

**Evaluation of Recruitment Strategies  
on Inclusiveness of Populations at Risk for Health Disparities.**

Marilyn M. Bartholmae<sup>1,2</sup>, Amira A. Roess<sup>3</sup>, Keith D. Renshaw<sup>4</sup>, Brian L. Levy<sup>5</sup>, Matvey V. Karpov<sup>1</sup>, Joshua, M. Sill<sup>6</sup>, Sunita Dodani<sup>1,7</sup>

<sup>1</sup>EVMS-Sentara Healthcare Analytics and Delivery Science Institute,  
Norfolk, Virginia, United States of America

<sup>2</sup>Department of Psychiatry and Behavioral Sciences, Eastern Virginia Medical School,  
Norfolk, Virginia, United States of America

<sup>3</sup>Department of Global and Community Health, George Mason University,  
Fairfax, Virginia, United States of America

<sup>4</sup>Department of Psychology, George Mason University, Fairfax, Virginia,  
United States of America

<sup>5</sup>Department of Sociology & Anthropology, George Mason University, Fairfax, Virginia,  
United States of America

<sup>6</sup>Division of Pulmonology, Department of Internal Medicine, Eastern Virginia Medical School,  
Norfolk, Virginia, United States of America

<sup>7</sup>Division of Cardiology, Department of Internal Medicine, Eastern Virginia Medical School,  
Norfolk, Virginia, United States of America

**Corresponding author:**

Marilyn M. Bartholmae, PhD

EVMS-Sentara Healthcare Analytics Science Institute

855 W. Brambleton Avenue, A-Wing,

Norfolk, VA, 23510 – Williams Hall

Phone: 757-446-7991

Fax: 757-446-7076

Email: [barthomm@evms.edu](mailto:barthomm@evms.edu)

# Recruitment Strategies on Inclusiveness of Populations at Risk

## Background

The global spread of the coronavirus disease (COVID-19) has had a greater social, health, and economic impact on vulnerable populations from ethnic/racial minority groups of low socioeconomic status (SES) when compared to White populations of higher SES (Abedi et al., 2021; Lopez et al., 2021; Kim et al., 2020; Webb Hooper et al., 2020). Disadvantaged populations were more likely to experience health disparities and inequities prior to the COVID-19 pandemic (Guglielmi et al., 2019; Guerrero et al., 2019; Stormacq et al., 2019; Bell et al., 2017; Dyk et al., 2018). This pandemic exacerbated existing health disparities (Kim et al., 2020; Saltzman et al., 2021; Mueller et al., 2021; Khatana & Groeneveld, 2020; IDSA, 2020).

Population health research is a critical element of reducing health disparities through producing evidence that allows for the allocation of resources to areas of need and the implementation of policies to reduce health disparities. During the COVID-19 pandemic, remote online data collection tools became essential for conducting population health research (De Man et al., 2021; Lowey et al., 2020; De R et al., 2020). However, little is known about the representativeness of samples in population health research using online data collection methods. Some argue that using online health technologies may exacerbate health inequities in individuals at risk for health disparities (Davies et al., 2021; Azzopardi-Muscat & Sorensen, 2019). Minority racial/ethnic populations with lower SES are less likely to engage in online research (Ashford et al., 2020; Kovic et al., 2008; Suarez-Balcazar et al., 2009). Underrepresentation of these populations could lead to problems with intervention effectiveness among diverse populations (Ashford et al., 2020; Clark, et al., 2019).

The inclusion of minority populations in research studies was problematic before COVID-19 was declared a pandemic (Kovic et al., 2008; Suarez-Balcazar et al., 2009). For example, Juraschek et al. (2018) reported using Facebook proprietary algorithm micro-trials to optimize advertisement objectives for African Americans by using targeted demographics, alternative logo designs, and alternative advertisement titles and texts. Despite their efforts, the authors noted that more research is clearly needed to improve recruitment of minority groups.

Since online research has become popular after COVID-19 (De Man et al., 2021; Lowey et al., 2020; De R et al., 2020), there is a need to prevent exacerbation of existing health disparities. This study aims to close the gap in understanding how to increase the inclusiveness of racial/ethnic minorities and low-SES populations by evaluating multiple recruitment strategies utilized in the statewide COVIDsmart registry. This evaluation may help augment our understanding of factors affecting participation in remote online health research studies.

## Methods

The COVIDsmart statewide registry in Virginia is a partnership between Eastern Virginia Medical School (EVMS), Sentara Healthcare Analytics and Delivery Science Institute (HADSI), George Mason University (GMU), and Vibrent Health Inc., to collect clinical, social, and behavioral data for Virginians during COVID-19. The registry aims to generate studies to help us understand the impacts of COVID-19 on Virginians.

## Recruitment Strategies

Several recruitment strategies were utilized to increase the likelihood of engaging racial/ethnic minorities, individuals in rural areas, and socioeconomically disadvantaged populations. Recruitment strategies included advertising the COVIDsmart study via online

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articles, employer e-newsletters, purchased email lists targeting racial/ethnic minorities, social media (e.g., Facebook, Instagram, and LinkedIn), television, radio, and paper/digital flyers shared with multiple hospitals, churches, and other community organizations (Fig 1). Electronic gift card incentives were used to motivate participants to complete this six-month study. Residents of Virginia who chose to participate were eligible to enter a monthly drawing for a chance to win one out of twenty \$50 electronic gift cards, and a final drawing at the end of the study for a chance to win one out of four \$500 gift cards.

Figure 1. COVIDsmart Graphic Sample.



**Share how COVID-19 has altered your lifestyle and community.**

**Easy.  
Secure.  
Inclusive.**

**Give back to your community.  
Take part.  
Get COVIDsmart.**

**COVIDsmart**

vibrent | **EVMS**  
Epidemiology, Vaccines, and  
Infectious Disease Institute

**GEORGE MASON UNIVERSITY**

The graphic features a central circular image of a man and a young boy, both wearing white face masks, smiling. The man is carrying the boy on his shoulders. The background is a soft-focus outdoor setting with green foliage. The entire graphic is set against a white background with a dark red footer area containing the call to action text and three yellow circles.

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The following key messages were central to COVIDsmart recruiting efforts:

### Inclusive/Diverse

COVIDsmart aims to gather information from participants from all walks of life and engages community groups, including people from racial and ethnic minority groups, to give all people a voice in this important health research.

### Community/Voice

COVIDsmart gives all people an opportunity to participate and help shape current and future public health policy by sharing their experiences about how COVID-19 has impacted them, their families, and their communities.

### Altruistic/Helping Others

By participating in COVIDsmart, you are helping to represent your community by giving researchers information that will enable public health officials to make informed decisions that will help you and your community in response to the current pandemic and any future crisis.

### Learning

Participants in COVIDsmart can learn more about how the pandemic has affected their own health and well-being and see what the common concerns about COVID-19 are in their community. COVIDsmart features resources to help participants learn more about COVID-19 and ways to keep themselves and their families safe and well.

## **Defining Risks for Health Disparities**

Based on the literature reviewed above, we considered the following indicators of risk for health disparities: living in poverty, living in rural areas, not having a high school diploma/degree, not having health insurance, and being a racial/ethnic minority (i.e., Black, Asian Indian, Filipino, Chinese, Japanese, Korean, Native Hawaiian/Pacific Islander, American Indian/Aleut/Eskimo, Hispanic/Latin or other race or Spanish origin). We used the US Census Bureau poverty thresholds to assign poverty status (US Census Bureau, 2022). Rural areas were determined using the Rural Health Grant Eligibility Analyzer, available on the Health Resources & Services Administration's website (HRSA, 2022).

