplication, and Proposed Uses of the Data**

*NOTE: Excepted where noted, these items appear on the Sample Adult only.*

### **POSITIVE COVID-19 CASES, Sample Adult and Sample Child**

#### **Concepts Measured:**

- Ever told you had or likely had coronavirus or COVID-19
- Ever been tested for coronavirus or COVID-19
- Test find that had coronavirus or COVID-19
- Severity of coronavirus symptoms when they were at their worst: no symptoms, mild, moderate or severe

#### **Uses of the data:**

- The purpose of including doctor-diagnosed COVID-19 and testing-confirmed COVID-19 is to create a recode that accurately captures the number of positive cases of COVID-19. They are not intended to be used individually to produce estimates, but rather to be used as covariates for other outcomes. People who had doctor-diagnosed COVID-19 or testing-confirmed COVID-19 are likely to have different health care experiences, and different health and well-being outcomes, than people who did not.
- Based on the current estimate of about 1% testing positive on viral tests, and a daily incidence of about 20,000 cases, we expect the prevalence to increase to between 2 or 3% by January 2021 and closer to 4 or 5% by December of 2021. Adding to that an additional 2-3% of those who had a doctor tell them they likely had COVID-19, we conservatively expect the prevalence to be around 6% (expected n=2160). The number of moderate or severe cases is unknown, perhaps 1/3 of these, a prevalence around 2%.
- For people with COVID-19, NHIS will be able to produce reliable estimates for any risk factor or outcome that is at least 2% of the total population, such as the prevalence of uninsured adults among persons with COVID-19, or the prevalence of fair or poor health, anxiety, depression, cardiovascular disease, diabetes, or asthma.
- For the more severe cases, NHIS will be able to produce reliable estimates for any risk factor or outcome that is at least 7% of the total population, such as the prevalence (among persons who had moderate or severe symptoms) of at least one condition that increases risk for complications from COVID-19.
- Linkage of NHIS survey participants with mortality data from the National Death Index in 20 or 30 years provides an opportunity to conduct outcome studies that investigate the association of health factors with mortality. The linked mortality follow-up data, when combined with COVID-19 diagnosis, testing, and hospitalization responses, may enable future research on long-term mortality associated with COVID-19.

### **Duplication with other surveys:**

- Other national surveys and surveillance systems may include questions on these constructs, but these questions are still needed on NHIS to serve as covariates in analyses of health, health care, and well-being outcomes such as uninsured adults under age 65, persons with fair or poor health, anxiety, depression, and chronic conditions.
- The proposed COVID-19-related Research and Development Survey (RANDS), conducted by NCHS's Collaborative Center for Questionnaire Design and Evaluation Research, will include these questions and provide information on respondent's understanding of these constructs.

### **UNDERLYING HEALTH CONDITIONS**

#### **Concepts Measured:**

- Ever been told by a doctor or other health professional had ...
  - Weak or failing kidneys
  - Hepatitis
  - Cirrhosis or any other kind of long-term liver condition

#### **Uses of the data:**

- The questions on weak or failing kidneys, hepatitis and cirrhosis or any other kind of long-term liver condition will be used along with other chronic conditions already captured on the core NHIS and the addition of immunosuppression (see below) to identify persons with chronic conditions that increase their risk for complications from COVID-19. The core NHIS questionnaire already includes questions on diabetes, heart disease, asthma, COPD, emphysema, chronic bronchitis, and obesity.
- Approximately 33% of the adult population has at least one condition that increases their risk for complications from COVID-19.
- With the inclusion of these questions along with the chronic conditions in the core questionnaire, the NHIS can also be used to assess the prevalence of comorbidities among COVID-19 survivors who had doctor-diagnosed COVID-19 or testing-confirmed COVID-19. In addition, the COVID-19 items along with other comorbidities provide a clearer understanding of health outcomes during the pandemic.

### **Duplication with other surveys:**

- These questions are part of the rotating core content for the NHIS, already scheduled to appear in the 2021 NHIS.

