

Introduction

Joondalup Health Campus (JHC) is home to one of Australia's busiest Emergency Departments with presentations exceeding 300 cases daily. As the population in Perth's northern corridor continues to grow and age, JHC will experience a continual rise in ED presentations including suspected spinal injuries. Given the serious nature of traumatic spinal injuries, 'spinal precautions' (SP) are an essential measure taken to immobilise the spine while investigations determine the presence and stability of an injury and an appropriate treatment plan. The management of patients with spinal injuries requires specialised, coordinated hospital care to minimise delays and the time patients spend restricted to bed rest.

Prolonged use of SP (>72 hours) has been linked to increased hospital length of stay (LOS), hospital-acquired complication rates and higher healthcare costs.³

Aim

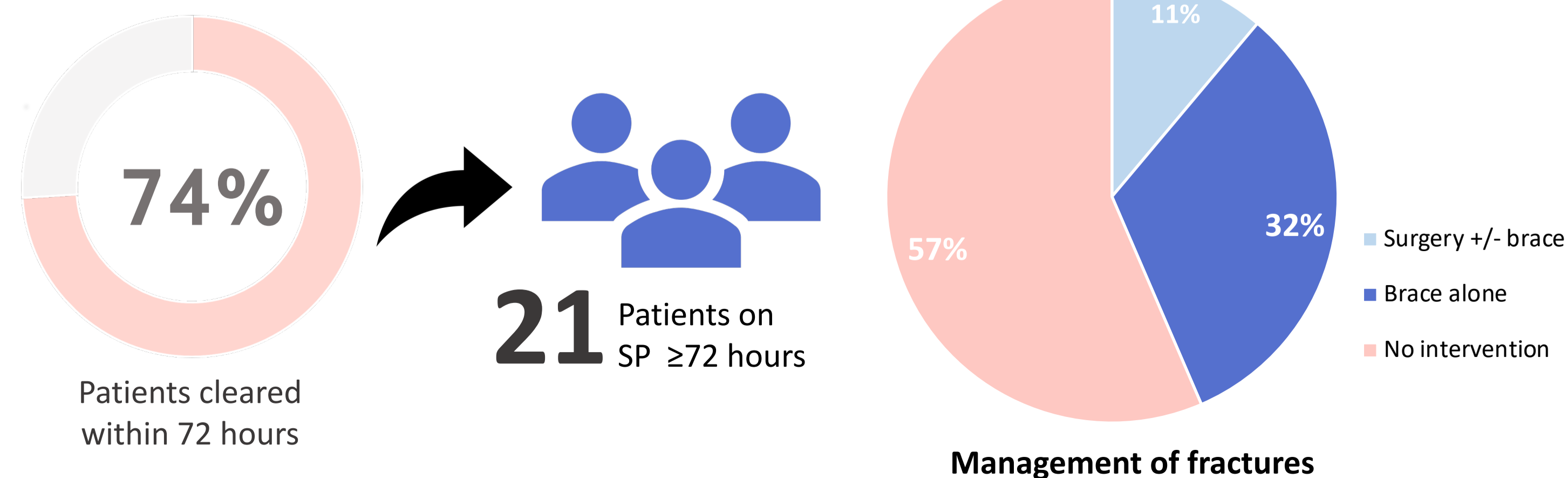
This audit aimed to evaluate the current service provided to patients with spinal fractures at JHC, with a focus on clearance from SP. One main question was asked: does JHC's spinal service align with best-practice recommendations?

