

Sentinel Diagnoses in the COVID-19

Pandemic: Pulmonary Embolism

Thomas Woodward¹, Drew Richardson²

¹ANU Medical Student, ANU Medical School, Canberra Hospital and Health Services, Garran, ACT 2605

²Professor, ANU Medical School, Canberra Hospital and Health Services, Garran, ACT 2605

BACKGROUND

- The COVID-19 pandemic and related public health measures impacted demand, process and workflow in Emergency Departments (EDs)

OBJECTIVES

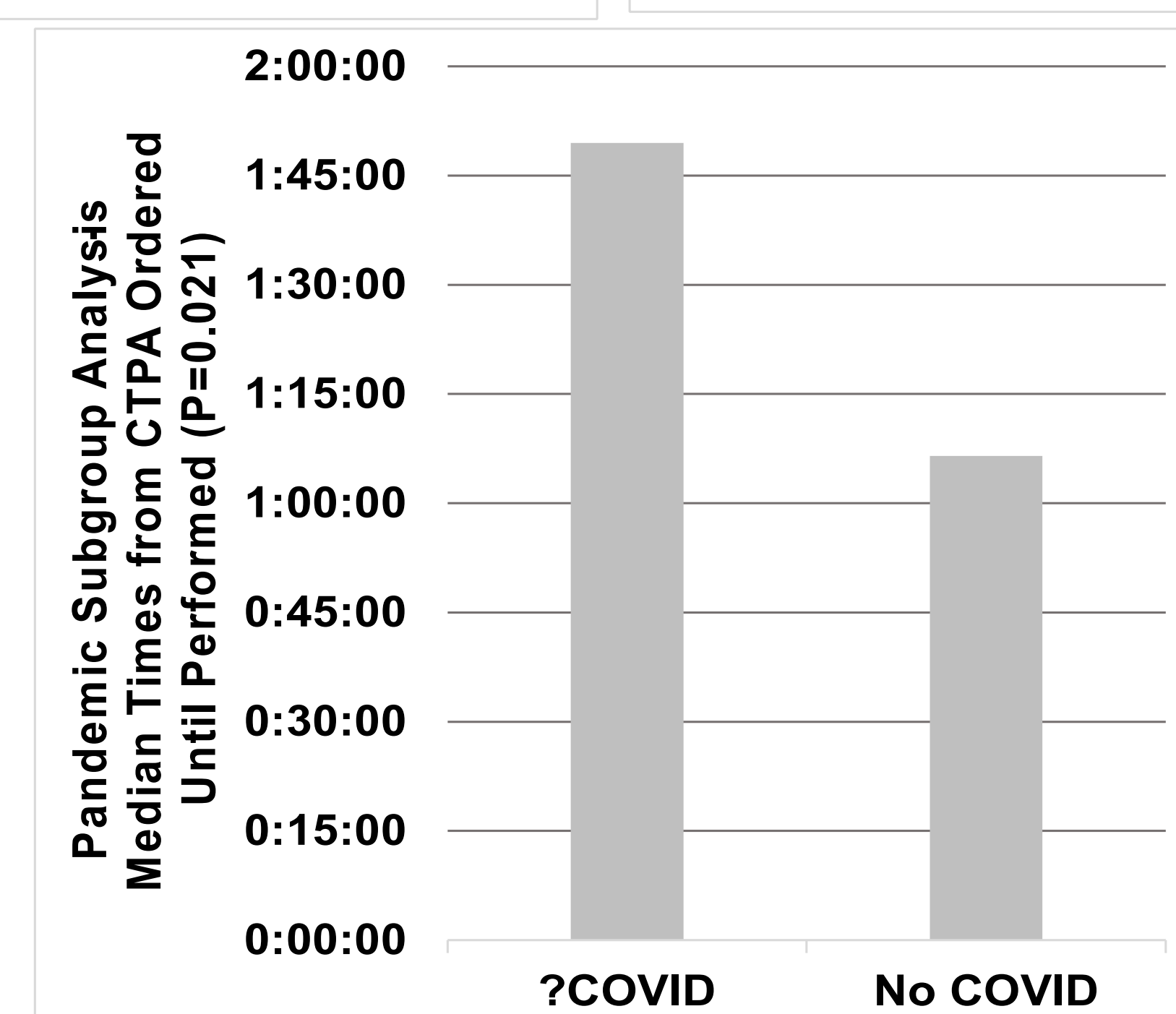
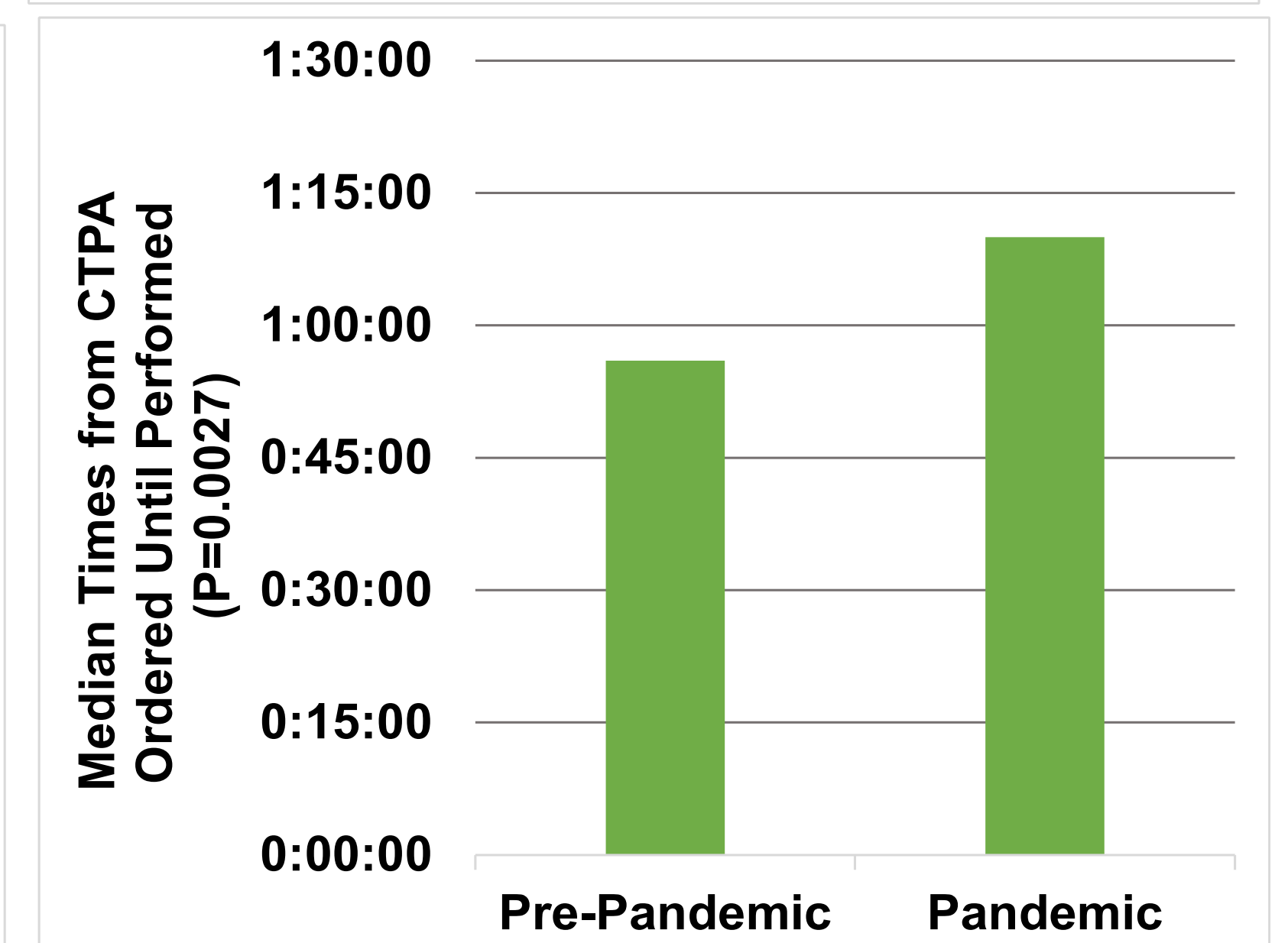
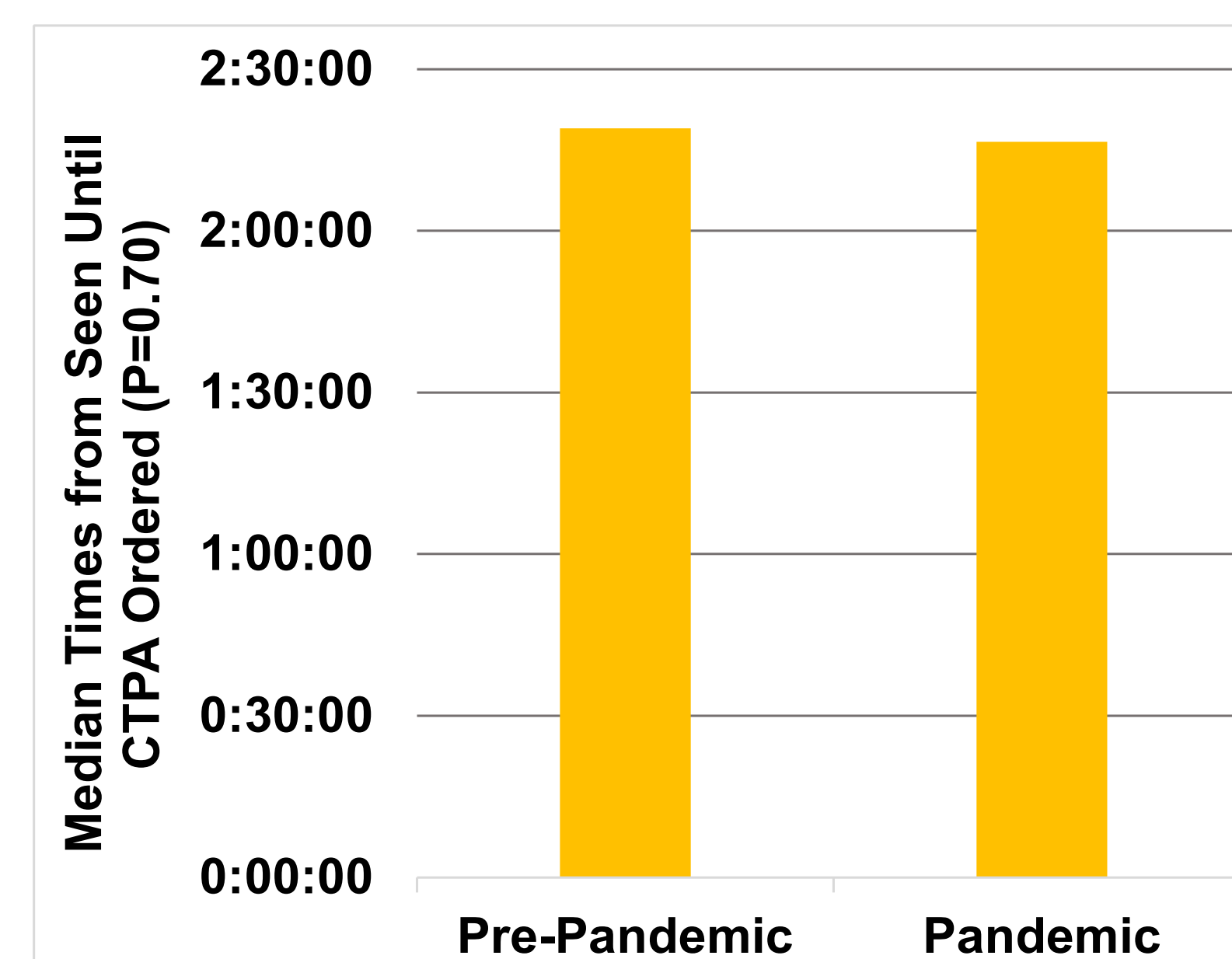
