**Supplementary Results**

**Healthcare personnel who tested positive for SARS-CoV-2** **but were not interviewed**

Of the 26,542 total healthcare personnel (HCP) with positive SARS-CoV-2 tests who were reported to the Emerging Infections Program (EIP) sites but who were not interviewed: 8,543 HCP (32.2%) could not be reached after at least five contact attempts by telephone, text messages, or email and were considered as non-responsive; 5,497 HCP (20.7%) had dates of specimen collection of the positive virus test >60 days before the interview and were therefore not interviewed to minimize the impact of recall bias; 5,574 HCP (21.0%) were reported during a period when interviews were paused to dedicate health department resources to another priority surveillance activity; 3,572 HCP (13.5%) declined to participate; 335 (1.3%) did not meet the HCP definition; 68 (0.3%) spoke a language other than English or Spanish; 29 HCP (0.1%) resided outside of the surveillance areas; 11 HCP (0.04%) had duplicate reports; four HCP (0.02%) required an interview in Spanish but the interview form had not yet been approved for use; three HCP (0.01%) died before the telephone interview; and for 2,906 HCP (10.9%) the reason was unknown.

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Licensed Practical Nurse (n=253)** | **Facilities Personnelk**  **(n=172)** | **Nurse Practitioner**  **(n=165)** | | **Environmental Services Personnell (n=163)** | | **Surgical or Medical Technicianm (n=159)** | **Food Services Personneln (n=157)** | **All professions (N=7,531)** | |
| **Facility type, no. (%)** |  | | |  | |  | | | |  |
| Hospital | 34 (13.4) | 121 (70.3) | 83 (50.3) | | 113 (69.3) | | 107 (67.3) | 85 (54.1) | 3,975 (52.8) | |
| Nursing home | 133 (52.6) | 34 (19.8) | 16 (9.7) | | 39 (23.9) | | 5 (3.1) | 61 (38.9) | 1,142 (15.2) | |
| Outpatient clinic | 42 (16.6) | 6 (3.5) | 50 (30.3) | | 6 (3.7) | | 21 (13.2) | 2 (1.3) | 1,223 (16.2) | |
| Home healthcare setting | 12 (4.7) | 2 (1.2) | 2 (1.2) | | 1 (0.6) | | 0 (0.0) | 0 (0.0) | 386 (5.1) | |
| Assisted living facility | 8 (3.2) | 3 (1.7) | 0 (0.0) | | 2 (1.2) | | 13 (8.2) | 6 (3.8) | 126 (1.7) | |
| Other facilitiesb | 24 (9.5) | 6 (3.5) | 14 (8.5) | | 2 (1.2) | | 13 (8.2) | 3 (1.9) | 679 (9.0) | |
| **Sex, no, (%)c** |  | | |  | |  | | | |  |
| Female | 220 (87.0) | 64 (37.2) | 148 (89.7) | | 110 (67.5) | | 119 (74.8) | 102 (65.0) | 5,933 (78.8) | |
| Male | 31 (12.3) | 107 (62.2) | 16 (9.7) | | 53 (32.5) | | 38 (23.9) | 55 (35.0) | 1,574 (20.9) | |
| **Age group in years, no. (%)d** |  | | |  | |  | | | |  |  |
| Median [IQR] | 42 [33–52] | 46 [36–56] | 41 [34–49] | | 42 [33–54] | | 36 [28–45] | 41 [28–53] | 39 [30–50] | |
| <30 | 43 (17.0) | 22 (12.8) | 10 (6.1) | | 24 (14.7) | | 46 (28.9) | 45 (28.7) | 1,769 (23.5) | |
| ≥30 | 205 (81.0) | 146 (84.9) | 155 (93.9) | | 136 (83.4) | | 113 (71.1) | 110 (70.1) | 5,686 (75.5) | |
| **Race and ethnicity, no. (%)e** |  | | |  | |  | | | |  |  |
| Hispanic | 22 (8.7) | 59 (34.3) | 14 (8.5) | | 56 (34.4) | | 42 (26.4) | 50 (31.9) | 1,495 (19.9) | |
| White, non-Hispanic | 92 (36.3) | 51 (29.6) | 112 (67.9) | | 36 (22.1) | | 57 (35.9) | 32 (20.4) | 3,445 (45.7) | |
| Black or African American,  non-Hispanic | 91 (36.0) | 38 (22.1) | 26 (15.8) | | 50 (30.7) | | 31 (19.5) | 47 (30.0) | 1,465 (19.5) | |
| Asian, non-Hispanic | 30 (11.9) | 14 (8.1) | 6 (3.6) | | 12 (7.4) | | 17 (10.7) | 20 (12.7) | 700 (9.3) | |
| Other or multiple races | 7 (2.8) | 6 (3.6) | 7 (4.2) | | 9 (5.5) | | 10 (6.2) | 6 (3.7) | 273 (3.6) | |
| Unknown race, non- Hispanic | 11 (4.3) | 4 (2.3) | 0 (0.0) | | 0 (0.0) | | 2 (1.3) | 2 (1.3) | 153 (2.0) | |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | |  | |  | | | |  |
| High social vulnerabilityg | 68 (28.0) | 61 (38.4) | 5 (3.1) | | 70 (49.0) | | 45 (30.8) | 63 (45.0) | 1,681 (24.2) | |
| Low social vulnerabilityh | 40 (16.5) | 22 (13.8) | 84 (52.8) | | 13 (9.1) | | 29 (19.9) | 17 (12.1) | 1,804 (26.0) | |
| **Community exposures, no. (%)** |  | | |  | |  | | | |  |  |
| Traveled domestically or  internationally | 22 (8.7) | 14 (8.1) | 27 (16.4) | | 8 (4.9) | | 21 (13.2) | 10 (6.4) | 1,157 (15.4) | |
| Attended a mass gathering or  gathering with people other  than household members | 34 (13.4) | 27 (15.7) | 50 (30.3) | | 16 (9.8) | | 38 (23.9) | 24 (15.3) | 1,818 (24.1) | |
| Used public or shared  transportation | 20 (7.9) | 32 (18.6) | 13 (7.9) | | 30 (18.4) | | 19 (12.0) | 23 (14.7) | 1,058 (14.1) | |
| Had close contact with ill  person(s) outside of a  healthcare facility | 29 (11.5) | 21 (12.2) | 40 (24.2) | | 25 (15.4) | | 27 (17.0) | 22 (14.0) | 1,412 (18.8) | |
| Had close contact with a  family member(s) who  had COVID-19 | 40 (15.8) | 31 (18.0) | 52 (31.5) | | 35 (21.5) | | 45 (28.3) | 37 (23.6) | 1,883 (25.0) | |
| **Underlying conditions, no. (%)** |  | | |  | |  | | | |  |  |
| At least one underlying  condition | 183 (72.3) | 123 (71.5) | 100 (60.6) | | 111 (68.1) | | 96 (60.3) | 106 (67.5) | 4,660 (61.9) | |
| Asthma | 48 (19.0) | 19 (11.1) | 21 (12.7) | | 18 (11.0) | | 18 (11.3) | 21 (13.4) | 1,051 (14.0) | |
| Autoimmune or  rheumatologic disease | 15 (5.9) | 7 (4.1) | 15 (9.1) | | 1 (0.6) | | 10 (6.3) | 1 (0.6) | 351 (4.7) | |
| Chronic kidney disease | 1 (0.4) | 1 (0.6) | 1 (0.6) | | 2 (1.2) | | 0 (0.0) | 0 (0.0) | 31 (0.4) | |
| Chronic obstructive  pulmonary disease | 2 (0.8) | 2 (1.2) | 0 (0.0) | | 3 (1.8) | | 1 (0.6) | 1 (0.6) | 46 (0.6) | |
| Current or recent smokeri | 75 (29.6) | 59 (34.3) | 32 (19.4) | | 45 (27.6) | | 35 (22.0) | 41 (26.1) | 1,628 (21.6) | |
| Diabetes mellitus | 31 (12.3) | 13 (7.6) | 4 (2.4) | | 19 (11.7) | | 10 (6.3) | 21 (13.4) | 471 (6.3) | |
| Heart condition | 8 (3.2) | 7 (4.1) | 9 (5.5) | | 6 (3.7) | | 2 (1.3) | 6 (3.8) | 249 (3.3) | |
| Hypertension | 58 (22.9) | 42 (24.4) | 22 (13.3) | | 30 (18.4) | | 24 (15.1) | 6 (3.8) | 1,163 (15.4) | |
| Obesity or severe obesity | 126 (49.8) | 70 (40.7) | 43 (26.1) | | 69 (42.3) | | 59 (37.1) | 60 (38.2) | 2,549 (33.9) | |
| Pregnancy | 3 (1.2) | 3 (1.7) | 8 (4.9) | | 1 (0.6) | | 0 (0.0) | 3 (1.9) | 160 (2.1) | |
| **COVID-19 vaccination status at time of test, no. (%)j** |  | | |  | |  | | | |  |  |
| Vaccinated | 38 (62.3) | 26 (66.7) | 33 (73.3) | | 27 (67.5) | | 30 (83.3) | 22 (62.9) | 1,541 (73.6) | |
| Unvaccinated | 23 (37.7) | 13 (33.3) | 12 (26.7) | | 13 (32.5) | | 6 (16.7) | 13 (37.1) | 548 (26.2) | |

