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Isolation and Quarantine for Coronavirus Disease 2019 (COVID-19) in the United States, 2020–2022

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Abstract

Background.—Public health programs varied in ability to reach people with coronavirus disease 2019 (COVID-19) and their contacts to encourage separation from others. For both adult case patients with COVID-19 and their contacts, we estimated the impact of contact tracing activities on separation behaviors from January 2020 until March 2022.

Methods.—We used a probability-based panel survey of a nationally representative sample to gather data for estimates and comparisons.

Results.—An estimated 64 255 351 adults reported a positive severe acute respiratory syndrome coronavirus 2 test result; 79.6% isolated for ≥5 days, 60.2% isolated for ≥10 days, and 79.2% self-notified contacts. A total of, 24 057 139 (37.7%) completed a case investigation, and 46.2% of them reported contacts to health officials. More adults who completed a case investigation isolated than those who did not complete a case investigation (≥5 days, 82.6% vs 78.2%, respectively; ≥10 days, 69.8% vs 54.8%; both $P < .05$). A total of 84 946 636 adults were contacts of a COVID-19 case patient. Of these, 73.1% learned of their exposure directly from a case patient;

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Author Contributions.

J. E. O. and P. K. M. had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Concept and design: J. E. O., N. D., R. R. L., M. M. T., and P. K. M. Acquisition, analysis, or interpretation of data: J. E. O., D. V., H. H. M., J. P. S., C. C., and P. K. M. Drafting of the manuscript: J. E. O., D. V., N. D., M. M. T., and P. K. M. Critical revision of the manuscript for important intellectual content: All authors. Statistical analysis: J. E. O., D. V., J. P. S., C. C., and P. K. M. Administrative, technical, or material support: J. E. O., H. H. M., N. D., R. R. L., B. H., M. B., A. E., P. M. T., O. D., P. R., P. L., E. C., D. J. K., M. M. T., and P. K. M. Supervision: J. E. O., H. H. M., and P. K. M.

Supplementary Data

Supplementary materials are available at *Clinical Infectious Diseases* online. Consisting of data provided by the authors to benefit the reader, the posted materials are not copyedited and are the sole responsibility of the authors, so questions or comments should be addressed to the corresponding author.

Potential conflicts of interest.

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49.4% quarantined for ≥5 days, 18.7% quarantined for ≥14 days, and 13.5% completed a contact tracing call. More quarantined among those who completed a contact tracing call than among those who did not complete a tracing call (≥5 days, 61.2% vs 48.5%, respectively; ≥14 days, 25.2% vs 18.0%; both $P < .05$).

Conclusions.—Engagement in contact tracing was positively correlated with isolation and quarantine. However, most adults with COVID-19 isolated and self-notified contacts regardless of whether the public health workforce was able to reach them. Identifying and reaching contacts was challenging and limited the ability to promote quarantining, and testing.

Keywords

COVID-19; contact tracing; isolation; quarantine

Case investigation and contact tracing are well-established public health strategies [1, 2]. The multistep process to identify, assess, and manage people exposed to an infectious agent, in order to prevent onward transmission [3], includes supporting and educating case patients with an infectious disease diagnosed and systematically assessing people potentially exposed (contacts) to an infectious person. For coronavirus disease 2019 (COVID-19), case investigation informs important follow-up actions, such as masking, isolation, medical referral for treatment, and elicitation of contacts [4]. COVID-19 contact tracing informs follow-up actions, such as masking, quarantine, testing, vaccination, and postexposure prophylaxis [5].

Case investigation and contact tracing are key components of the US public health response for several infectious diseases, including COVID-19 [6]. The US Centers for Disease Control and Prevention (CDC) provided approximately $3 billion to state and local health departments to expand the public health workforce [7], including >100 000 dedicated staff for COVID-19 [8]. Program performance for COVID-19 case investigation and contact tracing varied widely [8, 9] and was dependent on the magnitude of community transmission [10] and the capacity of the public health workforce to complete timely interviews and notifications [8–11]. Even when case patients were interviewed, however, many did not provide information about contacts [8, 9, 11–15]. Despite these implementation challenges, modeling studies suggest that case investigation and contact tracing averted cases and hospitalizations; however, mitigation was dependent on the timing of notifications and the assumed percentage who isolated or quarantined [16, 17].

