

Sentinel diagnosis during COVID-19 pandemic-Bronchiolitis

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INTRODUCTION

- The ACT (Australian Capital Territory) represents a population of 431 000 and during the COVID-19 pandemic, the ACT reported 118 cases of COVID-19 and 3 associated deaths.
- The ACT public health responses, including community lockdowns and social-distancing requirements, indirectly impacted upon non-COVID-19 presentations to The Canberra Hospital Emergency Department (TCH ED), including other infectious respiratory conditions.

AIMS

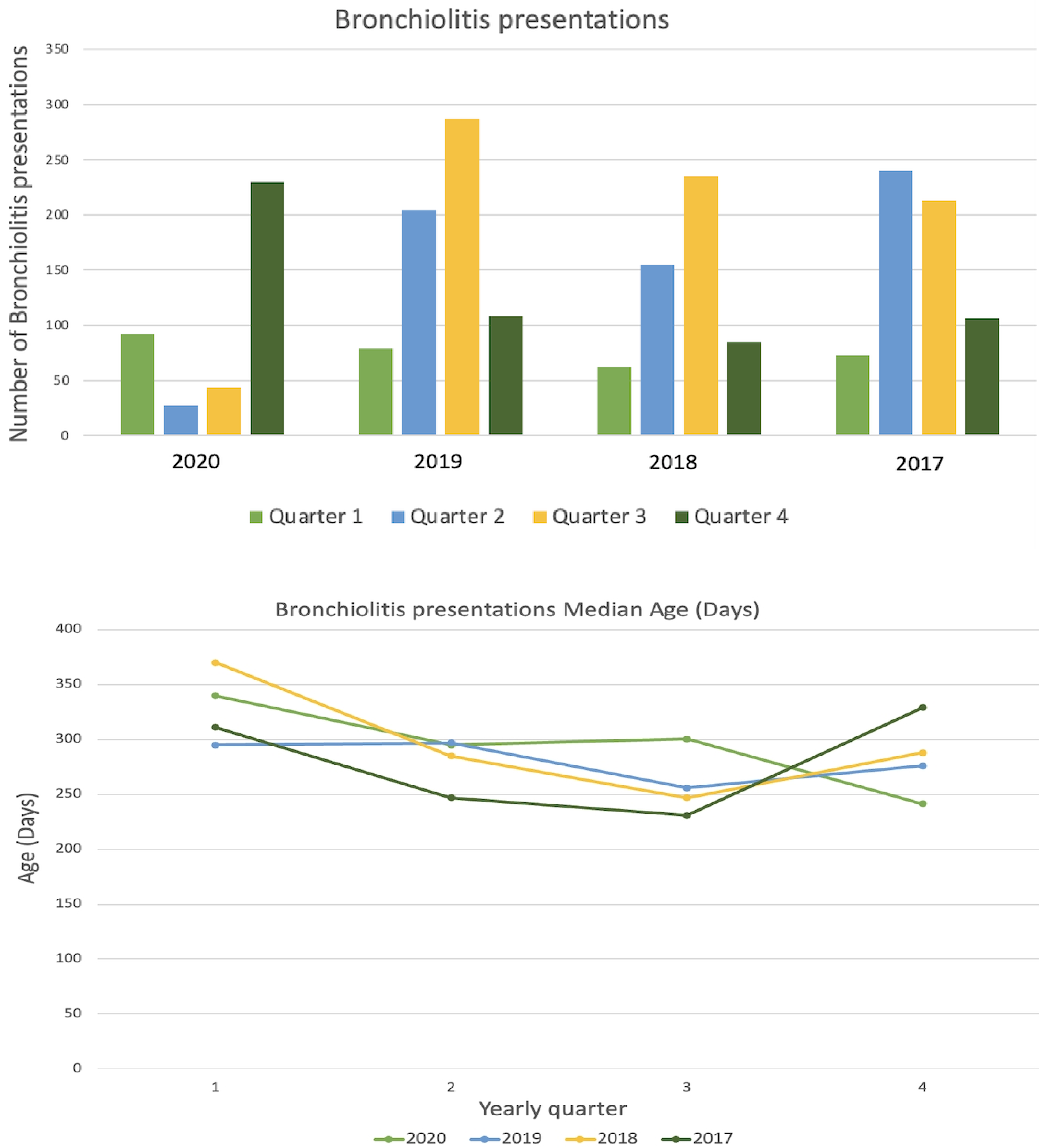
- This study aimed to analyse presentation patterns at a large tertiary-level mixed ED with a clinical diagnosis of Bronchiolitis during the COVID-19 pandemic.

METHODS

- Prospective descriptive study analysing TCH ED presentations with clinically diagnosed Bronchiolitis and nasopharyngeal swab rates during 2020 with retrospective controls derived from 2017-2019.
- Mean daily presentations were calculated by quarters and compared to controls using the t-test (unequal variance).
- Median patient age was calculated in days and compared to controls using the Mann-Whitney test.

RESULTS

- 2017-2019 control data reflected a consistent pattern, with presentation peaks in the third quarter.
- Presentations in the first quarter of 2020 increased by 28% (P=0.09) over controls and by 128% (P<0.001) in the fourth quarter.
- Presentations decreased during the second quarter (-86% (P<0.0001)) and in the third quarter (-82% (P<0.0001)) compared to controls.
- Median age was not significantly different except during the fourth quarter, with a fall in median age from 299 to 241.5 days (P=0.0025).
- RSV swab rates increased significantly in the fourth quarter from 41.5% (95% CI 36.1-47.2) in the controls to 70.4% (64.2-76.0) in 2020, with RSV positive rates rising from 13.6% (8.6-20.7) in controls to 88.3% (82.4-92.4) in 2020.



LIMITATIONS

- Data is reliant on the accurate clinical diagnosis of Bronchiolitis.
- The data analysed included only patient data collected from TCH Emergency department records.

CONCLUSIONS

- Community lockdown measures and other public health pandemic precautions including social distancing regulations were associated with a marked decline in Bronchiolitis presentations.
- Initial decline in presentations during the pandemic and Winter, were followed by an epidemic during Spring and early Summer.
- Hypothesised increased contact between children and family and within childcare settings following Winter, with greater contact willingness when children were unwell.
- Age distribution suggests that exposure occurred in a younger cohort than in previous control years.

