Aim: Fracture-related infections (FRI) are common and serious complications of musculoskeletal trauma. With average hospital healthcare costs for infected patients being 6.5 times higher than uninfected patients, FRI poses a significant social-economic burden to the patient and healthcare system. We aim to audit current practice in preventing and diagnosing FRIs, and improve management of infections in patients with fractures. The guidelines covered are the British Orthopaedic Association (BOA) FRI guidelines.

Method: Our sample included patients who suffered an infection as a direct consequence of fracture and/or subsequent surgical management procedures over a seven-year period. Surgical procedures were performed for fractures in 8826 patients. In total, 102 patients with a FRI were reviewed. Audit results and recommendations have been presented at a clinical governance meeting.

Results: Seven out of sixteen items had poor compliance (<80% compliance). Ultrasound-guided aspiration was done in 21.6% (22/102), even if debridement surgery is delayed. 1.96% (2/102) received adequate advice about responding to a suspected FRI. 56.9% had recommended 2-week antibiotic-free duration before sampling. Our recommendations include pre-written template in discharge documentation providing guidance on responding to a suspected FRI, better communication between microbiology, surgical team, and GPs regarding antibiotic prescription timing, including weekly bone and joint infection MDT review for FRI patients.

Conclusions: Lowering FRI-related burden requires a three-pronged approach: uniform set of standards for infection prevention in trauma and orthopaedic surgery, robust diagnostic workup for suspected FRI cases, effective management scheme for confirmed FRI cases. These systems should be a key element of orthopaedic trauma service.