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## The cost of unnecessary post-operative blood tests in trauma & orthopaedic surgery

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**Background:** Despite being one of the most efficient healthcare systems, the NHS remains under constant financial pressures in view of ever-increasing health care demands. Clinicians therefore have an important duty to identify areas where efficacy savings can be achieved to ensure that funds are utilised appropriately.

**Aim:** Identify savings that can be achieved by eliminating unnecessary post-operative blood tests for patients undergoing trauma and elective orthopaedic surgery.

**Setting:** Manchester Royal Infirmary & Trafford General Hospital, University of Manchester NHS Foundation Trust, UK

**Methods:** A retrospective service evaluation study was conducted to assess the cost of unnecessary post-operative blood tests for 50 patients who underwent trauma or elective orthopaedic surgery at 2 hospital sites. The patients' notes were examined with 3 aims: 1) Identify the operations that were undertaken 2) Identify blood tests done up to 5 days post-operatively 3) Whether there was any clinical indication for the blood tests.

**Results:** A cumulative of over 150 unnecessary blood tests were identified. The most common inappropriately ordered tests were CRP, Liver Function Tests, Bone profile and Coagulation screen. The total cost of these tests exceeded £750, a significant cost considering these figures are for only 50 patients. It was also noted that a higher number of unnecessary blood tests were carried out at Manchester Royal Infirmary, where most patients underwent trauma surgery, compared to Trafford General Hospital, where most patients underwent elective surgery.

**Conclusion:** This study identified that significant savings, amounting to at least thousands of pounds annually, can be achieved if the practice of ordering unnecessary post-operative blood tests is eliminated. We therefore recommend: 1) Education of medical and nursing staff about the financial/clinical implication of unnecessary bloods 2) A protocol is developed, potentially on the type of operation done, to order post-operative bloods so as to limit unnecessary tests.

### Biography

Louai Abdeh is 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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