Although routine surveillance can enumerate the case patients and contacts notified by public health programs, less is known about the actions of individuals after receiving notification. We conducted a national survey to understand the actions of people who tested positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and those who learned they were exposed to someone with COVID-19—both known and unknown to public health programs.

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METHODS

From 22 February 2022 to 28 March 2022, we surveyed a nationally representative sample of adult (aged ≥18 years) COVID-19 case patients and contacts in the United States. This study follows the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines for cross-sectional studies [18].

Ipsos Survey Panel

We drew the sample from the Ipsos KnowledgePanel, a probability-based, web-based panel that provides a representative sampling frame for all noninstitutionalized adults residing in the United States (Supplement 1). Ipsos uses an address-based sampling recruitment method based on the US Postal Service's Delivery Sequence File. Stratified random sampling ensures that the geodemographic composition is comparable with that of the US adult population [19]. Data were weighted to ensure representativeness of the US adult population. Email reminders were sent to nonresponding panelists throughout the field period to enhance the survey completion rate.

Survey Administration

Survey eligibility was based on a self-reported positive SARS-CoV-2 test result (case patients) or self-reported notification of exposure to COVID-19 (contacts). Respondents who qualified as both a case patient and a contact were offered only the survey questions pertaining to case patients. The survey was administered in English and Spanish and focused on participants' experiences the first time they learned of a positive test result or exposure.

A nationally representative sample of 22 514 US adult panelists aged ≥18 years were selected. Of these, 15 923 (70.1%) completed the survey. A total of 9269 (58.2%) were classified as a case patient or as a contact and were asked additional questions about actions taken after testing positive for COVID-19 or being informed of exposure to a case patient. Among these, 8809 (95.0%) completed additional questions about whether they isolated or quarantined from others and, if so, for how many days. For case patients and contacts who did not isolate or quarantine, we asked about reasons why they did not. We also asked whether they had been contacted for formal case investigation or contact tracing. We defined formal case investigation and contact tracing as interactions with public health officials or people acting on behalf of the health department (eg, contractors or school officials).

We calculated the percentage of case patients who isolated [20], as well as the percentage who self-notified known contacts about COVID-19 exposure. For those who completed a formal case investigation, we calculated the percentage who provided a public health official with contact information of the people they may have exposed. We used a similar approach to summarize the experiences of contacts. We calculated the percentages of contacts who quarantined after learning of their SARS-CoV-2 exposure [20] and who were motivated to be tested after learning of their exposure. Our outcomes of interest were days isolating for case patients and days quarantining for contacts. We estimated the numbers of case patients who isolated for ≥10 and ≥5 days. Those who reported isolating for ≥10 days were included in estimates of those isolating for ≥5 days. We estimated the numbers of

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contacts who quarantined for ≥14 and ≥5 days. Those who reported quarantining for ≥14 days were included in estimates of those quarantining for ≥5 days. To test the hypothesis that participation in case investigation or contact tracing might alter actions, we estimated the percentages who isolated or quarantined separately for people who completed formal case investigation or contact tracing and those who did not. We also calculated crude associations for measures that can shed light on issues related to specific subpopulations of the United States.

Statistical Analyses

Because different demographic groups responded to the survey at different rates, we weighted data to ensure representativeness of the adult US population using demographic benchmarks (ie, age, sex, race, ethnicity, education, household income, census region, and metropolitan status) from the 2021 March supplement Current Population Survey [21] and the 2019 American Community Survey (for language proficiency) [22]. We adjusted weights using an iterative proportional fitting procedure [23] and conducted all analyses using survey procedures to account for the unequal weights in variance estimation, and projected frequencies and percentages to reflect the overall adult US population. Projected percentages may not sum to 100% owing to survey item nonresponse. We calculated weight adjustments to account for nonresponse and conducted a formal nonresponse bias analysis (Supplement 2). We linked respondent Federal Information Processing Standards (FIPS) codes to the Minority Health Social Vulnerability Index (SVI) [24].