## **Data Collection**

COVIDsmart uses an online Health Insurance Portability and Accountability Act (HIPAA)-compliant data collection platform designed by Vibrent Health Inc. The Vibrent platform required an Internet connection, but no additional software was needed (Vibrent, 2021). A total of 782 residents of Virginia, ages 18 to 87 years, enrolled in the COVIDsmart registry from March to May 2021. We collected data for six months, including measures of demographics, COVID-19 clinical parameters, health perceptions, mental and physical health, resilience, vaccination status, education/work functioning, social/family functioning, and economic impact of COVID-19. Surveys included the Patient Health Questionnaire-9 (Kroenke et al., 2001), the Generalized Anxiety Disorder-7 (Löwe et al., 2008), a shortened version of the UCLA Loneliness Scale (Hughes et al., 2004), and a shortened version of the Social Network Index (Berkman & Syme, 1979). Literature findings were used to create questions for occupation exposure (Baker et al., 2020), lifestyle impact (Ballew et al., 2020), demographics during

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COVID-19 (Kluge et al., 2020; Liem et al., 2020), and vaccine perceptions (Lazarus et al., 2021; Larson et al., 2015). COVID-19 questions were adapted from the Centers for Disease Control and Prevention (CDC)'s Human Infection with 2019 Novel Coronavirus Case Report Form (CDC, 2019). In addition, surveys included questions created by an expert panel from GMU and EVMS, including an epidemiologist, a sociologist, and a psychologist, a health services researcher, a cardiologist, and a pulmonologist. Surveys are embedded in Appendices A-D.

Research ethics approval:

This COVIDsmart analysis was approved by Eastern Virginia Medical School Institutional Review Board (IRB# 20-07-EX-0138-OTHER).

### **Statistical Analysis**

Descriptive statistics were used to analyze the demographics of COVIDsmart participants. Monte Carlo Estimates for Fisher's Exact Test were used to evaluate the association between the categorical recruitment strategy (i.e., method of recruitment reported by participants) and health disparity risk status. Two-tailed Z tests evaluated the proportion differences between COVIDsmart and State individuals at risk for health disparities. We conducted the analysis using SAS 9.4, and  $p$  values  $< .05$  were considered significant.

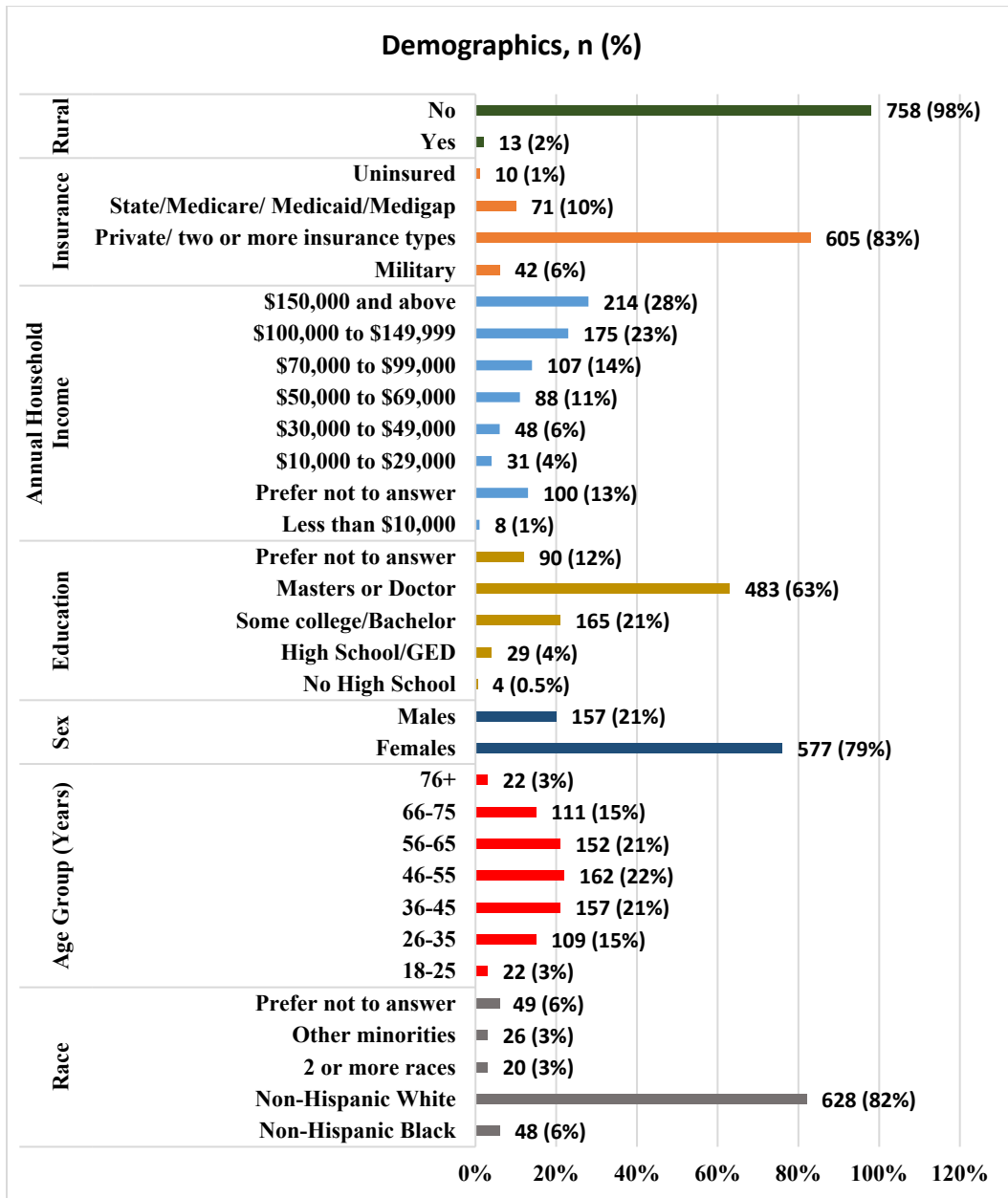
## **Results**

### **Characteristics of COVIDsmart Participants**

The majority of participants were non-Hispanic White (81.5%), female (78.6%), with a Masters' degree or higher (62.6%), an income of \$100,000 or higher (51%), non-rural (98%), and with health insurance (98.6%). The mean respondent age was 51 years (SD 14.58) (Fig 2).

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Figure 2. Demographics of COVIDsmart participants, N=771.



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### Recruitment Strategies Utilized by the COVIDsmart Study

Reported recruitment strategies were not significantly different based on racial/ethnic minority status,  $p > .05$ , but were significantly different for low SES versus high SES groups,  $p = 0.03$ . Overall, most COVIDsmart participants learned about this registry via emails. Low SES participants were more likely to report learning about the study via social media and community/other recruitment strategies than were high SES participants. None of the low SES participants learned about the study through television or radio. Similar proportions of low SES and high SES were reached through online/employer ads (Table 1).

Table 1. Recruitment Strategies Utilized to Enroll Participants in the COVIDsmart Registry, N=771.

