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## Post-operative blood tests in trauma & orthopaedic surgery – Is there a scope for efficacy savings?

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**Background:** Similar to many healthcare systems worldwide, the UK's National Health Service (NHS) is under increasing financial pressures owing to many factors including an ageing population and increased treatment costs. As medical professionals we have a responsibility to identify and reduce the waste of resources within our practice. We have set up a study to identify the possible financial savings that can be achieved by eliminating unnecessary post-operative blood tests in our unit.

**Aim:** Identify possible savings that can be achieved by educating staff and eliminating unnecessary post-operative blood tests for patients undergoing orthopaedic surgery at Manchester Royal Infirmary & Trafford General Hospital.

**Methods:** A retrospective study was conducted to identify the cost of unnecessary post-operative blood tests for 100 patients who underwent trauma or elective orthopaedic surgery at both hospital sites. The patients' notes were reviewed to identify: 1) The operations undertaken 2) Blood tests which were done up to 5 days post-operatively 3) Whether there was a clinical indication for the blood tests.

**Results:** A possible saving of over £1500 was identified, with over 300 blood tests being identified as unnecessary for the patients included in the study. An estimated 80% of these blood tests were carried out at Manchester Royal Infirmary where majority of patients underwent trauma rather than elective surgery. CRP, Liver Function Tests, Bone profile and Coagulation screen were the most commonly ordered unnecessary blood tests.

**Conclusion:** Significant financial savings can be achieved through appropriate education of medical and nursing staff to eliminate or reduce the practice of performing unnecessary post-op blood tests. This study therefore recommends the introduction of a post-op blood protocol followed by comprehensive staff training in order to reverse the culture of performing unnecessary tests on patients undergoing orthopaedic surgery.

### Biography

Louai Abdeh is a Trauma & Orthopedics Core Surgical Trainee at the Manchester Royal Infirmary. As a medical student and junior doctor, he has taken an active role in many clinical governance and research projects, and he has presented at a number of conferences including the ASiT International Conference 2018, Barts and London National Undergraduate Surgical Conference and Warwick Undergraduate Regional Medical Conference. He has also completed a Master of Research in Tissue Engineering for Regenerative Medicine, and he received a distinction grade for his dissertation "The Role of Macrophages and Mast Cells in Fibroblast to Myofibroblast Differentiation- An insight into the Relationship between Inflammatory Cells and Fibrosis".

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