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021 (continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Pharmacisto**  **(n=144)** | **Laboratory Personnelp (n=141)** | **Radiology Personnelq**  **(n=131)** | **Physical Therapist  (n=126)** | **Emergency Medical Services Personnelr (n=121)** | **Mental Health Personnels (n=115)** | **All professions (N=7,531)** |
| **Facility type, no. (%)** |  | | | | | | |
| Hospital | 81 (56.3) | 101 (71.6) | 90 (68.7) | 56 (44.4) | 39 (32.2) | 41 (35.7) | 3,975 (52.8) |
| Nursing home | 5 (3.5) | 2 (1.4) | 0 (0.0) | 30 (23.8) | 3 (2.5) | 4 (3.5) | 1,142 (15.2) |
| Outpatient clinic | 16 (11.1) | 8 (5.7) | 34 (26.0) | 28 (22.2) | 3 (2.5) | 34 (29.6) | 1,223 (16.2) |
| Home healthcare setting | 0 (0.0) | 0 (0.0) | 0 (0.0) | 9 (7.1) | 0 (0.0) | 13 (11.3) | 386 (5.1) |
| Assisted living facility | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (0.8) | 0 (0.0) | 0 (0.0) | 126 (1.7) |
| Other facilitiesb | 42 (29.1) | 30 (21.3) | 7 (5.3) | 2 (1.6) | 76 (62.8) | 23 (20.0) | 679 (9.0) |
| **Sex, no, (%)c** |  | | | | | | |
| Female | 106 (73.6) | 98 (69.5) | 99 (75.6) | 91 (72.2) | 42 (34.7) | 82 (71.3) | 5,933 (78.8) |
| Male | 38 (26.4) | 43 (30.5) | 32 (24.4) | 34 (27.0) | 79 (65.3) | 32 (27.8) | 1,574 (20.9) |
| **Age group in years, no. (%)d** |  | | | | | | |
| Median [IQR] | 36 [29–49] | 41 [31–52] | 40 [31–52] | 38 [31–47] | 33 [26–43] | 35 [28–46] | 39 [30–50] |
| <30 | 39 (27.1) | 32 (22.7) | 25 (19.1) | 27 (21.4) | 46 (38.0) | 32 (27.8) | 1,769 (23.5) |
| ≥30 | 104 (72.2) | 107 (75.9) | 106 (80.9) | 98 (77.8) | 75 (62.0) | 83 (72.2) | 5,686 (75.5) |
| **Race and ethnicity, no. (%)e** |  | | | | | | |
| Hispanic | 18 (12.5) | 26 (18.4) | 18 (13.7) | 10 (7.9) | 26 (21.5) | 27 (23.5) | 1,495 (19.9) |
| White, non-Hispanic | 80 (55.6) | 66 (46.8) | 90 (68.7) | 95 (75.4) | 72 (59.5) | 43 (37.4) | 3,445 (45.7) |
| Black or African American,  non-Hispanic | 21 (14.6) | 32 (22.7) | 12 (9.1) | 6 (4.8) | 11 (9.1) | 27 (23.5) | 1,465 (19.5) |
| Asian, non-Hispanic | 18 (12.5) | 12 (8.5) | 6 (4.6) | 12 (9.5) | 6 (5.0) | 8 (7.0) | 700 (9.3) |
| Other or multiple races | 2 (1.4) | 2 (1.4) | 2 (1.5) | 2 (1.6) | 4 (3.3) | 5 (4.3) | 273 (3.6) |
| Unknown race, non-Hispanic | 5 (3.5) | 3 (2.1) | 3 (2.3) | 1 (0.8) | 2 (1.7) | 5 (4.3) | 153 (2.0) |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | | | | | |
| High social vulnerabilityg | 28 (20.0) | 25 (18.5) | 21 (18.8) | 10 (8.7) | 21 (19.1) | 23 (20.4) | 1,681 (24.2) |
| Low social vulnerabilityh | 41 (29.3) | 32 (23.7) | 32 (28.6) | 45 (39.1) | 37 (33.6) | 19 (16.8) | 1,804 (26.0) |
| **Community exposures, no. (%)** |  | | | | | | |
| Traveled domestically or  internationally | 24 (16.7) | 29 (20.6) | 28 (21.4) | 28 (22.2) | 14 (11.6) | 17 (14.8) | 1,157 (15.4) |
| Attended a mass gathering or  gathering with people other  than household members | 51 (35.4) | 40 (28.4) | 45 (34.4) | 42 (33.3) | 32 (26.5) | 29 (25.2) | 1,818 (24.1) |
| Used public or shared  transportation | 23 (16.0) | 25 (17.7) | 22 (16.8) | 22 (17.5) | 15 (12.4) | 12 (10.4) | 1,058 (14.1) |
| Had close contact with ill  person(s) outside of a healthcare  facility | 36 (25.0) | 27 (19.2) | 27 (20.6) | 15 (11.9) | 17 (14.1) | 21 (18.3) | 1,412 (18.8) |
| Had close contact with a family  member(s) who had COVID-19 | 45 (31.3) | 40 (28.4) | 39 (29.8) | 21 (16.7) | 14 (11.6) | 29 (25.2) | 1,883 (25.0) |
| **Underlying conditions, no. (%)** |  | | | | | | |
| At least one underlying  condition | 77 (53.5) | 90 (63.8) | 76 (58.0) | 57 (45.2) | 75 (70.0) | 77 (67.0) | 4,660 (61.9) |
| Asthma | 20 (13.9) | 16 (11.4) | 16 (12.2) | 11 (8.7) | 14 (11.6) | 18 (15.7) | 1,051 (14.0) |
| Autoimmune or rheumatologic  disease | 6 (4.2) | 5 (3.6) | 12 (9.2) | 15 (11.9) | 4 (3.3) | 8 (7.0) | 351 (4.7) |
| Chronic kidney disease | 1 (0.7) | 1 (0.7) | 1 (0.8) | 0 (0.0) | 0 (0.0) | 2 (1.7) | 31 (0.4) |
| Chronic obstructive pulmonary  disease | 0 (0.0) | 0 (0.0) | 1 (0.8) | 0 (0.0) | 0 (0.0) | 1 (0.9) | 46 (0.6) |
| Current or recent smokeri | 12 (8.3) | 28 (19.9) | 31 (23.7) | 18 (14.3) | 31 (25.6) | 31 (27.0) | 1,628 (21.6) |
| Diabetes mellitus | 9 (6.3) | 9 (6.4) | 3 (2.3) | 3 (2.4) | 3 (2.5) | 3 (2.6) | 471 (6.3) |
| Heart condition | 5 (3.5) | 3 (2.1) | 4 (3.1) | 1 (0.8) | 2 (1.7) | 4 (3.5) | 249 (3.3) |
| Hypertension | 26 (18.1) | 27 (19.2) | 17 (13.0) | 7 (5.6) | 9 (7.4) | 15 (13.0) | 1,163 (15.4) |
| Obesity or severe obesity | 43 (29.9) | 46 (32.6) | 33 (25.2) | 21 (16.7) | 41 (33.9) | 40 (34.8) | 2,549 (33.9) |
| Pregnancy | 6 (4.2) | 0 (0.0) | 5 (3.8) | 6 (4.8) | 2 (1.7) | 2 (1.7) | 160 (2.1) |
| **COVID-19 vaccination status at time of test, no. (%)j** |  | | | | | | |
| Vaccinated | 33 (86.8) | 42 (77.8) | 39 (78.0) | 31 (83.8) | 35 (72.9) | 23 (69.7) | 1,541 (73.6) |
| Unvaccinated | 5 (13.2) | 12 (22.2) | 11 (22.0) | 6 (16.2) | 12 (25.0) | 10 (30.3) | 548 (26.2) |