Method

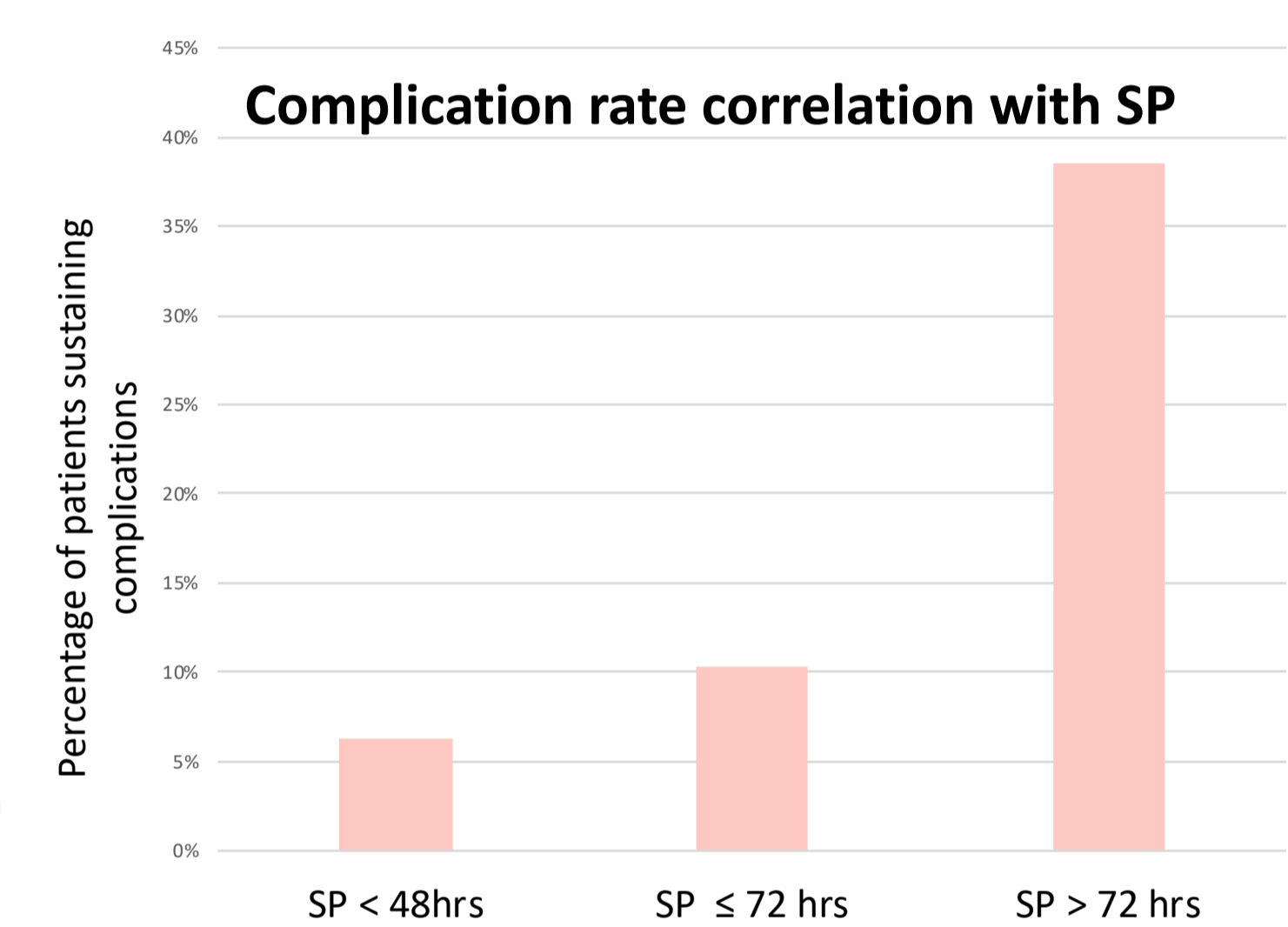
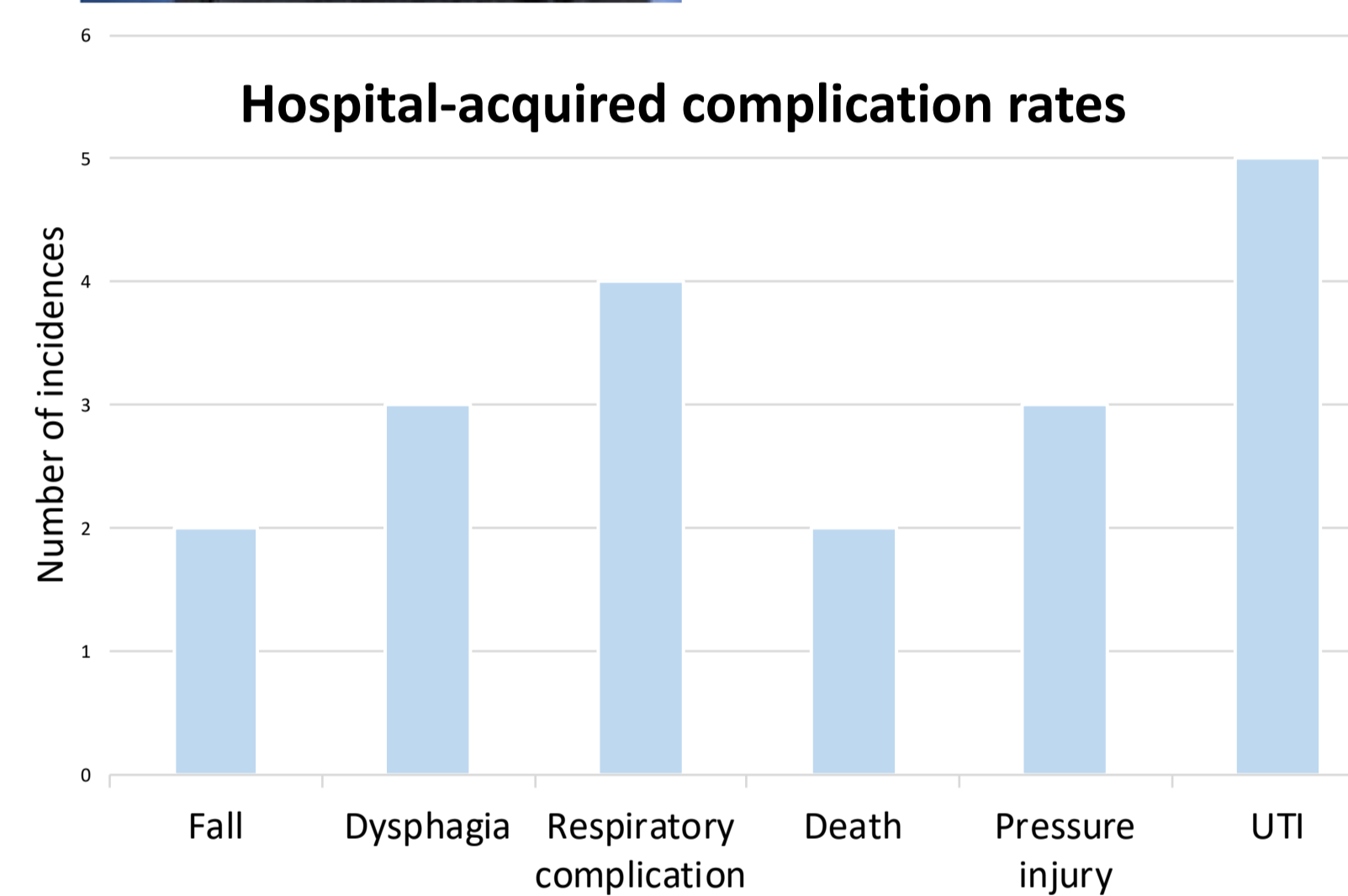
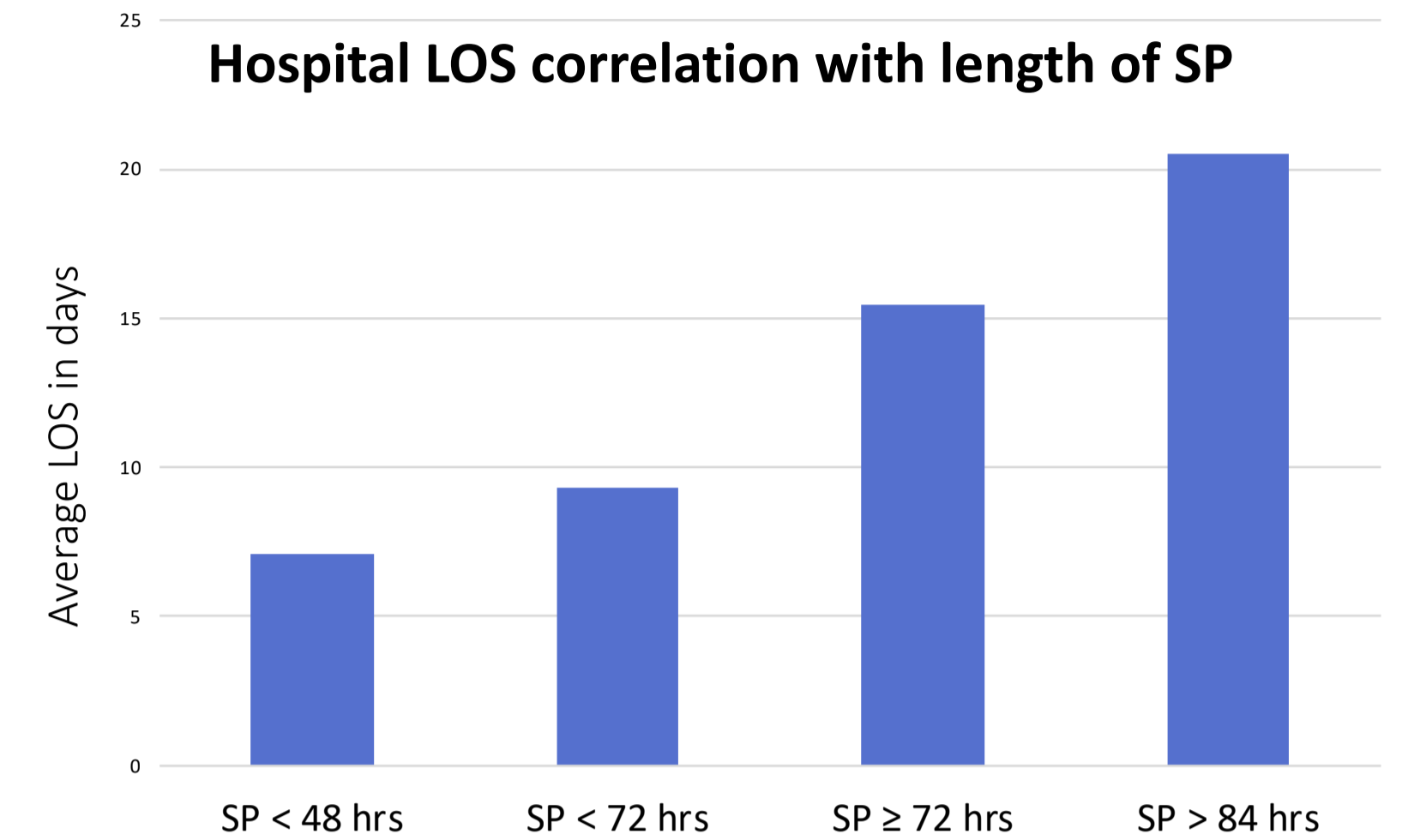
A retrospective clinical note audit was conducted on patients admitted to JHC in 2020 with acute cervical, thoracic and lumbar fractures. Paediatric patients, discharges against medical advice (DAMA), death during the first 24 hours of admission, patients never on SP, chronic fractures and patients managed at other hospitals were excluded from the audit. After selection criteria was applied, 81 patients were included in the audit. Data was extracted from clinical notes and recorded electronically using the MARS audit program. Quantitative data analysis focused on a variety of measures including fracture treatment, length of SP, hospital LOS, time to MRI, time to orthotist review and hospital-acquired complications.

Results

81 patients were audited, with an average age of 60.2 years and hospital LOS of 9.5 days. The average length of SP was 2.06 days (0-15).



30% Required braces fit by orthotists
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2 days Average wait for orthotist review



Conclusion

Patients on prolonged SP (≥72 hours) had an average LOS more than 8 days longer than patients cleared within 48 hours, with an estimated additional annual cost to JHC of \$457,296. Those on SP >72 hours also had significantly higher hospital-acquired complication rates and overall estimated hospital costs per admission.

Key Recommendations

JHC must continue to expand and develop spinal services to ensure the delivery of safe, quality care to patients within their catchment area that allows patients to receive this complex care in a timely manner, closer to home. The auditors have the following recommendations from this audit:

1. Prioritise implementing hospital-wide spinal injury guidelines
2. Implement a budgeted 0.3 FTE physiotherapy role for the fitting of cervicothoracic collars
3. Improve access to MRI scans, especially on weekends and public holiday periods
4. Improve documentation standards
5. Drive education and upskilling in spinal injury management for ED and ward staff
6. Improve MDT communication – consider MDT meetings or ward rounding
7. Re-conduct clinical audit in 2 years

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