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Short communication

A national survey of early treatment seeking behavior among those with incident SARS-CoV-2 infection

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COVID-19 continues to cause severe disease, hospitalization, and death. Despite effective means to treat SARS-CoV-2 infection with nirmatrelvir/ritonavir, molnupiravir, monoclonal antibodies, and remdesivir [1–4], the early treatment seeking behavior of those newly diagnosed with infection is not clear. We surveyed users of a national SARS-CoV-2 testing company to assess the frequency and correlates of early treatment seeking behavior for a positive test result.

We recruited adults (18 years or older) who had tested positive for SARS-CoV-2 by PCR at a large clinical laboratory (Curative, San Dimas, CA). To be eligible, individuals had to have a positive test result within 7 days of enrollment. Surveys were anonymous and voluntary. We collected data on demographic characteristics, general health care access and utilization, awareness of treatment for COVID-19, treatment seeking behavior, and treatments received. Questions were developed to be answered in a multiple choice fashion for user ease. Descriptive statistics and odds ratios (OR) with 95% confidence intervals (95% CI) were calculated on StataSE (StataCorp, College Station, TX). Chi-squared tests and linear regression analysis were used to compare categorical variables and continuous variables between groups, respectively. Advarra granted the study IRB exempt (Pro00059961).

Participants were surveyed from 3-7 January 2022: among the 15,991 who viewed a survey request, 7,647 individuals were eligible and provided responses. The median age of a respondent was 42 years (interquartile range: 32 to 54), 68.9% of respondents were women, and respondents represented 33 different states, districts, and territories. Among those surveyed, 66.7% identified as White, 30.6% as Hispanic, 12.1% as Black or African American, 6.2% as Asian, and 1.2% as Pacific Islander or Native American. Most respondents reported they were vaccinated (89.3%).

Among respondents, 23.1% reported they had sought treatment or medical advice for their current COVID-19 diagnosis (Table 1). Of those who were very aware of treatment for COVID-19, 31.0% sought treatment versus 16.7% who were unaware (p-value < 0.001). The odds of treatment seeking behavior were higher for those that were contacted by a medical professional after their diagnosis (OR: 4.57 [95% CI: 3.89 to 5.37]), those with a primary doctor (OR: 2.94 [95% CI: 2.52 to 3.43]), those who self-measured their oxygen saturation (OR: 2.53 [95% CI: 2.25 to 2.84]), and those over 65 years of age (OR: 2.36 [95% CI: 2.02 to 2.76]).

There was no difference in those seeking treatment based on heritage, ethnicity, prior COVID-19 diagnosis, state political affiliation, or vaccination status. The odds of seeking treatment were lower among men (OR: 0.88 [95% CI: 0.78 to 0.99]) and those without insurance (OR: 0.62 [95% CI: 0.52 to 0.72]). The most common treatment locations were clinics and most common treatments were Vitamin C, Vitamin D, Zinc, Tylenol, and NSAIDs (Table 2).

Due to the timing of the survey, infection was most likely due to the Omicron variant of SARS-CoV-2, which might be less severe in those with prior immunity [5]. The most commonly used treatments were over-the-counter medications for symptom relief which are not FDA authorized for effective treatment of COVID-19. Few had received therapies known to reduce risk of disease progression like...
nirmatrelvir/ritonavir, molnupiravir, monoclonal antibodies, and remdesivir [4,6]. There were also continued reports of non-beneficial medication use, i.e., ivermectin and hydroxychloroquine.

Individuals that recovered from COVID-19 before did not seem to have different behavior patterns when compared to those who were naïve to SARS-CoV-2 infection. It is possible that a history of COVID-19 and their indications might increase the use of early effective treatments for COVID-19. Efforts to increase awareness of effective treatments for COVID-19 and their indications might increase the use of early effective treatment for SARS-CoV-2 infection, while reducing the use of medications that do not provide benefit. Additionally, those who were contacted by a health professional were more likely to seek treatment or medical advice for COVID-19. Increased outreach with treatment facilitation from medical professionals and/or public health staff to those with newly detected SARS-CoV-2 infections, particularly among those at higher-risk of complications, might also be helpful to educate individuals about effective medications and non-effective medications for COVID-19.

COVID-19. We found that people who were more aware about treatment for COVID-19 were more likely to seek medical advice or therapy, however the majority of individuals that had sought medical advice or therapy did not ultimately use effective treatments for COVID-19. Efforts to increase awareness of effective treatments for COVID-19 and their indications might increase the use of early effective treatment for SARS-CoV-2 infection, while reducing the use of medications that do not provide benefit. Additionally, those who were contacted by a health professional were more likely to seek treatment or medical advice for COVID-19. Increased outreach with treatment facilitation from medical professionals and/or public health staff to those with newly detected SARS-CoV-2 infections, particularly among those at higher-risk of complications, might also be helpful to educate individuals about effective medications and non-effective medications for COVID-19.

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Declaration of Competing Interest
NK is a consultant for Curative. MB and VS are employed by Curative. JDK is an independent consultant and serves as the Medical Director of Curative.

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