## **IMMUNOSUPPRESSION**

### **Concepts Measured:**

- Past 12 months, taken prescription medication or had any medical treatments that a doctor or other health professional said would weaken immune system
- Currently has a health condition that a doctor or other health professional said weakens the immune system

### **Uses of the data:**

- These questions will be used to identify persons with suppressed immune systems as a result of prescription medication, medical treatment, or a chronic condition. The items on immunosuppression will be used along with other chronic conditions already captured on the core NHIS and the addition of weak or failing kidneys, hepatitis and cirrhosis or any other kind of long-term liver condition (see above) to identify persons with chronic conditions that increase their risk for complications from COVID-19.
- Based on 2013 NHIS data, approximately 2.7% of the adult population has self-reported immunosuppression. There will be sufficient power to assess the prevalence of immunosuppression among adults with doctor-diagnosed or testing-confirmed COVID-19, but perhaps not among adults with moderate or severe symptoms.

### **Duplication with other surveys:**

- These questions were previously included on the 2013 NHIS as part of a longer immunosuppression supplement.

## **ACCESS TO CARE, Sample Adult and Sample Child**

### **Concepts Measured:**

- Any time DELAYED getting medical care because of the coronavirus pandemic
- Any time needed medical care for something other than coronavirus, but DID NOT GET IT because of the coronavirus pandemic
- Past 12 months, had an appointment with a doctor, nurse, or other health professional by video or by phone
  - any of appointments done by video or by phone because of reasons related to the coronavirus pandemic

### **Uses of the data:**

- Access to health care is a fundamental determinant of health, and its equitable distribution across the population is a critical issue of health services research and policymaking. Unmet needs are generally the result of cost-related barriers, accessibility problems (lack of transportation or lack of availability in area), and acceptability (personal preferences). The coronavirus pandemic has the potential to exacerbate these causes, especially accessibility problems (for example, due to doctor's offices limiting in-person appointments, urgent care clinics focusing on COVID-19 symptoms and excluding others, or public transportation systems cutting back on service).
- The inclusion of questions on access to care provides an opportunity to examine the prevalence of persons with unmet needs and whether historic demographic inequities in access to care are widening. Unmet needs comprise both delayed and foregone care. Based on the initial results of the Census Bureau's Household Pulse Survey, about 45% of adults reported delayed or foregone care in the previous 4 weeks as a result of the coronavirus pandemic.
- NHIS will be able to produce reliable estimates of foregone or delayed care for any subpopulation that is at least 2% of the total population such as adults aged 65 and over (16%), uninsured adults under age 65 (9%), adults with poor or fair health (9%), and adults with cardiovascular disease (11.5%), diabetes (9.5%), or asthma (13.5%). NHIS can also produce reliable estimates for most smaller racial subgroups (e.g., Asians, 6%; multiple race, 3%).
- The coronavirus pandemic has altered the way in which people access and utilize health care, as many avoid public areas and groups of people in order to reduce the spread of the virus. In many areas, elective procedures have been canceled or delayed, with telehealth appointments replacing in-person medical appointments. The inclusion of these questions on telehealth provides an opportunity to examine the prevalence of telehealth use, the prevalence of telehealth use as a substitute for in-person appointments during the coronavirus pandemic, and whether certain subgroups are more likely to use telehealth.
- Approximately 85% of people have access to a usual source of care but estimates of how many medical establishments offer telehealth vary widely. Even for those establishments who offer telemedicine, how often telehealth substitutes for appointments (and not follow-up communications, referrals, prescriptions, etc.) is unknown. With a prevalence as low as 7%, NHIS will be able to produce reliable estimates for any subpopulation that is at least 2% of the total population including all the subgroups mentioned above who might have difficulty accessing care.

**Duplication with other surveys:**

- The two questions on delayed care and foregone care are included on the COVID-19 Household Pulse Survey, conducted by the Census Bureau. The question on foregone care is also included on the Current Population Survey starting in May. Their inclusion on the NHIS starting in July permits the continued monitoring of the prevalence of delayed and foregone care later in 2020. Their inclusion on the NHIS also permits examination of these prevalence estimates in the context of other health care access variables such as cost-related barriers to care and health insurance coverage.