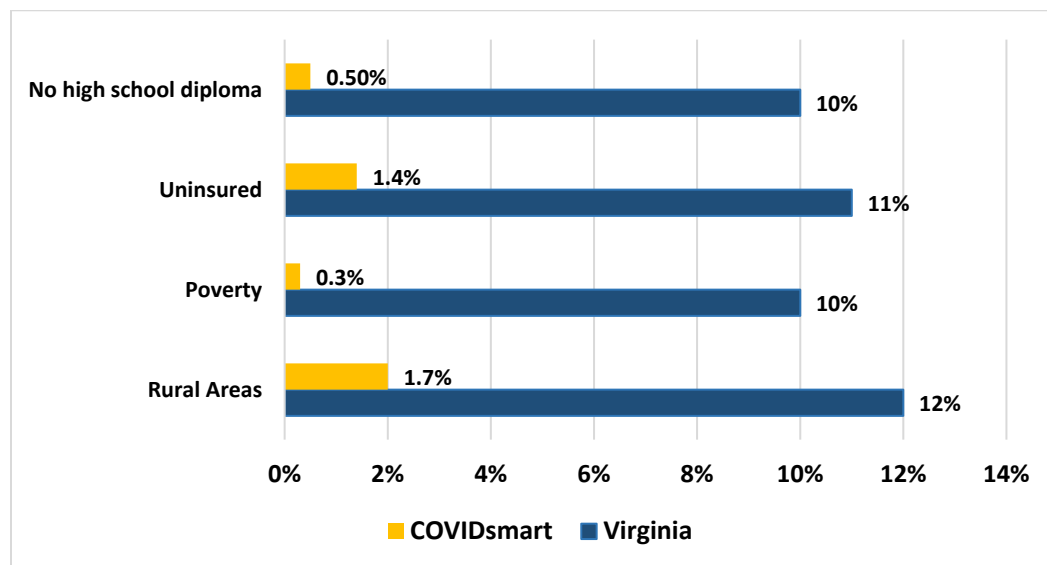
	Low SES		Ethnic/Racial Minority (n=21)	
	No (n=656)	Yes (n=21)	No (n=582)	Yes (n=84)
Community/ Other	36 (5.49%)	4 (19.05%)	32 (5.50%)	7 (8.33%)
Online/ Employer Ads	153 (23.32%)	4 (19.05%)	133 (22.85%)	21 (25.00%)
Radio	15 (2.29%)	0 (0%)	15 (2.58%)	0 (0%)
Social Media	47 (7.16%)	4 (19.05%)	47 (8.08%)	3 (13.10%)
TV	74 (11.28%)	0 (0%)	63 (10.82%)	11 (13.10%)
Emails	331 (50.46%)	9 (42.86%)	292 (50.17%)	42 (50.00%)
<i>P</i>	0.03*		0.34	

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### Comparison of Populations Captured by COVIDsmart and Virginia State Data

According to the US Department of Agriculture (USDA), about 12% of the Virginian population live in rural areas (USDA, 2022), and about 10% of the population in Virginia live in poverty (USDA, 2022), compared to COVIDsmart participants in rural areas (1.7%) or in poverty (0.3%). The Virginia Health Care Foundation states about 11% of Virginians ages 19 to 64 years do not have health insurance (VHCF, 2022), compared to 1.4% of Virginians in the COVIDsmart study who were uninsured. The US Census Bureau states about 10% of individuals in Virginia aged 25 years and older have not graduated from high school (U.S. Census Bureau, 2016-2020), compared to 0.5% COVIDsmart participants who did not have a high school degree (Fig 3). The proportions of low-SES in COVIDsmart were significantly different compared to the proportions of low SES individuals in the state of Virginia,  $p < .05$ . (Table 2).

Figure 3. Comparison of COVIDsmart (N=771) and Virginia (N=8,642,274) Socioeconomic Risk Factors for Health Disparities.





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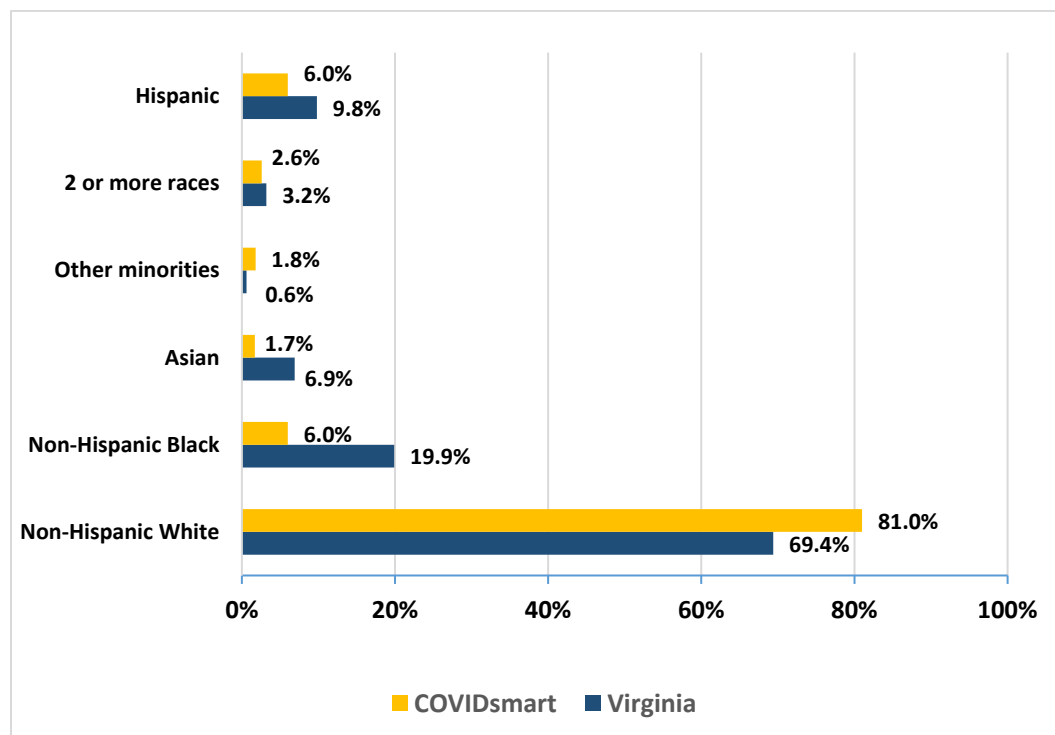
Table 2. Comparison of Proportions for Low Socioeconomic Status and Race/Ethnicity for COVIDsmart (N=771) versus Virginia (N= 8,642,274).

	<b>COVIDsmart Proportions</b>	<b>Virginia Proportions</b>	<b>Z Test</b>	<b>P</b>
<b>SES</b>				
No High School Diploma	0.005	0.1	8.7928	< .00001
Uninsured	0.014	0.11	8.5193	< .00001
Poverty	0.003	0.1	8.9779	< .00001
Rural Areas	0.017	0.12	8.8009	< .00001
<b>Race/Ethnicity</b>				
Hispanic	0.06	0.098	3.5488	0.00038
Two or more races	0.026	0.032	0.9466	0.34212
Other minorities	0.018	0.006	-4.314	< .00001
Asian	0.017	0.069	5.6967	< .00001
Non-Hispanic Black	0.062	0.199	9.5279	< .00001
Non-Hispanic White	0.815	0.612	-11.5669	< .00001

In Virginia, most of the population is non-Hispanic White (61.2%). Other races/ethnicities in Virginia include non-Hispanic Black (19.9%), Asian (6.9%), Hispanic (9.8%), two or more races (3.2%), and other minorities (0.6%), as reported by the US Census Bureau (US Census Bureau, 2016-2020). COVIDsmart study had a significantly greater proportion of non-Hispanic White participants (81.5%) than state statistics,  $p < .05$ . The proportions of Non-Hispanic Black, Asian, and Hispanic minorities were significantly lower, compared to state statistics,  $p < .05$  (6.2%, 1.7%, and 6%, respectively). The proportions of “other” minorities were significantly more prominent than the state proportion of other minorities,  $p < .05$ . The proportions of “two races or more” category was not significantly different between COVIDsmart and state data,  $p > .05$  (Fig 4).

