

# Impact of a Pandemic on Regional Spinal and Pelvic Trauma Services: A 3 Year comparative study.

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## AIMS:

We aimed to assess the impact of COVID-19 pandemic and lockdown restrictions on admissions with spinal or pelvic fractures to a tertiary trauma centre.

## METHODS:

- Data for all patients with Spinal and/or Pelvic Fractures admitted to QEUH was prospectively collected for a six month period following the nationwide lockdown on 23<sup>rd</sup> March 2020.
- We compared retrospectively collected data over the same periods from 2019 and 2018. 571 Patients were included in the study.

Year	373 Spinal Fractures	198 Pelvic Fractures
2020	112	67
2019	127	67
2018	134	64

## SPINAL RESULTS:

The predominant mechanism of injury in operative cases was:

- a fall from height (78% in 2020)
- most related to alcohol/drug intoxication (33%)
- suicidal attempt (26%).

*A greater proportion of spinal fractures required fixation following lockdown* and was shown to be significant:

Year	No. Patients	% of Patients	P-Value
2020	27	24	
2019	14	11	0.007
2018	15	11	0.007

## CONCLUSION:

- Our study reports an increase in spinal fractures and no change in the number of pelvic fractures requiring operative fixation during lockdown.
- This highlights the importance of maintaining regional major trauma services, including theatre capacity, to manage these injuries during a pandemic response.

## PELVIC RESULTS:

There was no change in the proportion of pelvic fractures requiring operative intervention:

Year	No. Patients	% of Patients	P-Value
2020	41	61	
2019	39	58	0.72
2018	40	62	0.69

Pelvic trauma resulting from a *fall from height increased* following lockdown:

Year	No Patients	% of Patients	P-Value
2020	22	33	
2019	12	18	0.04
2018	7	11	0.002

- Pelvic fractures related to *motor vehicle collisions decreased*: 7(10%) in 2020, 16(24%) in 2019( $p=0.04$ ), 16(25%) in 2018( $p=0.03$ )
- Those related to *cycling increased*: 11(16%) in 2020, 3(4%) in 2019( $p=0.02$ ) and 2(3%) in 2018( $p=0.01$ ) .

*Median time to operative intervention increased during the lockdown period*: 3 days in 2020 compared with 2 days in 2019( $p=0.03$ ) and 2018( $p=0.01$ ).