We calculated 95% confidence limits for weighted frequencies and percentages from the linearized standard errors estimated through survey procedures. We used natural cubic-spline plots to model the association between pandemic month and our primary outcome of percentage of case isolation (5 or 10 days) or contact quarantine (5 or 14 days) [25]. We identified 3 knots for case isolation (months 7, 13, and 18) and 4 knots for contact quarantine (months 5, 8, 11, and 19). Statistical significance was set at a 2-sided α value of .05.

Ethical Considerations

Participation was voluntary, and all participants had privacy and confidentiality protections. The CDC reviewed this study and deemed it not to be research, as defined in the *Code of Federal Regulations* [26].

RESULTS

We projected weighted estimates that 64 255 351 adults (25.8% of the adult US population) self-reported ≥1 positive SARS-CoV-2 test result (case patients) and 84 946 636 adults (34.1% of the adult US population) self-reported being exposed to ≥1 person with COVID-19 (contacts) from January 2020 to March 2022. Table 1 shows the sociodemographic characteristics of case patients and contacts. The odds of isolation by select sociodemographic factors, including SVI, are provided in Supplement 3.

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COVID-19 Case Investigation

Among all adult case patients, 37.7% (an estimated 24 057 139 people) completed a formal case investigation (Table 2). The remaining estimated 39 806 330 (62.0%) were either not contacted or did not complete a case investigation. Reasons for not completing a case investigation among those reached are provided in Supplement 4.

Isolation by Case Patients

Overall, estimates suggest that 51 117 249 (79.6%) adult case patients isolated for ≥5 days and 38 674 427 (60.2%) isolated for ≥10 days after receiving a positive test result. The percentage who isolated was higher among those who completed a case interview than among those who did not (≥5 days, 82.6% vs 78.2% respectively [$P < .005$]; ≥10 days, 69.8% vs 54.8% [$P < .001$]) (Table 2). Among case patients who did not isolate for ≥5 days, their reasons for not isolating are provided in Supplement 5. The odds of taking a call and isolation within select subpopulations defined by sociodemographic characteristics including SVI are shown in Supplement 6.

Notification of Contacts by Case Patients

Among all case patients, an estimated 50 915 726 (79.2%) self-notified their known contacts after a positive SARS-CoV-2 test result. Although those who completed a case investigation were significantly more likely to self-notify their contacts than those who did not, the difference in total percentages was only 3.9% (82.2% vs 78.3%, respectively; $P < 005$). Among the 37.7% who completed a formal case investigation, only 46.3% offered public health officials tracing information for the people they potentially exposed (Table 2).

Contact Notification and Tracing

Overall, an estimated 84 946 636 adults reported exposure to ≥1 person with COVID-19. Contacts were informed about being a contact a median of 2 times (interquartile range, 1–3). Most contacts (73.1%) were notified by a person who tested positive; fewer were notified by their employer (16.7%), a public health worker (13.1%), school official (7.2%), or a smartphone application (4.7%). Among all contacts, an estimated 11 256 346 (13.5%) completed formal contact tracing (Table 3). Reasons for not participating in a contact tracing call are provided in Supplement 4.

Quarantine by Contacts

In total, an estimated 41 975 504 contacts (49.4%) quarantined for ≥5 days and 15 874 513 (18.7%) quarantined ≥14 days after being notified of exposure (Table 3). The percentage who quarantined was higher among those who completed a tracing call than among those who did not (≥5 days, 61.2% vs 48.5% respectively; ≥14 days: 25.2% vs 18.0%; both $P < .001$). Reasons for not quarantining for ≥5 days, are provided in Supplement 5.

About half (53.3%) of COVID-19 contacts were motivated to be tested after learning of their exposure. The percentage motivated to test for COVID-19 was greater among those who completed formal contact tracing than among those who did not (63.9% vs 51.5%, respectively; $P < .001$) (Table 3). The odds of taking a call and quarantining within select

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subpopulations defined by sociodemographic characteristics, including SVI, are shown in Supplement 7.

Isolation and Quarantine Over Time

The percentage of case patients who isolated for ≥5 days remained stable over the course of the pandemic (Figure 1A). The percentage who isolated for ≥10 days remained stable until September 2021 and then decreased sharply. The percentage of contacts who quarantined initially increased over time until reaching a peak in November 2020 (68.5%) and then steadily decreased until June 2021, when it remained constant until the end of the study (Figure 1B).

