

Developing a Structured Toolkit to Address Delays in Time to Surgery for Low Energy Hip Fracture Patients: The SWIFT Initiative

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INTRODUCTION: Delayed surgery (>24-48 hours) for hip fracture patients is associated with higher morbidity, mortality, and overall cost, but determinants of delayed surgery are varied and context dependent. Improvement strategies are specific to the identified determinants of delay; therefore, we sought to identify determinants of delay at a single hospital and match barriers to interventions to improve time to surgery (TTS).

METHODS:

Semi-structured interviews were completed with stakeholders using the Consolidated Framework for Implementation Research (CFIR) and Theoretical Domains Framework (TDF). Transcripts were analyzed to identify determinants affecting TTS. Themes from the codes were identified and barriers were matched to tailored strategies using the Expert Recommendations for Implementing Change (ERIC) matching tool to create a system-level matrix of improvement strategies. After implementation, the hospital quality team tracked quarterly TTS metrics within 24 hours for patients who did not receive echocardiograms and for those who did. Pre- and post-implementation data was calculated using running weighted averages.

RESULTS:

Seventeen stakeholders from orthopaedic surgery, internal medicine, emergency medicine, anesthesia, and nursing were interviewed. Thematic analysis identified seven themes as determinants of delayed TTS: patient health, care coordination, prioritization, improvement climate, availability, incentive structures, and empowerment. 23 sub-themes and 66 codes were identified as areas of interest for implementation strategies. The matrix contained barriers that were matched to strategies spanning seven ERIC domains. Before implementation, 62% of patients had timely surgery, while 23% had timely surgery while receiving an echocardiogram. Post intervention, 74.1% of patients had timely surgery, and 35.8% had timely surgery while receiving an echocardiogram.

DISCUSSION AND CONCLUSION:

An improvement strategy matrix improved TTS within 24 hours for hip fracture patients within the context of one health system. This process to identify barriers and to develop an improvement strategy matrix may be usable by other health systems to identify determinants of delays.