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021 (continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Dental practitionert (n=100)** | **Social worker (n=99)** | **Respiratory therapist**  **(n=80)** | **Occupational therapist**  **(n=73)** | **Phlebotomist**  **(n=67)** |  | **All professions (N=7,531)** |
| **Facility type, no. (%)** |  | | | | | | |
| Hospital | 3 (3.0) | 44 (44.4) | 60 (75.0) | 29 (39.7) | 36 (53.7) |  | 3,975 (52.8) |
| Nursing home | 0 (0.0) | 16 (16.2) | 12 (15.0) | 27 (37.0) | 1 (1.5) |  | 1,142 (15.2) |
| Outpatient clinic | 42 (42.0) | 20 (20.2) | 5 (6.3) | 7 (9.6) | 22 (32.8) |  | 1,223 (16.2) |
| Home healthcare setting | 0 (0.0) | 6 (6.1) | 0 (0.0) | 5 (6.9) | 0 (0.0) |  | 386 (5.1) |
| Assisted living facility | 0 (0.0) | 1 (1.0) | 0 (0.0) | 1 (1.4) | 0 (0.0) |  | 126 (1.7) |
| Other facilitiesb | 55 (55.0) | 12 (12.1) | 3 (3.8) | 4 (5.5) | 8 (11.9) |  | 679 (9.0) |
| **Sex, no, (%)c** |  | | | | | | |
| Female | 89 (89.0) | 86 (86.9) | 54 (67.5) | 64 (87.7) | 58 (86.6) |  | 5,933 (78.8) |
| Male | 10 (10.0) | 13 (13.1) | 26 (32.5) | 9 (12.3) | 9 (13.4) |  | 1,574 (20.9) |
| **Age group in years, no. (%)d** |  | | | | | | |
| Median [IQR] | 33 [26–46] | 39 [31–50] | 42 [36–51] | 37 [30–44] | 39 [30–47] |  | 39 [30–50] |
| <30 | 41 (41.0) | 20 (20.2) | 8 (10.0) | 17 (23.3) | 15 (22.4) |  | 1,769 (23.5) |
| ≥30 | 57 (57.0) | 79 (79.8) | 72 (90.0) | 56 (76.7) | 49 (73.1) |  | 5,686 (75.5) |
| **Race and ethnicity, no. (%)e** |  | | | | | | |
| Hispanic | 49 (49.0) | 17 (17.2) | 10 (12.5) | 7 (9.6) | 19 (28.4) |  | 1,495 (19.9) |
| White, non-Hispanic | 23 (23.0) | 54 (54.6) | 46 (57.5) | 49 (67.1) | 15 (22.4) |  | 3,445 (45.7) |
| Black or African American, non-  Hispanic | 9 (9.0) | 18 (18.2) | 13 (16.3) | 11 (15.1) | 19 (28.4) |  | 1,465 (19.5) |
| Asian, non-Hispanic | 11 (11.0) | 5 (5.1) | 6 (7.5) | 3 (4.1) | 5 (7.5) |  | 700 (9.3) |
| Other or multiple races | 3 (3.0) | 3 (3.0) | 2 (2.5) | 1 (1.4) | 7 (10.5) |  | 273 (3.6) |
| Unknown race, non-Hispanic | 5 (5.0) | 2 (2.0) | 3 (3.8) | 2 (2.7) | 2 (3.0) |  | 153 (2.0) |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | | | | | |
| High social vulnerabilityg | 24 (25.0) | 20 (21.5) | 13 (17.8) | 11 (16.7) | 19 (32.8) |  | 1,681 (24.2) |
| Low social vulnerabilityh | 23 (24.0) | 29 (31.2) | 23 (31.5) | 20 (30.3) | 6 (10.3) |  | 1,804 (26.0) |
| **Community exposures, no. (%)** |  | | | | | | |
| Traveled domestically or  internationally | 20 (20.0) | 19 (19.2) | 11 (13.8) | 12 (16.4) | 14 (20.9) |  | 1,157 (15.4) |
| Attended a mass gathering or  gathering with people other than  household members | 23 (23.0) | 31 (31.3) | 18 (22.5) | 25 (34.3) | 10 (14.9) |  | 1,818 (24.1) |
| Used public or shared transportation | 15 (15.0) | 19 (19.2) | 7 (8.8) | 12 (16.4) | 6 (9.0) |  | 1,058 (14.1) |
| Had close contact with ill person(s)  outside of a healthcare facility | 16 (16.0) | 22 (22.2) | 22 (27.5) | 12 (16.4) | 14 (20.9) |  | 1,412 (18.8) |
| Had close contact with a family  member(s) who had COVID-19 | 34 (34.0) | 30 (30.3) | 25 (31.3) | 12 (16.4) | 21 (31.3) |  | 1,883 (25.0) |
| **Underlying conditions, no. (%)** |  | | | | | | |
| At least one underlying  condition | 59 (59.0) | 64 (64.7) | 54 (67.5) | 36 (49.3) | 42 (62.7) |  | 4,660 (61.9) |
| Asthma | 12 (12.0) | 23 (23.2) | 9 (11.3) | 8 (11.0) | 10 (14.9) |  | 1,051 (14.0) |
| Autoimmune or rheumatologic disease | 2 (2.0) | 6 (6.1) | 4 (5.0) | 4 (5.5) | 1 (1.5) |  | 351 (4.7) |
| Chronic kidney disease | 0 (0.0) | 1 (1.0) | 1 (1.3) | 0 (0.0) | 0 (0.0) |  | 31 (0.4) |
| Chronic obstructive pulmonary disease | 1 (1.0) | 1 (1.0) | 1 (1.3) | 0 (0.0) | 0 (0.0) |  | 46 (0.6) |
| Current or recent smokeri | 21 (21.0) | 29 (29.3) | 20 (25.0) | 9 (12.3) | 17 (25.4) |  | 1,628 (21.6) |
| Diabetes mellitus | 6 (6.0) | 5 (5.1) | 5 (6.3) | 0 (0.0) | 7 (10.5) |  | 471 (6.3) |
| Heart condition | 2 (2.0) | 4 (4.0) | 4 (5.0) | 3 (4.1) | 1 (1.5) |  | 249 (3.3) |
| Hypertension | 8 (8.0) | 15 (15.2) | 15 (18.8) | 7 (9.6) | 11 (16.4) |  | 1,163 (15.4) |
| Obesity or severe obesity | 31 (31.0) | 29 (29.3) | 29 (36.3) | 20 (27.4) | 27 (40.3) |  | 2,549 (33.9) |
| Pregnancy | 3 (3.0) | 2 (2.0) | 1 (1.3) | 2 (2.7) | 0 (0.0) |  | 160 (2.1) |
| **COVID-19 vaccination status at time of test, no. (%)j** |  | | | | | | |
| Vaccinated | 17 (65.4) | 35 (87.5) | 11 (64.7) | 11 (73.3) | 15 (62.5) |  | 1,541 (73.6) |
| Unvaccinated | 9 (34.6) | 5 (12.5) | 6 (35.3) | 4 (26.7) | 9 (37.5) |  | 548 (26.2) |