DISCUSSION

In this nationally representative survey, an estimated 149 million adult Americans, (60% of all adults), were either a COVID-19 case patient or contact during the first 27 months of the pandemic. Approximately 4 of 5 case patients isolated for ≥5 days after receiving a positive test result and self-notified their contacts, regardless of whether they completed a formal case investigation with a public health professional. Notably, among case patients participating in formal case investigations, fewer than half provided names of their contacts.

Contacts that participated in contact tracing were significantly more likely to quarantine. However, there was a low proportion of total contacts elicited through formal contact tracing (13.5%), suggesting that formal contact tracing failed to reach an estimated 73 million Americans who knew they were contacts and that, among those reached, the ability to promote desired levels of quarantining was limited.

This survey design and large sample size yielded a representative sample that allowed us to estimate the isolation and quarantine actions of affected adults, including those not previously included in public health surveillance. Our estimates—that about 64 million adults had positive COVID-19 test results and an additional 85 million adults knew they were contacts of a COVID-19 case patient—are consistent with other national estimates [8, 27]. We learned that most case patients isolated for ≥5 days, the minimum number of days currently recommended by CDC [20]. Even among those who did not complete a formal case investigation, the proportion who isolated was high, suggesting that broader public health messaging about the importance of isolation was widely received and adopted.

The persistence of the pandemic, despite such a high proportion of infected people who reported isolation, could be attributed to several reasons. Presymptomatic and asymptomatic SARS-CoV-2 transmission (ie, transmission before case patients are aware of infection) was likely widespread in most communities, especially during periods when access to testing was limited [28–30]. Although vaccines reduce community transmission, the risk of infection is not zero [31, 32], and on average vaccine effectiveness against infection has been shown to decrease by 21% over 6 months [33]. The nationwide vaccination campaign might have given the false impression that vaccination gave absolute protection from risk of infection or transmission of the virus to others. This could have deterred some people from appropriately masking, isolating after testing positive, or quarantining after exposure

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[34]. Moreover, the guidelines for isolation and quarantine evolved over time, and changes to these recommendations might have led to confusion and varying adherence and practices [35, 36]. The changing recommendations for quarantine were influenced by the vaccination status of the person exposed and the degree of exposure, making it difficult to distinguish those who chose not to quarantine from those who did not quarantine because of their vaccination status.

Considering that the proportion of adults who isolated or quarantined was larger among those who participated in contact tracing calls, it is reasonable to conclude that efforts by public health officials had a positive outcome. Yet given the highly transmissible nature of SARS-CoV-2, and the fact that most case patients and contacts were not reached, these efforts might not have been sufficient to greatly change the US COVID-19 trajectory [37].

Our study has several limitations. All responses were self-reported, and the retrospective nature of our survey could have resulted in recall bias, particularly among those infected or exposed early in the pandemic. Some respondents might have been inclined to overstate their compliance with guidelines (social desirability bias), though the self-administered nature of this survey may have minimized this bias. Furthermore, survey participation was limited to people proficient in English or Spanish and did not include persons who died or those too sick to participate. We did not gather information from contacts who became case patients during quarantine and cannot provide information regarding whether they remained secluded during progression from a contact to a case patient. We did not collect information about multiple infections for case patients; therefore, we cannot discuss changes in their behaviors over time. We did not know anything about individuals who did not take the survey, and our survey did not capture information about the strength of contact tracing efforts by respondents' local health jurisdictions, so we were unable to assess the association between participation in contact tracing and the robustness of the local public health response. We did not record the number of days it took to isolate or quarantine from the time of the positive test result or notification of exposure. If many days had passed before isolation, the benefits of separation would be minimized. Our study did not include evaluation of backward contact tracing, a technique that has been shown to minimize transmission [38].

Our results were drawn from a sample designed to represent the US-based population. While the survey itself was sent to 22 514 persons, these types of panels have been shown to yield as accurate an estimate as much larger and more costly surveys [39]. Finally, it is important to acknowledge that correlation does not equal causation. Although participation in calls from contact tracers might have promoted higher rates of isolation and quarantine, it is also possible that people who isolated or quarantined may have been more available or more willing to answer calls.

