

Effect of COVID-19 on Cardiac Catheter Lab Presentations through TCH ED

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BACKGROUND

- During the COVID-19 pandemic in 2020 (starting 11 March), anecdotal evidence suggested an altered workflow for patients with suspected acute cardiac events through the Canberra Hospital Emergency Department (TCH ED).

OBJECTIVES

- To identify the effect of the COVID-19 pandemic on cardiac catheter lab (CCL) presentations through TCH ED, specifically the number of presentations and the door to balloon time (D2B).

METHODS

- Prospective analysis with a focus on those brought in by ambulance (BIBA). Presentations from 2020 were compared to retrospective controls from 2019.
- D2B was calculated as the difference between door time (when patient presents) and balloon time (time of first balloon inflation).

RESULTS

- Significantly more CCL presentations to TCH ED month on month during 2020 compared to 2019 ($P=0.04$, paired t-test, two-tailed).
- Significantly more BIBA to TCH ED month on month ($P=0.018$, paired t-test, two-tailed). Proportion of BIBA CCL presentations significantly increased from 76% in 2019 to 86% in 2020 ($P=0.046$, chi-squared test).
- However, there was no significant change to D2B ($P = 0.5$, Mann-Whitney U) for patients BIBA to TCH ED.

DISCUSSION

- Community lockdown may have been associated with increased hesitancy to present early to primary care providers. This precipitates more severe sequelae of coronary heart conditions that are more likely BIBA to TCH ED and require admissions to the CCL.
- No significant change to D2B indicates that after patients arrived to TCH ED, they were still processed at an equivalent time interval when compared to retrospective controls. This is a positive sign showing TCH ED and TCH Cardiology's protocols were still effective during the COVID-19 pandemic in 2020.

LIMITATIONS

- Data used was only from TCH ED records. There may be some missed presentations from the TCH Coronary Care Unit that could alter the findings. Consultation with cardiology records could provide better explanations for the observed trends.

CONCLUSIONS

- While TCH ED had significantly more CCL presentations month on month in 2020 during the COVID-19 pandemic, especially those BIBA as an absolute number and proportion, D2B for BIBA patients remained similar across both years.
- TCH ED's data is unique compared to EDs around Australia and the world, with minimal effects on CCL activation during COVID-19 in 2020, a positive marker for TCH's interventional cardiology team.

