

Hip Fractures: Minimal Presurgical Wait Time for Maximal Results

For New Zealand hip fracture patients undergoing surgical intervention, what is the best time frame post- fracture?

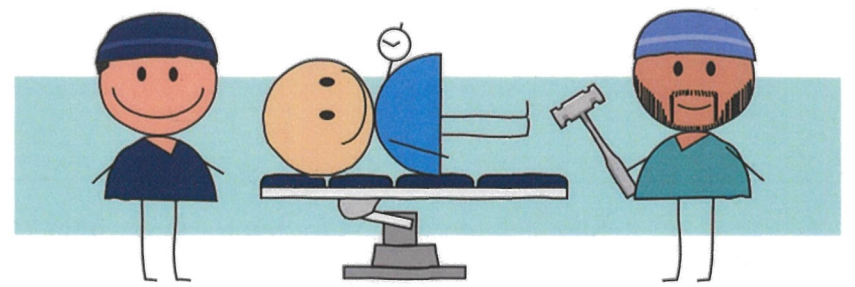
INTRODUCTION

A hip fracture is a break occurring to the upper region of the bone called the femur. Majority of fractures (90%) are treated surgically. Surgical intervention usually involves the implantation of plates and screws to realign the bone and fix it in place (American Academy of Orthopaedic Surgeons, n.d.).

The incidence of hip fractures is rising globally due to the continuous population growth and the rise of the ageing population (Osteoporosis New Zealand, n.d.), (Worldometers, N.D.). Due to the rise in incidence there needs to be an awareness and an active effort made to create a hip fracture.

BENEFITS FROM A PRE-OPERATIVE WAIT LESS THAN 48 HOURS

- Post-operative stay:** Post-operative stay is substantially lengthened (by almost 11 days) if pre-operative wait is longer than 48 hours, due to risk of post-operative complications (Siegmet, Gurusamy, & Parker., 2005).
- Pain:** Pre-operative time's less than 48 hours minimizes the amount of time the patient experiences fracture pain, decreasing the likelihood of resulting consequences associated with prolonged muscle tension such as muscle atrophy and a delay in rehabilitation (Simunovic, Devereaux, & Bhandar, 2011).
- Motility:** Loss of motility and independence occurs initially with injury. Inadequate recovery increases risk for secondary injury and affects an individual's independence post injury. Levels of independence post fracture for elderly decrease from 60-70% pre-fracture to 40-60% (Moja et al., 2012).
- Mortality:** Incidence of mortality is decreased within the following year (5,691 deaths prevented) if pre-operative wait is less than 48 hours, due to the correlation between pre-operative wait and associated complications (Colais, di Martino, Fusco, Perucci, & Davoli, 2015).
- Associated complications:** Incidences of minor and major medical complications such as UTI, pressure sores and pulmonary embolism are increased if pre-operative wait is delayed over 48 hours. This is often due to the correlation between pre-operative wait over 48 hours and prolonged immobility (Simunovic, Devereaux, & Bhandari, 2011).



CONCLUSION

Recommendation: To have a clinical care standard for hip fracture care that incorporates multidisciplinary care and a focus on short pre-operative periods from admission (within 48 hours if the patient is medically fit). For the benefit of the patients and the health care system, hospitals should adapt a best practice hip fracture pathway that champions early surgery due to the known positive outcomes that this intervention can have and the negative consequences that other clinical pathways can cause. This clinical care standard for hip fracture care should be utilized in every hospital.

References

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PECOT Table:

PECOT category:	Information relating to question:	Explanation:
Population	My population for this research is those who experience hip fractures resulting in surgical intervention.	Hip fractures are at a high incidence in New Zealand and they create a great pressure on the Health System. A large proportion of hip fracture patients have surgical intervention as their best treatment option. There is significant debate on the correct time frame in which patients needing surgical intervention should have surgery post-fracture to ensure best outcomes.
Intervention	Surgical intervention for hip fracture within 24-48hours of fracture and after 2 days + fracture	Are patients who undergo surgery within 24-48hours of fracture, given they are in a ‘fit’ state for surgery, more likely to have better recovery results than those who wait for 2+ days.
Comparison	The outcomes of those who undergo surgery within 24/48hours post fracture and those who wait longer.	The debate for surgery on hip fractures focuses on the most beneficial time frame in which patients needing surgical intervention should have surgery done post-fracture to provide the best outcomes. This debate usually focuses around 24hours-48hours post-fracture and hours/days longer.
Outcome	Majority of research concludes: having surgery done within 24-48 hours of fracture, given the patient is medically fit for surgery, provides better outcomes for the patient.	Within New Zealand’s health system there are several pathways and recommendations. One of these include The Australian and New Zealand Hip Fracture Registry which promotes admission to the orthopedic ward within 4 hours of presentation and surgery within 48 hours if medically fit.

The rational for choosing to present this in an academic poster format:

An academic poster is a visual presentation of academic work/research. It is presented in a way which can be used to inform colleagues or a chosen audience about a subject matter which is important. This can inspire conversation about the topic and help stimulate change. The topic surrounding the beneficial timing for surgical intervention for hip fractures is a widely discussed topic. There are many frameworks currently available to utilise to help provide the most timely and affective care, however the knowledge of best practice needs to continuously be discussed. It was beneficial to present this topic as a poster as the information surrounding the benefits from having timely surgical intervention can be effectively presented as a poster. It would not be effective to present this information as a submission as I am not proposing an action of change, rather I am using this to inform others and stimulate conversation.