Our descriptive analysis indicates that among adults who participated in formal contact tracing, larger proportions isolated or quarantined than among adults who did not participate. These findings suggest the influence on health behaviors when affected persons are educated and encouraged through interactions with the public health department. The modest differences in absolute yield of isolation and quarantine reported in this study, along with low participation in health department outreach in this and other studies [8, 9], call into

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question the overall effectiveness of case investigation and contact tracing programs for pathogens that spread as rapidly and efficiently as SAR-CoV-2 over sustained periods of time. As the COVID-19 pandemic evolved, health departments scaled back universal case investigation and contact tracing and prioritized other prevention measures (eg, masking, vaccination, distribution of at-home test kits, and targeted efforts to reach vulnerable populations). Our results are consistent with other findings suggesting that universal case investigation and contact tracing are effective when containment is possible but less so during periods of widespread community transmission [9, 40]. They also reinforce the idea that name-based contact tracing might have limited yield [41]. Our finding that a disproportionate number of case patients self-notified contacts, compared with those who offered names of contacts during case interviews, suggests some hesitation to provide personal information and presents a major limitation to named-based tracing efforts. Studies conducted in other countries suggest a lack of trust in government-funded public health activities [42, 43], and their findings are consistent with our finding that approximately 1 in 5 case patients choose not to complete an interview because they did not trust the interviewer.

In conclusion, our findings provide information about how adults behaved on learning of SARS-CoV-2 infection or exposure. Most infected adults chose to isolate. Although formal case investigation and contact tracing might have influenced adults to isolate or quarantine for a longer duration, the proportion of adults who engaged with public health workers was suboptimal, especially for contacts, which may have limited the effectiveness of contact tracing to encourage isolation and quarantine.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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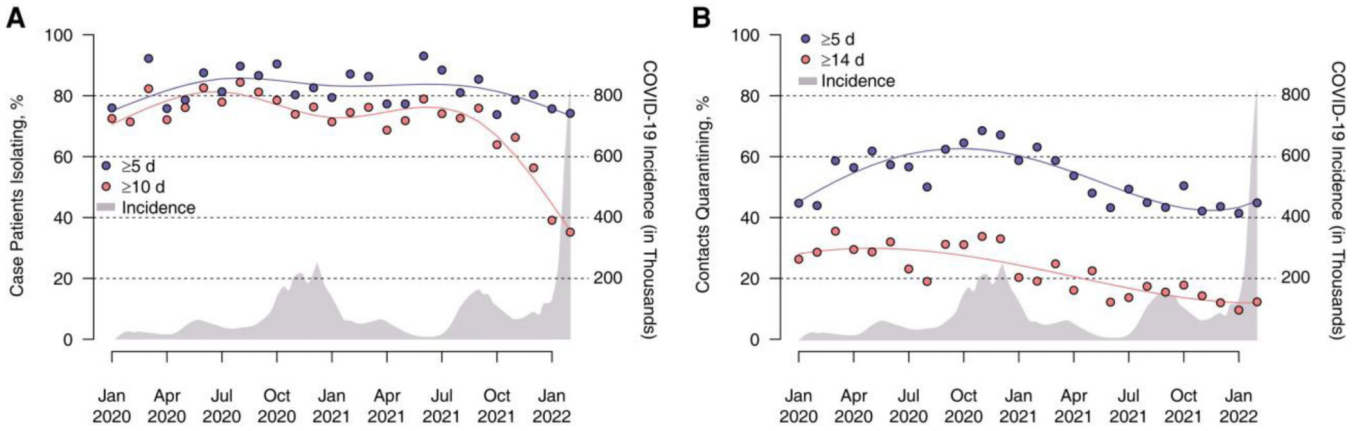

Figure 1.

Coronavirus disease 2019 (COVID-19) incidence and percentages of COVID-19 case patients (Panal A) and contacts (Panal B), aged ≥18 years who isolated or quarantined over time—United States, January 2020 to March 2022.

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Table 1.

