

Hand Injury and Pathology Transfers to a Single Tertiary Care Center

Michael Anderson, BS¹, Nicholas Pilla, MD², Brittany Homcha, MD²,
Kenneth Taylor, MD²

¹Penn State College of Medicine, Hershey, PA ²Penn State Department of Orthopaedics and Rehabilitation, Hershey, PA

Introduction

- Hand injuries and conditions are common causes for presentation to the ED
- Many institutions are not prepared to treat often complex pathologies
- Results in transfers to other institutions
- Objective: Analyze patterns and disposition of hand pathology transfers to a single tertiary care center

Methods

- Retrospective review of 1,636 orthopaedic transfers
- Primary data endpoints:
 - Reason for transfer
 - Total transfer time
 - Patient insurance type
 - Disposition

Results

- 222 complete patient records, 62 related to hand pathology of which 6 were pediatric
- No significant difference between number of traumatic vs non-traumatic pathologies, hand vs non-hand ($p = 0.349$)
- Most common reasons for hand pathology transfers were limitations of transporting hospital and patient requiring higher level of care
- Total transfer time did not vary between hand vs non-hand pathologies ($p=0.106$)
- Traumatic hand injuries were transferred significantly faster ($p=0.04$)
- Overall, there was a statistical difference between transport times based on final disposition ($p=0.039$)
- Hand cases treated in the outpatient setting had longer transport times than those treated in the OR ($p=0.035$).
- There was no significant difference between ED and OR, as well as ED and outpatient ($p=1.0$, $p=0.771$)
- Insurance type did not impact transport time ($p=0.9$) or final disposition ($p=0.064$)

Table 1: Mean transport times based on injury type and disposition

	Mean Transport Time	St Dev	p value
Hand Pathology	02:42:45	01:55:26	0.106
Non-Hand Pathology	03:45:14	04:53:46	
Traumatic Hand Injury	02:31:13	01:18:47	0.04*
Non-Traumatic Hand Pathology	04:00:38	04:07:19	
Hand Pathology treated in ED	02:59:17	01:10:27	
Hand Pathology treated in Outpatient	03:39:05	03:31:02	0.039*
Hand Pathology treated in Surgery	03:27:24	04:30:43	

Conclusions

- Transport times of non-traumatic, outpatient-managed hand cases are significantly longer than those traumatic hand injuries which end up going to surgery
- Neither transport time nor final disposition were impacted by patient insurance type