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Figure 4. Percentage of COVIDsmart population (N=771) and Virginia population (N=8,642,274) by Race and Ethnicity.



### Discussion/Conclusion

Remote online data collection grew significantly during COVID-19, since many existing research activities and new research projects had to move online due to COVID-19 related restrictions (De Man et al., 2021; Lowey et al., 2020; De R., 2020). Numerous studies have reported that racial/ethnic minorities are at risk for health disparities and have been underrepresented in online and in-person research studies (Singh et al., 2020; Nelson et al., 2020; Goel et al., 2021; Sanchez et al., 2022; Jang & Vorderstrasse, 2019). For example, in a study assessing the association between generalized anxiety disorder scores and online activity among US adults during the COVID-19 pandemic, participants were primarily White (75%), female (82%), and with at least a high school/GED diploma or higher (97%) (Singh et al., 2020). Another study evaluating US public concerns about the COVID-19 pandemic reported that most of the participants were White (83%), female (65%), and had a bachelor's or graduate degree (80%) (Nelson et al., 2020).

To improve the representation of individuals at risk for health disparities in the COVIDsmart registry, we used several recruitment strategies, including online articles, emails, television, radio, social media, and paper/digital flyers sent to community organizations such as health clinics serving at-risk groups. Although multiple recruitment methods were used, they were insufficient to capture a representative number of individuals at risk for health disparities. Nevertheless, this evaluation demonstrates that targeted emails, social media, and community collaboration may help to improve the inclusion of low SES populations in remote online research studies.

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A significant limitation of this evaluation was the lack of face-to-face interaction with participants, which was not feasible due to restrictions imposed in response to the pandemic and the large-scale nature of COVIDsmart. Previous studies have highlighted that trust and cooperation are fostered in online research when an initial face-to-face interaction occurs (Bret & Kret, 2019; Adjekum et al., 2018; Wilson et al., 2006; Rocco, 1998). A second limitation was difficulty convincing community organizations to share information about the COVIDsmart registry. The willingness of community entities to promote online health research may depend on previous collaborations. For example, we collaborated with local primary care physicians willing to distribute COVIDsmart flyers (digital or paper) to patients. We faced difficulty securing responses from other local organizations with whom we did not have prior collaborations.

Low participation rates of populations at risk for health disparities may also be due to COVID-19 exhaustion and a more significant COVID-19 impact on low SES and racial/ethnic minority populations. COVID-19 impacted traditionally disadvantaged populations disproportionately (Abedi et al., 2021; Lopez et al., 2021; Kim et al., 2020; Webb Hooper et al., 2020), as many low-income jobs were lost during the pandemic (Morales et al., 2021; Kantamneni, 2020; Mendez-Smith & Klee, 2020) and people may have had to terminate unnecessary services such as cable and internet.

Remote online data collection has become a standard research practice to understand large-scale complex economic, behavioral, and clinical dynamics leading to poor population health outcomes. However, health disparity exacerbation is a risk when those of low SES and ethnic/racial minorities are underrepresented in these studies. Researchers should further evaluate the use of targeted emails, social media, and community collaboration in improving the inclusivity of populations at risk for health disparities in remote online research efforts.

### **Conflicts of interest**

None declared.

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### COVIDsmart: About You Appendix A

Question	Potential Responses/Communications
<p><b>Survey introduction</b></p>	<p><b>You are now starting the About You module. This module asks questions about you, your work, your general health, and your family life.</b></p> <p><b>It takes about 10-15 minutes to answer these questions. Please answer each question as honestly as possible. There are no right or wrong answers to any of the questions. Your privacy and confidentiality are very important to us, and your identity will be separated from your answers before information is shared with approved researchers.</b></p>
<p><b>1. To get started, we'd like to get to know you better.</b></p> <p><b>What is your date of birth?</b></p>	<p>[date picker]</p>
<p><b>2. What is your gender you were assigned at birth?</b></p>	<p><b>1, Male</b> <b>2, Female</b></p>
<p><b>3. How would you describe your current gender identity?</b></p>	<p><b>1, Male</b> <b>2, Female</b> <b>3, Trans Woman (Male-to-Female)</b> <b>4, Trans Man (Female-to-Male)</b> <b>5, Gender Nonconforming</b> <b>99, Prefer not to answer</b></p>
<p><b>4. Are you currently pregnant?</b></p>	<p><b>1, Yes</b> <b>2, No</b></p>
<p><b>5. Which of the following best describes your marital status?</b></p>	<p><b>1, Single, never married</b> <b>2, Member of an unmarried couple</b> <b>3, Married or domestic partnership</b> <b>4, Widowed</b> <b>5, Divorced</b> <b>6, Separated</b> <b>99, Prefer not to answer</b></p>
<p><b>6. Are you of Hispanic, Latino or Spanish origin or ancestry?</b></p>	<p><b>1, No</b> <b>2, Yes - Mexican, Mexican American or Chicano</b> <b>3, Yes - Puerto Rican</b> <b>4, Yes – Cuban</b> <b>5, Yes - Other or Mixed Hispanic, Latino or Spanish origin</b> <b>99, Prefer not to answer</b></p>



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<p><b>7. Which of the following categories that best describe your race?</b></p> <p><b>Please select all that apply.</b></p>	<p><b>1, White</b>  <b>2, Black</b>  <b>3, Asian Indian</b>  <b>4, Filipino</b>  <b>5, Chinese</b>  <b>6, Japanese</b>  <b>7, Korean</b>  <b>8, Native Hawaiian/ Pacific Islander</b>  <b>9 American Indian/Aleut/Eskimo</b>  <b>10, Other (please specify)</b>  <b>99, Prefer not to answer</b></p>
<p><b>8. You selected multiple race or origin responses. Is there one with which you most identify?</b></p>	<p><b>1, White</b>  <b>2, Black</b>  <b>3, Asian Indian</b>  <b>4, Filipino</b>  <b>5, Chinese</b>  <b>6, Japanese</b>  <b>7, Korean</b>  <b>8, Native Hawaiian/ Pacific Islander</b>  <b>9 American Indian/Aleut/Eskimo</b>  <b>10, Other (please specify)</b>  <b>99, Prefer not to answer</b></p>
<p><b>9. How you would you describe your current residence?</b></p>	<p><b>1, Studio</b>  <b>2, One-bedroom apartment</b>  <b>3, Two-bedroom apartment</b>  <b>4, Three-bedroom (or more) apartment</b>  <b>5, Townhouse</b>  <b>6, Free-standing house</b>  <b>7, Military Base</b>  <b>8, Nursing home, or rehab facility</b>  <b>9, Homeless</b>  <b>10, Other (please specify)</b></p>
<p><b>10. How many people live in your home?</b>  <b>Please Include yourself and all other adults/children.</b></p>	<p><b>1, Just myself</b>  <b>2, 2 people</b>  <b>3, 3 people</b>  <b>4, 4 people</b>  <b>5, 5 people</b>  <b>6, 6+ people</b></p>
<p><b>11. Including yourself, how many people in your household are 65 years of age or older?</b></p>	<p><b>1, Just myself</b>  <b>2, 2 people</b>  <b>3, 3 people</b>  <b>4, 4 people</b>  <b>5, 5 people</b>  <b>6, 6+ people</b></p>