- The proposed COVID-19-related Research and Development Survey (RANDS), conducted by NCHS's Collaborative Center for Questionnaire Design and Evaluation Research, will include the foregone care question and provide information on respondent's understanding of this construct. The first telehealth question also is proposed for RANDS, but with a 2-month reference period.

## **ACCESS TO CANCER CARE**

### **Concepts Measured:**

- At any time since the start of the coronavirus pandemic, in treatment or supposed to receive treatment for cancer
  - any treatments for cancer changed, delayed, or cancelled because of the coronavirus pandemic
- At any time since the start of the coronavirus pandemic, need any of OTHER medical care related to your cancer
  - Was any of this other medical care related to your cancer changed, delayed, or cancelled because of the coronavirus pandemic

### **Uses of the data:**

- The intent of these questions is to examine the extent to which cancer patients and survivors had their active cancer treatment and other cancer-related care disrupted during the coronavirus epidemic. Such disruptions may have a negative impact on disease progression or recurrence, side-effects of treatment, other health outcomes, and health and wellness after a cancer diagnosis.
- About 12% of the population has ever had cancer, and according to 2010 NHIS data, about 16% of them are currently undergoing treatment (overall, a total population prevalence of about 2%, expected n=720). How many will have had their treatment changed, delayed, or canceled is unknown, but based on the Household Pulse Survey's estimate that about 45% of adults had delayed or foregone care, the prevalence of treatment impacts among adults undergoing cancer treatment is likely to be high. NHIS will be able to produce reliable estimates if the prevalence is greater than 7%.
- In 2010, 23% of those who ever had cancer did not consider themselves cancer free, and so were likely to be undergoing monitoring (overall a total population prevalence of about 3%, expected n=1000). How many will have had their monitoring interrupted is unknown, but like delayed or foregone care, the prevalence of monitoring impacts among adults undergoing cancer treatment is likely to be high. NHIS will be able to produce reliable estimates if the prevalence is greater than 3%.

### **Duplication with other surveys:**

- To our knowledge, no other surveys ask about delays and changes in cancer treatment due to the coronavirus pandemic.

## **ACCESS TO SKILLED AND INFORMAL CAREGIVING**

### **Concepts Measured:**

- Any time when needed care at home from a nurse or other health professional but DID NOT GET IT because of the coronavirus pandemic
- Past 12 months, receive care at home from a friend or family member
- Any time needed care at home from a friend or family member but DID NOT GET IT because of the coronavirus pandemic
- A friend or family member provide some or all of the care that a nurse or other health professional did not provide due to the coronavirus pandemic

### **Uses of the data:**

- As the United States population ages, caregiving roles, both skilled and informal, have become essential in ensuring older adults are able to meet their personal care, household, and medical needs. Social distancing practices that have been put into place as a result of the coronavirus pandemic may limit or inhibit such care being received. The purpose of including these questions is to estimate the prevalence of problems obtaining needed caregiving.
- From the 2018 NHIS, we know that about 5% of adults received home healthcare from a nurse or other health professional. If the prevalence of any unmet need for skilled caregiving due to the coronavirus pandemic is greater than 2%, we will have sufficient sample (expected n= 1800) to produce a reliable estimate. If the prevalence is greater than 7%, we will have sufficient sample to produce reliable estimates for demographic subgroups exceeding 25% of the population receiving skilled caregiving.
- Little is known about the size of the population of adults receiving informal caregiving. It is estimated that about 17% of the adult population are caregivers for adults aged 18 or older, which we can use as a proxy for the prevalence of adults receiving care. If the prevalence of unmet needs for informal caregiving due to the coronavirus pandemic is greater than 1%, we will have sufficient sample (expected n=6120) to produce a reliable estimate. If the prevalence is greater than 7%, we will have sufficient sample to produce reliable estimates for demographic subgroups exceeding 8% of the population receiving informal caregiving.
- These questions and the social support items can be used in concert with each other to create a composite of care available for the respondent.

### **Duplication with other surveys:**

- Questions from the Behavioral Risk Factor Surveillance System (BRFSS) Caregiving Module were used as a resource in constructing these items. The BRFSS questions focus on identifying caregivers and understanding the care provided. The proposed NHIS questions focus on identifying persons receiving care and are more appropriate for a survey that includes extensive core content on disability and functioning.