Estimated Weighted Demographic Characteristics of Survey Respondents—United States, 2020–2022

Characteristic	Survey Participants, % (95% CI)			
	Case Patients (n = 3500; weighted n = 64 255 351 [95% CI: 62 431 64266 079 060])	Contacts (n = 5369; weighted n = 84 946 636 [95% CI: 83 062 425–86 830 846])	Neither Cases nor Contacts (n = 6654; weighted n = 99 816 124 [95% CI: 97 566 003–102 066 244])	Total (n = 15 923; weighted n = 249 018 111)
Age, Y				
18–24	11.1 (9.7–12.4)	11.0(9.8–12.2)	7.4 (6.4–8.4)	9.6 (8.9–10.2)
25–34	20.2 (18.7–21.7)	17.9 (16.7–19.1)	13.7 (12.6–14.8)	16.8 (16.1–17.5)
35–44	22.8 (21.3–24.3)	20.7 (19.4–21.9)	15.3 (14.2–16.3)	19.1 (18.3–19.8)
45–54	17.5 (16.3–18.7)	15.9 (14.9–16.9)	12.6(11.8–13.5)	15.0 (14.4–15.6)
55–64	16.9 (15.7–18.1)	17.7 (16.6–18.7)	18.7 (17. 7–19.6)	17.9 (17.3–18.5)
65–74	8.4 (7.5–9.2)	12.5(11.6–13.3)	20.3 (19.3–21.3)	14.6 (14.0–15.1)
≥75	3.2 (2.7–3.7)	4.4 (3.9–5.0)	12.1 (11.3–12.9)	7.2 (6.8–7.6)
Sex				
Male	45.7 (43.9–47.4)	48.4 (46.9–49.9)	50.6 (49.2–52.0)	48.6 (47.7—49.5)
Female	54.3 (52.6–56.1)	51.6 (50.1–53.1)	49.4 (48.0–50.8)	51.4 (50.6–52.3)
Race/ethniclty				
Non-Hlspanic, white	61.5(59.77–63.31)	65.4 (63.9–67.0)	61.7 (60.3–63.2)	63.0 (62.1–63.8)
Non-Hlspanlc, black or African American	10.7 (9.5–11.8)	10.6(9.6–11.6)	13.7 (12.7–14.6)	11.8 (11.3–12.4)
Non-Hlspanlc, American Indian or Alaska Native	0.9 (.5–1.3)	0.6 (.3–.9)	0.9 (.6–1.2)	0.8 (.6–1.0)
Non-Hlspanlc, Aslan, Native Hawaiian/ Pacific Islander	4.0 (3.2–4.9)	5.7 (4.8–6.6)	8.6 (7.6–9.6)	6.4 (5.9–7.0)
Non-Hlspanlc, ≥2 races	1.4 (1.1–1.7)	1.6 (1.3–2.0)	1.3 (1.0–1.5)	1.4 (1.3–1.6)
Hispanic, any race	21.5(20.0–23.1)	16.1 (14.8–17.3)	13.9 (12.8–14.9)	16.6 (15.9–17.3)
Employment status				
Working (paid employee)	66.8 (65.1–68.4)	61.5 (60.1–63.0)	42.8 (41.5–44.2)	55.4 (54.5–56.3)
Working (self-employed)	6.7 (5.7–7.6)	8.8 (7.9–9.7)	8.1 (7.3–8.8)	8.0 (7.5–8.4)
Not working (on temporary layoff from a job)	0.8 (.5–1.1)	0.5 (.3–7)	0.7 (.5–1.0)	0.7 (.5–.8)
Not working (looking for work)	4.0 (3.3–4.8)	4.9 (4.1–5.7)	5.0 (4.3–5.7)	4.7 (4.3–5.1)
Not working (retired)	11.6(10.6–12.5)	15.0 (14.0–15.9)	30.1 (29.0–31.3)	20.2 (19.5–20.8)
Not working (disabled)	3.4 (2. 8–4.0)	3.1 (2.6–3.6)	4.6 (4.0–5.2)	3.8 (3.5–4.1)

