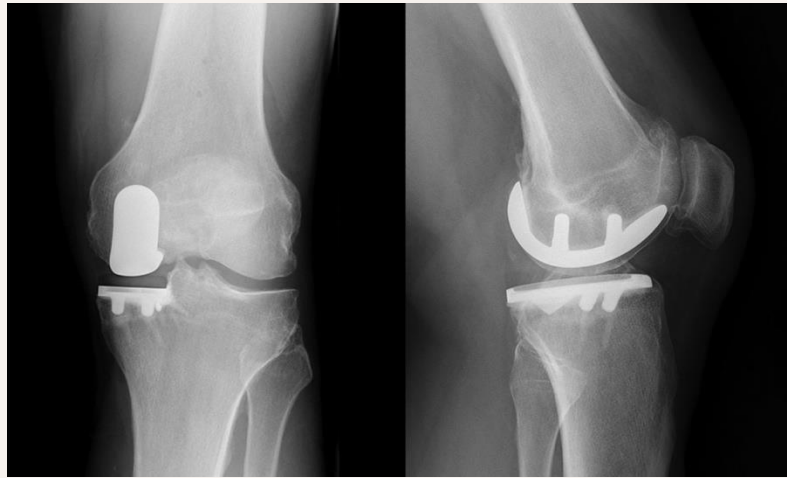


Investigating Patient And Surgical Factors Affecting Same Day Discharge After Unicompartmental Knee Replacement



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Conflict of Interest & Financial Disclosure

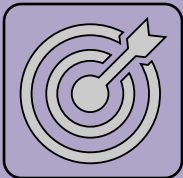
- Dr Suleyman Ulla: **None to declare**
 - Mr Patrick R.M. Nicholas: **None to declare**
 - Mr Stuart W. Bell: **None to declare**
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Introduction & Purpose



Inception

- November 2023



Objective

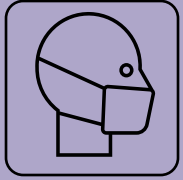
- To identify patient and surgical factors affecting same-day discharge (SDD) following medial unicompartmental knee replacement (UKR)



Importance

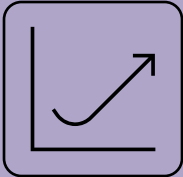
- Prolonged bed stay post-operatively is detrimental to both patient outcomes and hospital resources.
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Background



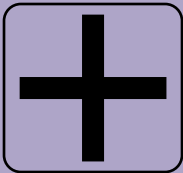
Unicompartmental Knee Replacement

- Less invasive, less complications and shorter hospital stay



Relevance

- Improving patient outcomes
- Improving surgical efficiency



Research Gap

- Independent variables that have been researched in the context of SDD after UKR
 - Few studies have focused on predictors of SDD, rather than length of stay (LOS)
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Methods



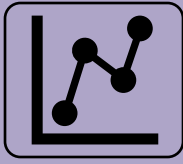
Study Design

- Prospectively collected data
- Collated over 14-month period



Participants

- 92 patients - 6 consultant surgeons - 1 elective surgical centre



Data Collection

- Same day discharge was compared with multiple independent variables



Analysis

- Fisher's Exact Test
 - Multiple logistic regression analysis
-

Independent Variables		Result
Patient Factors	Age (n = 92)	65 years (\bar{x})
	Sex (n = 92)	64 Male 28 Female
	Post-Operative Hb (n = 33)	132 Hb (\bar{x})
	Discharge Pain Score (n = 76)	1.7 (\bar{x}) with same day discharge 2.7 (\bar{x}) without same day discharge
	Mobilisation Status Post-Operatively (n =92)	59 mobilised same day 33 not mobilised same day
Surgical Factors	Intra-Operative Blood Loss (n = 92)	'Minimal' in all recorded cases
	Surgical Time (n = 91)	65 minutes (\bar{x})
	Tranexamic Acid (TXA) Use (n = 71)	44 received both intra-articular and intravenous TXA 27 received only intravenous TXA
	Implant Type (n = 92)	75 uncemented implants 17 cemented implants
	Tourniquet Use (n = 92)	Used in all recorded cases

Table 1: Displays the results for each independent variable

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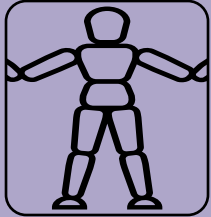
Table 1: Displays the results for each independent variable