## Recruitment Strategies on Inclusiveness of Populations at Risk

<p><b>12. Including yourself, how many people in your household are 18 years of age or younger?</b></p>	<p>1, 1 2, 2 3, 3 4, 4 5, 5 6, 6+</p>
<p><b>13. In this section, we'd like to better understand your general health factors. To get started, how confident are you filling out medical forms by yourself?</b></p>	<p>1, Not at all confident 2, A little bit confident 3, Somewhat confident 4, Quite a bit confident 5, Extremely confident</p>
<p><b>14. How often do you...</b>  <b>a. Have someone help you read hospital materials?</b>  <b>b. Have problems learning about your medical condition because of difficulty understanding written information?</b>  <b>c. Have a problem understanding what is told to you about your medical condition?</b></p>	<p>5, Always 4, Often 3, Sometimes 2, Occasionally 1, Never</p>
<p><b>15. Which of the following types of health insurance or health coverage plans do you have?</b>  Please select all that apply.</p>	<p>1, Private health insurance (e.g., provided through employer) 2, Medicare 3, Medigap 4, Medicaid 5, Children's Health Insurance Program (CHIP) 6, Military related health care (e.g., TRICARE, VA, etc.) 7, Indian Health Service 8, State-sponsored health plan 9, Other government program 10, Other, please specify: 11, No coverage of any type/uninsured 98, I don't know 99, Prefer not to answer</p>
<p><b>16. Which of the following conditions have you been diagnosed with by a doctor?</b>  Please select all that apply.</p>	<p>1, Cancer 2, Chronic lung disease 3, Diabetes Mellitus (Type 1 or Type 2) 4, Cardiovascular Disease 5, Coronary Artery Disease 6, High Blood Pressure (Hypertension) 7, High Cholesterol 8, Stroke</p>

## Recruitment Strategies on Inclusiveness of Populations at Risk

	<b>9, Chronic Kidney Disease</b> <b>10, Liver Disease</b> <b>11, Autoimmune Disease (please specify):</b> <b>12, Neurological Disorders (please specify):</b> <b>13, Other (please specify):</b> <b>14, None of the above</b> <b>99, Prefer not to answer</b>
<b>17. Excluding yourself, which of the following conditions have members of your household been diagnosed with by a doctor?</b>  <b>Please select all that apply.</b>	<b>1, Cancer</b> <b>2, Chronic lung disease</b> <b>3, Diabetes Mellitus (Type 1 or Type 2)</b> <b>4, Cardiovascular Disease</b> <b>5, Coronary Artery Disease</b> <b>6, High Blood Pressure (Hypertension)</b> <b>7, High Cholesterol</b> <b>8, Stroke</b> <b>9, Chronic Kidney Disease</b> <b>10, Liver Disease</b> <b>11, Autoimmune Disease (please specify):</b> <b>12, Neurological Disorders (please specify):</b> <b>13, Other (please specify):</b> <b>14, None of the above</b> <b>99, Prefer not to answer</b>
<b>18. Do you currently use any type of tobacco product? This includes chewing tobacco, cigarettes, cigars, and/or vaping products.</b>	<b>1, Yes</b> <b>2, No</b> <b>99, Prefer not to answer</b>
<b>19. How many years you been using tobacco?</b>	<b>[Open end text box for number of years]</b>
<b>20. Have you used tobacco in the past?</b>	<b>1, Yes</b> <b>2, No</b>
<b>21. How many years did you use tobacco?</b>	<b>[Open end text box for number of years]</b>
<b>22. Do you currently drink alcohol in any capacity?</b>	<b>1, Yes</b> <b>0, No</b>
<b>23. When was the last time you received the flu vaccine?</b>	<b>1, 2020</b> <b>2, 2019</b> <b>3, 2018</b> <b>4, Before 2018</b> <b>5, Never</b>
<b>Pivot text/communication break</b>	<b>Thank you for your answers so far! Now, we just have a few more questions for classification purposes.</b>
<b>24. What is the highest level of school that you completed or the highest degree you have received?</b>	<b>1, No schooling completed</b> <b>2, Nursery school</b> <b>3, Grades 1 through 11</b> <b>4, 12th grade—no diploma</b>

## Recruitment Strategies on Inclusiveness of Populations at Risk

	<p>5, Regular high school diploma</p> <p>5, GED or alternative credential</p> <p>6, Some college credit, but less than 1 year of college</p> <p>7, 1 or more years of college credit, no degree</p> <p>8, Associates degree (for example: AA, AS)</p> <p>9, Bachelor's degree (for example: BA, BS)</p> <p>10, Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)</p> <p>11, Professional degree beyond bachelor's degree (for example: MD, DDS, DVM, LLB, JD)</p> <p>12, Doctorate degree (for example, PhD, EdD)</p> <p>99, Prefer not to answer</p>
25. Generally speaking, do you think of yourself as...	<p>1, Republican</p> <p>2, Democrat</p> <p>3, Independent</p> <p>4, Other, please specify:</p> <p>5, No party / not interested in politics</p> <p>99, Prefer not to answer</p>
<p>26. Information about income is very important to understand. Would you please give your best guess on your annual household income?</p> <p>Please indicate the answer that includes your entire household income in 2019 before taxes.</p>	<p>1, Less than \$10,000</p> <p>2, \$10,000 - \$29,999</p> <p>3, \$30,000 –\$49,999</p> <p>4, \$50,000 –\$69,999</p> <p>5, \$70,000 - \$99,999</p> <p>6, \$100,000 - \$149,999</p> <p>7, \$150,000+</p> <p>99, Prefer not to answer</p>
27. Have you ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard?	<p>1, No, I never served in the military</p> <p>2, Yes, I served only on active duty for training in the Reserves or National Guard</p> <p>3, Yes, I was on active duty in the past, but not now</p> <p>4, Yes, I am now on active duty</p>
28. In the past 14-days, have you traveled domestically, or within the United States, outside of your home state (excluding daily routines or commutes)?	<p>1, Yes</p> <p>2, No</p>
29. You mentioned you've traveled domestically, or within the United States, in the past 14 days. Which state did you most recently visit?	Alphabetical list of states in a drop down
30. What is your current height?	Open end forms for feet and inches

## Recruitment Strategies on Inclusiveness of Populations at Risk

<b>Please provide your height in feet and inches below.</b>	
<b>31. What is your current weight? Please provide your weight in pounds (lbs).</b>	<b>Open end form for pounds</b>
<b>32. How did you hear about the study? (Check all that apply)</b>	<b>1, Newspaper/online article 2, Newsletter/e-mail 3, Television 4, Radio 5, Flyer 6, Social media (please specify) 7, Other (please specify)</b>
<b>33. Why did you choose to participate in the study? (Check all that apply)</b>	<b>1, To advance research 2, To give back to my community and others 3, To learn more about my health 4, To access resources 5, For the chance to win a gift card 6, Other (please specify)</b>

