

UC Davis
Emergency Medicine

Title

Utility of Asymptomatic COVID-19 Screening in the Emergency Department

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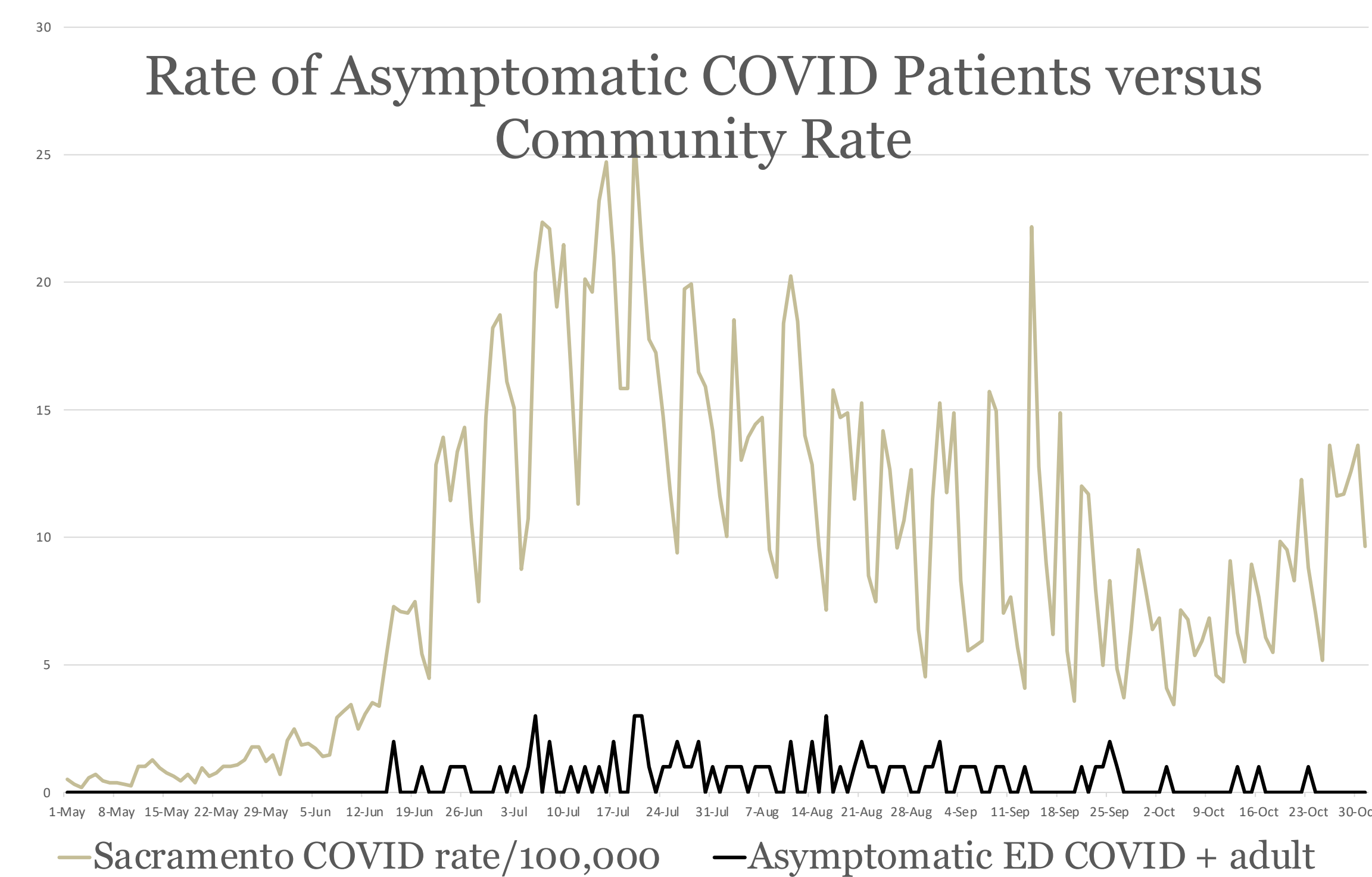
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Data Availability

The data associated with this publication are not available for this reason: N/A

Background

- Coronavirus of 2019 (COVID-19) is an infectious virus currently causing a pandemic. Evidence supports high rates of asymptomatic infections with COVID-19, leading to concerns that viral transmission may occur via these asymptomatic patients.
- Initially, the screening of asymptomatic patients was of low utility as only 2 of 1,342 ED patients tested positive. These findings were during a period of low COVID-19 prevalence in the community.
- Subsequently, COVID-19 infection rates increased in the community. During this increase in COVID-19, the rate of asymptomatic cases also increased.



Aims

To describe the utility of screening in the Emergency Department for COVID-19 in asymptomatic patients.

Methods

- Retrospective cohort study that included all adult ED patients who had a COVID-19 test via the ED's asymptomatic screening protocol. The dates of data collected ranged from the May 1st, 2020 to October 31st, 2020.
- The primary outcome was positive COVID-19 tests. Patients with positive tests underwent further data abstraction using standard chart review methodology. Data were described with simple descriptive statistics.
- Signs/symptoms of COVID-19 : fever, hypoxia, cough, fatigue, myalgias, nasal congestion/drainage, shortness of breath, sore throat, headache, diarrhea, or loss of taste/smell.
- Other data collected included: COVID risk factors, laboratory testing including COVID antibody, imaging findings if obtained, infectious disease consult, and treatments.