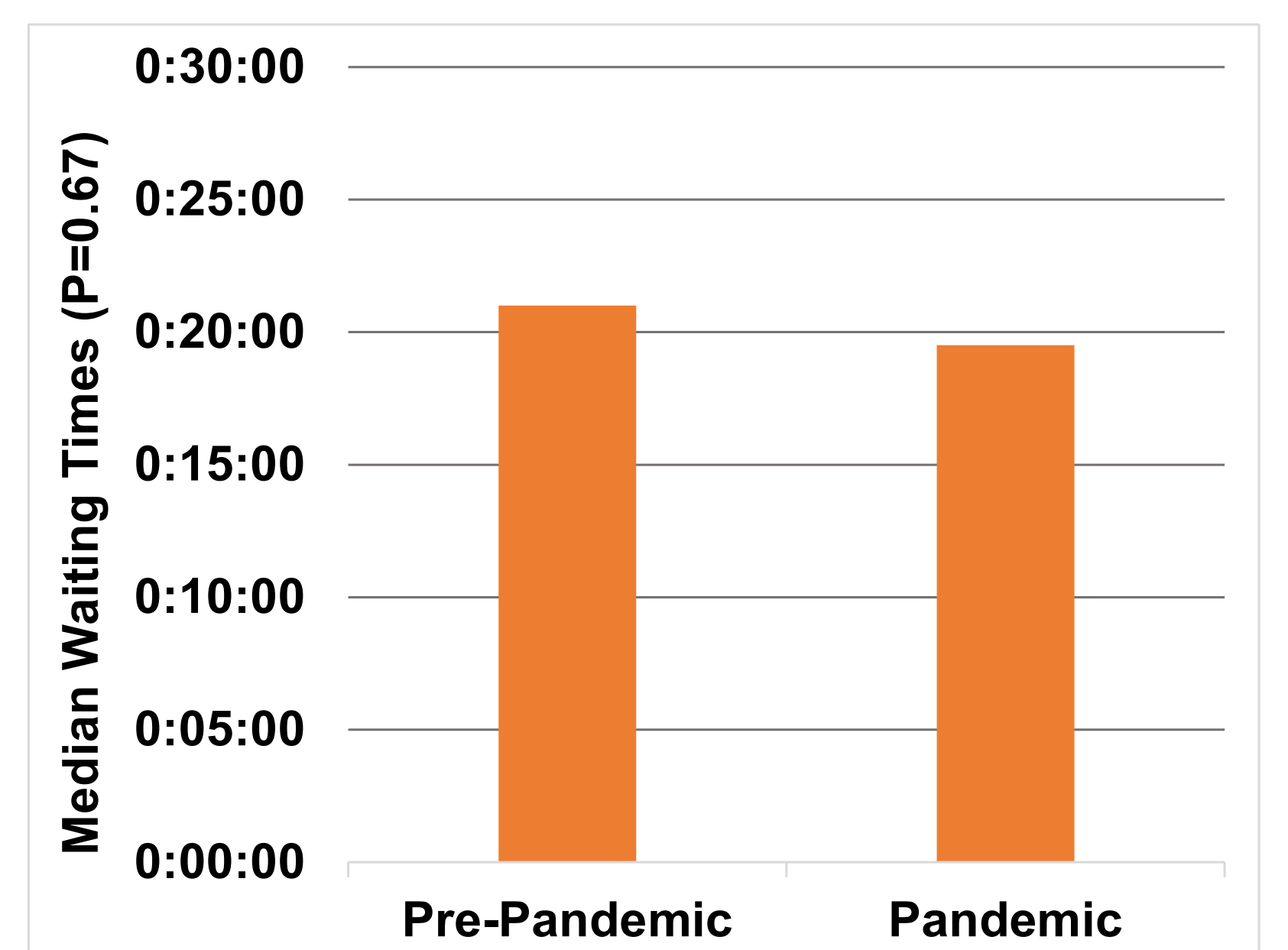
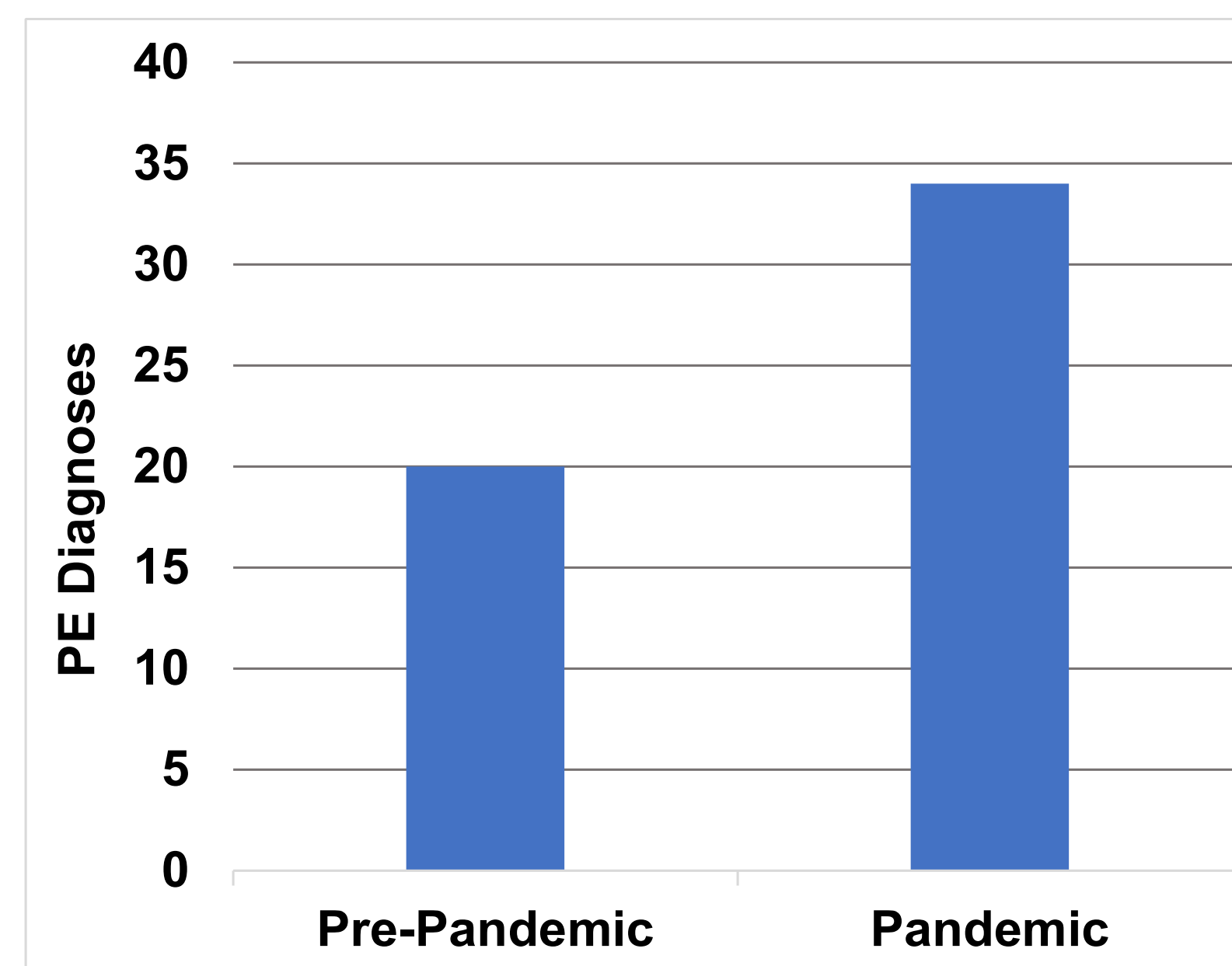
- To identify incidence of pulmonary embolism (PE) and changes to workflow in a tertiary ED during 2020 as a result of COVID-19