**Recruitment Strategies on Inclusiveness of Populations at Risk**

**COVIDsmart: COVID-19 Pulse Check  
Appendix B**

<b>Question</b>	<b>Potential Responses/Communications</b>
<p><b>Survey Introduction</b></p>	<p><b>You are now starting the COVID-19 Pulse Check module. This module asks questions about your experiences and health during the time of the coronavirus (COVID-19) pandemic.</b></p> <p><b>It takes about 5-10 minutes to answer these questions. Please answer each question as honestly as possible. There are no right or wrong answers to any of the questions. Your privacy and confidentiality are very important to us, and your identity will be separated from your answers before information is shared with approved researchers.</b></p> <p><b>We will be reaching out to you every couple of weeks to ask these questions so that you may keep us updated.</b></p>
<p><b>1. How have the following changed compared to this time last year before the COVID-19 pandemic affected the U.S.?</b></p> <p><b>a, Your consumption of alcoholic beverages</b></p> <p><b>b, Your consumption of tobacco products, cigarettes, electronic cigarettes (e-cigs, vapes, etc.)</b></p> <p><b>c, Your consumption of marijuana or cannabis products</b></p> <p><b>d, Your physical activity</b></p> <p><b>e, Your use of social media</b></p>	<p><b>1, Increased</b></p> <p><b>2, Decreased</b></p> <p><b>3, Approximately the same</b></p> <p><b>4, Not applicable</b></p>
<p><b>2. How many times, if at all, have you done the following over the past 7 days?</b></p> <p><b>If you're not sure, please provide your best estimate.</b></p> <p><b>a, Wore a mask in public to help protect myself or others from getting sick</b></p> <p><b>b, Gone to the store to buy groceries or other products</b></p> <p><b>c, Used public transportation, buses, or trains</b></p>	<p><b>1, Never</b></p> <p><b>2, Rarely</b></p> <p><b>3, Sometimes</b></p> <p><b>4, Always</b></p>

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<p><b>d, Used ridesharing services (e.g., taxis, Lyft, Uber)</b>  <b>e, Left my home</b>  <b>f, Visited a place where many people gather, like shopping centers, markets, movie theaters, or sporting events</b>  <b>g, Gotten together with family or friends who don't live with me</b>  <b>h, Called or checked in on friends, family, or neighbors</b></p>	
<p><b>3. During the last 14 days, how often did you usually have any kind of drink containing alcohol? By a drink we mean half an ounce of absolute alcohol (e.g., a 12 ounce can or glass of beer or cooler, a 5 ounce glass of wine, or a drink containing 1 shot of liquor).</b></p>	<p><b>1, Increased</b>  <b>2, Decreased</b>  <b>3, Remained the same</b>  <b>4, I do not drink alcohol</b>  <b>5, Prefer not to answer</b></p>
<p><b>4. How much has COVID-19 impacted your community?</b></p>	<p><b>1, Not at all</b>  <b>2, Slightly</b>  <b>3, Moderately</b>  <b>4, Very much</b>  <b>5, Extremely</b>  <b>6, Prefer not to answer</b></p>
<p><b>5. How long do you think COVID-19 will continue to impact your community?</b></p>	<p><b>1, 6 months or less</b>  <b>2, 7 months to 1 year</b>  <b>3, Greater than 1 year</b>  <b>4, Prefer not to answer</b></p>
<p><b>6. Have you had any known exposure to the coronavirus in the past month?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, Prefer not to answer</b></p>
<p><b>7. Have you been tested for the coronavirus, and if so, what was the result of your most recent test?</b></p>	<p><b>1, No, I have not been tested</b>  <b>2, Yes, and I tested positive</b>  <b>3, Yes, and I tested negative</b>  <b>4, Yes, and my results were inconclusive</b>  <b>5, Yes, and my results are still pending</b>  <b>6, Prefer not to answer</b></p>
<p><b>8. Do you want to get tested for the coronavirus?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, I don't know</b></p>
<p><b>9. Which of the following best describes why you want to get tested for the coronavirus? Please select all that apply.</b></p>	<p><b>1, I have coronavirus symptoms</b>  <b>2, I came into contact with someone who has the coronavirus</b>  <b>3, I want to make sure I don't spread the coronavirus to others</b></p>

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	<p>4, I don't have symptoms and haven't had contact with someone who has the coronavirus, but I would like to get tested</p> <p>5, Other, please specify:</p>
<p>9b. Which of the following best describes why you were tested for the coronavirus? Please select all that apply.</p>	<p>1, I had coronavirus symptoms</p> <p>2, I came into contact with someone who has/had the coronavirus</p> <p>3, I wanted to make sure I didn't spread the coronavirus to others</p> <p>5, My employer/school required me to get tested</p> <p>4, I didn't have symptoms and hadn't had contact with someone who has the coronavirus, but I wanted to get tested</p> <p>6, Other, please specify:</p>
<p>10. Which of the following best describes why you don't want to get tested for the coronavirus? Please select all that apply</p>	<p>1, I don't have any symptoms of the coronavirus</p> <p>2, A medical professional has told me that I don't qualify for a test</p> <p>3, No tests are available in my area</p> <p>4, I don't know where to get a test</p> <p>5, I'm afraid of going to an area that may have people infected with the coronavirus</p> <p>6, I'm afraid of finding out that I have the coronavirus</p> <p>7, The test is too expensive</p> <p>8, The test is too uncomfortable</p> <p>9, I'm not afraid of having the coronavirus</p> <p>10, The coronavirus is a hoax</p> <p>11, Other, please specify:</p>
<p>11. Which of the following best describes why you don't know if you want to get tested for the coronavirus? Please select all that apply</p>	<p>1, I don't have any symptoms of the coronavirus</p> <p>2, A medical professional has told me that I don't qualify for a test</p> <p>3, No tests are available in my area</p> <p>4, I don't know where to get a test</p> <p>5, I'm afraid of going to an area that may have people infected with the coronavirus</p> <p>6, I'm afraid of finding out that I have the coronavirus</p> <p>7, The test is too expensive</p> <p>8, The test is too uncomfortable</p> <p>9, I'm not afraid of having the coronavirus</p> <p>10, The coronavirus is a hoax</p> <p>11, Other, please specify:</p>
<p>12. You mentioned you have been tested for the coronavirus. Where were you tested?</p>	<p>1, Drive-through testing center</p> <p>2, Community/free clinic</p> <p>3, Other (please specify):</p> <p>4, Prefer not to answer</p>



## Recruitment Strategies on Inclusiveness of Populations at Risk

<b>13. Based on your positive coronavirus test, were you admitted into a healthcare facility?</b>	<b>1, Yes</b> <b>2, No</b> <b>3, Prefer not to answer</b>
<b>14. Are you currently experiencing any of the following symptoms? Please select all that apply.</b>	<b>1, Abdominal pain</b> <b>2, Chest pain</b> <b>3, Chills</b> <b>4, Cough (worse than usual)</b> <b>5, Diarrhea</b> <b>6, Fatigue / general malaise</b> <b>7, Felt feverish (did not measure)</b> <b>8, Fever (measured with a temperature <math>\geq 100.0</math> degrees F)</b> <b>9, Headache</b> <b>10, Loss of appetite</b> <b>11, Loss of taste or smell</b> <b>12, Muscle / joint aches or pains (worse than usual)</b> <b>13, Nausea or vomiting</b> <b>14, Runny nose or extra mucus from the nose</b> <b>15, Scratchy or sore throat</b> <b>16, Shortness of breath, difficulty breathing or wheezing</b> <b>17, Other, please specify:</b> <b>18, None of the above</b>
<b>15. To your knowledge, is there anyone you have had close personal contact with who has coronavirus symptoms but who has been unable to get tested?</b>	<b>1, Yes</b> <b>2, No</b>
<b>16. Excluding yourself, has anyone in your household been tested for the coronavirus and if so, what was the result of their most recent test?</b>	<b>1, No, no one else in my household has been tested</b> <b>2, Yes, and they tested positive</b> <b>3, Yes, and they tested negative</b> <b>4, Yes, and their results were inconclusive</b> <b>5, Yes, and their results are still pending</b> <b>6, Prefer not to answer</b>
<b>17. You mentioned others in your household have been tested for the coronavirus. Where were they tested?</b>	<b>1, Drive-through testing center</b> <b>2, Community/Free Clinic</b> <b>3, Other (please specify):</b> <b>4, Prefer not to answer</b>
<b>18. Based on their positive coronavirus test, were they admitted to a healthcare facility?</b>	<b>1, Yes</b> <b>2, No</b> <b>3, Prefer not to answer</b>