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021 (continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Physician assistant (n=64)** | **Patient care technician or assistant**  **(n=57)** | **Equipment technicianu**  **(n=49)** | **Nurse, other**  **(n=42)** | **Research personnel (n=39)** |  | **All professions (N=7,531)** |
| **Facility type, no. (%)** |  | | | | | | |
| Hospital | 40 (62.5) | 40 (70.2) | 40 (81.6) | 27 (64.3) | 27 (69.2) |  | 3,975 (52.8) |
| Nursing home | 1 (1.6) | 7 (12.3) | 0 (0.0) | 1 (2.4) | 0 (0.0) |  | 1,142 (15.2) |
| Outpatient clinic | 16 (25.0) | 3 (5.3) | 5 (10.2) | 3 (7.1) | 9 (23.1) |  | 1,223 (16.2) |
| Home healthcare setting | 1 (1.6) | 5 (8.8) | 0 (0.0) | 3 (7.1) | 0 (0.0) |  | 386 (5.1) |
| Assisted living facility | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (2.4) | 0 (0.0) |  | 126 (1.7) |
| Other facilitiesb | 6 (9.4) | 2 (3.5) | 4 (8.2) | 7 (16.7) | 3 (7.7) |  | 679 (9.0) |
| **Sex, no, (%)c** |  | | | | | | |
| Female | 45 (70.3) | 53 (93.0) | 20 (40.8) | 38 (90.5) | 31 (79.5) |  | 5,933 (78.8) |
| Male | 19 (29.7) | 3 (5.3) | 29 (59.2) | 4 (9.5) | 8 (20.5) |  | 1,574 (20.9) |
| **Age group in years, no. (%)d** |  | | | | | | |
| Median [IQR] | 36 [30–43] | 34 [28–53] | 43 [33–50] | 41 [37–48] | 28 [25–32] |  | 39 [30–50] |
| <30 | 14 (21.9) | 18 (31.6) | 8 (16.3) | 1 (2.4) | 25 (64.1) |  | 1,769 (23.5) |
| ≥30 | 49 (76.6) | 38 (66.7) | 40 (81.6) | 41 (97.6) | 14 (35.9) |  | 5,686 (75.5) |
| **Race and ethnicity, no. (%)e** |  | | | | | | |
| Hispanic | 4 (6.3) | 18 (31.6) | 13 (26.5) | 5 (11.9) | 3 (7.7) |  | 1,495 (19.9) |
| White, non-Hispanic | 47 (73.4) | 8 (14.0) | 19 (38.8) | 27 (64.3) | 27 (69.2) |  | 3,445 (45.7) |
| Black or African American,  non-Hispanic | 5 (7.8) | 22 (38.6) | 12 (24.5) | 7 (16.7) | 3 (7.7) |  | 1,465 (19.5) |
| Asian, non-Hispanic | 7 (10.9) | 4 (7.0) | 2 (4.1) | 0 (0.0) | 6 (15.4) |  | 700 (9.3) |
| Other or multiple races | 1 (1.6) | 3 (5.3) | 3 (6.1) | 2 (4.8) | 0 (0.0) |  | 273 (3.6) |
| Unknown race, non-  Hispanic | 0 (0.0) | 2 (3.5) | 0 (0.0) | 1 (2.4) | 0 (0.0) |  | 153 (2.0) |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | | | | | |
| High social vulnerabilityg | 3 (4.8) | 17 (31.5) | 12 (26.7) | 5 (12.8) | 4 (13.3) |  | 1,681 (24.2) |
| Low social vulnerabilityh | 32 (50.8) | 14 (25.9) | 8 (17.8) | 18 (46.2) | 14 (46.7) |  | 1,804 (26.0) |
| **Community exposures, no. (%)** |  | | | | | | |
| Traveled domestically or  internationally | 22 (34.4) | 7 (12.3) | 9 (18.4) | 5 (11.9) | 14 (35.9) |  | 1,157 (15.4) |
| Attended a mass gathering or  gathering with people other than  household members | 26 (40.6) | 6 (10.6) | 14 (28.6) | 8 (19.1) | 14 (35.9) |  | 1,818 (24.1) |
| Used public or shared  transportation | 13 (20.3) | 6 (10.5) | 9 (18.4) | 2 (4.8) | 14 (35.9) |  | 1,058 (14.1) |
| Had close contact with ill person(s)  outside of a healthcare facility | 13 (20.3) | 9 (15.8) | 10 (20.4) | 10 (23.8) | 10 (25.6) |  | 1,412 (18.8) |
| Had close contact with a family  member(s) who had COVID-19 | 16 (25.0) | 12 (21.1) | 13 (26.5) | 12 (28.6) | 18 (46.2) |  | 1,883 (25.0) |
| **Underlying conditions, no. (%)** |  | | | | | | |
| At least one underlying condition | 30 (46.9) | 41 (71.9) | 33 (67.4) | 27 (64.3) | 19 (48.7) |  | 4,660 (61.9) |
| Asthma | 13 (20.3) | 11 (19.3) | 3 (6.1) | 6 (14.3) | 4 (10.3) |  | 1,051 (14.0) |
| Autoimmune or  rheumatologic disease | 5 (7.8) | 1 (1.8) | 1 (2.0) | 2 (4.8) | 1 (2.6) |  | 351 (4.7) |
| Chronic kidney disease | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 31 (0.4) |
| Chronic obstructive  pulmonary disease | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 46 (0.6) |
| Current or recent smokeri | 4 (6.3) | 14 (24.6) | 13 (26.5) | 5 (11.9) | 7 (18.0) |  | 1,628 (21.6) |
| Diabetes mellitus | 0 (0.0) | 6 (10.5) | 4 (8.2) | 1 (2.4) | 0 (0.0) |  | 471 (6.3) |
| Heart condition | 3 (4.7) | 2 (3.5) | 2 (4.1) | 1 (2.4) | 5 (12.8) |  | 249 (3.3) |
| Hypertension | 1 (1.6) | 10 (17.5) | 5 (10.2) | 4 (9.5) | 2 (5.1) |  | 1,163 (15.4) |
| Obesity or severe obesity | 7 (10.9) | 30 (52.6) | 18 (36.7) | 19 (45.2) | 11 (28.2) |  | 2,549 (33.9) |
| Pregnancy | 5 (7.8) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (2.6) |  | 160 (2.1) |
| **COVID-19 vaccination status at time of test, no. (%)j** |  | | | | | | |
| Vaccinated | 20 (87.0) | 14 (70.0) | 10 (71.4) | 8 (100) | 10 (100) |  | 1,541 (73.6) |
| Unvaccinated | 3 (13.0) | 6 (30.0) | 4 (28.6) | 0 (0.0) | 0 (0.0) |  | 548 (26.2) |

