Evaluating First Responders for SARS-CoV-2 Infection in Broward County, Florida

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BACKGROUND

- First responders (e.g., emergency medical technicians, firefighters and police) may be at higher risk of SARS-CoV-2 infection and potentially spreading it than the general population due to frequent and close exposure to others.
- Prevention of first responder infections is important for reducing secondary transmission and maintaining health system capacity.
- We aimed to evaluate the burden of SARS-CoV-2 infection on first responders, identify risk factors for infection, and finally provide health services to help control the current outbreak.

METHODS

- Memorial Healthcare System (MHS), a public healthcare system serving the South Broward Hospital District, together with the National Guard and Florida state governor, opened up a drive-through testing center for SARS-CoV-2 at C.B. Smith Park in Broward County, Florida.
- All first responders in Broward County, symptomatic or asymptomatic, were being tested.
- SARS-CoV-2 infection was made when a positive real time polymerase chain reaction was detected for the virus with a nasopharyngeal swab.
- All first responders who test positive for SARS-CoV-2 were informed by test site staff and self-isolate to limit the spread of the disease.

FIGURES

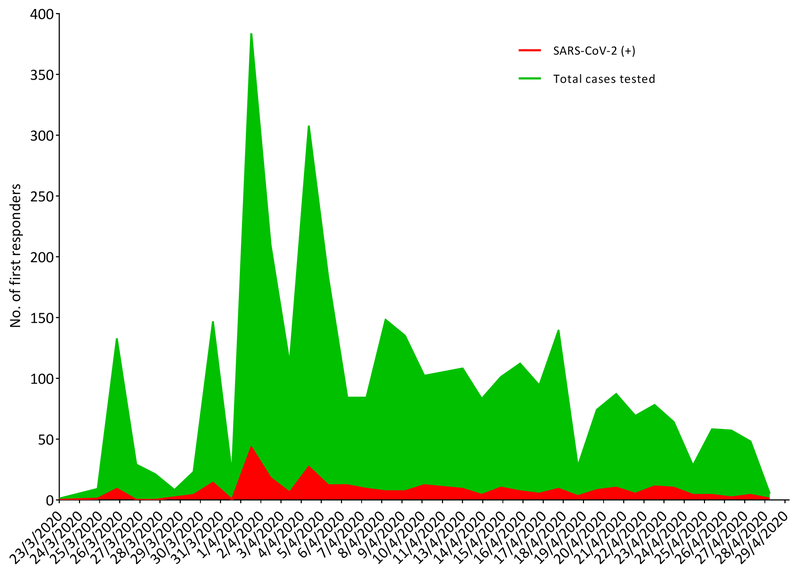

Figure 1

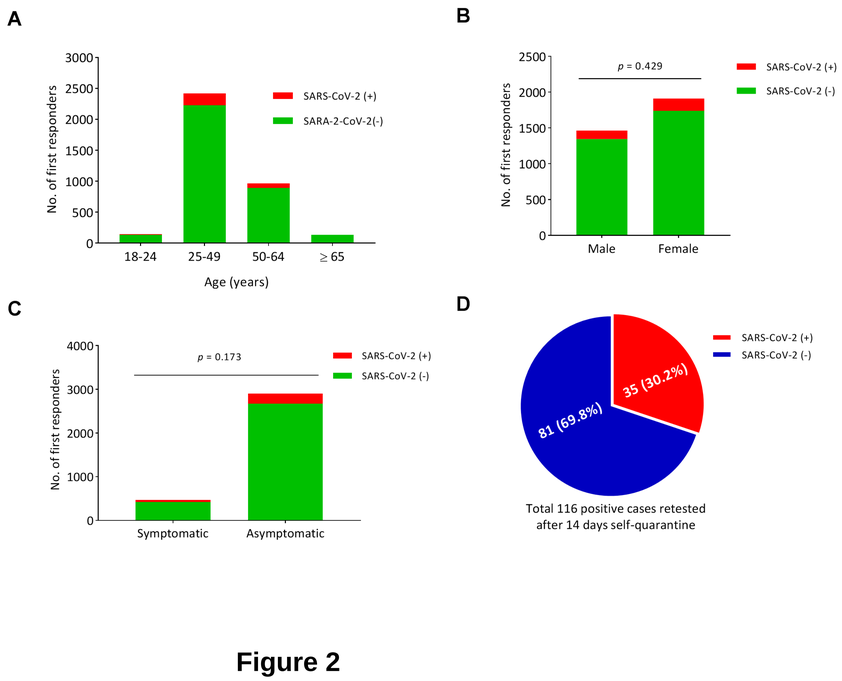

Figure 2

RESULTS

- A total of 3,375 tests were collected during the period from April 1 to April 29, 2020. (Figure 1)
- The median age was 42 years (IQR 33–52) and 1,911 (57%) were taken from females 473 (14%) were symptomatic and 2,902 (86%) were asymptomatic. 289 (8.5%) of 3,375 first responders were positive for SARS-CoV-2 infection. These included 54 of 473 symptomatic (11%) and 235 of 2,902 asymptomatic (8.1%) cases. (Figure 2)
- The rates of SARS-CoV-2 infection were comparable in male vs female (8.1% vs 8.9%, p = 0.429) and in symptomatic vs asymptomatic (p = 0.173).
- There is no sex-, age-based differences in susceptibility to SARS-CoV-2 infection among the first responders tested.

DISCUSSION

- First responders carry a significant burden from SARS-CoV-2 infection, with an infection rate of 8.5%, which was comparable in symptomatic and asymptomatic individuals.
- There is no sex-, age-based differences in susceptibility to SARS-CoV-2 infection in first responders.
- High priority testing for SARS-CoV-2 must expand to include first responders, particularly asymptomatic individuals.