



NEWSLETTER

COVID-19 Research Efforts

January 2021

Dear NHS, NHSII, NHS3 and GUTS participants,

In a year that has been like no other, your continued participation is greatly appreciated. In this newsletter, we provide you with an update from each of the cohorts, as well as some information about two COVID-focused research efforts that are ongoing.

Last spring, in response to the COVID-19 pandemic, many of you were invited to participate in the **COVID-19 Questionnaire Sub-study** and the **COVID Symptom Study** mobile app. Over these past 10 months, participants in these sub-studies have been providing regular updates about their health, PPE use, and experiences at work and in their communities. These responses are already helping us investigate the mental and physical impacts of the COVID-19 pandemic.

Below, we would like to share some of our early findings.

We can't thank you enough for your commitment to public health research.

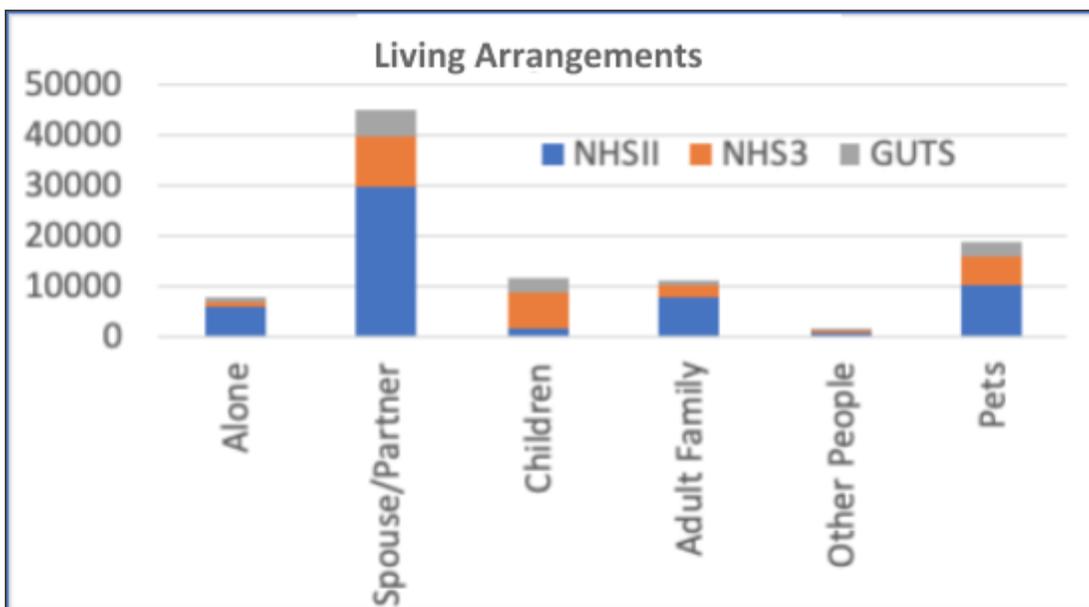
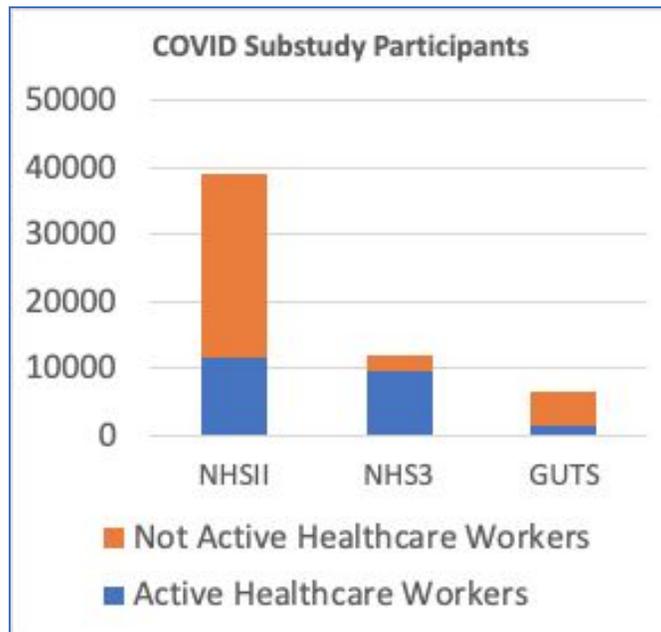
With warmest regards,