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021 (continued)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Student**  **(n=36)** | **Transport personnel (n=36)** | **Dieticianv**  **(n=34)** | **Other licensed healthcare professional (n=31)** | **Coordinator or case manager (n=29)** |  | **All professions (N=7,531)** |
| **Facility type, no. (%)** |  | | | | | | |
| Hospital | 24 (66.7) | 26 (72.2) | 21 (61.8) | 10 (32.3) | 11 (37.9) |  | 3,975 (52.8) |
| Nursing home | 2 (5.6) | 1 (2.8) | 8 (23.5) | 1 (3.2) | 2 (6.9) |  | 1,142 (15.2) |
| Outpatient clinic | 6 (16.7) | 3 (8.3) | 3 (8.8) | 18 (58.1) | 5 (17.2) |  | 1,223 (16.2) |
| Home healthcare setting | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (10.3) |  | 386 (5.1) |
| Assisted living facility | 0 (0.0) | 1 (2.8) | 0 (0.0) | 0 (0.0) | 3 (10.3) |  | 126 (1.7) |
| Other facilitiesb | 4 (11.1) | 5 (13.9) | 2 (5.9) | 2 (6.5) | 5 (17.2) |  | 679 (9.0) |
| **Sex, no, (%)c** |  | | | | | | |
| Female | 31 (86.1) | 17 (47.2) | 34 (100) | 22 (71.0) | 25 (86.2) |  | 5,933 (78.8) |
| Male | 5 (13.9) | 19 (52.8) | 0 (0.0) | 9 (29.0) | 4 (13.8) |  | 1,574 (20.9) |
| **Age group in years, no. (%)d** |  | | | | | | |
| Median [IQR] | 25 [24–29] | 41 [26–55] | 38 [28–49] | 39 [31–54] | 42 [35–50] |  | 39 [30–50] |
| <30 | 27 (75.0) | 14 (38.9) | 12 (35.3) | 5 (16.1) | 2 (6.9) |  | 1,769 (23.5) |
| ≥30 | 9 (25.0) | 22 (61.1) | 22 (64.7) | 26 (83.9) | 27 (93.1) |  | 5,686 (75.5) |
| **Race and ethnicity, no. (%)e** |  | | | | | | |
| Hispanic | 5 (13.9) | 6 (16.7) | 5 (14.7) | 4 (12.9) | 11 (37.9) |  | 1,495 (19.9) |
| White, non-Hispanic | 20 (55.6) | 9 (25.0) | 22 (64.7) | 21 (67.7) | 10 (34.5) |  | 3,445 (45.7) |
| Black or African American, non-Hispanic | 5 (13.9) | 15 (41.7) | 3 (8.8) | 2 (6.5) | 5 (17.2) |  | 1,465 (19.5) |
| Asian, non-Hispanic | 4 (11.1) | 3 (8.3) | 2 (5.9) | 3 (9.7) | 2 (6.9) |  | 700 (9.3) |
| Other or multiple races | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (3.2) | 1 (3.5) |  | 273 (3.6) |
| Unknown race, non-Hispanic | 2 (5.6) | 3 (8.3) | 2 (5.9) | 0 (0.0) | 0 (0.0) |  | 153 (2.0) |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | | | | | |
| High social vulnerabilityg | 3 (8.6) | 12 (37.5) | 6 (18.8) | 2 (7.1) | 8 (28.6) |  | 1,681 (24.2) |
| Low social vulnerabilityh | 13 (37.1) | 7 (21.9) | 10 (31.3) | 8 (28.6) | 6 (21.4) |  | 1,804 (26.0) |
| **Community exposures, no. (%)** |  | | | | | | |
| Traveled domestically or  internationally | 6 (16.7) | 0 (0.0) | 5 (14.7) | 6 (19.4) | 5 (17.2) |  | 1,157 (15.4) |
| Attended a mass gathering or gathering  with people other than household  members | 10 (27.8) | 5 (13.9) | 13 (38.2) | 8 (25.8) | 7 (24.1) |  | 1,818 (24.1) |
| Used public or shared transportation | 4 (11.1) | 3 (8.3) | 5 (14.7) | 3 (9.7) | 5 (17.2) |  | 1,058 (14.1) |
| Had close contact with ill person(s) outside  of a healthcare facility | 4 (11.1) | 4 (11.1) | 7 (20.6) | 5 (16.1) | 7 (24.1) |  | 1,412 (18.8) |
| Had close contact with a family member(s)  who had COVID-19 | 8 (22.2) | 8 (22.2) | 12 (35.3) | 7 (22.6) | 12 (41.4) |  | 1,883 (25.0) |
| **Underlying conditions, no. (%)** |  | | | | | | |
| At least one underlying condition | 10 (27.8) | 21 (58.3) | 19 (55.9) | 15 (48.4) | 22 (75.9) |  | 4,660 (61.9) |
| Asthma | 3 (8.3) | 2 (5.6) | 7 (20.6) | 4 (12.9) | 5 (17.2) |  | 1,051 (14.0) |
| Autoimmune or rheumatologic disease | 0 (0.0) | 1 (2.8) | 4 (11.8) | 0 (0.0) | 2 (6.9) |  | 351 (4.7) |
| Chronic kidney disease | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 31 (0.4) |
| Chronic obstructive pulmonary disease | 0 (0.0) | 1 (2.8) | 0 (0.0) | 0 (0.0) | 1 (3.5) |  | 46 (0.6) |
| Current or recent smokeri | 1 (2.8) | 5 (13.9) | 5 (14.7) | 6 (19.4) | 9 (31.0) |  | 1,628 (21.6) |
| Diabetes mellitus | 0 (0.0) | 5 (13.9) | 4 (11.8) | 0 (0.0) | 3 (10.3) |  | 471 (6.3) |
| Heart condition | 1 (2.8) | 2 (5.6) | 1 (2.9) | 0 (0.0) | 2 (6.9) |  | 249 (3.3) |
| Hypertension | 1 (2.8) | 7 (19.4) | 4 (11.8) | 2 (6.5) | 5 (17.2) |  | 1,163 (15.4) |
| Obesity or severe obesity | 6 (16.7) | 17 (47.2) | 5 (14.7) | 6 (19.4) | 13 (44.8) |  | 2,549 (33.9) |
| Pregnancy | 0 (0.0) | 0 (0.0) | 3 (8.8) | 1 (3.2) | 0 (0.0) |  | 160 (2.1) |
| **COVID-19 vaccination status at time**  **of test, no. (%)j** |  | | | | | | |
| Vaccinated | 5 (62.5) | 4 (44.4) | 7 (87.5) | 6 (42.9) | 6 (66.7) |  | 1,541 (73.6) |
| Unvaccinated | 3 (37.5) | 5 (55.6) | 1 (12.5) | 8 (57.1) | 3 (33.3) |  | 548 (26.2) |