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<p><b>19. Is anyone in your household, other than you, currently experiencing any of the following symptoms? Please select all that apply.</b></p>	<p>1, Abdominal pain 2, Chest pain 3, Chills 4, Cough (worse than usual) 5, Diarrhea 6, Fatigue / general malaise 7, Felt feverish (did not measure) 8, Fever (measured with a temperature <math>\geq 100.0</math> degrees F) 9, Headache 10, Loss of appetite 11, Loss of taste or smell 12, Muscle / joint aches or pains (worse than usual) 13, Nausea or vomiting 14, Runny nose or extra mucus from the nose 15, Scratchy or sore throat 16, Shortness of breath, difficulty breathing or wheezing 17, Other, please specify: 18, None of the above</p>
<p><b>20. Were you offered the COVID-19 vaccine?</b></p>	<p>1, Yes 2, No</p>
<p><b>21. Have you received the COVID-19 vaccine?</b></p>	<p>1, Yes, two doses of a two dose vaccine 2, Yes, one dose of a two dose vaccine 3, Yes, one dose of a one dose vaccine 4, No</p>
<p><b>22. Why didn't you get the COVID-19 vaccine? (Check all that apply)</b></p>	<p>1, Waiting on appointment date 2, Don't want the vaccine 3, Worried about side effects 4, Don't trust the vaccine development process 5, Need more information about the vaccine 6, In general, I am wary of vaccines 7, Other, please specify:</p>

## Recruitment Strategies on Inclusiveness of Populations at Risk

### COVIDsmart: Mood Appendix C

Question	Potential Responses/Communications
<p><b>Survey introduction</b></p>	<p><b>You are now starting the Mood module. This module asks questions about your perspectives, experiences and feelings related to a variety of different topics.</b></p> <p><b>It takes about 5-10 minutes to answer these questions. Please answer each question as honestly as possible. There are no right or wrong answers to any of the questions. Your privacy and confidentiality are very important to us, and your identity will be separated from your answers before information is shared with approved researchers.</b></p> <p><b>We will be reaching out to you every four (4) weeks to ask these questions so that you may keep us updated.</b></p>
<p><b>Section Intro</b></p>	<p><b>For the next several questions, we want you to think about your life and experiences prior to the coronavirus (COVID-19) pandemic or before March 2020. Please answer each question to the best of your ability.</b></p>
<p><b>1. Prior to the COVID-19 pandemic (before March 2020), how many close friends did you have that you felt at ease with, and could talk to about private matters?</b></p>	<p><b>1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more</b></p>
<p><b>2. Prior to the COVID-19 pandemic (before March 2020), how many of these close friends did you see at least once a month?</b></p>	<p><b>1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more</b></p>
<p><b>3. Prior to the COVID-19 pandemic (before March 2020), how many relatives did you have that you felt at ease with, and could talk to about private matters?</b></p>	<p><b>1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more</b></p>
<p><b>4. Prior to the COVID-19 pandemic (before March 2020), how many of these</b></p>	<p><b>1, None 2, 1 or 2 3, 3 to 5</b></p>

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relatives did you see at least once a month?	4, 6 to 9 5, 10 or more
5. Prior to the COVID-19 pandemic (before March 2020), did you participate in any groups, such as a senior center, social or work group, religious-connected group, self-help group, or charity, public service, or community group?	1, Yes 2, No
6. Prior to the COVID-19 pandemic (before March 2020), how often do you go to religious meetings or services?	1, Never or almost never 2, Once or twice a year 3, Every few months 4, Once or twice a month 5, Once a week 6, More than once a week
Section Intro	Now for the next handful of questions, we want you to think about your current life and experiences as they are now. Please answer each question to the best of your ability.
1b. Currently, how many close friends do you have that you feel at ease with, and can talk to about private matters?	1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more
2b. How many of these close friends did you see at least once over the past 30 days?	1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more
3b. Currently, how many relatives do you have that you feel at ease with, and can talk to about private matters?	1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more
4b. How many of these relatives did you see at least once over the past 30 days?	1, None 2, 1 or 2 3, 3 to 5 4, 6 to 9 5, 10 or more
5b. Do you currently participate in any groups, such as a senior center, social or work group, religious-connected group, self-help	1, Yes 2, No

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group, or charity, public service, or community group?	
<b>6b. How often do you currently go to religious meetings or services?</b>	<b>1, Never or almost never</b> <b>2, Once or twice a year</b> <b>3, Every few months</b> <b>4, Once or twice a month</b> <b>5, Once a week</b> <b>6, More than once a week</b>
<b>7. Over the past 2 weeks, how often have you felt ...</b>	
<b>a) Little interest or pleasure in doing things?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>b) Feeling down, depressed, or hopeless?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>c) Trouble falling or staying asleep, or sleeping too much?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>d) Feeling tired or having little energy?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>e) Poor appetite or overeating?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>8. Similar to the previous question, over the past 2 weeks, how often have you felt ...</b>	
<b>a) Feeling bad about yourself — or that you are a failure or have let yourself or your family down?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>b) Trouble concentrating on things, such as reading the newspaper or watching television?</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>
<b>c) Moving or speaking so slowly that other people could have noticed? Or so fidgety or</b>	<b>1, Not at all</b> <b>2, Several Days</b> <b>3, More than half the days</b> <b>4, Nearly every day</b>

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restless that you have been moving a lot more than usual?	
d) Thoughts that you would be better off dead, or thoughts of hurting yourself in some way?	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
9. Over the last 2 weeks, how often have you been bothered by the following problems?	
a) Feeling nervous, anxious, or on edge	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
b) Not being able to stop or control worrying	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
c) Worrying too much about different things	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
d) Trouble relaxing	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
e) Being so restless that it's hard to sit still	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
f) Becoming easily annoyed or irritable	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
g) Feeling afraid as if something awful might happen	1, Not at all 2, Several Days 3, More than half the days 4, Nearly every day
10. Since the beginning of March 2020, have you or a member of your household experienced any of the following because of the spread of the coronavirus, or not? Please select all that apply.	1, Lost income from a job or business 2, Lost money in retirement accounts or investments 3, Had your work hours reduced 4, Lost a job 5, Filed for unemployment benefits 6, Been unable to get groceries

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	<p><b>7, Been unable to get disinfectant products (e.g., disinfecting wipes, hand sanitizer)</b></p> <p><b>8, Been unable to get prescription medicine</b></p> <p><b>9, Had trouble sleeping</b></p> <p><b>10, Been unable to get adequate medical care</b></p> <p><b>11, Been unable to visit family members who are at higher risk of infection</b></p> <p><b>12, None of the above</b></p>
<p><b>11. Prior to the COVID-19 pandemic (before March 2020), did you have enough emergency or rainy day funds that would cover your expenses for 3 months, in case of sickness, job loss, economic downturn, or other emergencies?</b></p>	<p><b>1, Yes</b></p> <p><b>2, No</b></p>
<p><b>12. Currently, do you have enough emergency or rainy day funds that would cover your expenses for 3 months, in case of sickness, job loss, economic downturn, or other emergencies?</b></p>	<p><b>1, Yes</b></p> <p><b>2, No</b></p>
<p><b>13. Prior to the COVID-19 pandemic (before March 2020), if you had received an unexpected \$400 bill (e.g., car repair or medical bill) due immediately, would that have affected your ability to pay the rest of your bills in full and on time?</b></p>	<p><b>1, Yes</b></p> <p><b>2, No</b></p>
<p><b>14. If you receive an unexpected \$400 bill (e.g., car repair or medical bill) due immediately today, would that affect your ability to pay the rest of your bills in full and on time?</b></p>	<p><b>1, Yes</b></p> <p><b>2, No</b></p>
<p><b>15. How often do you feel...</b></p>	<p><b>1, Hardly ever</b></p> <p><b>2, Sometimes</b></p>

