

## Length of stay after admission for traumatic injury – before and after reconfiguration of Danish emergency departments

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**Background:** There has been a large reconfiguration within the Danish emergency departments since 2007, including merging of hospitals and establishing

joint emergency departments with larger populations, leading to an enhancement in experienced healthcare personnel, specialized equipment and the availability of medical specialists. The aim of this study was to investigate the association between length of stay at the hospital after a physical traumatic injury and the reconfiguration of emergency departments.

**Methods:** The study was conducted as a retrospective cohort study including patients admitted as trauma patients at Hospital of South West Jutland within the Region of Southern Denmark and in the years 2007-2016. Statistical analyses were conducted using multiple linear regressions.

**Results:** A total of 1693 trauma patients were included, of which 580 patients were admitted before the reconfiguration and 1113 were admitted after. The results showed a beta coefficient of -0.32 with a p-value <0.001 and 95% confidence interval of -0.48 to -0.15, giving a 27.1% decrease in length of stay after the reconfiguration compared to before.

**Conclusion:** After reconfiguring emergency departments, the length of stay for trauma patients has decreased, suggesting enhanced efficiency and increased the quality of care for trauma patients.