- ***The Nurses' Health Study & GUTS research team***

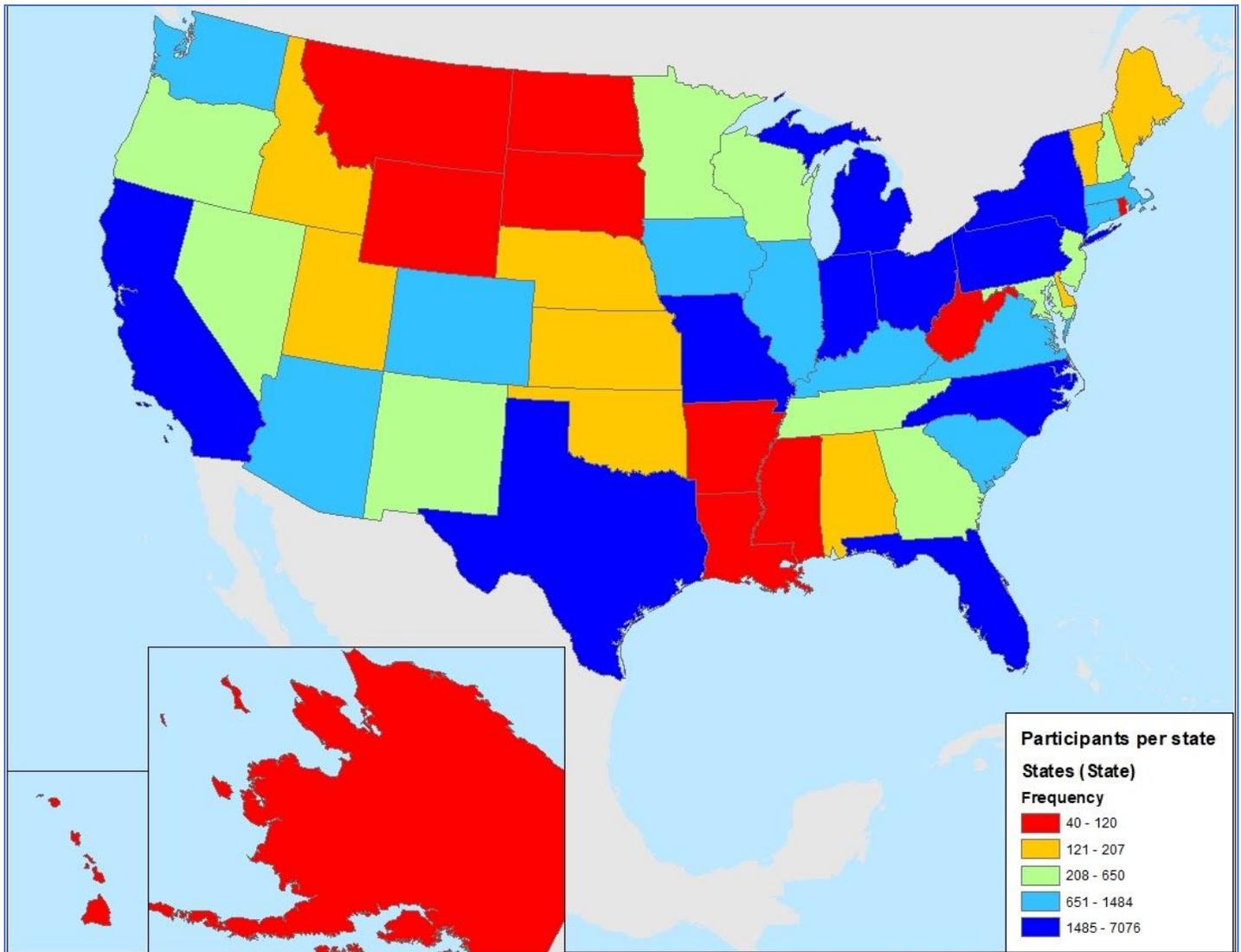
COVID Questionnaire Substudy

By the numbers

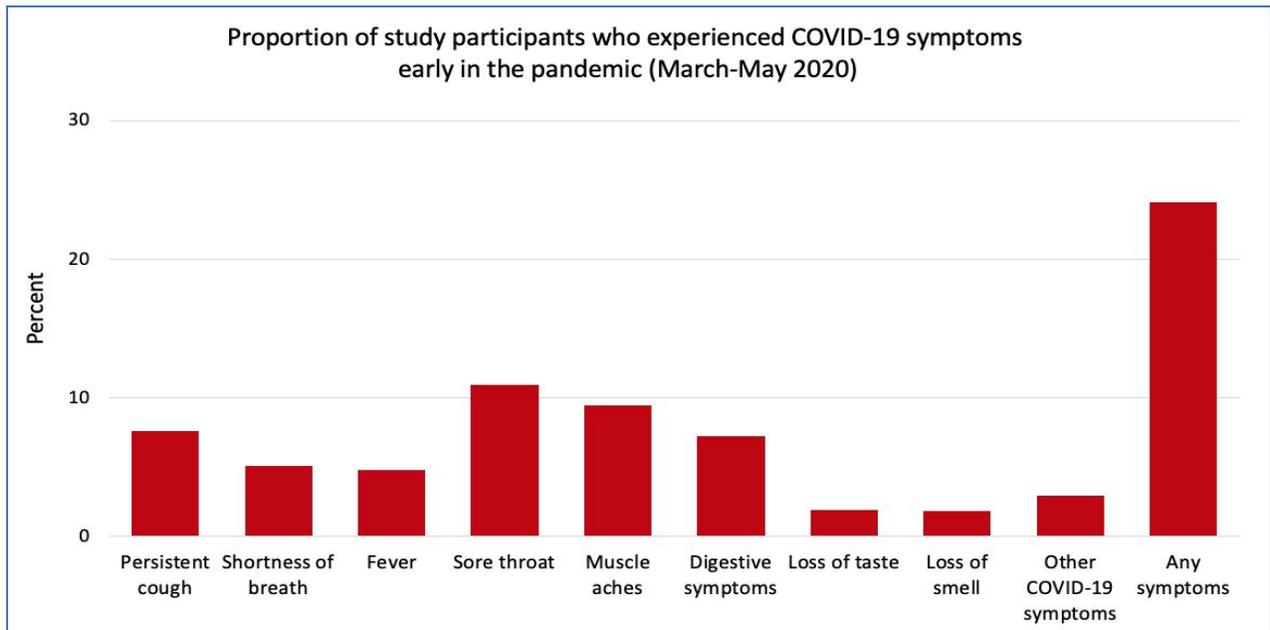
The **COVID Questionnaire Substudy** includes more than 57,000 participants from across three cohorts (39,137 NHSII, 11,976 NHS3, and 6,508 GUTS). Of these 57,000 participants, approximately 40% reported working as an active healthcare worker during the pandemic. Most participants reported living with at least one other person, including partners/spouses, other adult family members, and children.



In the spring of 2020, **COVID Questionnaire Substudy** participants were living throughout the country, with at least forty participants in every US state and the District of Columbia. This has given us a unique opportunity to see how individuals in different parts of the country have experienced the pandemic.



In the early months of the pandemic, when testing was especially hard to come by, we also looked to see how many of the 57,000 **COVID Questionnaire Substudy** participants may have experienced COVID-19, but because of a lack of testing were unable to confirm a diagnosis. Using responses from our questionnaires, we were able to estimate that approximately 4% of **COVID Questionnaire Sub-study** participants were likely to have already experienced COVID-19 infection in early in the spring of 2020.



In your own words

We'd like to thank **COVID Questionnaire Substudy** participants who have taken the time to provide comments. Your input helps us to improve future questionnaires and investigate topics that are important to you.

Below are a few comments from participants, reprinted here with permission.

"Thank you for continuing with this work. Answering the questions this morning helped me see that my mental state has declined a bit and I am more anxious more often than I was previously. That helps me know to take better care of myself & use some healthy coping tools."

- L.M.

"Work has been tough, but my colleagues and I are getting through this together!"

- M. O.

"While I understand why we could not gather as a family after my grandfather died in April 2020, it makes me sad that there wasn't the large gathering and celebration of

his life that otherwise would have occurred. He was part of this world for 96 years and just quietly passed away without the world even seeming to notice."

- L.D.