Table S1. Characteristics of healthcare personnel with SARS-CoV-2 infection, by primary healthcare role, 2020–2021 (continue)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Speech therapist**  **(n=27)** | **Patient screener or greeter**  **(n=22)** | **Activities coordinator**  **(n=15)** | **Chaplain**  **(n=10)** | **Other professions or preferred not to answer**  **(n=138)** |  | **All professions (N=7,531)** |
| **Facility type, no. (%)** |  | | | | | | |
| Hospital | 12 (44.4) | 15 (68.2) | 0 (0.0) | 7 (70.0) | 65 (47.1) |  | 3,975 (52.8) |
| Nursing home | 8 (29.6) | 0 (0.0) | 12 (80.0) | 1 (10.0) | 14 (10.1) |  | 1,142 (15.2) |
| Outpatient clinic | 6 (22.2) | 5 (22.7) | 0 (0.0) | 0 (0.0) | 24 (17.4) |  | 1,223 (16.2) |
| Home healthcare setting | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 5 (3.6) |  | 386 (5.1) |
| Assisted living facility | 0 (0.0) | 0 (0.0) | 1 (6.7) | 0 (0.0) | 0 (0.0) |  | 126 (1.7) |
| Other facilitiesb | 1 (3.7) | 2 (9.1) | 2 (13.3) | 2 (20.0) | 30 (21.7) |  | 679 (9.0) |
| **Sex, no, (%)c** |  | | | | | | |
| Female | 25 (92.6) | 14 (63.6) | 12 (80.0) | 5 (50.0) | 96 (69.6) |  | 5,933 (78.8) |
| Male | 2 (7.4) | 8 (36.4) | 3 (20.0) | 5 (50.0) | 40 (29.0) |  | 1,574 (20.9) |
| **Age group in years, no. (%)d** |  | | | | | | |
| Median [IQR] | 37 [32–48] | 30 [22–44] | 33 [28–58] | 58 [38–69] | 36 [29–50] |  | 39 [30–50] |
| <30 | 5 (18.5) | 11 (50.0) | 6 (40.0) | 1 (10.0) | 35 (25.4) |  | 1,769 (23.5) |
| ≥30 | 22 (81.5) | 11 (50.0) | 9 (60.0) | 9 (90.0) | 95 (68.8) |  | 5,686 (75.5) |
| **Race and ethnicity, no. (%)e** |  | | | | | | |
| Hispanic | 3 (11.1) | 8 (36.4) | 5 (33.3) | 0 (0.0) | 33 (23.9) |  | 1,495 (19.9) |
| White, non-Hispanic | 18 (66.7) | 8 (36.4) | 4 (26.7) | 9 (90.0) | 51 (37.0) |  | 3,445 (45.7) |
| Black or African American, non-Hispanic | 3 (11.1) | 3 (13.6) | 2 (13.3) | 1 (10.0) | 28 (20.3) |  | 1,465 (19.5) |
| Asian, non-Hispanic | 3 (11.1) | 2 (9.1) | 3 (20.0) | 0 (0.0) | 13 (9.4) |  | 700 (9.3) |
| Other or multiple races | 0 (0.0) | 1 (4.6) | 1 (6.7) | 0 (0.0) | 4 (2.9) |  | 273 (3.6) |
| Unknown race, non-Hispanic | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 9 (6.5) |  | 153 (2.0) |
| **Residential address Social Vulnerability Index (SVI), no. (%)f** |  | | | | | | |
| High social vulnerabilityg | 2 (8.3) | 7 (36.8) | 7 (50.0) | 2 (22.2) | 29 (22.3) |  | 1,681 (24.2) |
| Low social vulnerabilityh | 11 (45.8) | 3 (15.8) | 1 (7.1) | 3 (33.3) | 41 (31.5) |  | 1,804 (26.0) |
| **Community exposures, no. (%)** |  | | | | | | |
| Traveled domestically or internationally | 7 (25.9) | 5 (22.7) | 3 (20.0) | 4 (40.0) | 26 (18.8) |  | 1,157 (15.4) |
| Attended a mass gathering or gathering  with people other than household  members | 8 (29.6) | 2 (9.1) | 5 (33.3) | 4 (40.0) | 40 (29.2) |  | 1,818 (24.1) |
| Used public or shared transportation | 7 (25.9) | 4 (18.2) | 2 (13.3) | 4 (40.0) | 29 (21.0) |  | 1,058 (14.1) |
| Had close contact with ill person(s) outside  of a healthcare facility | 8 (29.6) | 5 (22.7) | 2 (13.3) | 1 (10.0) | 24 (17.5) |  | 1,412 (18.8) |
| Had close contact with a family member(s)  who had COVID-19 | 6 (22.2) | 5 (22.7) | 1 (6.7) | 1 (10.0) | 31 (22.5) |  | 1,883 (25.0) |
| **Underlying conditions, no. (%)** |  | | | | | | |
| At least one underlying condition | 13 (48.2) | 10 (45.5) | 14 (93.3) | 7 (70.0) | 82 (59.4) |  | 4,660 (61.9) |
| Asthma | 3 (11.1) | 0 (0.0) | 4 (26.7) | 2 (20.0) | 26 (18.8) |  | 1,051 (14.0) |
| Autoimmune or rheumatologic disease | 2 (7.4) | 1 (4.6) | 0 (0.0) | 0 (0.0) | 4 (2.9) |  | 351 (4.7) |
| Chronic kidney disease | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 31 (0.4) |
| Chronic obstructive pulmonary disease | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0(0.0) |  | 46 (0.6) |
| Current or recent smokeri | 2 (7.4) | 5 (22.7) | 7 (46.7) | 3 (30.0) | 34 (24.6) |  | 1,628 (21.6) |
| Diabetes mellitus | 0 (0.0) | 1 (4.6) | 2 (13.3) | 0 (0.0) | 10 (7.3) |  | 471 (6.3) |
| Heart condition | 1 (3.7) | 0 (0.0) | 0 (0.0) | 2 (20.0) | 3 (2.2) |  | 249 (3.3) |
| Hypertension | 4 (14.8) | 1 (4.6) | 4 (26.7) | 3 (30.0) | 19 (13.8) |  | 1,163 (15.4) |
| Obesity or severe obesity | 6 (22.2) | 6 (27.3) | 9 (60.0) | 1 (10.0) | 42 (30.4) |  | 2,549 (33.9) |
| Pregnancy | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |  | 160 (2.1) |
| **COVID-19 vaccination status at time of test, no. (%)j** |  | | | | | | |
| Vaccinated | 6 (85.7) | 6 (75.0) | 5 (83.3) | 4 (80.0) | 36 (67.9) |  | 1,541 (73.6) |
| Unvaccinated | 1 (14.3) | 2 (25.0) | 1 (16.7) | 1 (20.0) | 16 (30.2) |  | 548 (26.2) |

aHCP who reported their role as administrative personnel, director, financial personnel, human resources personnel, receptionist, patient service assistant, clinical supervisor, or marketing personnel.

