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Ankle Fracture Management: A Unique Cross Departmental Quality Improvement Project

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Abstract : Introduction: In light of recent BOAST 12 (August 2016) published guidance on management of ankle fractures, the project aimed to highlight key discrepancies throughout the care trajectory from admission to point of discharge at a district general hospital. Wide breadth of data covering three key domains: accident and emergency, radiology, and orthopaedic surgery were subsequently stratified and recommendations on note documentation, and outpatient follow up were made. Methods: A retrospective twelve month audit was conducted reviewing results of ankle fracture management in 37 patients. Inclusion criterion involved all patients seen at Darent Valley Hospital (DVH) emergency department with radiographic evidence of an ankle fracture. Exclusion criterion involved all patients managed solely by nursing staff or having sustained purely ligamentous injury. Medical notes, including discharge summaries and the PACS online radiographic tool were used for data extraction. Results: Cross-examination of the A & E domain revealed limited awareness of the BOAST 12 recent publication including requirements to document skin integrity and neurovascular assessment. This had direct implications as this would have changed the surgical plan for acutely compromised patients. The majority of results obtained from the radiographic domain were satisfactory with appropriate X-rays taken in over 95% of cases. However, due to time pressures within A & E, patients were often left without a post manipulation XRAY in a backslab. Poorly reduced fractures were subsequently left for a long period resulting in swollen ankles and a time-dependent lag to surgical intervention. This had knocked on implications for prolonged inpatient stay resulting in hospital-acquired co-morbidity including pressure sores. Discussion: The audit has highlighted several areas of improvement throughout the disease trajectory from review in the emergency department to follow up as an outpatient. This has prompted the creation of an algorithm to ensure patients with significant fractures presenting to the emergency department are seen promptly and treatment expedited as per recent guidance. This includes timing for X-rays taken in A & E. Re-audit has shown significant improvement in both documentation at time of presentation and appropriate follow-up strategies. Within the orthopedic domain, we are in the process of creating an ankle fracture pathway to ensure imaging and weight bearing status are made clear to the consulting clinicians in an outpatient setting. Significance/Clinical Relevance: As a result of the ankle fracture algorithm we have adapted the BOAST 12 guidance to shape an intrinsic pathway to not only improve patient management within the emergency department but also create a standardised format for follow up.

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