Results

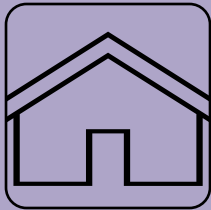


Statistically significant variables:

- Mobilisation Status on Day Zero ($p < 0.05$)
- Age ($p < 0.05$)
- Discharge Pain Score ($p < 0.05$)

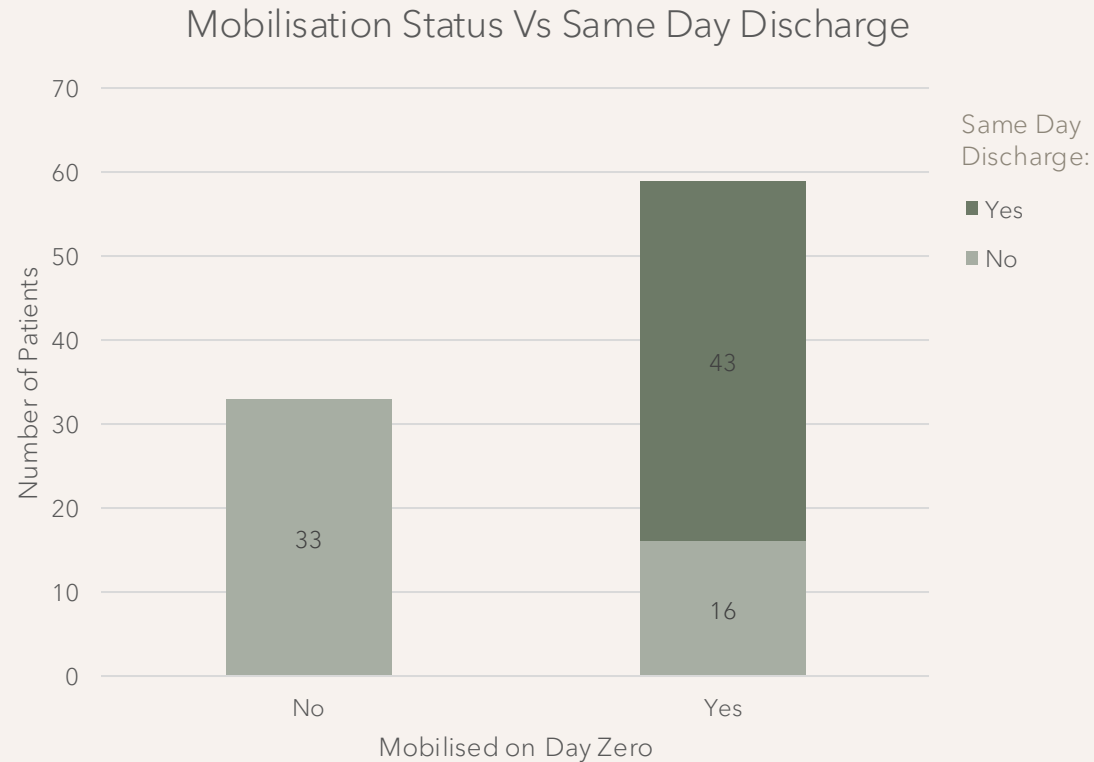


100% (43/43) of patients who achieved same day discharge had mobilised on day zero



47% (43/92) of all patients achieved same day discharge

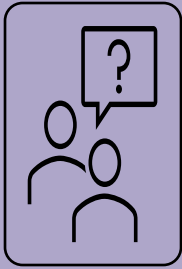
Analysis



- Early mobilisation, lower age and reduced pain scores were all associated with a greater likelihood of achieving same day discharge
- An interaction term was applied and these variables were found to act **independently** of each other ($p < 0.05$)
- SDD was achieved in:
 - 52% (33/64) of male patients
 - 36% (10/28) of female patients

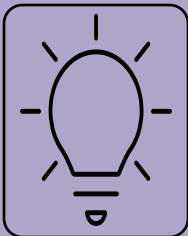
Figure 1: Relationship between mobilisation on day zero and same day discharge

Conclusion



Ideas

1. Standardised physiotherapy intervention within 2 hours post-operation
2. Pain score monitoring
3. Pre-operative support for older patients



Solution

- Revise existing peri-operative care protocols
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Senior authors

- Mr Patrick R.M. Nicholas (Trauma & Orthopaedic Registrar)
- Mr Stuart W. Bell (Trauma & Orthopaedic Consultant)

Questions?

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