

Re-Intervention Rates Are Low After Direct Discharge from the Edinburgh Trauma Triage Clinic: Outcome of 6,688 Patients

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Purpose: The Edinburgh Trauma Triage clinic (TTC) is an established form of virtual fracture clinic (VFC) that permits the direct discharge of simple, isolated fractures from the emergency department (ED), with the subsequent electronic consultant review of the clinical notes and radiographs. Small short-term cohort studies of similar systems have been published, but to detect low rates of complications requires a large study sample and longer-term follow-up. This study details the outcomes of all patients with injuries suitable for the direct discharge protocol over a 4-year period, reviewed at a minimum of 3 years after attendance.

Methods: All TTC records between January 2014 and December 2017 were collated from a prospective database. Fractures of the radial head, little finger metacarpal, fifth metatarsal, toe phalanges, and soft-tissue mallet finger injuries were included. Application of a well-established direct discharge protocol, and any deviations including a prescribed phone call from a nurse practitioner or fracture clinic appointment, were noted. All records were then reassessed at a minimum of 36 months after TTC triage (mean 54 months) to ascertain which injuries attended the trauma clinic after initial discharge. Reasons for attendance, the source of referral, and any subsequent surgical procedures were identified.

Results: There were 6688 patients with fractures of the radial head (1861), little finger metacarpal (1621), fifth metatarsal (1916), toe phalanges (920), and soft-tissue mallet finger injuries (370). A total of 962 (14%) patients were offered in-person review after TTC assessment of the ED records and radiographs, of whom 35 (0.5%) underwent a surgical intervention. There were 298 patients (4%) who attended trauma clinic after TTC direct discharge at a mean time after injury of 11.9 weeks, of whom 11 (0.2%) underwent a surgical intervention. Serious adverse events, defined as those in which a patient may not have come to harm if early clinical review had been undertaken, occurred in 1 patient (0.01%). This was related to user error rather than a protocol failure.

Conclusion: TTC direct discharge protocols significantly reduce in-person fracture clinic appointments for simple, isolated injuries of the elbow, hand, and foot. Reintervention after direct discharge of these simple pre-defined injuries is low and, within a TTC system, patients with these injuries can be safely discharged without routine follow-up.