

JULY-NOVEMBER, 2020

**PREVALENCE AND
PREDICTORS OF SARS-COV-2
INFECTION AMONG
FARMWORKERS IN
MONTEREY COUNTY, CA**

SUMMARY REPORT



EXECUTIVE SUMMARY

United States farmworkers ensure the continuity of the nation's food supply and have been deemed essential workers in the ongoing COVID-19 pandemic. Latinos, including those in farmworker communities, have accounted for a disproportionate share of COVID-19 cases. We present the findings from surveys and biological measures of active and prior SARS-CoV-2 infection to reveal the extent to which farmworkers have been excessively burdened by the COVID-19 pandemic. We provide critical assessments of the risk factors for SARS-CoV-2 infection among California's most vulnerable and essential population, finding evidence of current infection in about 13% of 1091 farmworkers tested for active SARS-CoV-2 infection over a five-month period (July – November 2020).

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INTRODUCTION

Latinos in the United States have been disproportionately impacted by the COVID-19 pandemic, accounting for a large proportion of COVID-19 cases and experiencing 5 to 7 times the risk of COVID-19 mortality relative to Whites.¹

Farmworkers, most of whom are Latino and from Mexico, are essential workers and ensure the continuity of the nation's food supply. California is the leading

agricultural state in the United States with \$50 billion in agricultural annual revenue^{2,3} and employing nearly 800,000 agricultural workers.⁴ The Salinas Valley, the "Salad Bowl of the Nation", employs more than 50,000 of these agricultural workers. To date, there has been no systematic attempt to monitor the prevalence of current and prior COVID-19 infection among farmworkers, although there is concern that their working and living conditions exacerbate the risk of COVID-19 transmission.



On July 16, 2020, we launched a collaborative effort between Clinica de Salud del Valle de Salinas (CSVS) and the UC Berkeley School of Public Health to understand the extent and causes of SARS-CoV-2 infection among California farmworkers in the Salinas Valley. The goal of the study was to identify risk factors of infection among California farmworkers to inform evidence-based preventative strategies in this vulnerable population of essential workers.

¹ Bassett, M., Chen, J. & Krieger, N. The unequal toll of COVID-19 mortality by age in the United States: Quantifying racial/ethnic disparities. *Harvard Center for Population and Development Studies* 19, 1-12 (2020).

² The Measure of California Agriculture. (Agricultural Issues Center, 2003).

³ Increased Risks and Fewer Jobs: Evidence of California Farmworker Vulnerability During the COVID-19 Pandemic. Results of Statewide Farmworker Survey Announced at Press Conference. *Covid-19 Farmworker Study* (2020).

⁴ Martin, P., Hooker, B., Akhtar, M. & Stockton, M. How many workers are employed in California agriculture? *Calif. Agric.* 71, 30-34 (2016).



METHODS

Data were collected through a collaboration between medical professionals from CSVS and researchers from the UC Berkeley School of Public Health. CSVS employed all research assistants who collected data, and the CSVS network of health clinics and community outreach events served as the primary recruitment sites. CSVS conducted all COVID-19 PCR tests used in the research and managed clinical follow-up for the patient/participants. UC Berkeley researchers designed the survey and data collection protocols, provided training and remote supervision to research assistants, and conducted all data management and analysis activities.

Recruitment for this study started on July 16, 2020 and ended on November 30, 2020. Herein we report on the 1091 participants enrolled up until November 25. Individuals were eligible to participate if they were age 18 years or older, spoke Spanish or English, were not pregnant, worked in agriculture, were getting tested for COVID-19, and had not tested positive for COVID-19 in the past two weeks. Initially we only enrolled current agricultural workers, but starting in early October, we enrolled anyone who had worked in agriculture since March 2020, since many farmworkers were being laid off as the harvest season was winding down. Recruitment took place on-site at CSVS clinics or community testing events, including at community health fairs and housing complexes. A team of 11 clinic-

based research assistants obtained participants' written consent, collected blood samples, and measured height and weight on the same day as the COVID-19 testing and a team of nine home-based research assistants conducted surveys with participants by phone.

COVID-19 testing was conducted using oropharyngeal (or back-of-throat) swab samples, which were analyzed at a CLIA-certified medical laboratory (Foundation Laboratory, Pomona CA) using reverse-transcriptase polymerase chain reaction (RT-PCR). Participants provided written permission to use the test results in our research.

Interviews were conducted in Spanish (n=984) or English (n=107). In most cases, surveys were completed on the same day as COVID-19 testing (n=719) or the following day (n=289); 99% of participants (n=1083/1091) were interviewed within two days after testing, which is when they would have received their COVID-19 test results. Survey topics covered participant and household demographics, including main language spoken at home; employment information, including type of agricultural work; COVID-19 risk factors and safety practices at home, in the community, and in the workplace; COVID-19 symptoms; other medical conditions and health behaviors, including smoking and substance use; and economic and social stressors experienced during COVID-19, including food insecurity.

Blood samples were successfully obtained from 1045 participants (96%), and a single serum aliquot from each sample was tested at UC Berkeley via an in-house enzyme-linked immunosorbent assay (ELISA) for IgG antibody against the SARS-CoV-2 spike protein (laboratory of Professor Eva Harris). The assay was validated using convalescent sera from hospitalized, mildly symptomatic, and fully asymptomatic PCR-positive cases as well as pre-2020 specimens. In addition, we collected saliva samples from all participants. A total of 1042 participants provided blood, saliva, and interview. Participants were given a \$50 gift card for their participation in the study.

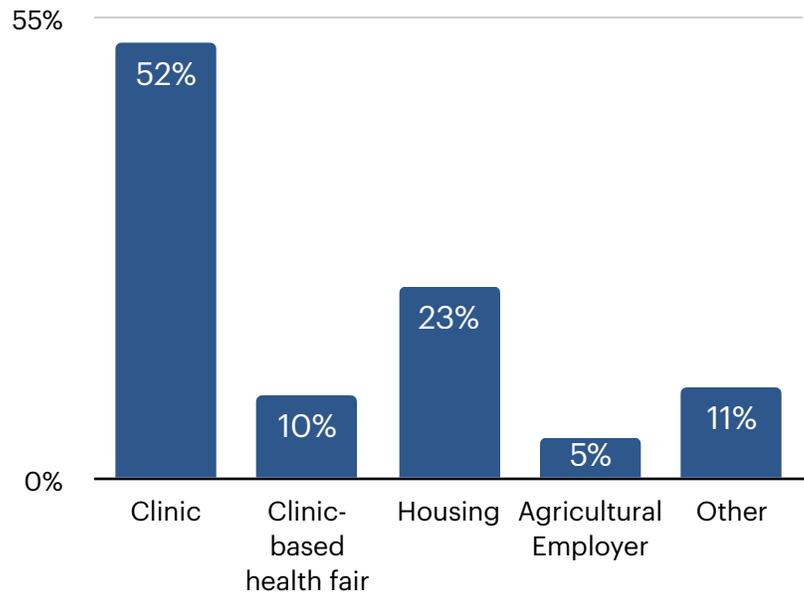
All research activities were approved by the UC Berkeley Office for the Protection of Human Subjects.

RESULTS

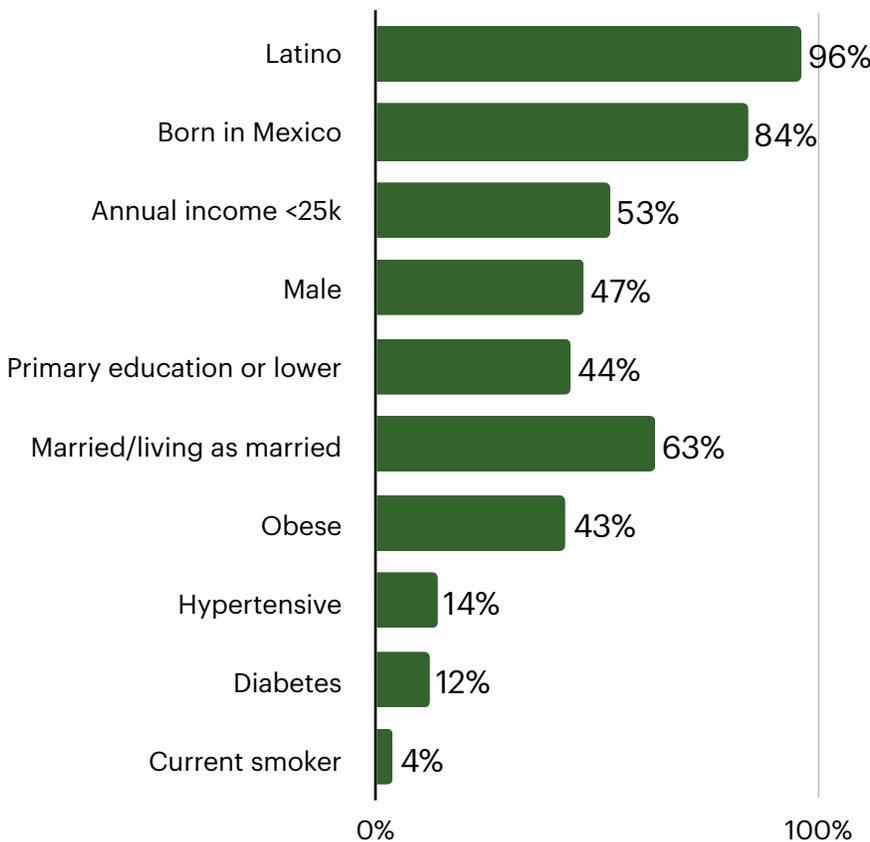
SECTION 1: DEMOGRAPHIC CHARACTERISTICS

Farmworkers were recruited into the study through clinic visits (52%; 565/1091) and outreach campaigns (48%; 526/1091) in housing units and clinic based health fairs among other outreach efforts.