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<b>a. That you lack companionship?</b> <b>b. Left out?</b> <b>c. Isolated from others?</b>	<b>3, Often</b>
<b>16. Which of the following is more important to you right now?</b>	<b>1, Stopping the decline in the economy, even if more people get infected by the coronavirus</b> <b>2, Stopping the spread of the coronavirus, even if the economy gets worse</b> <b>3, Prefer not to answer</b>



## Recruitment Strategies on Inclusiveness of Populations at Risk

### COVIDsmart Occupational Exposures Appendix D

Question	Potential Responses/Communications
<p><b>Survey introduction</b></p>	<p><b>You are now starting the Occupational Exposure module. This module asks questions about what you do for work, and experiences on the job.</b></p> <p><b>It takes about 3-5 minutes to answer these questions. Please answer each question as honestly as possible. There are no right or wrong answers to any of the questions. Your privacy and confidentiality are very important to us, and your identity will be separated from your answers before information is shared with approved researchers.</b></p> <p><b>We will be reaching out to you every four (4) weeks to ask these questions so that you may keep us updated.</b></p>
<p><b>1. Which statement best describes your current employment status?</b></p>	<p><b>1, Working - paid employee (full time)</b>  <b>2, Working - paid employee (part time)</b>  <b>3, Working - self employed</b>  <b>4, Not working, temporarily laid off or furloughed</b>  <b>5, Not working, looking for work</b>  <b>6, Not working, not looking for work</b>  <b>7, Not working, other (please specify):</b>  <b>8, Retired</b>  <b>9, Disabled</b>  <b>10, Prefer not to answer</b></p>
<p><b>2. Are you currently receiving, or in the process of filing for, unemployment insurance?</b></p>	<p><b>1, No, I do not plan to file for unemployment insurance</b>  <b>2, Yes, I am in the process/waiting for unemployment insurance payments</b>  <b>3, Yes, I am currently receiving unemployment insurance payments</b>  <b>4, Other, please specify:</b>  <b>5, Prefer not to answer</b></p>

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<p><b>3. Have you or anyone in your household lost their job or any wages due to the COVID-19 pandemic?</b>  <b>This includes layoffs, furloughs, reduce hours, reduced business hours, business closures, etc.</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, I don't know</b></p>
<p><b>4. Which one of the following best describes your employment?</b></p>	<p><b>1, For profit company or organization</b>  <b>2, Non-profit organization (including tax-exempt and charitable organizations)</b>  <b>3, Local government (e.g., city or county school district, police, etc.)</b>  <b>4, State government (including state colleges/universities)</b>  <b>5, Active duty military (U.S. Armed Forces or Commissioned Corps)</b>  <b>6, Federal government (civilian employee)</b>  <b>7, Self-employed owner of a non-incorporated business, professional practice, or farm</b>  <b>8, Self-employed owner of an incorporated business, professional practice, or farm</b>  <b>9, Worked without pay in a for-profit family business or farm for 15 hours or more per week</b>  <b>10, I don't know</b></p>
<p><b>5. Are you currently required to go into work, outside of your home, during the coronavirus (COVID-19) pandemic (e.g., during stay-at-home orders)?</b></p>	<p><b>1, Yes</b>  <b>2, No</b></p>
<p><b>6. Is your workplace currently providing access to Personal Protective Equipment (PPE), such as masks, gloves, or face shields?</b></p>	<p><b>1, Yes</b>  <b>2, No</b></p>
<p><b>7. Would you consider this PPE adequate for you to maintain personal safety on the job?</b></p>	<p><b>1, Yes</b>  <b>2, No</b></p>
<p><b>8. Are you a healthcare worker, an allied healthcare professional or work in a medical setting (e.g., physician, EMT, nurse; long-term-care facility, dental office,</b></p>	<p><b>1, Yes</b>  <b>2, No</b></p>

## Recruitment Strategies on Inclusiveness of Populations at Risk

pharmacy, hospital, clinic, or other healthcare setting)?	
9. What is your specific occupation as it relates to the medical or healthcare setting you work in?	<b>1, Administration/business support/front desk</b> <b>2, Emergency Medical Technician (EMT)</b> <b>3, Nurse (LPN, RN, CNA, medical assistant, etc.)</b> <b>4, Pharmacist</b> <b>5, Physical/occupational therapist</b> <b>6, Physician assistant/nurse practitioner</b> <b>7, Physician/surgeon</b> <b>8, Receptionist/patient registration</b> <b>9, Resident/fellow</b> <b>10, Social worker</b> <b>11, Other, please specify:</b>
10. At the time of this assessment, have you come in contact with a COVID-19 patient? If you have come into contact with multiple patients, please think about the most recent patient.	<b>1, Yes</b> <b>2, No</b> <b>3, Unsure</b>
11. Was the COVID-19 patient...	<b>1, Confirmed Positive</b> <b>2, Assumed Positive</b> <b>3, Unknown</b>
12. You mentioned the COVID-19 patient was positive. Approximately when did you first encounter them?	<b>[EMBEDDED CALENDAR FUNCTION TO COLLECT DATE]</b> <b>1, I don't know</b>
13. Is/was the COVID-19 patient...	<b>1, Inpatient</b> <b>2, Outpatient</b> <b>3, Employee</b> <b>4, Family member visiting a patient</b> <b>5, Non-family visitor to a patient</b> <b>7, Other, please specify:</b> <b>6, Unknown</b>
14. Was your exposure to the COVID-19 patient 15 minutes or longer?	<b>1, Yes</b> <b>2, No</b> <b>3, I don't know</b>
15. At any time during the COVID-19 patient's encounter, did you have or were you...	<b>1, Yes</b> <b>2, No</b> <b>3, Unsure</b>

## Recruitment Strategies on Inclusiveness of Populations at Risk

<p><b>a. Direct contact with the patient or their secretions/excretions?</b></p> <p><b>b. Prolonged close contact with the patient while the patient was not wearing a mask?</b></p>	
<p><b>16. About how many separate times during the COVID-19 patient's encounter did you have contact with the patient or their secretions/excretions?</b></p>	<p><b>1, Once</b>  <b>2, Twice</b>  <b>3, 3 to 5 times</b>  <b>4, 6+ times</b>  <b>5, I don't know</b></p>
<p><b>17. During the encounter with the COVID-19 patient, were you using all appropriate PPE (N95, goggles, gloves, and gown if you performed an aerosolizing procedure)?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, Unsure</b></p>
<p><b>18. Did you wear a facemask or respirator during your exposure to the COVID-19 patient?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, Unsure</b></p>
<p><b>19. Did you wear eye protection during your exposure to the COVID-19 patient?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, Unsure</b></p>
<p><b>20. Did you wear a gown and gloves when having extensive body contact with the COVID-19 patient?</b></p>	<p><b>1, Yes</b>  <b>2, No</b>  <b>3, Unsure</b></p>
<p><b>21. Is anyone in your household, other than you, a healthcare worker, an allied healthcare professional or work in a medical setting (e.g., physician, EMT, nurse; long-term-care facility, dental office, pharmacy, hospital, clinic, or other healthcare setting)?</b></p>	<p><b>1, Yes</b>  <b>2, No</b></p>