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Characteristic	Survey Participants, % (95% CI)			
	Case Patients (n = 3500; weighted n = 64 255 351 [95% CI: 62 431 64266 079 060])	Contacts (n = 5369; weighted n = 84 946 636 [95% CI: 83 062 425–86 830 846])	Neither Cases nor Contacts (n = 6654; weighted n = 99 816 124 [95% CI: 97 566 003–102 066 244])	Total (n = 15 923; weighted n = 249 018 111)
Not working (other)	6.8 (5.8–7.7)	6.2 (5.4–7.1)	8.7 (7.8–9.6)	7.3 (6.8–7.9)
Household Income				
<$10 000	4.4 (3.6–5.2)	3.3 (2.7–3.8)	5.4 (4.8–6.1)	4.4 (4.1–4.8)
$10 000–324 999	7.7 (6.9–8.6)	6.8 (6.1–7.6)	10.0 (9.2–10.7)	8.3 (7.9–8.8)
$25 000-$49 999	16.0 (14.7–17.2)	15.9 (14.8–17.1)	18.6 (17.5–19.6)	17.0 (16.3–17.7)
$50 000-$74 999	15.9 (14.7–17.2)	16.2 (15.1–17.3)	16.6 (15.5–17.6)	16.3 (15.6–16.9)
$75 000-$99 999	14.7 (13.5–15.9)	13.3 (12.3–14.3)	12.2 (11.4–13.1)	13.2 (12.6–13.8)
$100 000-$ 149 999	19.7 (18.3–21.1)	19.3 (18.2–20.1)	15.6 (14.6–16.5)	17.9 (17.3–18.6)
≥$150000	21.5(20.1–23.0)	25.2 (23.9–26.5)	21.7 (20.6–22.9)	22.9 (22.1–23.6)

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Table 2.

Behaviors of Adults (Aged ≥18 Years) With Self-Reported Positive Severe Acute Respiratory Syndrome Coronavirus 2 Test Results—United States, January 2020 to March 2022

Behavior	All Case Patients	Case Patients Who Completed Case Investigation	Case Patients Who Did Not Complete Case Investigation	*P* Value (χ^2 Test)[a]
Overall				
Raw no.	3900	1476	2400	…
Population estimate	64 255 351	24 057 139	39 806 330	…
Weighted %	100	37.7	62.0	<.001
Isolated ≥5 d				
Raw no.	3121	1218	1897	…
Population estimate, no.	51 117 249	19 865 667	31 143 680	…
Weighted %	79.6	82.6	78.2	<.005
Isolated ≥10 d				
Raw no.	2364	1025	1334	…
Population estimate, no.	38 674 427	16 786 039	21 798 107	…
Weighted %	60.2	69.8	54.8	<.001
Self-notified contacts of positive exposure				
Raw no.	3094	1217	1876	…
Population estimate, no.	50 915 726	19 770 014	31 123 149	…
Weighted %	79.2	82.2	78.3	<.005
Provided names of contacts during interview				
Raw no.	NA	672	NA	…
Population estimate, no.	NA	11 127 613	NA	…
Weighted %	NA	46.3	NA	…

Abbreviation: NA, not applicable.

[a] *P* values for comparison between case patients who completed a case investigation and those who did not

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Table 3.

Behaviors of Adults (Aged ≥18 Years) With Self-Reported Exposure to Someone With Severe Acute Respiratory Syndrome Coronavirus 2 — United States, January 2020 to March 2022

Behavior	All Contacts	Contacts Who Completed Contact Tracing Call	Contacts Who Did Not Complete Contact Tracing Call	*P* Value (χ^2 Test)[a]
Overall				
Raw no.	5369	684	4578	…
Population estimate, no.	84 946 636	11 256 346	71 913199	…
Weighted %	100	13.5	84.7	<.001
Quarantined ≥5 d				
Raw no.	2621	405	2202	…
Population estimate, no.	41 975 504	6 884 048	34 862 416	…
Weighted %	49.4	61.2	48.5	<.001
Quarantined ≥14 d				
Raw no.	955	170	780	…
Population estimate, no.	15 874 513	2 836 978	12 954 398	…
Weighted %	18.7	25.2	18.0	<.001
Motivated to test for SARS-CoV-2				
Raw no.	2793	437	2340	…
Population estimate, no.	44 439 338	7 197 382	36 942 176	…
Weighted %	53.3	63.9	51.5	<.001

Abbreviation: SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

[a] *P* values for comparison between contacts who completed a contact tracing call and those who did not

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