The implications of SARS-CoV-2 on a Cardiothoracic unit

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Introduction: The effort to prevent healthcare systems becoming overrun during the 2020 COVID-19 pandemic has come at the cost of delaying operations and with that bringing difficult risk analysis to help decide which operations should go ahead. With COVID-19 being a novel disease there is limited evidence for guidance on this issue. We have previously presented work highlighting the high risk of mortality associated with a perioperative cardiothoracic patient becoming COVID-19 positive and thus decided to implement a series of changes to departmental perioperative practice. This work presents these interventions and compares the infection and the mortality rate with those before the intervention was put in place.

Method: Two retrospective loops were performed. Pre intervention, 5/3/20 – 20/4/20, and post intervention, 21/4/20- 23/6/20. Inclusion criteria: patients who had received cardiothoracic surgery at University Hospital of Wales within 4 weeks of the positive COVID-19 PCR (1st loop n = 53, 2nd loop n = 40). Exclusion criteria included re-admissions from greater than 4 weeks (n = 2). Interventions included 14 day pre op isolation, a strict multifaceted screening regime, reverse barrier nursing and delaying operations if diagnostic uncertainty.

Results: 9/51 patients from the pre intervention loop and 2/40 from post intervention loop tested +ve for COVID-19. The pre intervention mortality was 5/9 and post intervention mortality was 0/2.

Conclusion: Our data suggest that simple changes to perioperative practice can decrease the transmission of COVID-19 during this period. Thus, allowing surgical services to run at a reduced risk.