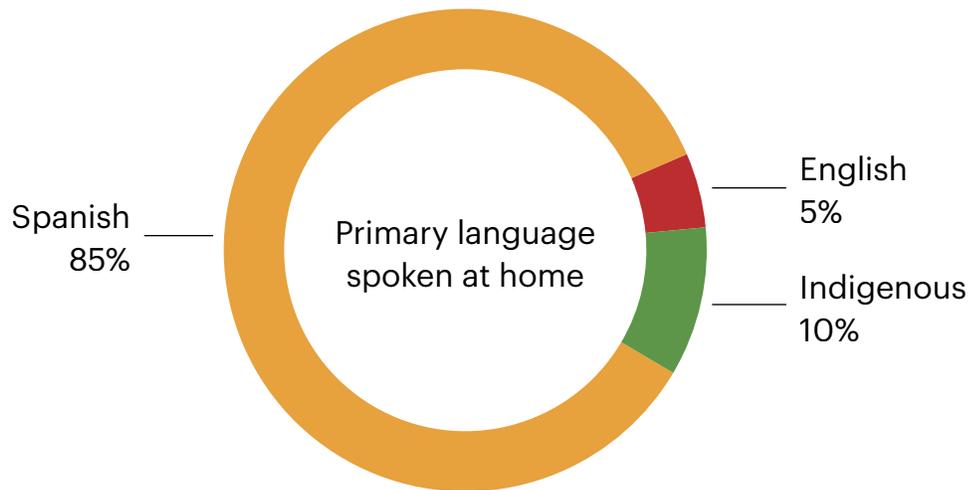
Participants by recruitment site



Demographic and health characteristics

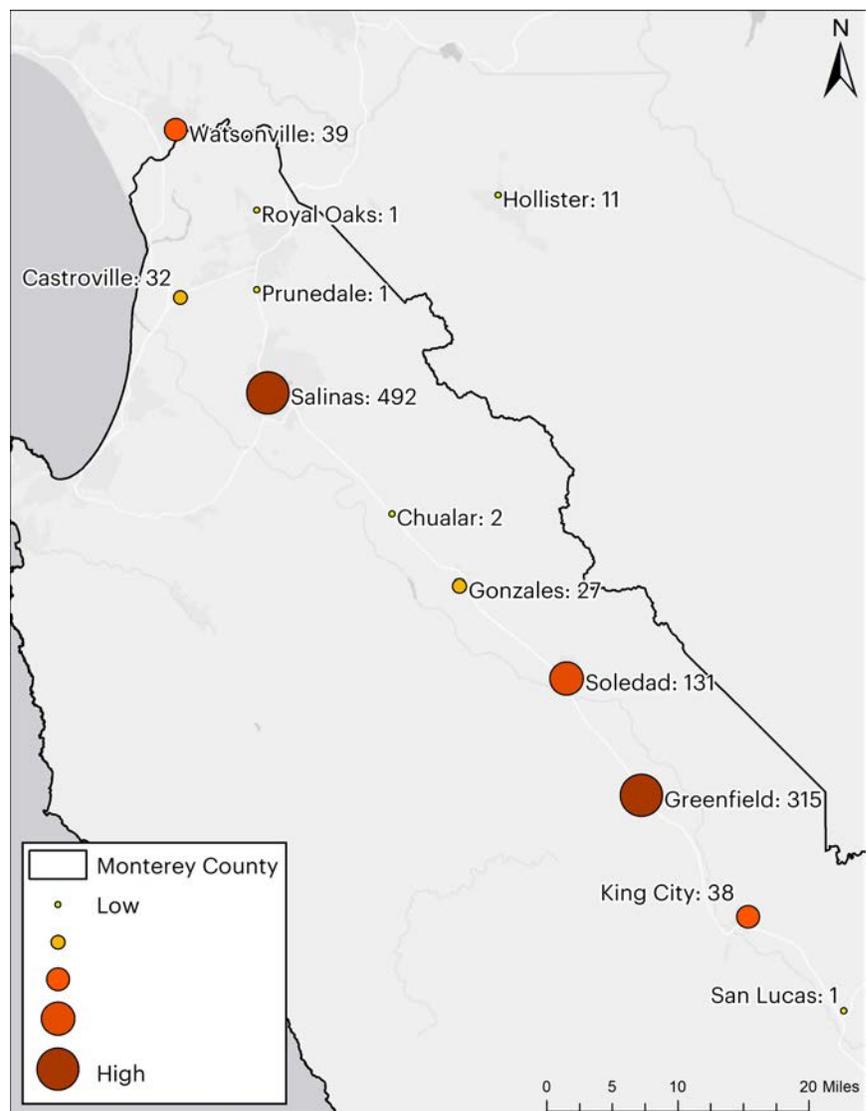


Of the 1091 farmworkers interviewed, most resided in Salinas (45%; 492/1091) or Greenfield (29%; 315/1091) in Monterey County, CA. The average age of farmworkers was 39.8 (Standard Deviation, SD=12.6) years, 47% (516/1091) were male, and 63% (684/1090) were married or living with a partner. On average, the farmworkers had lived in the United States for 20.6 years (SD=11.3). Most farmworkers spoke Spanish (85%; 925/1091); some spoke indigenous languages at home (10%; 113/1091) or English (5%; 53/1091).



The indigenous languages included: Triqui (5%; n=50/1091) Mixteco (4%; n=44/1091), Zapoteco (1%; n=6/1091) and 10 other languages with 1 or 2 people in each group. Most participants were from Mexico (84%; 914/1091), and identified as Latino (96%; 1051/1091). The annual household income of more than half (53%; 553/1035) of the farmers who responded was less than \$25,000. Nearly half of farmworkers (44%; 484/1090) had the equivalent of primary school or lower education. Many farmworkers had risk factors for severe COVID-19 if they were to become sick: 43% (456/1063) were obese, 14% (148/1087) had hypertension, and 12% (126/1087) were diabetic.

Participants by town of residence.



