Purpose: It is quite evident that a patient’s Length of Stay (LoS) in an Emergency Department (ED) is prolonged while awaiting the results of their investigations including CTs. The aim of our QI initiative was to understand which patients with fractures receive CTs in our department, the rationale for having this done, the waiting times and disposition of these patients following their CTs.

Methods: A clinical retrospective audit was undertaken to review all presentations from July – December 2019. ETC presentations with fractures involving the appendicular skeleton were included. ETC presentations with fractures of the clavicle and scapula were excluded. CTs ordered as part of trauma alerts or trauma responds were excluded. Data for this audit was provided by the Department of Radiology and collected from the Emergency Department Information System (EDIS), ieMR and Intelleconnect.

Results: 161 patients received CTs in this 6-month period of which 50 (31%) patients were admitted to the hospital and 111 were seen in the orthopaedic OPD. Common fractures that required a CT in ETC were for fractures involving the tibial plateau, humerus (glenohumeral joint), bones of the foot.

The Average ED LoS for this cohort: 6 hours 13 minutes
The Average time to CT if already discharged from ETC: 4 hours 23 minutes
The Average time to discharge after a CT is still close to 4 hours.

To obtain a more conclusive diagnoses when an injury was not obvious on x-rays, patients who presented days after initially sustaining their injuries and operative planning stood out as the main rationale documented for having CTs done.

Conclusion: This audit suggests that the waiting times for CTs requested for orthopaedic injuries surpass the “4-hour rule”. Close to 70% of patients who received CTs for orthopaedic injuries went on to be seen in an outpatient setting. The average time to discharge after a CT is still close to 4 hours. The documented rationale for CTs is inconsistent. Following this audit, RBWH ETC and the Jameson Trauma Institute are collaborating on a joint QI initiative that looks at developing a pathways for these patients who present to ETC with orthopedic injuries.