

Title: ReCCAP: Return to Campus COVID-19 Assessment Project for UNC-CH Employees & Trainees

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The primary research question of this study was to determine if prevention measures implemented on the UNC-CH research community was effective in reducing the spread of SARS-CoV-2 among the research staff, faculty and students.

Methods

UNC-Chapel Hill employees and students who were conducting or supporting research activities that required coming to campus at least one day a week were invited to enroll in the ReCCAP study. Upon enrollment, study participants were asked to provide written informed consent and then to complete a survey on compliance with SARS-CoV-2 prevention practices in the workplace and when not at work, risk factors for COVID-19 and symptoms, and experiences with COVID-19. Asymptomatic participants were asked to provide nasal swabs for PCR testing for SARS-CoV-2 at baseline, month 1 and month 3 and blood samples to conduct serology testing for antibodies to SARS-CoV-2. In addition, asymptomatic participants provided nasal swabs every 2 weeks between the monthly visits to conduct PCR testing for active SARS-CoV-2 infection. Online surveys were also conducted at 1 and 3 months.

Major Findings

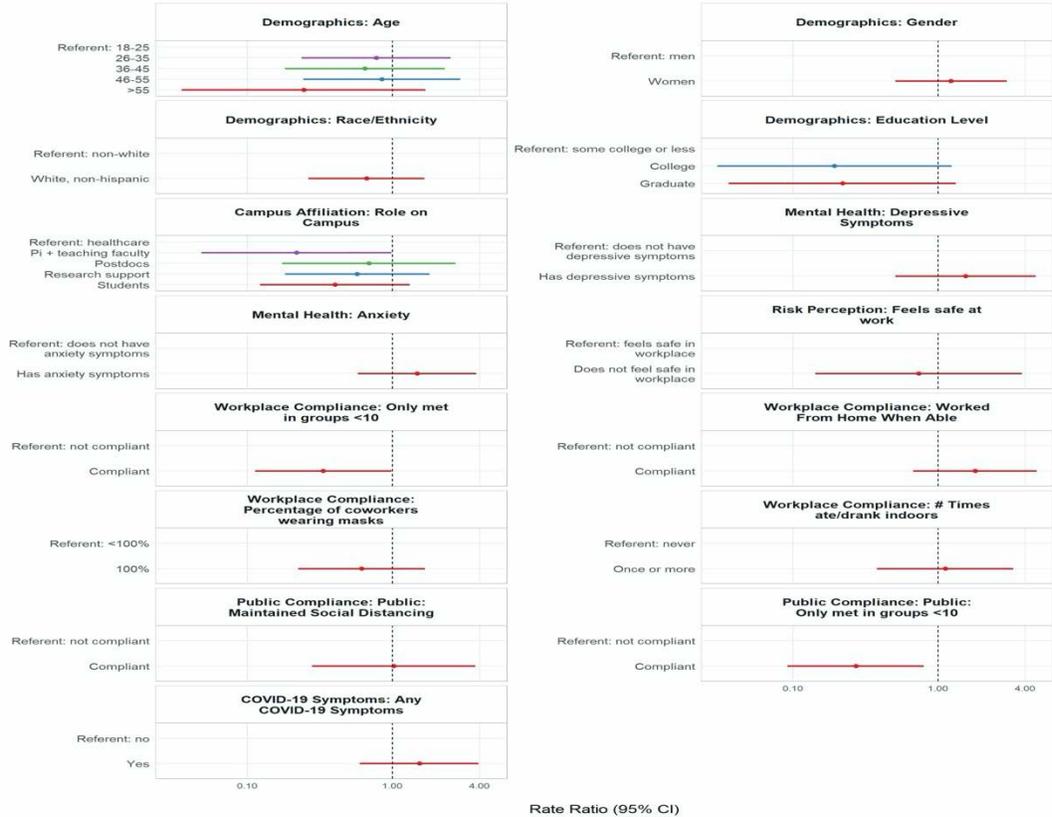
We enrolled 927 faculty, staff and students/post-docs into the ReCCAP study between July-Sept 2020. The baseline prevalence of SARS-CoV-2 serology was 5.3% (95% CI 3.9-6.8). The percentage of individuals who acquired SARS-CoV-2 between baseline and the 3-month visit was 3.7% (95% CI 2.05-5.26). There were only 5 individuals who tested positive through asymptomatic PCR testing throughout the whole study- none of these individuals tested positive through confirmatory testing. There were over 3,782 PCR tests conducted on participants during the study period.

Compliance with mask wearing and physical distancing in the work place was high.

- 68% of participants reported always wearing masks at work at baseline and 3-month surveys. Of those that did not always report wearing masks, they reported it was because they were alone in their work space.
- 87% said they always met in groups of less than 10 at baseline and 3-months.
- 87% and 85% at 1 and 3 months, respectively, said 100% of co-workers wore masks at work in the past 2 weeks
- 20 and 25% at 1 and 3 months, respectively, said they ate or drank in an indoor shared space with 1-10 people in the past 2 weeks without a mask
- 8% of participants at baseline reported being unhappy about being at work or feeling they were forced to be back at work.
- At baseline 32% of participants reported feeling not at all safe/a little safe/somewhat safe at work at baseline and 23% at 3 months.

When examining factors associated with sero-conversion, participants who reported that they only met in groups less than 10 at work and also when not at work were less likely to have acquired SARS-CoV-2. No other factors were significantly associated with sero-conversion although those who reported that 100% of their co-workers wore masks while at work were less likely to sero-convert although the result was not significant.

Table 1. Factors associated with SARS-CoV-2 Seroconversion



Conclusion

Overall there was a fairly low risk of asymptomatic SARS-CoV-2 in the UNC-CH campus research community: conducting research on campus with COVID-19 prevention precautions in place was low risk for COVID-19 transmission. Irregular PCR testing (1 time every 2 weeks or less often) was not very effective at identifying asymptomatic infections in the workplace. Serology testing was better at identifying asymptomatic SARS-CoV-2 new cases over time. Transient virus and low levels of virus in asymptomatic individuals likely means infrequent PCR testing is not particularly informative for identifying cases or understanding the scope of the epidemic in a workplace setting. Research activities can continue during a pandemic such as SARS-

CoV-2 with careful precautions in place in the workplace such as were in place at UNC-Chapel Hill (masking, reduced capacity in the workplace, physical distancing, disinfecting surfaces, handwashing).

Budget spent: \$2,617,669.65

Number of Staff and Students: 10 faculty, 22 permanent staff, 31 contract staff, 6 students