

## Early wound debridement in open fractures: How we adapted during a pandemic

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### INTRODUCTION:

Open fractures has always been a challenge. It carries up to 15-55% risk of infection. Standards for management suggest that open fractures should undergo wound debridement within 24 hours in order to reduce risk of fracture infection<sup>1</sup>. However, due to Covid-19 limitations, an audit conducted revealed standards were not met. We report the results of the above audit as well as the ways adapted to enable us to debride open fractures within 24 hours of being seen.

### METHODS:

We conducted a retrospective review recording patients with open fracture admitted over a period of 1 month in May 2022 in a tertiary hospital. Time of referrals and time of debridement were recorded. After analysing the data, we identified causes of delay in debridement, namely(1) the duration required to obtain pre-operative screening PCR results, and (2) lack of available operating theatre (OT) slots. Hospital policy amendment - replacing PCR with antigen rapid test in pre-operative screening, shortens result time from 24 hours to 4 hours, and the introduction of a semi-elective trauma operating theatre. Post intervention, data were collected in June 2022, and compared to the data with that of the earlier review.

### RESULTS:

In May 2022, out of 12 patients, only 3 (25%) patients had wound debridement done within 24 hours. After introducing the measures described earlier, 67% of patients were able to undergo wound debridement within 24 hours (8 out of 12 ), an increase of 42%.

Diagram 1: Debridement of open fractures in May 2022-pre intervention.

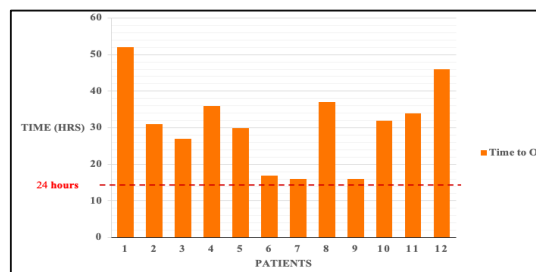
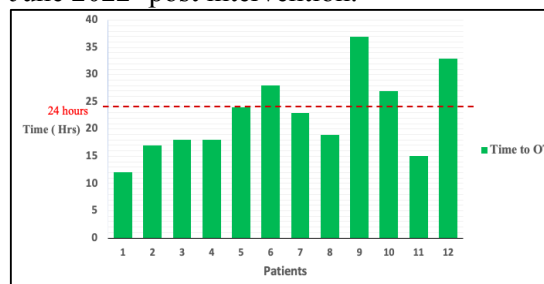


Diagram 2: Debridement of open fractures in June 2022- post intervention.



### DISCUSSIONS:

During the pandemic, healthcare facilities had to adapt with limited resources and stricter precautionary measures to mitigate the outbreak. However, this resulted in increased disruption of standards of care for non Covid-19 illnesses<sup>2</sup>. By adopting a multi-disciplinary approach and policy changes, we have demonstrated it is possible to improve time taken to debride open fractures while keeping appropriate precautions in place.

### CONCLUSION:

This review highlight causes for delay, enabling us to address them and thus, improve our management of open fractures while complying with Covid-19 infection control measures during a pandemic.

### REFERENCES:

- 1.Eccles S et. al. Standards for the Management of Open Fractures (2020), Oxford.
- 2.Lau VI et al. (2022) Non-COVID outcomes associated with the coronavirus disease-2019 (COVID-19) pandemic effects study (COPES)