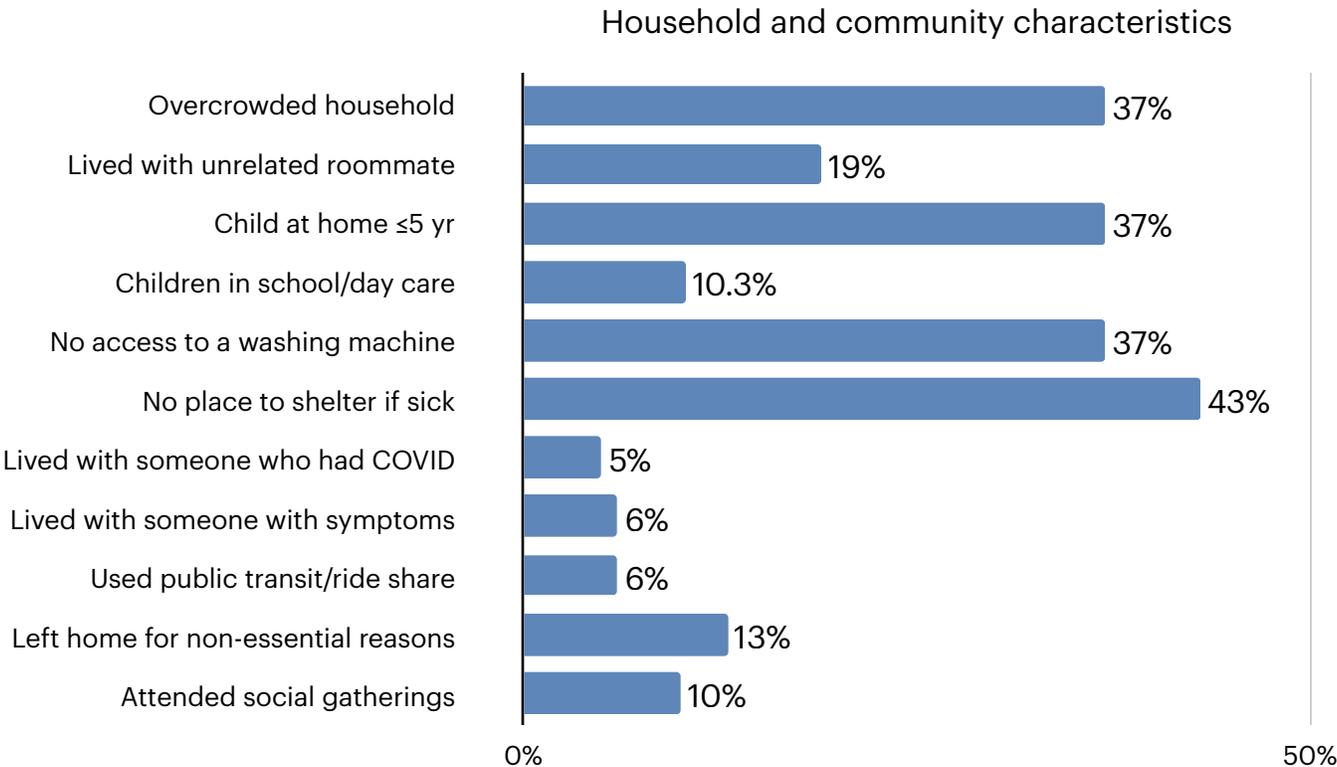
SECTION 2: HOUSEHOLD AND COMMUNITY

HOUSEHOLD AND COMMUNITY CHARACTERISTICS

SARS-CoV-2 transmission may be exacerbated in farmworker communities due to poor housing quality and mixed-generation overcrowding with unrelated household members. Many farmworkers (37%; 400/1091) reported living in overcrowded housing, defined by Housing and Urban Development (HUD) as more than two people per bedroom. Farmworkers lived primarily in houses (47%; 516/1091) or apartments (43%; 470/1091), with an average of 5.5 (SD=2.6) people per household. Many farmworkers (37%; 403/1091) lacked access to washing machines in their residence, and 19% (205/1091) of farmworkers lived with unrelated roommates. While 75% (815/1090) of the farmworkers lived with children younger than 18 years old, 37% (400/1091) of farmworkers lived with children age five or younger. Only 10.3% of these children attended school or daycare in the two weeks prior to the survey. Most public schools in Monterey County remained closed for in-person instruction for the duration of our project.

COVID-19 EXPOSURE AT HOME

About 9% (100/1085) of farmworkers lived with someone diagnosed with COVID-19 (5%; 51/1085) in the two weeks prior to the interview. In a similar fashion, 6% (70/1086) reported or lived with someone with a cough, fever, or trouble breathing. Almost half



(43%; 464/1091) of farmworkers described housing conditions which would be inadequate to quarantine (e.g., shared bathroom or bedroom) if they became exposed or infected with COVID-19.

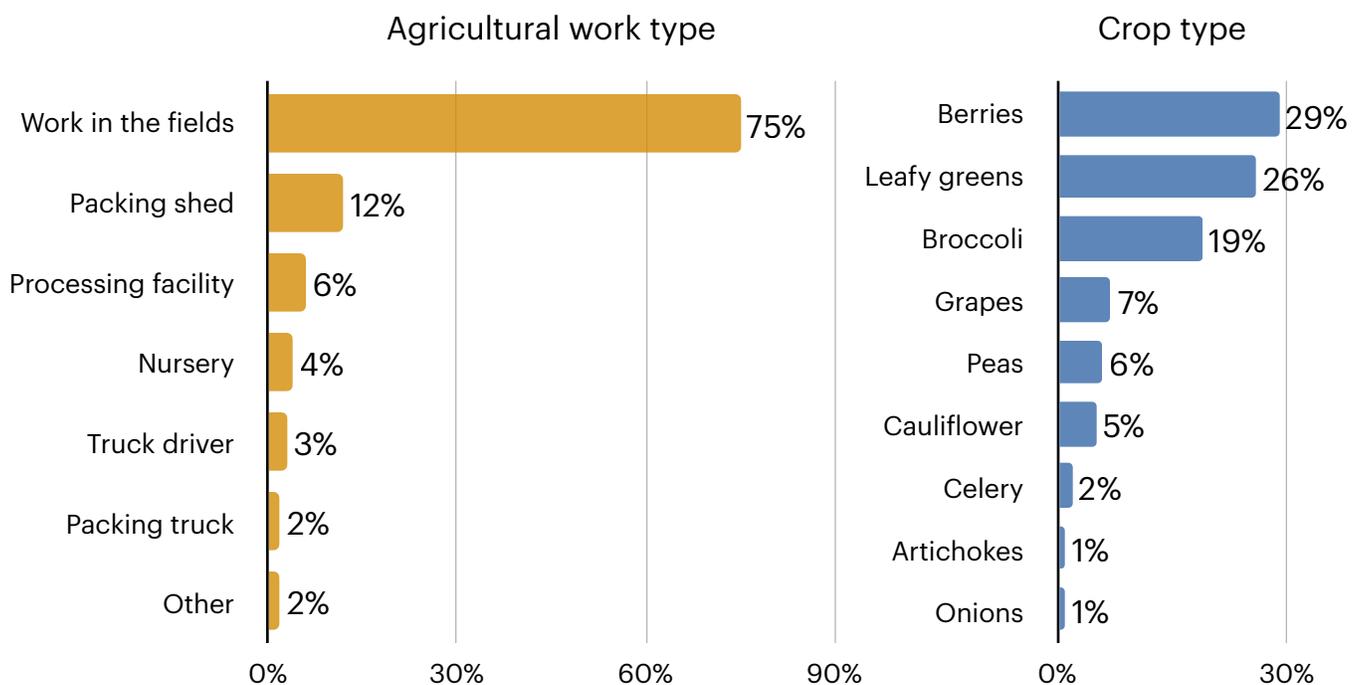
SOCIALIZING

Only 13% (139/1085) of farmworkers indicated they left their home for non-essential reasons (e.g., socializing with family and friends they did not live with, going to church, volunteering, meetings, going to a salon, travel from Mexico, etc.) in the two weeks prior to their interview. Most (94%;1020/1085) did not use public transport in this period. While only 10% (109/1091) reported attending social gatherings with people they did not live with, and only 5% (57/1089) reported attending indoor social gatherings, of those that did attend social gatherings, 40% (44/109) did not wear a face covering at least most of the time during the gathering. About half (51%; 56/109) of farmworkers who attended social gatherings indicated that most people present did not wear face coverings more than half the time.

SECTION 3: EMPLOYMENT

DESCRIPTION OF WORK

Most farmworkers (76%; 830/1090) indicated that they worked outdoors exclusively. Most of the farmworkers worked in the fields (75%; 814/1081); others worked in packing sheds (12%; 132/1081), processing facilities (6%; 64/1081), or nurseries/greenhouses (4%;



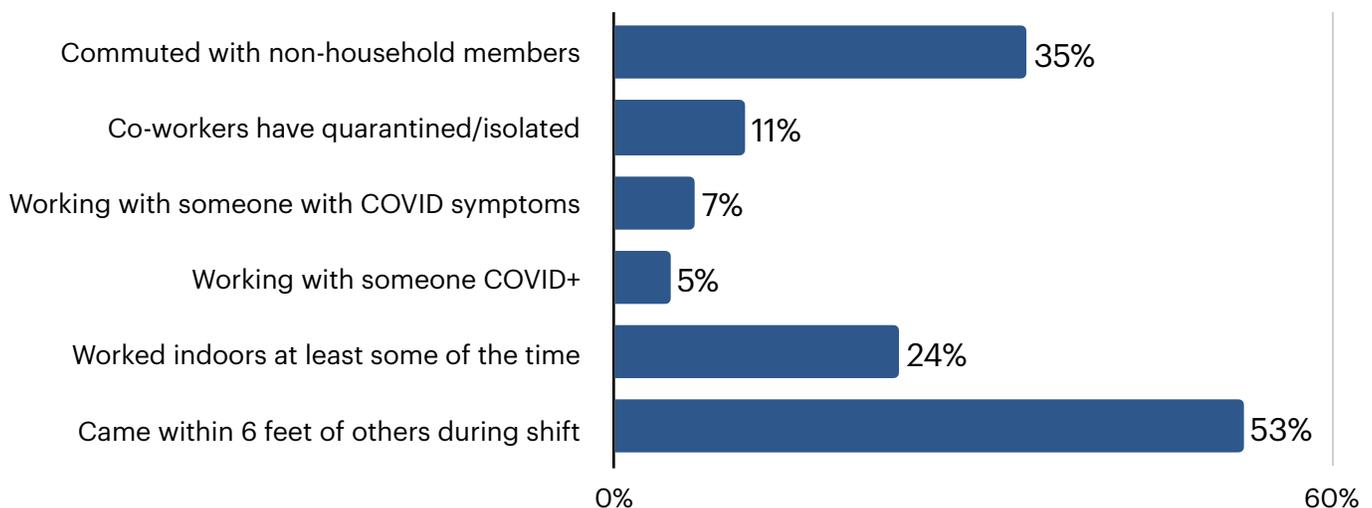
45/1081, including indoor and outdoor nurseries), operated trucks or other large machinery (3%; 33/1081) packing trucks in the field (2%; 21/1081), or did other jobs (2%; 20/1081). Among the field workers, they farmed numerous crops, including berries (29%; 240/814), leafy greens (26%; 214/814), broccoli (19%; 154/814), grapes (7%; 53/814), peas (6%; 52/814), cauliflower (5%; 42/814), celery (2%; 19/814), artichokes (1%; 6/814), and onions (1%; 5/814).



