

Open lower limb fractures represent a significant burden on both orthoplastic reconstructive services, and society as a whole. The outcomes following surgery (either reconstructive or ablative) can be variable. We aim to produce a novel patient centred tool capable of quantifying both speed and completeness of recovery following open tibial fracture.

The tool was developed in 3 stages. Firstly qualitative interviews provided the knowledge base for the development of a 112 question tool. This was then trialled in 35 open tibial fracture patients and subsequently reduced to a 50 item questionnaire. A total of 232 completed questionnaires were returned from open tibial fracture patients from across the UK. Factor analysis was used to determine the underlying factorial basis of the questionnaire and consequently allow it to be reduced further to 10 items. The 10 underlying factors described 60% of the variance observed in the sample.

The final tool, termed the Wales Lower Limb Trauma Recovery (WaLLTR) scale will be used to measure recovery in recovering open lower limb fracture patients, as well as patients with other lower limb injuries. It is hoped that the tool will become a standardised measure of recovery in lower limb injury.

Phase 1 of the work (qualitative knowledge production) has been presented at the British Trauma Society and published in Injury.