## An analysis of factors contributing to delays in surgery at a Level 1 Trauma Center prior to implementation of a Dedicated Orthopaedic Trauma Room

Jonathan McKeeman, Timothy Daniel Renzi<sup>1</sup>, Ryan Yimeng Lee, Kristofer S Matullo

<sup>1</sup>St Lukes University Hospital

INTRODUCTION:

The benefits of a dedicated orthopaedic trauma room (DOTR) are well known with notable improvements in efficiency and cost reduction post implementation. Delays in surgery can result in longer immobilization times while the patient is waiting for surgery with no oral intake and delayed rehabilitation, possibly resulting in extended length of stay in the hospital. Additionally, delays in care contribute to after-hours surgery which may result in operating room staff with less experience in orthopaedic trauma as well as surgeon fatigue. The benefits of the DOTR are well documented, but are not implemented in many hospital systems, possibly due to perceived financial or volume considerations. Administration at multispecialty hospital systems may also argue that other factors contribute to delays in surgery rather than purely operating room availability. The purpose of this study is to analyze the factors contributing to delays in surgery for orthopaedic trauma patients at a single Level I trauma academic medical center without a DOTR.

At a single Level I trauma center utilizing an "add-on" model of surgical scheduling for non-elective cases, orthopaedic trauma patients underwent operative intervention during the time frame of 10/01/21 to 9/30/22 were identified through a retrospective chart review. Primary outcome measures included: time from admission to surgery, time from clearance to surgery, number of rescheduled surgeries, and reasons for delays or cancellations in surgery. RESULTS:

A total of 581 "add on" orthopaedic trauma procedures were identified from 10/01/21-9/30/22. The median time from admission to surgery was 15 hours. The median time from clearance to surgery was 8.24 hours. 82.4% of cases arrived in preoperative holding without delay. 102 (17.55%) cases were rescheduled prior to patients arriving in preoperative holding. Of those cases, 72.54% were due to room availability and 27.46% due to other reasons. Once arriving in preoperative holding, 34.88% of cases were rescheduled due to room availability.

## DISCUSSION AND CONCLUSION:

Orthopaedic trauma patients are typically optimized for surgery and the main cause of delays in care is room availability with time from clearance to surgery accounting for over half the time from admission to surgery. In conjunction with the known economic and efficiency benefits, this analysis may remove barriers and assist orthopaedic surgeons and practice managers in making informed decisions on implementation of a DOTR.