COVID Symptom Study - Smartphone Application

By the numbers



Over 4 million people in the United States, the United Kingdom, and Sweden have contributed critical real-time information to the **COVID Symptom Study**, including 20,286 participants from NHS and GUTS. Several important analyses have already been published using the app data, the findings of which we detail below.

If you are interested in participating, it is not too late to download the [COVID Symptom app](#) and register with the same email from which you receive NHS updates. Now more than ever, as the pandemic continues to sweep the country, we need our participants to continue logging in. To get started, go to the Apple or Google app store and download [COVID Symptom app](#). If you have specific questions about the app, including help with downloads, contact us at predict@mgh.harvard.edu.

Findings from the COVID Research Studies

Using self-reported symptom data to predict COVID-19

The **COVID Symptom Study** was one of the first to report that loss of taste and smell, in addition to fever and a new persistent cough, could be important symptoms of COVID-19. As reported in [Nature Medicine](#), data from 2,618,862 app study participants was used to predict that over 17% of the study group had COVID-19, based on their symptoms. See coverage in the [New York Times](#).

Risk of COVID-19 among front-line healthcare workers

In [the Lancet Public Health](#), we reported that front-line healthcare workers (many of whom were members of NHS cohorts or GUTS) were over eleven times more likely to report a positive COVID-19 test than members of the general population. After adjusting for the fact that healthcare workers were more likely to have access to testing, front-line healthcare workers were still over three times more likely to report a positive test. Risks were the highest among front-line healthcare workers of color, among those without adequate access to personal protective equipment, and among those who had exposure to patients with suspected or documented COVID-19. See coverage in [Well and Good](#).

Risk of COVID-19 among individuals with cancer

In [The Oncologist](#), we reported that individuals living with cancer had a 60% increased risk of COVID-19 compared to those free of cancer. Those being treated with chemotherapy or immunotherapy had a risk of COVID-19 that was twice as high as individuals from the general population. Individuals living with cancer were also more likely to be hospitalized for COVID-19 compared to individuals free of cancer.

Updates from the Cohorts



We are happy to announce that we recently received funding from the National Institutes of Health to collect biological samples from GUTS and NHS3 participants over the next three years. In addition, the **Microbiome in Nurses (Micro-N)** study to collect stool and saliva samples from NHS II participants is back underway. We hope if you are contacted you will agree to participate in these important efforts.

We will be sending the **NHS and NHSII questionnaire in June of 2021**. Be on the lookout in your mailbox or email. To report name or address changes, please go to www.nurseshealthstudy.org.

If you are a participant in GUTS, please know we will be sending the invitations for the **2021 GUTS questionnaire** at the beginning of 2021 via email. In addition, we have a new GUTS sub-study focused on fatherhood. Even if it has been a while since you last participated, we'd love to have you complete the main questionnaire and see if you are eligible for this or other ongoing sub-studies. For **NHSII** participants, if you've heard your child say that they've lost touch with GUTS, please pass this info on. Updated contact information can be sent to guts@channing.harvard.edu.

NHS3 recruitment is ongoing! If you know a male or female nurse or nursing student living in the US or Canada (and born after 1964) we'd love it if you'd encourage them to join NHS3 at www.nhs3.org We are almost halfway to our goal of 100,000 participants.



Want to stay in touch? Like our Facebook page at facebook.com/nhs3.org

We post news on the latest NHS results a couple of times a month and updates on recruitment. *Come join us online!*

COVID Research Grant Funding

This research is supported by Massachusetts Consortium on Pathogen Readiness (MassCPR), National Institute for Occupational Safety and Health (NIOSH), the National Institutes of Health, the Federal Drug Administration, and the Harvard T.H. Chan School of Public Health.

Friends of the Nurses' Health Studies

Thanks to your continued participation, we continue to discover new ways to address major health concerns. If you'd like to make a tax-deductible donation, visit www.nurseshealthstudy.org/donations or contact Danielle Hernon at 617-424-4334 dhernon@bwh.harvard.edu .

Additional Resources & Links

- *GetUsPPE*, <https://getusppe.org>
- *Feeding America*, <https://www.feedingamerica.org/find-your-local-foodbank>
- Covid Symptom Study, <https://covid.joinzoe.com/us-2>
- *Harvard T.H. Chan School of Public Health - Coronavirus Pandemic Series*, <https://theforum.sph.harvard.edu/series/covid-19/>