OCCUPATIONAL CHARACTERISTICS

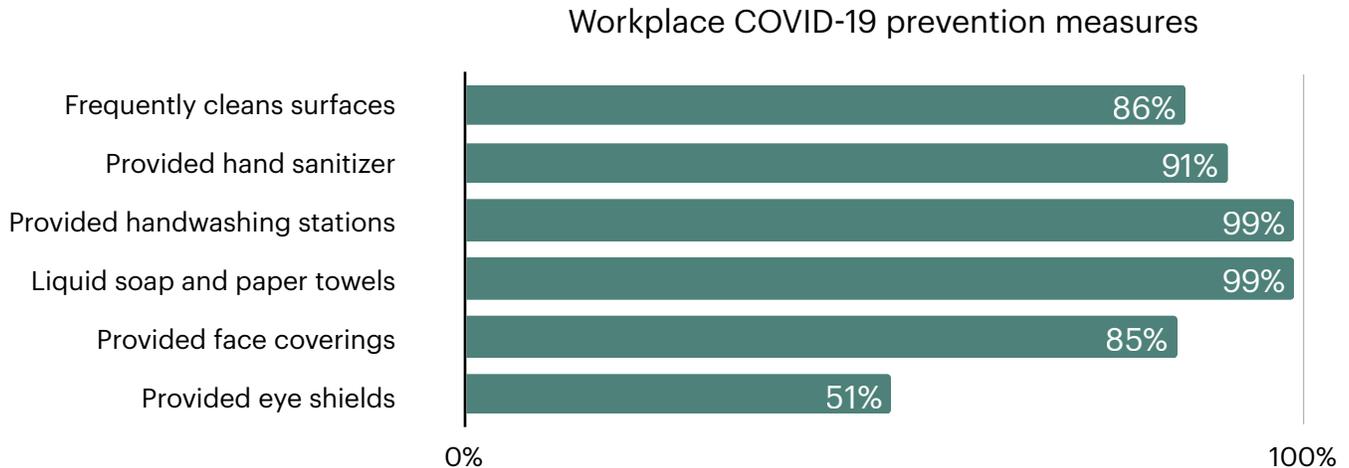
Conditions in the workplace, especially crowded conditions in carpools and workbuses, and insufficient access to personal protective equipment (PPE) and handwashing facilities may exacerbate risk of COVID-19 transmission and infection among farmworkers. Of the 1091 farmworkers surveyed, the majority (83%; 901/1091) indicated that they worked in agriculture during the two weeks preceding the survey, although the remaining had worked earlier in the season. Many farmworkers (35%; 370/1069) indicated that they travelled with non-household members to work. Nearly all (98%; 1070/1089) reported using a face covering most or all the time at work. Slightly more than half of farmworkers (53%; 554/1052) reported insufficient physical distancing at work, defined as at least one person coming within six feet of them at work.

Workplace characteristics

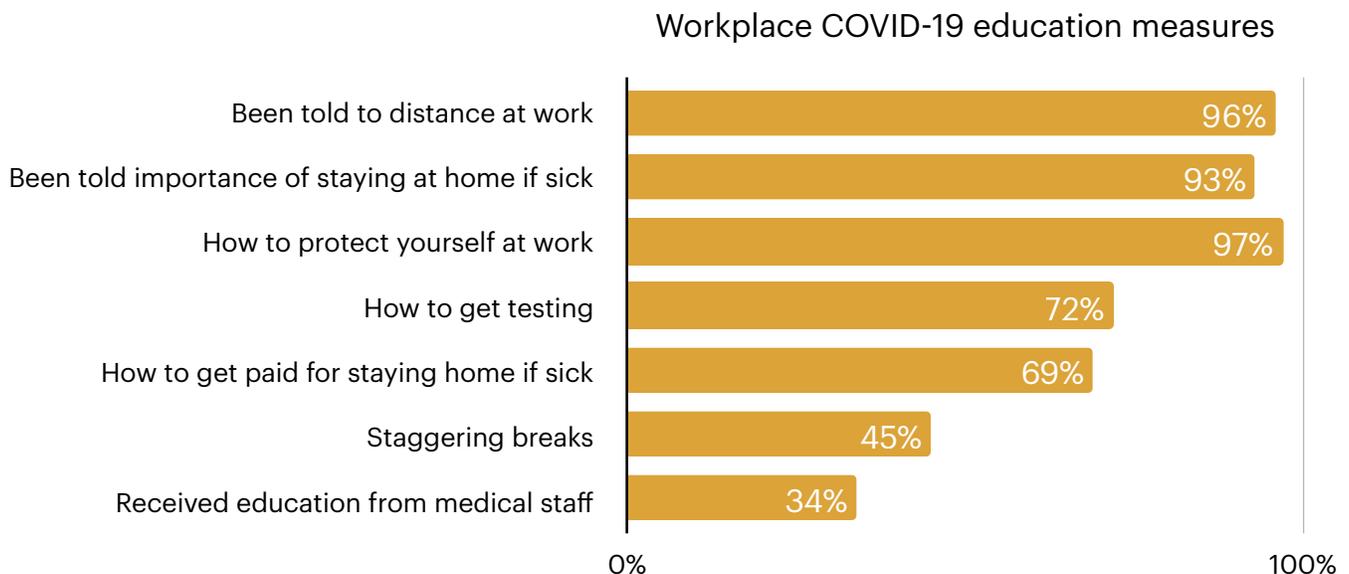


PROVISIONS OF EMPLOYER

According to farmworkers, nearly all of the employers provided handwashing stations (99%; 1084/1090) with liquid soap and paper towels (99%; 1078/1083). Farmworkers reported that the vast majority of employers provided hand sanitizer (91%; 994/1090), gloves (85%; 929/1090), and face coverings (85%; 923/1089). About half (51%; 551/1090) of employers provided eye shields. Farmworkers reported that employers (86%; 933/1087) disinfected high touch surfaces.

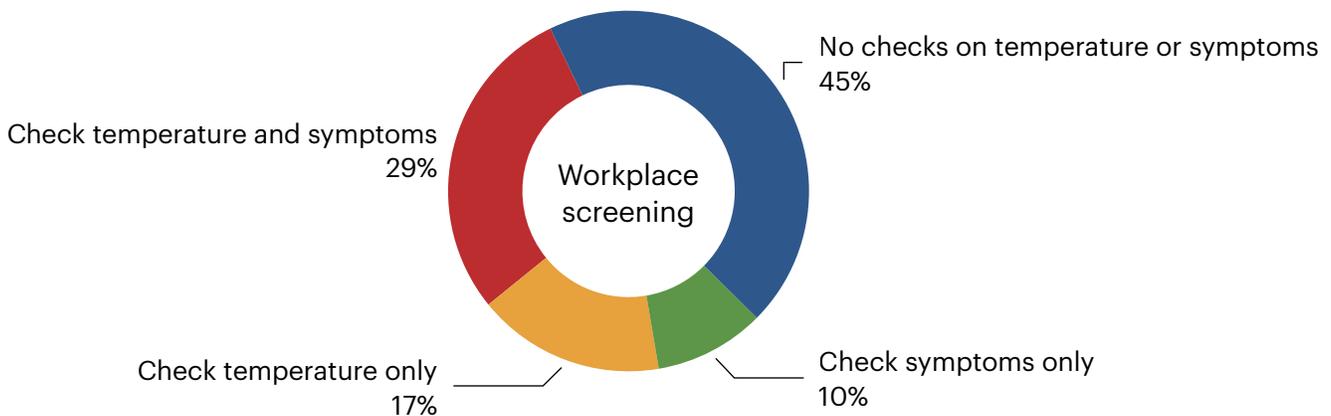


According to farmworkers, employers disseminated different types of health and physical distancing messaging to their farmworkers. Over 97% (1053/1089) of employers provided information about how farmworkers could protect themselves at work, and 72% (785/1088) of employers provided information on how to get COVID-19 testing or treatment. Only 44% (483/1088) provided information on where to get housing to quarantine or isolate if exposed or infected with COVID-19; among those who were



diagnosed with COVID-19, 43% (54/127) had been provided this information before the results were returned. Nearly all (96%; 1040/1088) employers instructed employees to adhere to physical distancing guidelines at work, but less than half of the employers (45%; 485/1087), according to farmworkers, staggered breaks to promote physical distancing during break time.

