

# Patterns of Follow-Up Compliance in Pediatric Hand Injury Patients



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## INTRODUCTION

Hand injuries are a common cause of pediatric emergency department (ED) visits.<sup>1</sup>

Follow-up visits are important for decreasing hospital readmission and minimizing diagnosis error.<sup>2</sup> However, research concerning follow-up appointment compliance for pediatric hand-injuries is limited

Successful compliance could pose a unique benefit to pediatric patients due to their faster healing rates as compared to adults.<sup>3</sup> Identifying and understanding barriers to follow-up compliance are necessary for improving patient outcomes.<sup>4</sup>

## OBJECTIVE

The purpose of this study is to investigate compliance to hand injury follow-up care in pediatric patients by analyzing their attendance and barriers to follow-up appointments.

## MATERIALS & METHODS

An IRB approved protocol for a retrospective chart review of pediatric hand clinic follow-up visits was conducted on patients at a major United States level I Trauma Center. The review included data from November 2019 to November 2020.

Inclusion criteria:

- Patients under the age of 18
- Injuries limited to upper extremity distal to elbow

Follow-ups, defined as non-surgical appointments made after initial ED visit, were recorded for first visit attendance.

Descriptive analysis and binomial logistic regression were completed using Jamovi Statistical Software. A value of  $p < 0.05$  was considered significant.

## RESULTS

There was a total of 236 pediatric patients, average age  $9.9 \pm 4.68$  years, that were scheduled for follow-up appointments at the ED between November 2019 and November 2020.

Of the 236 patients, 74.6% attended their first follow-up appointment.

Patients who lived a distance 20-50 miles and 100+ miles from the hospital were significantly less likely to follow up than those within 10 miles of the hospital.

Patients whose primary injury was laceration were also significantly less likely to follow-up. There were significant differences in follow-up compliance for other types of injuries.

Insurance, gender, race, language preference, and mechanism of injury (MOI) were not significantly associated.

## RESULTS (cont.)

Table 1: First Follow-up attendance by demographic

Factor (comparison baseline)	Odds Ratio	P-value	2.5%	97.5%
<b>Gender (Male)</b>				
Female	1.15	0.672	0.608	2.16
<b>Race (White/Non-Hispanic)</b>				
Black/Hispanic	0.720	0.684	0.148	3.50
White/Hispanic	1.260	0.614	0.514	3.09
Black/Non-Hispanic	0.928	0.868	0.382	2.25
<b>Insurance Type (Private)</b>				
Government	1.50	0.288	0.710	3.18
Self Pay	1.03	0.952	0.383	2.77
<b>Distance in Miles (0-10)</b>				
10-20	0.458	0.061	0.203	0.631
20-50	0.144	<b>*0.010</b>	0.033	1.035
50-100	0.120	0.087	0.011	1.360
100+	0.040	<b>*0.003</b>	0.005	0.343

\*Statistically significant at  $p < 0.05$  compared to all follow-ups

Table 2: Follow-up based on type of injury (5 most frequent)

Type of Injury	Yes	No	Total	P-value
Radius Fracture	72 (80.0%)	18 (20.0 %)	90	0.3076
Phalanx Fracture	34 (70.8%)	14 (29.2 %)	48	0.5849
Ulna Fracture	26 (89.7%)	3 (10.3 %)	29	0.0715
Laceration	11 (52.4%)	10 (47.6 %)	21	<b>*0.008</b>
Both Bone Forearm Fracture	10 (83.3 %)	2 (16.7 %)	12	0.4972

\*Statistically significant at  $p < 0.05$  compared to all follow-ups

## CONCLUSION

The aim of this study was to assess compliance to follow-up for pediatric patients with upper distal extremity injuries. We found that increased distance from the hospital and lacerations are associated with decreased compliance to follow-up.

## FUTURE DIRECTIONS

Investigate other potential barriers to follow up such as, language barriers, time constraints, and health literacy.

Obtain qualitative data regarding patient and caregiver perspectives on barriers to follow up.

## Citations

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