bOther facilities include: administrative building, correctional facility, dental facility, outpatient dialysis unit, emergency medical service, free standing emergency room, hospice facility, laboratory, memory care facility, mental health facility, pharmacy, public health department, rehabilitation center, school, COVID-19 testing center, urgent care center.

c24 HCP did not answer question about sex or reported sex as unknown.

d76 HCP did not answer question about age.

e168 HCP with missing or unknown ethnicity were grouped as non-Hispanic.

fCensus tract-level SVI for HCP residential address. 592 HCP were not matched with SVI data due to lack of valid addresses or residential addresses that were out of catchment areas.

gHighest quartile of SVI values for census tracts where healthcare personnel resided.

hLowest quartile of SVI values for census tracts where healthcare personnel resided.

iRecent smokers were defined as HCP who quit smoking <1 year before the interview date.

jAmong 2,094 HCP cases who tested positive for SARS-CoV-2 in 2021; 5 HCP reported unknown COVID-19 vaccination status; vaccinated is defined as having received at least one dose of COVID-19 vaccine ≥14 days before the SARS-CoV-2 positive test dates.

kHCP who reported their role as facilities personnel, electrician, or engineer.

lHCP who reported their role as environmental services, laundry, or housekeeping personnel.

mHCP who reported their role as surgical or medical technician, ambulatory technician, dialysis technician, or radiologist therapist.

nHCP who reported their role as food services personnel, chef, or dietary aide.

oHCP who reported their role as pharmacist or pharmacist interns.

pHCP who reported their role as laboratory personnel, histotechnologist, or laboratory supervisor.

qHCP who reported their role as radiology personnel, cardiac sonographer, CT technician, MRI technician,

mammographer, or X-ray technician.

rHCP who reported their role as emergency medical services personnel, paramedic personnel, fire fighter, national guard, or emergency medical technician.

sHCP who reported their role as mental health personnel, behavioral technician, addictions counselor, mental health technician, or clinical psychologist.

tHCP who reported their role as dental practitioner, dental assistant, dental hygienist, or hygienist assistant.

uHCP who reported their role as equipment technician, biomedical equipment technician, cardiac monitor technician, supply technician, telemetry technician, or sterile processing technician.

vHCP who reported their role as dietitian or nutrition assistant.

Table S2. Percentage of healthcare personnel with SARS-CoV-2 infection living in high or low Social Vulnerability Index census tracts, by Emerging Infections Program site and primary healthcare role, 2020–2021

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Site, no. (%)** | | **All Professionsa** | **Registered Nurse** | **Administrative Personnelb** | **Certified Nursing Assistant** | **Physician** | **Medical Assistant** | **Home Healthcare worker** | **Other Professionsc** |
| EIPd 1 | High social vulnerabilitye | 50 (16.2) | 10 (9.9) | 6 (18.2) | 6 (30.0) | 2 (6.7) | 3 (18.8) | 1 (20.0) | 22 (21.2) |
| Low social vulnerabilityf | 113 (36.6) | 45 (44.6) | 9 (27.3) | 6 (30.0) | 17 (56.7) | 4 (25.0) | 1 (20.0) | 31 (29.8) |
| EIP 2 | High social vulnerability | 60 (21.0) | 15 (15.6) | 7 (14.9) | 5 (41.7) | 0 (0.0) | 7 (50.0) | 0 (0.0) | 26 (24.1) |
| Low social vulnerability | 49 (17.1) | 22 (22.9) | 7 (14.9) | 1 (8.3) | 4 (50.0) | 2 (14.3) | 0 (0.0) | 13 (12.0) |
| EIP 3 | High social vulnerability | 59 (18.0) | 15 (13.2) | 7 (21.9) | 4 (44.4) | 5 (12.8) | 6 (40.0) | 1 (100) | 21 (17.8) |
| Low social vulnerability | 130 (39.6) | 53 (46.5) | 8 (25.0) | 4 (44.4) | 14 (35.9) | 4 (26.7) | 0 (0.0) | 47 (39.8) |
| EIP 4 | High social vulnerability | 231 (16.9) | 38 (13.1) | 40 (18.9) | 33 (27.0) | 2 (3.6) | 21 (25.0) | 8 (25.0) | 89 (15.6) |
| Low social vulnerability | 472 (34.6) | 123 (42.6) | 57 (26.9) | 23 (18.9) | 35 (62.5) | 18 (21.4) | 8 (25.0) | 208 (36.5) |
| EIP 5 | High social vulnerability | 130 (23.2) | 23 (13.5) | 15 (24.2) | 8 (21.6) | 2 (9.5) | 28 (50.9) | -- | 54 (25.1) |
| Low social vulnerability | 163 (29.1) | 62 (36.5) | 10 (16.1) | 7 (18.9) | 11 (52.4) | 11 (20.0) | -- | 62 (28.8) |
| EIP 6 | High social vulnerability | 26 (12.1) | 3 (4.2) | 6 (17.6) | 5 (33.3) | 3 (25.0) | 0 (0.0) | -- | 9 (11.5) |
| Low social vulnerability | 97 (45.1) | 40 (56.3) | 13 (38.2) | 7 (46.7) | 6 (50.0) | 2 (40.0) | -- | 29 (37.2) |
| EIP 7 | High social vulnerability | 105 (16.0) | 26 (14.4) | 12 (13.8) | 12 (27.9) | 2 (3.3) | 2 (25.0) | 0 (0.0) | 51 (18.5) |
| Low social vulnerability | 247 (37.6) | 72 (39.8) | 24 (27.6) | 6 (14.0) | 42 (68.9) | 1 (12.5) | 0 (0.0) | 102 (37.0) |
| EIP 8 | High social vulnerability | 240 (27.1) | 13 (6.9) | 20 (25.3) | 116 (58.3) | 3 (7.0) | 3 (23.1) | 1 (100) | 84 (23.3) |
| Low social vulnerability | 216 (24.4) | 63 (33.3) | 20 (25.3) | 21 (10.6) | 19 (44.2) | 3 (23.1) | 0 (0.0) | 90 (24.9) |
| EIP 9 | High social vulnerability | 689 (35.1) | 62 (22.3) | 73 (32.7) | 81 (41.3) | 7 (9.5) | 67 (45.9) | 155 (47.5) | 244 (34.0) |
| Low social vulnerability | 263 (13.4) | 51 (18.3) | 23 (10.3) | 13 (6.6) | 37 (50.0) | 8 (5.5) | 26 (8.0) | 105 (14.6) |
| EIP 10 | High social vulnerability | 91 (24.4) | 20 (13.9) | 8 (21.6) | 13 (50.0) | 3 (13.0) | 1 (12.5) | -- | 46 (34.1) |
| Low social vulnerability | 54 (14.5) | 25 (17.4) | 4 (10.8) | 1 (3.8) | 8 (34.8) | 2 (25.0) | -- | 14 (10.4) |
| All EIP sites | High social vulnerability | 1,681 (24.2) | 225 (13.8) | 194 (22.9) | 283 (41.7) | 29 (7.9) | 138 (37.9) | 166 (45.2) | 646 (24.1) |
| Low social vulnerability | 1,804 (26.0) | 556 (34.1) | 175 (20.7) | 89 (13.1) | 193 (52.6) | 55 (15.1) | 35 (9.5) | 701 (26.1) |

a592 HCP were not matched with SVI data due to lack of valid addresses or residential addresses that were out of catchment areas.