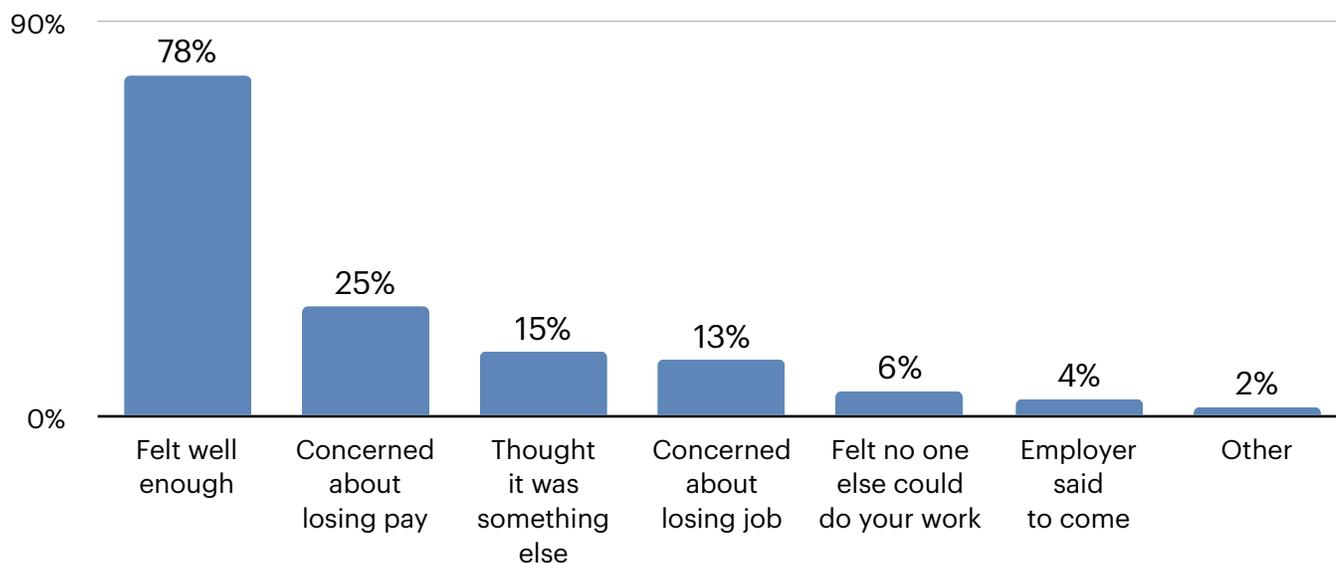
Many farmworkers reported that their employer did not conduct a screen to confirm their health: 10% (111/1091) reported symptom screening only, 17% (183/1091) reported temperature screening only, and 45% (486/1091) reported no health screenings at all; only 29% (311/1091) reported both temperature and symptom screening.



EXPOSURE TO CO-WORKERS WITH COVID-19 OR SYMPTOMS

Over 11% (104/950) of farmworkers indicated that they had at least one co-worker quarantined or isolated within the last two weeks, while smaller numbers of participants indicated working with someone who had been diagnosed with COVID-19 (5%; 48/1026) or who had experienced COVID-19 symptoms (7%; 71/1051). More than half (57%; 170/296) of the farmworkers who reported experiencing symptoms associated with COVID 19 and 58% (47/81) who had symptoms and later diagnosed with COVID-19 worked when they had those symptoms. The reason most farmworkers reported working despite COVID-19 symptoms was that they felt well enough to work (78%; 132/170); however, being concerned about losing pay (25%; 43/170), being concerned about losing their job (13%; 22/170), and being told to go to work by their employer (4%; 7/170) were important contributors to farmworkers going to work sick, as was thinking they were sick with something else besides COVID-19 (15%; 25/170).

Reasons for going to work while sick



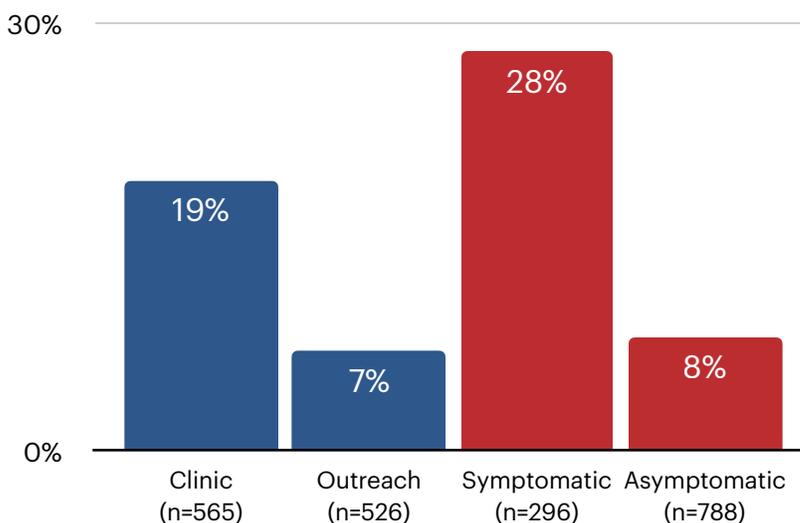
SECTION 4: COVID-19 TEST RESULTS

PCR TEST RESULTS

For this preliminary report, we have received PCR results for 1071 of the 1091 participants recruited between mid-July and November 25. Overall, 13% of farmworkers (140/1071) tested positive by PCR over the five-month study duration.

Prevalence of PCR-positive status increased from July (14%) and August (14%) to September (18%), dropped in October (9%), and November (12%). PCR positivity among people recruited at clinics (19%) was consistently higher than among those recruited through community outreach events (7%). Indeed, our lower prevalence of PCR positive results in October and November relative to the previous months may well have been related to our increased recruitment through outreach (i.e., testing outside the clinic) in those months.

Prevalence of infection: PCR



Among those farmworkers who were symptomatic in the last two weeks, 28% (81/291) were infected with COVID-19 on PCR. Among participants who were asymptomatic, 8% (58/773) were infected with COVID-19 by PCR.

ANTIBODY TEST RESULTS

For this preliminary report, we have received antibody results from those tested up through the end of October (n=740). Antibody results from farmworkers who tested negative for active infection revealed that antibody prevalence has increased over time from 9.1% in July, to 12.5% in August, 20.2% in September, and 19.4% in October.

SECTION 5: PREDICTORS OF PCR AND SEROPOSITIVITY

SYMPTOMS

Only 58% of those who tested positive were symptomatic (i.e., 42% were asymptomatic). Of the 140 farmworkers infected with COVID-19, the most commonly reported symptoms were headaches (33% of cases), muscle pain (32% of cases), chills (25% of cases), fever (24% of cases), fatigue (24% of cases), dry cough (22% of cases), and/or a sore throat (22% of cases) during their infection (Table - next page). Symptoms with the highest odds of testing positive for COVID-19 included shortness of breath, loss of smell and/or taste, fever, loss of appetite, and difficulty breathing (Table - next page).

Percent of positive cases:

Percent of people experiencing the symptom when infected.

Odds ratio:

The likelihood of testing COVID-19 positive when experiencing a specific symptom compared to not experiencing such symptom. For example, testing positive was 17 times more likely in participants who experienced loss of smell compared with those without loss of smell.



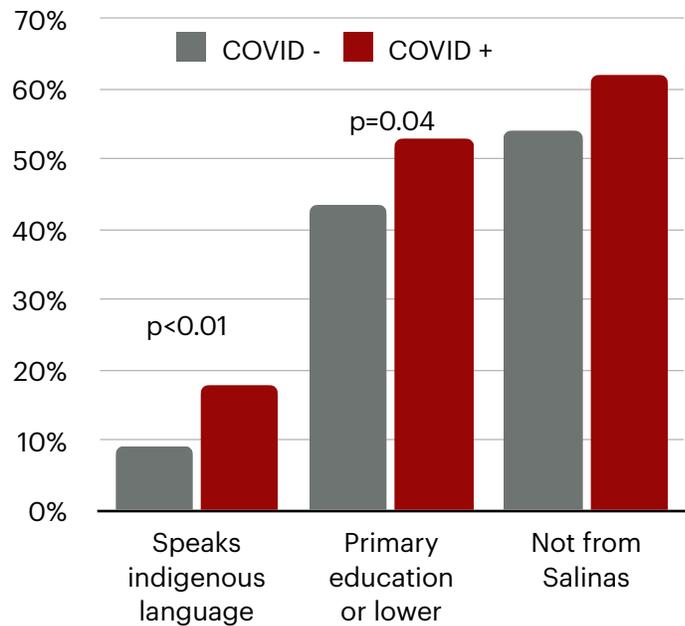
Symptoms	Percent of positive cases	Odds ratio (95% CI)
Any symptoms	58%	4.8 (3.2, 6.9)
Headache	33%	4.2 (2.7, 6.3)
Muscle pain	32%	7.8 (4.9, 12.2)
Chills	25%	7.6 (4.6, 12.6)
Fever	24%	12.2 (6.8, 21.5)
Fatigue	24%	4.7 (2.9, 7.5)
Dry cough	22%	7.1 (4.2, 11.9)
Sore throat	22%	3.6 (2.2, 5.8)
Cough with mucus	17%	4.4 (2.5, 7.5)
Loss of smell	16%	17.2 (7.8, 37.2)
Loss of taste	16%	15.6 (7.3, 33)
Sweats	16%	6.5 (3.5, 11.8)
Blocked nose	16%	4.4 (2.5, 7.7)
Runny nose	16%	3.2 (1.8, 5.4)
Loss of appetite	15%	9.5 (4.8, 18.5)
Sneezing	15%	2.1 (1.2, 3.6)
Hoarseness	14%	4.7 (2.5, 8.6)
Shortness of breath	13%	34.3 (11.1, 102.8)
Difficulty breathing	13%	9 (4.4, 18.3)
Tickle in the throat	12%	4.2 (2.2, 7.7)
Diarrhea	11%	4.5 (2.3, 8.9)
Stomach pain	11%	3.5 (1.8, 6.6)
Watery eyes	10%	2.4 (1.3, 4.5)
Nausea	9%	3.7 (1.8, 7.4)
Chest pain	8%	5.2 (2.3, 11.6)
Ear pressure	7%	5.0 (2.1, 11.6)
Sinus pressure	5%	4.9 (1.8, 12.9)
Wheezing	4%	4.6 (1.6, 13.1)
Eye pain	4%	2.3 (0.9, 5.8)
Trouble thinking	4%	2.6 (0.9, 7.4)
Swollen glands	4%	2.6 (0.9, 7.4)