Results

Patients

- Total of 7408 adult patients had COVID test under the asymptomatic protocol
 - Mean age 53.8 ± 19.3 years
- Total of 78 positive tests (1.1%, 95%CI 0.8-1.3) and 9 inconclusive.
- 48 (62%) underwent infectious disease consult.
- No patient died due to COVID.

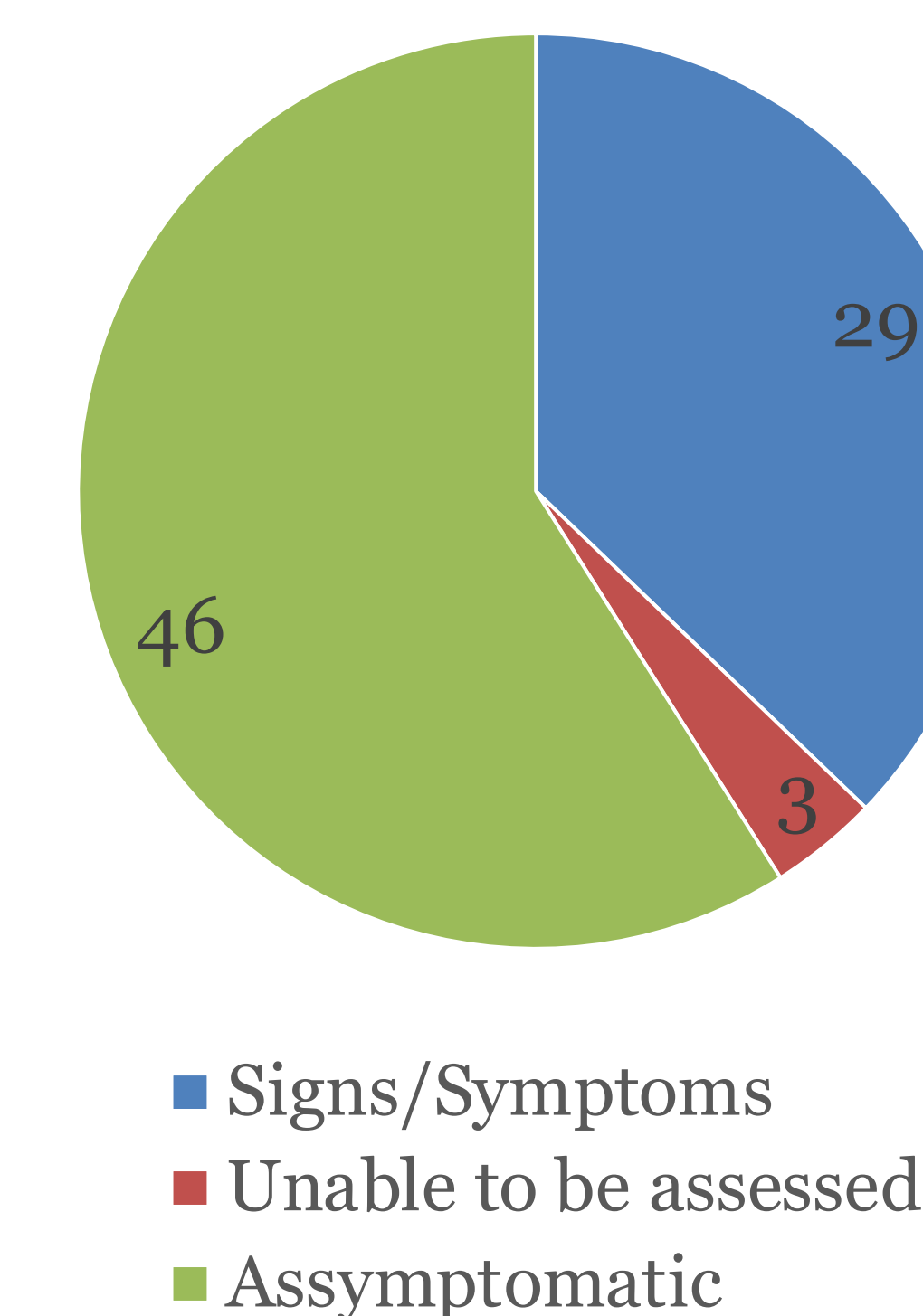


Figure 1. Of the positive cases, 32 (41%, 95%CI 30-53) had signs/symptoms (n=29) or were unable to be assessed due to decreased mental status (n=3).

Figure 2. 13 patients received specific therapy following positive COVID test

| Therapy | Supplemental oxygen | Dexamethasone | Convalescent plasma | Remdesivir |
|---------------|---------------------|---------------|---------------------|------------|
| # of patients | 12 | 6 | 6 | 4 |

Conclusion

Asymptomatic COVID-19 testing is of low yield when the daily community rate is less than 4 cases/100,000 individuals. Of those found to be positive under an asymptomatic testing protocol, nearly half had signs or symptoms attributed to COVID-19 infection suggesting the rate of asymptomatic infection was lower than reported. In the current pandemic, ED physicians should carefully assess for COVID-19 signs and symptoms even when patients present for other indications.

Acknowledgments

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Questions or comments?
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