

Out Of The Theatre And Into The Clinic: Cost and Waiting Time Analysis of Therapeutic Hip Injections; Ultrasound Versus Fluoroscopy

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BACKGROUND

Therapeutic hip injections can be delivered in clinic using ultrasound or in theatre using fluoroscopy. Although both approaches are clinically effective, they differ markedly in cost, staffing requirements, and waiting times. With increasing pressure on theatre capacity, understanding the most cost-effective pathway is essential for service planning.

METHODS

- Retrospective review of hip injections (Mar 2023–Feb 2024) at UHCW.
- Compared ultrasound-guided injections in clinic vs fluoroscopy-guided injections in theatre.
- Costs included staff pay, consumables, and medications.
- Capital costs (Imaging equipment, room maintenance and training) excluded.
- Waiting times compared using Mann–Whitney U test.
- Exclusions from analysis above due to unclear documentation or serial injection pathways:
Ultrasound: 34/168 (20.2%),
Fluoroscopy: 21/104 (20.1%)

CONCLUSIONS AND IMPLICATIONS

Ultrasound-guided hip injections are substantially more cost-effective and associated with shorter, more predictable waiting times than fluoroscopy-guided procedures. The lower staffing and consumable requirements of ultrasound result in markedly reduced per-patient and annual expenditure, while its clinic-based delivery avoids the scheduling constraints of theatre lists. These findings support prioritising an ‘ultrasound-first’ pathway for suitable patients. Implementing this approach can improve patient access, reduce delays, free theatre capacity for complex surgical cases, and optimise overall service efficiency and resource use within the MSK pathway.

Results: Cost Analysis

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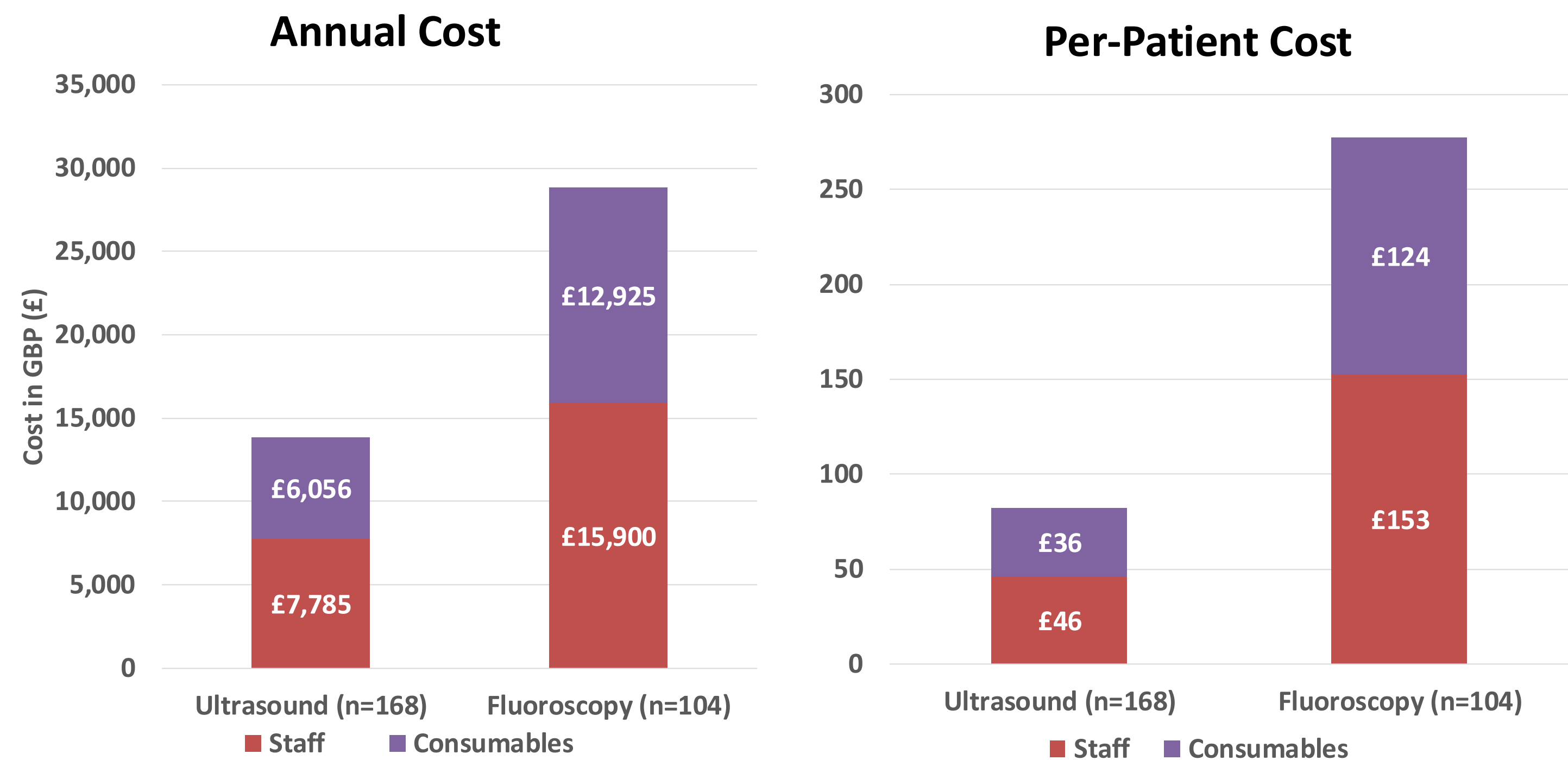