FACTORS AT HOME ASSOCIATED WITH COVID-19 TEST POSITIVITY

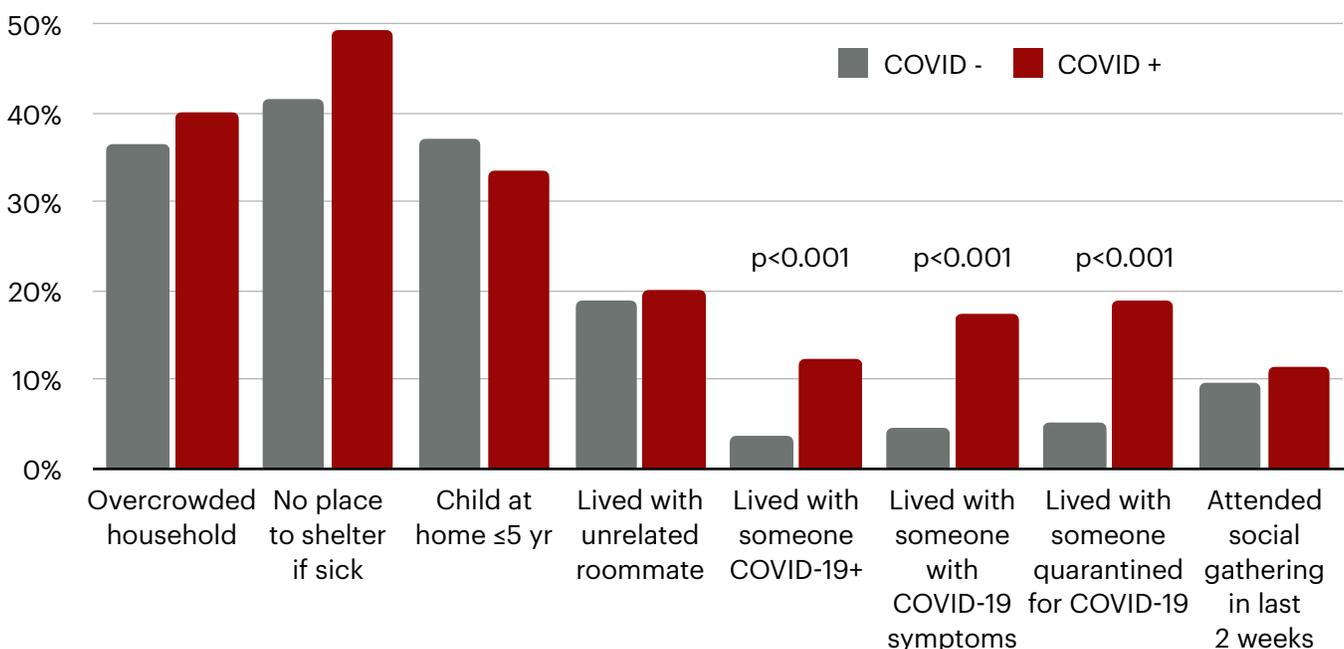
We found that living with someone exhibiting COVID-19 symptoms was a significant risk factor for testing positive. Of those living with someone diagnosed with COVID-19 in the past two weeks (n=51), 34% (17/50) tested positive. There were 51 people who reported living with someone who had COVID-19 symptoms without a positive diagnosis; of these, 35% (17/49) tested positive.

Conditions in the home may also exacerbate the risk of COVID-19 infection, but crowding in the home did not appear to increase the likelihood of testing positive (14% living in crowded homes vs 12% in uncrowded homes). PCR positivity was no higher amongst people who had children at home (13%) compared to households who did not have children (13%). There did not appear to be variations in PCR positivity by income or age, but we did find evidence that farmworkers with lower levels of education or who spoke Indigenous languages had higher test positivity rate (23%) than those who spoke Spanish (12%) or English (4%).

Positivity risk factors: demographic

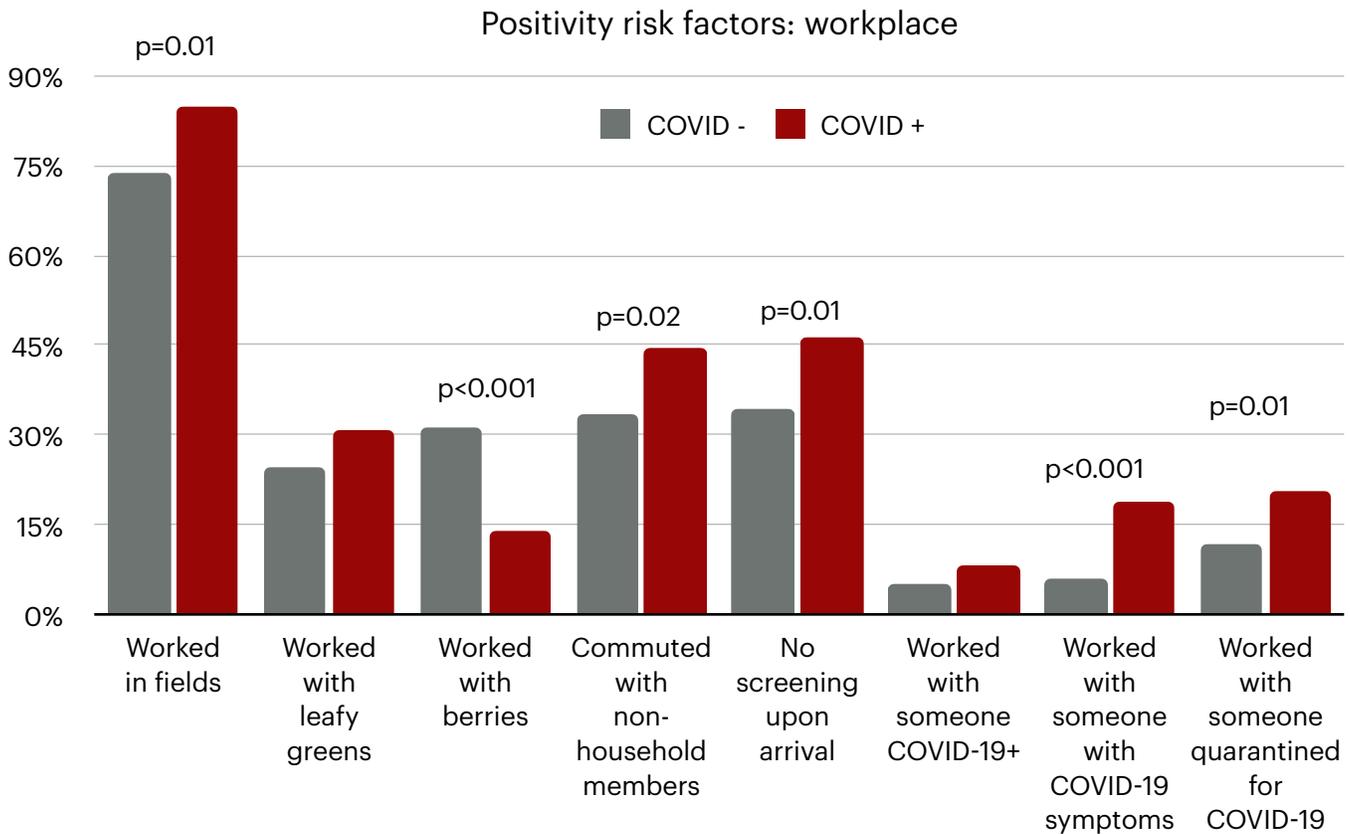


Positivity risk factors: household and community



FACTORS AT WORK ASSOCIATED WITH COVID-19 TEST POSITIVITY

We found that 7% (67/900) of farmworkers reported working with someone with cough, fever or trouble breathing in the last two weeks, with 36% (24/67) of these workers indicating that they traveled to work with the person exhibiting COVID-19 symptoms. Of the 24 workers that traveled to work with a symptomatic person, 65% (15/23) tested positive. Of those who used group transport to get to work (n=317), 17% (53/312) tested positive vs. 11% (66/575) among people who traveled solo or with household members.