## **SOCIAL SUPPORT**

### **Concepts Measured:**

- How often gets needed social and emotional support
- Compared with 12 months ago, receive more social and emotional support, less social and emotional support, or about the same

### **Uses of the data:**

- Adults who lack social and emotional supports have been shown to have poorer physical and mental health, require a greater access to health care services, and have higher mortality rates than their peers with such supports. During the coronavirus pandemic, adults lacking social and emotional supports, particularly older adults, may also be at higher risk for being unable to access needed health care. Social distancing practices that have been put into place as a result of the coronavirus pandemic may hinder access to social support networks.
- The purpose of including these questions is to estimate the prevalence of adults who rarely/never receive needed social support, and the prevalence of adults who are receiving less social support than they were receiving 12 months earlier. It is recognized that any change in social support received may be due to factors other than social distancing; the question will only permit estimation of whether perceived changes in social support have occurred, not the reasons why.
- We expect the prevalence for those who rarely/never receive social support to be 7% and the decrease in social support to be about 10%. NHIS will be able to produce reliable estimates for any subgroup that has a total population prevalence of at least 3% for those who rarely/never receive support and 2% for those with a decrease in social support.

### **Duplication with other surveys:**

- From 2005-2017, the first question was part of a Behavioral Risk Factor Surveillance System (BRFSS) optional module titled “Emotional Support and Life Satisfaction.” It was designed and used to measure the frequency in which the respondent receives the social and emotional support they need.
- The question was not included in the 2019 BRFSS, preventing an assessment of changes in estimates from 2019 to 2020. To our knowledge, no other surveys are asking about changes in social and emotional support.

## **IMPACT OF CHRONIC PAIN**

### **Concepts Measured:**

- Past three months, how often did pain limit life or work activities: never, some days, most days, or every day
- Past three months, how often did YOUR pain affect your family and significant others: never, some days, most days, or every day

### **Uses of the data:**

- Chronic pain can lead to mental health conditions such as anxiety and depression and diminished quality of life. It is a frequent reason people seek medical care and treatment, including use of prescription pain relievers and other pain management techniques. Anxiety can also be a root cause of pain and amplify pain perception and suffering. Anxiety related to the coronavirus pandemic has the potential to exacerbate chronic pain and its impact.
- In 2016, based on NHIS data, an estimated 20.4% of U.S. adults had chronic pain and 8.0% of U.S. adults had high-impact chronic pain. To determine if the prevalence of high-impact chronic pain has recently increased, estimates from the latter half of 2020 can be compared with those forthcoming for 2019. If the impact questions are added in July 2020, we will have sufficient power to detect a 1.0 percentage point increase (e.g., from 8% to 9%).

### **Duplication with other surveys:**

- The NHIS includes rotating core questions on the frequency and impact of chronic pain. These questions were part of the rotating core content in 2019 and are scheduled to appear again in 2021. In 2020, the frequency questions are included as part of sponsored content on the use of prescription opioids and non-opioid pain management. However, the impact questions were not included as sponsored content. This proposal restores the impact questions back to the NHIS prior to their expected inclusion in 2021.
- These questions are part of the rotating core content for the NHIS, already scheduled to appear in the 2021 NHIS.

## **SOCIAL DISTANCING AT CURRENT OR MOST RECENT JOB**

### **Concepts Measured:**

*Sample Adults 18+ who are currently employed*

- MAIN job or business currently social distancing measures in effect to help keep people apart
  - MAIN job or business, how often still need to work closer than 6 feet to other people [*Contact with social distancing measures*]
  - When social distancing measures NOT in effect, how often need to work closer than 6 feet to other people [*Contact without social distancing measures*]
  - Currently, at your MAIN job or business, how often need to work closer than 6 feet to other people [*Contact without social distancing measures*]
  - At any time since the start of the coronavirus pandemic, did MAIN job or business put social distancing measures into effect
  - When social distancing measures were in effect, how need to work closer than 6 feet to other people [*Contact with social distancing measures*]