METHODS

- Retrospective descriptive study of all CTPA studies ordered at Canberra Hospital ED from January-June in 2020
- Data on timings were extracted from ED information system and the radiology information system
- Data on differential diagnoses were extracted by patient chart review
- The period from 1-Jan until the first CTPA of a suspected COVID-19 case (19-Mar) was considered “Pre-pandemic”, and the subsequent period to 30-Jun was considered “Pandemic”
- The primary outcomes were waiting time, time from seen until CTPA ordered, time from test ordered until performed, and resultant diagnosis
- Mann-Whitney test was used for statistical comparison

RESULTS

- 123 “Pre-pandemic” scans were performed, of which 20 were positive for PE (16.3%)
- 184 “Pandemic” scans were performed, of which 34 were positive (18.4%)
- Median waiting times to see a doctor were 0:21:00 and 0:19:30 (P=0.67) respectively
- Median times from seen until CTPA ordered were 2:19:00 and 2:16:30 (p=0.70) respectively
- Median times from ordered to performed were 0:56:00 and 1:10:00 (P=0.0027)
- “Pandemic” subgroup analysis showed the times from ordered to performed were 1:49:30 for the 38 suspected COVID cases and 1:06:30 for the others (P=0.021). The mean difference between these times was 37 minutes



CONCLUSIONS

- There was no change in the incidence of PE diagnosed in this ED during COVID-19
- Changes in infection control protocols appear to have caused significant delays in time taken to perform CTPA both between “Pre-Pandemic” and “Pandemic” groups, as well as within the “Pandemic” group for suspected COVID cases
- Delays to medical imaging would elicit subsequent delays in clinical diagnosis with ramifications for patient care