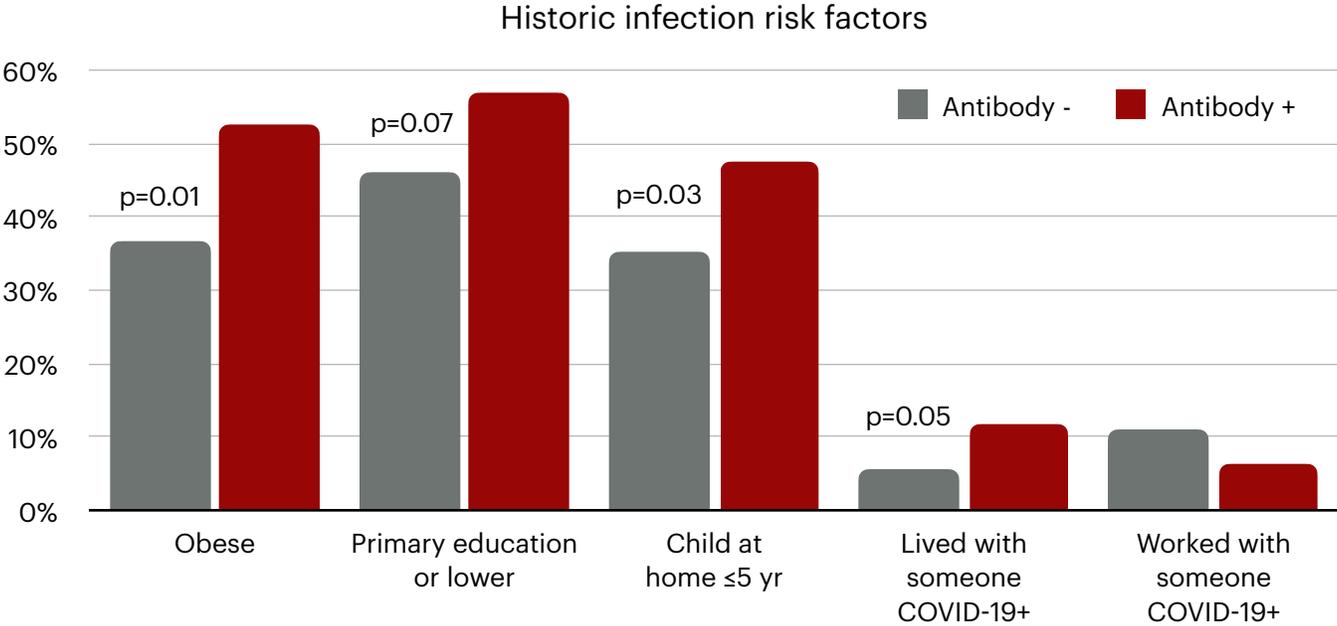


There were 46 workers who indicated working with someone with a COVID-19 diagnosis in the past two weeks; of these 20% (9/46) tested positive. Fifty-three workers indicated they worked with someone in the past two weeks who had COVID-19 symptoms but did not have a positive diagnosis; of these 29% (15/52) tested positive. Lastly, there were 49 workers who indicated they worked with someone who was quarantined for COVID-19 but did not have diagnosis or symptoms in the past two weeks; 22% (11/49) of these tested positive.

Farmworkers who worked in the field had higher positivity than those completing other agricultural jobs (15% vs. 8%). Similarly, farmworkers who worked outside only had higher PCR positivity than farmworkers who worked indoors exclusively or a combination of indoor and outdoor (15% vs. 9%). Field workers who worked with berries were less likely to be PCR-positive than those working with other crops (7% vs 18%).

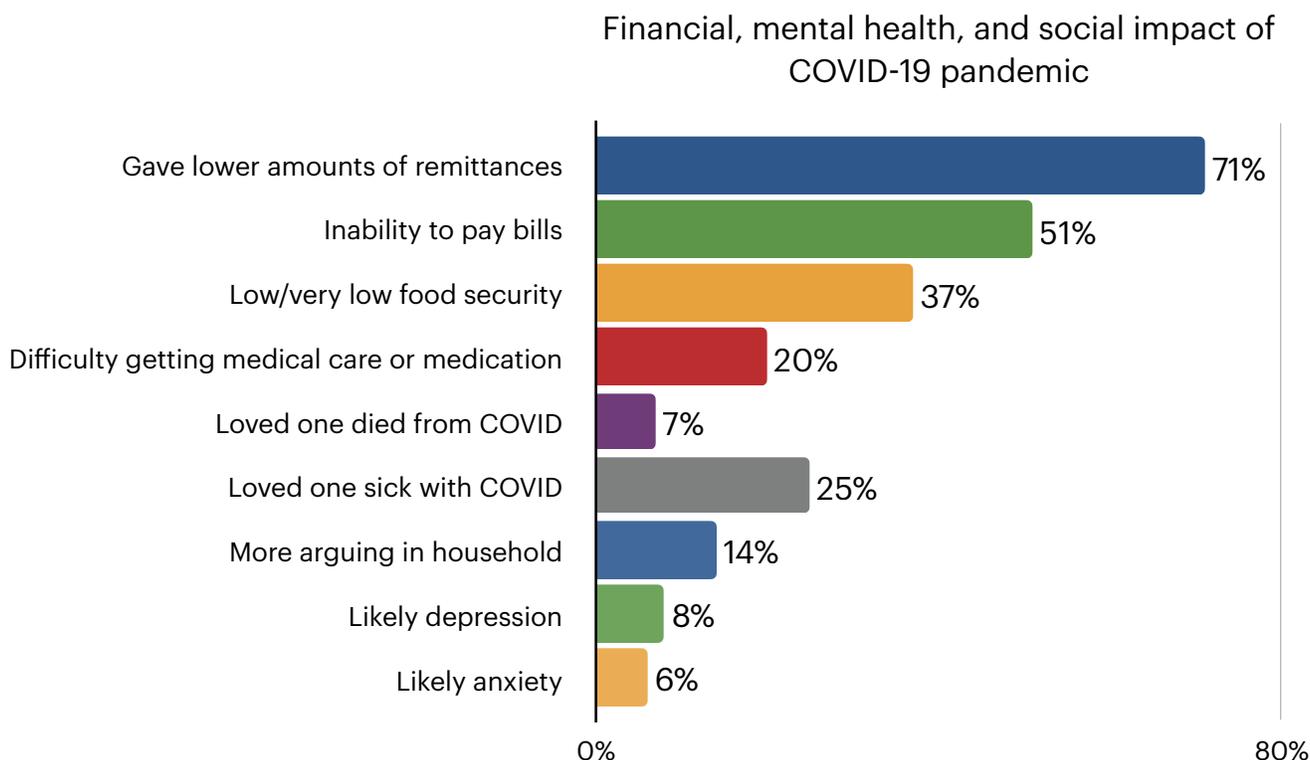
FACTORS ASSOCIATED WITH SEROPOSITIVITY

In preliminary analyses of antibody status for the first 740 participants, we found that those participants who were obese, had lower education, lived with children, or lived with someone who tested positive for COVID-19 were more likely to be seropositive.



SECTION 6: IMPACT OF COVID-19 PANDEMIC ON LIVES

COVID-19 has taken a toll on both the physical and mental well-being of farmworkers. The majority of farmworkers (91%; 992/1090) believed that COVID-19 is a real threat, and 42% (461/1089) reported being very concerned and 43% (468/1089) moderately concerned about COVID-19. Almost one quarter (24%; 257/1089) said COVID-19’s impact on their lives has been “extremely negative,” and another 63% (683/1089) said its effect has been somewhat or moderately negative. Over 25% (272/1091) of farmworkers had a loved one

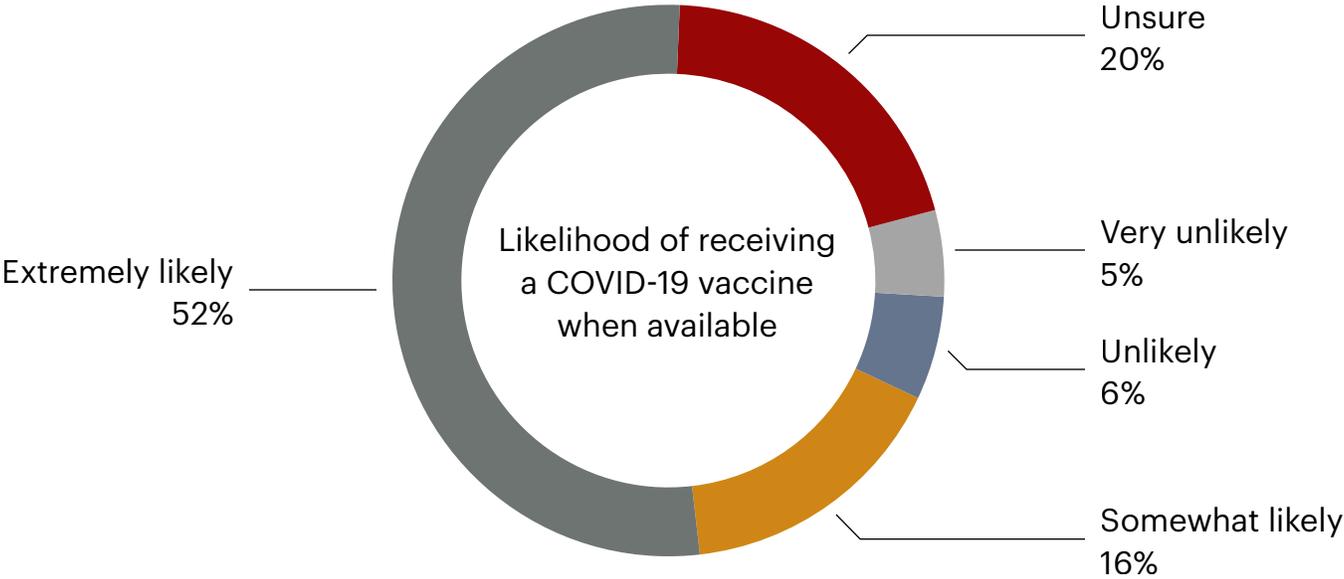


become infected with COVID-19 and 7% (73/1091) had a loved one die from COVID-19. One third (33%; 359/1089) indicated they were afraid of losing their job if they were sick with COVID-19. More than a third of farmworkers (37%; 400/1091) indicated they had low or very low food security, based on a scale by the US Department of Agriculture and answering questions such as “did you ever worry whether you would run out of food before you got money to buy more?”. In addition, 8% (86/1075) indicated likely major depressive disorder (Patient Health Questionnaire-2, PHQ-2, scale ≥ 3 , screening tool for depressive mood) with a total of 18% (198/1075) reporting symptoms of depression (PHQ-2 score ≥ 2). Similarly, 6% (69/1085) indicated likely generalized anxiety disorder (Generalized Anxiety Disorder-2, GAD-2, scale ≥ 3 , screening tool for generalized anxiety