### *Sample Adults 18+ who are unemployed now but employed in past 12 months*

- MAIN job you held in the past 12 months, ever any social distancing measures in effect
- When social distancing measures in effect, how often still need to work closer than 6 feet to other people [*Contact with social distancing measures*]
- When social distancing measures were not in effect, how often need to work closer than 6 feet to other people [*Contact without social distancing measures*]
- How often need to work closer than 6 feet to other people [*Contact without social distancing measures*]

### **Uses of the data:**

- Social distancing is one of the community mitigation measures that can be used during an epidemic. Social distancing in the workplace can reduce virus transmission from infected persons to susceptible individuals by increasing physical distance between people, or by reducing the number of people in the workplace. The benefits of social distancing apply not just to coronavirus. Reed et al. (2013) estimated that the influenza illness attack rate in the workplace in a severe pandemic can be over 20%. Contacts made in the workplace represent 20–25% of all weekly contacts, and influenza transmission in the workplace represents on average 16% (range 9–33%) of all transmissions (Edwards et al., 2016). A review of three epidemiologic and twelve modeling studies found that social distancing was associated with a 23% reduction in influenza-like illness (Ahmed et al., 2018).
- Along with information about industry and occupation already collected in the NHIS, the proposed questions will be used to understand the ability of different industry sectors to implement social distancing guidelines. This information may be used to target interventions in future outbreaks that can benefit from social distancing measures. For example, higher priority for interventions could be given to persons in industries and occupations with a high prevalence of obstacles to social distancing and employees whose age or underlying conditions increase the urgency of infection prevention.
- Although 10 questions on this topic are included in Attachment A, the most questions received by any one respondent is 4, and most employed adults will receive only 3. The goal is to identify two constructs—the extent of contact with social distancing measures in place and the extent of contact without such measures—and the difference between the two, which will indicate the efficacy of social distancing measures implemented. The power to reliably estimate these constructs for different industry sectors will depend on the prevalence of adults working in the sector and the prevalence of each contact level.
- Food preparation and healthcare each represent about 10% of the total population and office and administrative support represents about 15% of the total population. For industry sectors of this size, any prevalence estimates greater than 2% will be reliable. For smaller industry sectors (e.g., 3% of employed Americans, or 2% of all adults), prevalence estimates greater than or equal to 7% will be reliable. We predict that, for most industry sectors, at least 7% of adult workers will be in jobs where completely effective social distancing (i.e., reporting working closer than 6 feet none of the time) is not possible.

### **Duplication with other surveys:**

- Starting in May, the Current Population Survey (CPS) will include one item on teleworking or working from home in the past 4 weeks because of the coronavirus pandemic.
- The U.S. Department of Labor’s Occupational Information Network (O\*NET) can also be used to identify occupations with the highest risk of virus transmission. The O\*NET database contains several hundred variables representing occupation descriptors that provide details on the type of work involved in a given occupation and the characteristics of workers engaged in that occupation. O\*NET has been used to impute occupational exposures in many research studies. However, O\*NET cannot reflect the reality of social distancing practices or possibilities as they have played out in the actual context of the COVID-19 pandemic. This information is badly needed. Although O\*NET includes a variable that measures “How often does this job require exposure to disease/infections”, the data come from a typical time when only healthcare workers were thought to be likely to be exposed to serious infectious diseases. O\*NET also includes some variables that could be used to impute social distancing levels, but these also have limitations. The information from O\*NET about the typical amount of physical distancing workers experience in specific jobs is not accurate for judging exposure to infectious disease in the pandemic context because it fails to account for nonessential business closures and steps that businesses that were open took to address physical distancing. In addition, researchers and policy makers cannot use the “contact with others” measure in O\*NET to impute infectious disease exposure risk, because it includes contact via modes like telephone, etc. as well as face-to-face. Telemarketers, for example, score 100 on this measure. The nature of the job such as in the healthcare professions, mass transit workers, grocery store workers, and meat-packing workers, may mean that workers are unable to social distance. In addition, the representativeness of the worker sample with respect to basic demographic information, such as education, gender, race, and ethnicity, is unknown. Although O\*NET collects this information in its background survey, it is not made available to researchers.