bHCP who reported their role as administrative personnel, director, financial personnel, human resources personnel, receptionist, patient service assistant, clinical supervisor, or marketing personnel.

cAll other professions include: roles such as licensed practical nurse, nurse practitioner, facilities personnel, environmental services personnel, food services personnel, surgical or medical technician, laboratory personnel, pharmacist, or radiology personnel.

dEmerging Infections Program.

eHighest quartile of SVI values for census tracts where healthcare personnel resided.

fLowest quartile of SVI values for census tracts where healthcare personnel resided.

Table S3. Personal protective equipment use, workplace exposures, and patient care activities among healthcare personnel with SARS-CoV-2 infection and close contact with patients with COVID-19 in healthcare settings, by primary healthcare role, 2020–2021

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Licensed Practical Nurse**  **(n=121)** | **Nurse Practitioner**  **(n=73)** | | **Surgical or Medical Techniciansb**  **(n=72)** | **Environmental Services Personnelc**  **(n=28)** | **Facilities Personneld**  **(n=27)** | **Food Services Personnele**  **(n=7)** | | **All professions (n=2,606)** |
| **Facility type, no. (%)** |  | |  | | | | |  | | |
| Hospital | 19 (15.7) | 37 (50.7) | | 60 (83.3) | 16 (57.1) | 23 (85.2) | 3 (42.9) | | 1,631 (62.6) |
| Nursing home | 73 (60.3) | 8 (11.0) | | 2 (2.8) | 11 (39.3) | 2 (7.4) | 2 (28.6) | | 504 (19.3) |
| Outpatient clinic | 7 (5.8) | 15 (20.6) | | 3 (4.2) | 1 (3.6) | 2 (7.4) | 0 (0.0) | | 156 (6.0) |
| Home healthcare setting | 2 (1.7) | 1 (1.4) | | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 86 (3.3) |
| Assisted living facility | 4 (3.3) | 0 (0.0) | | 4 (5.6) | 0 (0.0) | 0 (0.0) | 2 (28.6) | | 42 (1.6) |
| Other facilities | 16 (13.2) | 12 (16.4) | | 3 (4.2) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 187 (7.2) |
| **PPE use and exposures in healthcare setting, no. (%)** |  | |  | | | | |  | | |
| Used gloves all the time | 107 (88.4) | 63 (86.3) | | 67 (93.1) | 26 (92.9) | 22 (81.5) | 5 (71.4) | | 2,224 (85.5) |
| Used a mask or  respirator all the time | 109 (90.1) | 63 (86.3) | | 68 (94.4) | 27 (96.4) | 26 (96.3) | 0 (0.0) | | 2,392 (91.8) |
| Used goggles or a face  shield all the time | 82 (67.8) | 56 (76.7) | | 57 (79.2) | 17 (60.7) | 17 (63.0) | 3 (42.9) | | 1,759 (67.7) |
| Used a gown all the time | 79 (65.3) | 52 (71.2) | | 50 (70.4) | 19 (67.9) | 14 (51.9) | 5 (71.4) | | 1,625 (62.6) |
| Always cared for COVID-  19 patients who had  source control in place | 16 (13.2) | 27 (37.0) | | 31 (43.1) | 2 (7.1) | 8 (29.6) | 1 (14.3) | | 527 (20.2) |
| Had a mucous membrane  or skin exposure to body  fluids from a COVID-19  patient | 21 (17.4) | 12 (16.9) | | 9 (12.5) | 1 (3.6) | 1 (3.7) | 1 (14.3) | | 495 (19.1) |
| Practiced extended use or  reuse of a respirator | 58 (47.9) | 49 (67.1) | | 46 (63.9) | 12 (42.9) | 7 (25.9) | 0 (0.0) | | 1,507 (57.8) |
| Always followed hand  hygiene recommendations  during care of COVID-19  patients | 108 (89.3) | 65 (91.6) | | 66 (91.7) | 25 (89.3) | 23 (85.2) | 6 (85.7) | | 2,346 (90.4) |
| **Patient care activities, no. (%)** |  | |  | | | | |  | | |  |
| Assisted patients with  COVID-19 with activities  of daily living | 85 (70.3) | 18 (24.7) | | 42 (58.3) | 4 (14.3) | 8 (29.6) | 3 (42.9) | | 1,716 (65.9) |
| Bathinga | 41 (48.2) | 5 (27.8) | | 12 (28.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 863 (50.3) |
| Emptying bedpana | 34 (40.0) | 2 (11.1) | | 14 (33.3) | 3 (75.0) | 2 (25.0) | 0 (0.0) | | 766 (44.6) |
| Feedinga | 49 (57.7) | 6 (33.3) | | 10 (23.8) | 1 (25.0) | 0 (0.0) | 0 (0.0) | | 807 (47.0) |
| Lifting or positioninga | 79 (92.9) | 0 (0.0) | | 39 (92.9) | 0 (0.0) | 2 (25.0) | 0 (0.0) | | 1,564 (91.1) |
| Performing oral carea | 18 (21.2) | 2 (11.1) | | 5 (11.9) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 392 (22.8) |
| Other activities of daily  livinga | 12 (14.1) | 3 (16.7) | | 17 (40.5) | 0 (0.0) | 5 (62.5) | 1 (33.3) | | 410 (23.9) |
| Provided non-procedure  clinical care to patients  with COVID-19 | 111 (91.7) | 64 (87.7) | | 42 (58.3) | 2 (7.1) | 4 (14.8) | 0 (0.0) | | 1,963 (75.3) |
| Performed procedures  on patients with COVID-19 | 76 (62.8) | 19 (26.0) | | 44 (61.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 1,199 (46.0) |
| Performed environmental  cleaning activities in COVID-19  patient care area | 64 (52.9) | 8 (11.0) | | 28 (38.9) | 26 (92.9) | 12 (44.4) | 0 (0.0) | | 1,277 (49.0) |
| Provided respiratory care to  patients with COVID-19 | 72 (59.5) | 34 (46.6) | | 26 (36.1) | 0 (0.0) | 0 (0.0) | 0 (0.0) | | 1,211 (46.5) |
| Performed administrative  activities with patients with  COVID-19 | 3 (2.5) | 4 (5.5) | | 2 (2.8) | 0 (0.0) | 8 (29.6) | 5 (71.4) | | 217 (8.3) |

aAmong HCP who assisted patients with COVID-19 with activities of daily living.

bHCP who reported their role as surgical or medical technician, ambulatory technician, dialysis technician, or radiologist therapist.

cHCP who reported their role as environmental services, laundry, or housekeeping personnel.

dHCP who reported their role as facilities personnel, electrician, or engineer.

eHCP who reported their role as food services personnel, chef, or dietary aide.