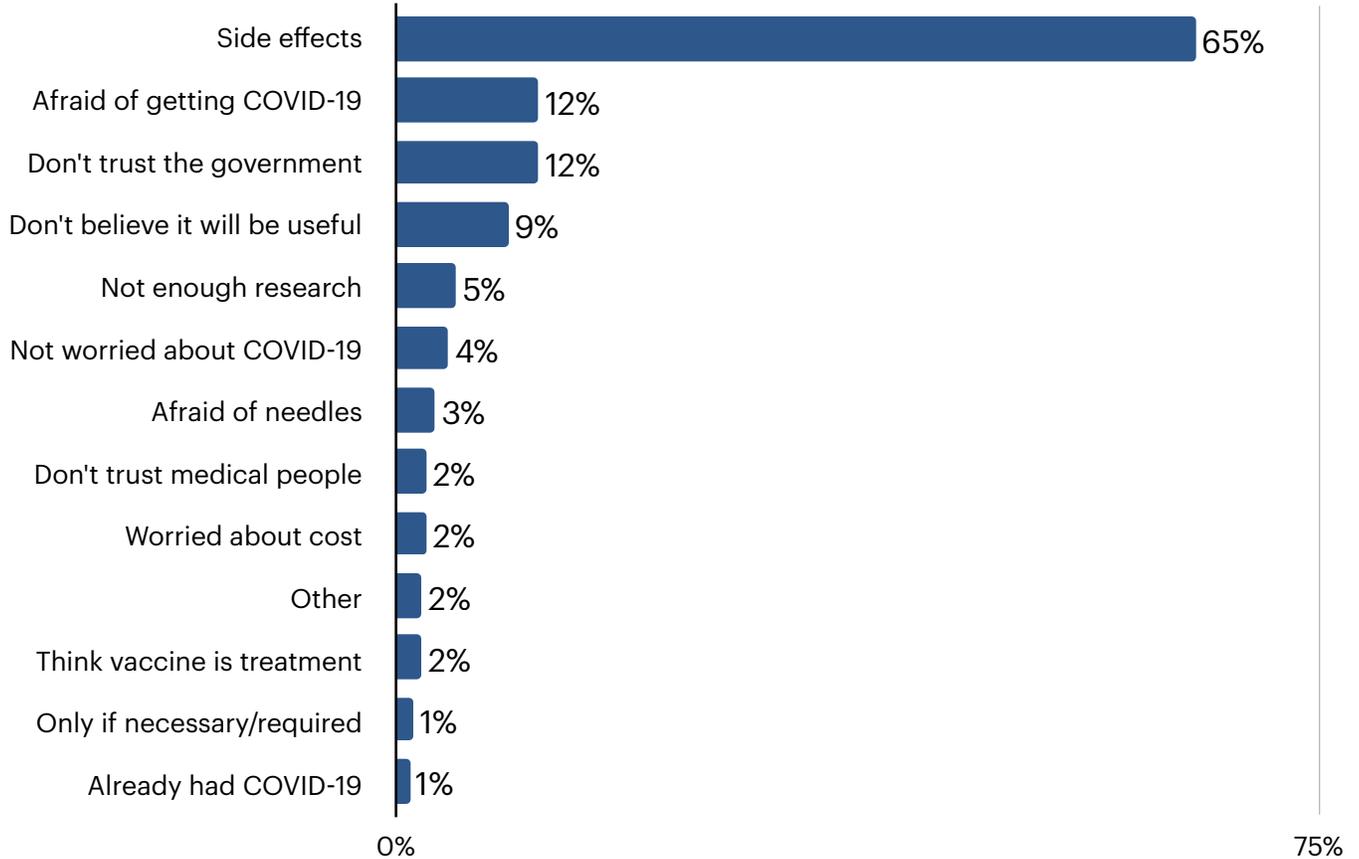
disorder) with a total of 15% (161/924) reporting symptoms of anxiety (GAD-2 score ≥ 2). A number of farmworkers reported greater discord at home (14%; 148/1090). Of the 586 people (54%) who indicated they sent remittances to family outside the US before the pandemic started, 71% (418/586) indicated that they sent less money to their family since the pandemic started. About half of farmworkers (51%; 307/599) who were asked the question (we added this question later) indicated they had difficulty paying bills since the start of the pandemic and 20% (223/1090) indicated that they had more trouble accessing medical care or medication since the pandemic began.

SECTION 7: VACCINATION

We asked the farmworkers how likely they were to get vaccinated when a vaccine became available to them. About half of farmworkers (52%; 565/1088) indicated they were extremely likely to get a COVID-19 vaccine, though a high percentage (20%; 222/1088) indicated they were unsure and 11% (125/1088) said either unlikely or very unlikely. Of the farmworkers who did not say they were extremely likely to receive a COVID-19 vaccine, the majority indicated this was due to fear of bad side effects (65%; 184/285), mistrust in the government (12%; 33/285), and/or fear that the vaccine could induce a COVID-19 infection (12%; 33/285).



Reasons not to receive COVID-19 vaccine when available



SECTION 8: CONCLUSIONS

We report on the first epidemiologic study of SARS-CoV-2 infection among California farmworkers. We found a high PCR positivity rate of 13% among over 1000 farmworkers enrolled from clinic and community settings. A striking 42% of cases were asymptomatic. In our preliminary results, we have found that seropositivity doubled between July and October reaching nearly 20% and suggesting that 1 in 5 farmworkers had an earlier infection.

Farmworkers who tested PCR positive were more likely to speak indigenous languages and to have lower education. Known exposure to COVID-19 at home or in the workplace were both significant predictors of subsequent infection. Many farmworkers if they were to become sick do not have homes with adequate space to isolate.

Although workers reported that employers provided face coverings and hand wash stations with soap, many were not adequately screening their workers for symptoms of disease prior to the work shift. Commuting to work with others not in their household markedly increased the risk of a farmworker becoming ill. In addition, a staggeringly high percentage of farmworkers reported working while symptomatic, with some reporting fear of not getting their next paycheck, being fired from their job, or because their employer told them to come to work as reasons for working while sick.

COVID-19 has taken a toll on both the health and well being of farmworkers. The majority of farmworkers believed that COVID-19 is a real threat and are very concerned about COVID-19. Many have loved ones who have been sick with COVID-19 and some have died. Many fear losing their job if they get sick and more than a third are food insecure during this pandemic.

Finally, just as vaccination is becoming available, only half of the farmworkers reported that they were extremely likely to get vaccinated. The main reasons for not getting vaccinated was their fear of side effects, of getting COVID-19 from the vaccination, as well as their distrust of the government.



SECTION 9: RECOMMENDATIONS

Our research has led us to propose ways to protect farmworker health and ultimately to secure the nation's food supply. We propose the following recommendations for policy makers and community leaders:

1. Develop and implement a culturally- and linguistically-appropriate education campaign. This program should target all levels in the agricultural industry: employers, supervisors, farm labor contractors, as well as farmworkers. This education campaign should go beyond educating about the virus and ways to protect oneself at work, in the community, and in the home, but educate workers and their employers about farmworker benefits and their ability to remain at home awaiting test results or if sick and receive replacement income. It should educate all in the employment hierarchy about the importance in screening workers for symptoms and temperature before entering work and for enforcing that sick workers do not come to work.
2. Increase rapid and convenient PCR testing and immediate and culturally- and linguistically-appropriate contact tracing. Testing should go to the farmworkers—to their neighborhoods and to the fields. Entire households should be tested. Testing should be rapid so that contact tracing is immediate and workers do not return sick to work.
3. To provide a support structure that allows for immediate and simple to access wrap-around services, including on-the-spot income replacement for those who await test results or are sick, mental and family health services, housing, and child and food support. Farmworkers are living paycheck to paycheck and a large proportion are food insecure or going hungry. They cannot wait to receive replacement income. Completing complex forms that require access to a computer can be a deterrent to receiving necessary benefits and thus, the process must be simplified with assistance provided if necessary. Supplemental income should be allocated for documented or undocumented.
4. To prioritize farmworkers, as essential workers, in rapid testing and vaccination programs in order to protect this population and secure the United States food supply. These programs must address the misunderstandings of testing/ vaccination and the mistrust of the government. Incentive programs to increase vaccination and testing should be given consideration and may ultimately prove to be cost-effective.

We propose that all the above actions should be developed and/or supported by respected and trusted sources, such as community-based organizations or clinics serving farmworkers and their families.

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