

INTRODUCTION

- The COVID-19 pandemic has been a threat to military medical readiness.
- Novel variants have been associated with differing disease severities and symptoms.
- Symptom-based screening tools focusing on fever, cough, and dyspnea have been widely utilized throughout the COVID-19 pandemic.
- However, the sensitivities of these screening tools in young, healthy patients have not been well characterized across the different waves (Pre-Delta vs. Delta) of the pandemic.

HYPOTHESIS

- We sought to test the hypothesis that COVID-19 symptom based screening would have low sensitivity within a young, healthy military population and sensitivity would vary by wave.

METHODS

Descriptive Cross-Sectional Study Design

Collected Data

- Date of positive COVID-19 test.
- Symptoms reported on a standardized questionnaire.

Data Analysis

- Symptom counts were compared across cohorts using Chi-Square or Fisher's Exact test for nominal variables.
- Total number of symptoms across cohorts was compared using Mann-Whitney U test for continuous variables.

Study Population

Convenience sample of 400 active duty service members who tested positive for COVID-19

Pre-Delta Cohort

200 service members who tested positive in January to March 2021

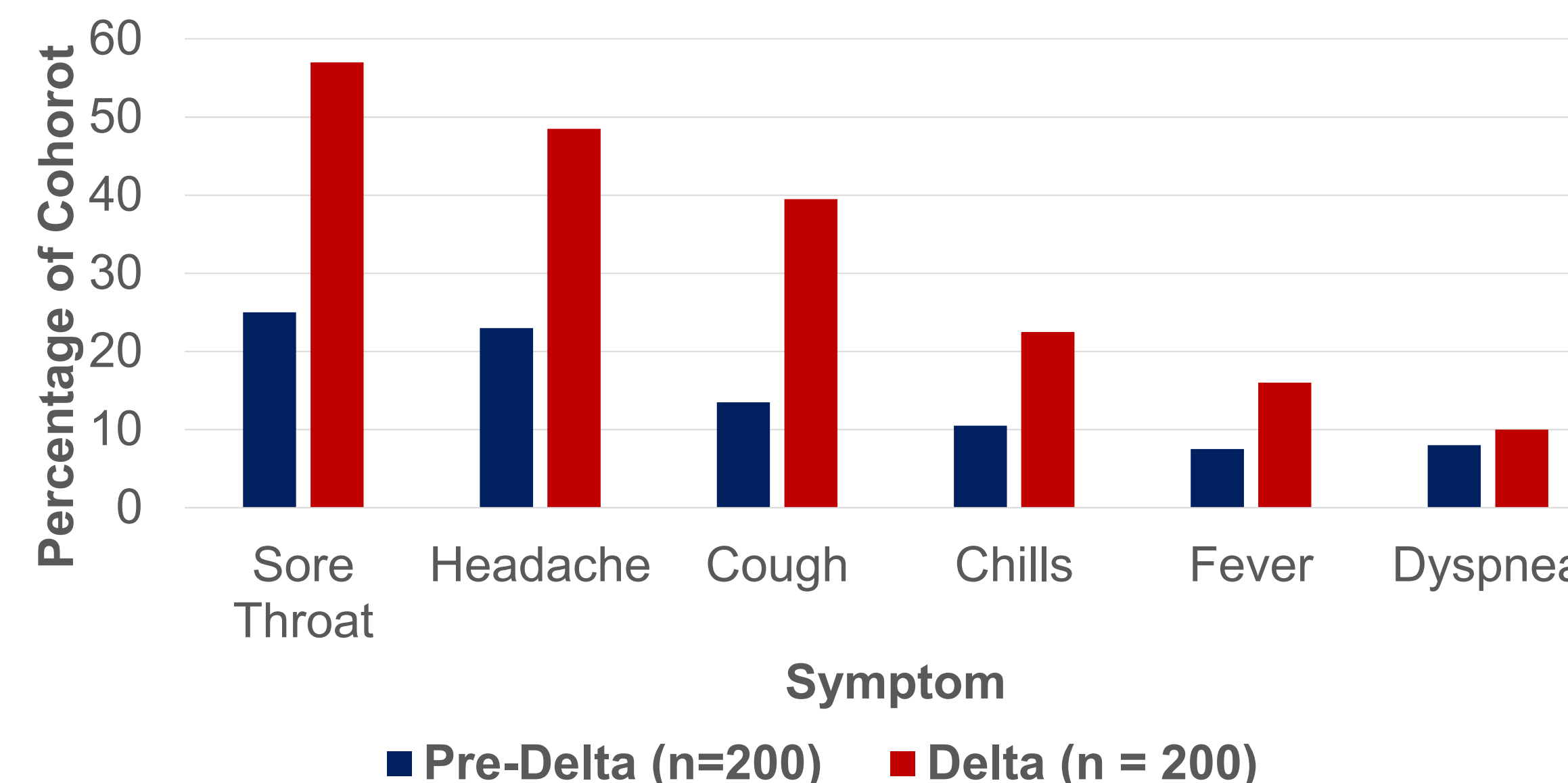
Delta Cohort

200 service members who tested positive in June to July 2021

RESULTS

	Pre-Delta (n = 200)	Delta (n = 200)	P-Value
Symptomatic Service Members, n (%)	117 (59%)	159 (80%)	< 0.001
Median Number of Symptoms, n (IQR)	2 (1-3)	3 (2-4)	< 0.001

Symptom Prevalence in 200 Service Members with COVID-19 Based on Wave of Infection (n = 400)



Symptom	Pre-Delta, n (%) (n = 200)	Delta, n (%) (n = 200)	P-Value
Sore Throat	50 (25%)	114 (57%)	< 0.001
Headache	46 (23%)	97 (49%)	< 0.001
Cough	27 (14%)	79 (40%)	< 0.001
Chills	21 (11%)	45 (23%)	0.001
Fever	15 (8%)	32 (16%)	0.008
Dyspnea	16 (8%)	20 (10%)	0.485

Cough, Fever, and Dyspnea Screener Sensitivity for COVID-19 Positive Service Members

Pre-Delta: 42/200 = **21%**
Delta: 101/200 = **51%**

DISCUSSION

- In a convenience sample of active duty service members with COVID-19, screening for cough, fever, and dyspnea had low sensitivity in identifying symptomatic cases of COVID-19.
- Additionally, the Delta variant was associated with significantly more cases of symptomatic disease as compared to cases identified before the Delta variant was prevalent.
- As screening strategies evolve with the pandemic, changing symptom prevalence should be considered.