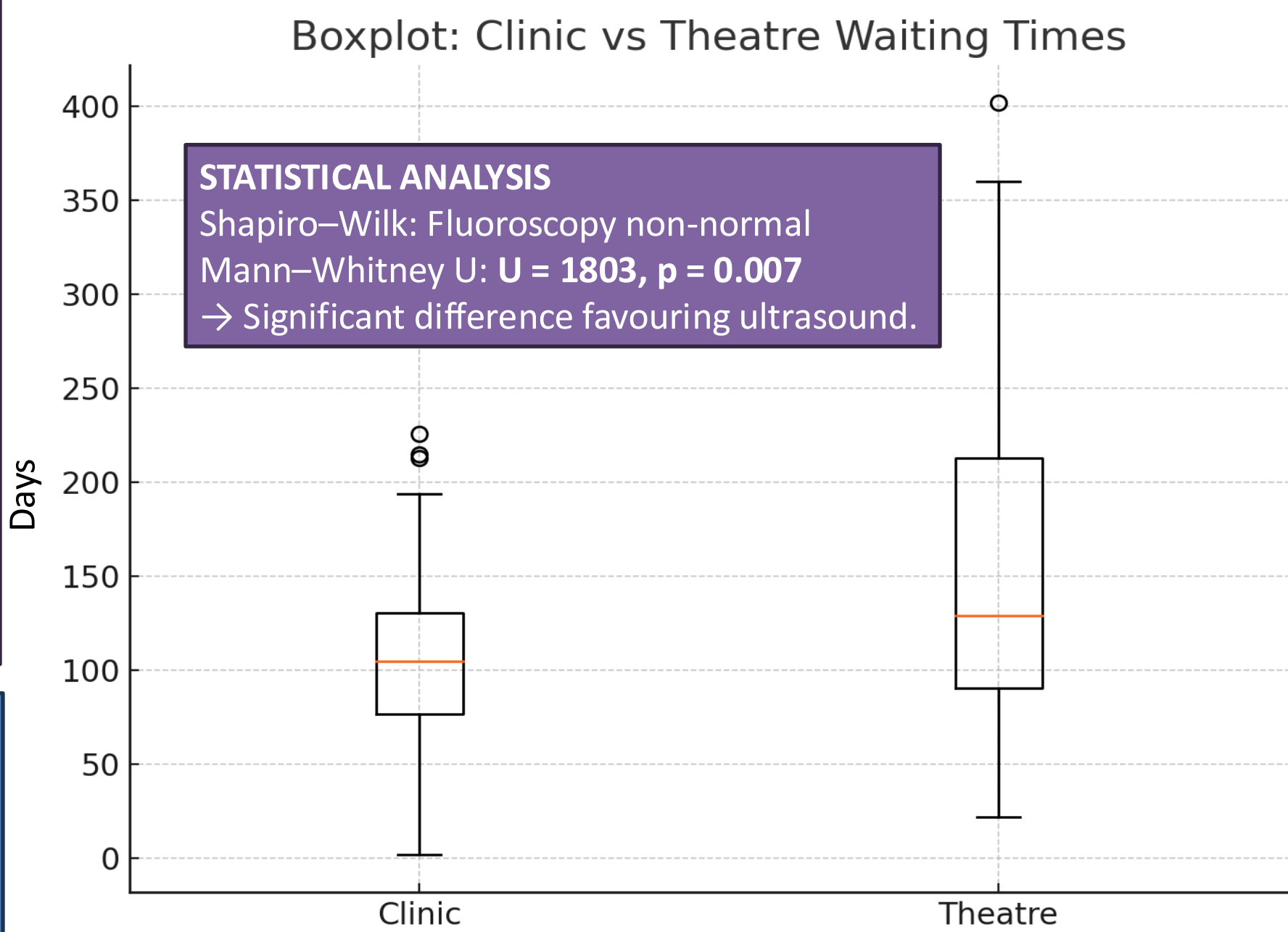
Figure 1: Cost comparison of ultrasound-guided and fluoroscopy-guided hip injections. Stacked bars display staff and consumable contributions to total cost. Annual expenditure reflects (procedure volume x cost).

Cost Type	Ultrasound (n=168)	Fluoroscopy (n=104)
Per-patient cost	£82.39	£277.16
Annual cost	£13,841.52	£28,824.64

Ultrasound required fewer staff roles and significantly less costly consumables. Fluoroscopy required SCP, consultant, ODP, two scrub nurses, support worker, radiographer, and recovery nurse. Fluoroscopy-guided injections incur **higher medication costs** to US guided procedures (£110.62 vs £24.90 respectively) due to the need for contrast medium and Penthrox analgesia.

Results: Waiting Time Analysis

- ### Key findings
- Ultrasound lists move faster on average with less variability.
 - Theatre scheduling can introduce delay and more variability.



	Ultrasound	Fluoroscopy
Median (days)	108.5	132.5
IQR	55.5	128
Range	2–292	22–465
Final (N)	134	83

Figure 2: Boxplot and table of Ultrasound vs Fluoroscopy Waiting Times in Days