

# Time to surgery and travel distances for brachial plexus surgery: a population-based perspective

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## INTRODUCTION

Despite the importance of timely evaluation and treatment of patients with brachial plexus injuries, we have noted delays in referral.

Because the majority of published experience with treatment of brachial plexus injuries is from individual centers, we used a population-based approach to better evaluate the referral patterns associated with these patients.

## METHODS

### Statewide databases

- California 2007-2011
- Florida 2007-2013
- New York 2008-2012
- North Carolina 2009-2010

### Study cohort (n=231)

- BPI surgery (CPT codes)
- Prior ED record for injury

### Outcome measures

- Time to surgery
- Travel distance

## RESULTS

### Time from injury-to-surgery

- Mean: 9.8 months
- Min: 2 days, Max 24mo
- Predictors for delay >12mo: initial tx at a rural, non-teaching, or <400 bed hospital

### Travel distance

- Median distance traveled for surgery: 14.7 miles  
>50 mi:19%, >100 mi:11%
- No association: incr. travel distance and delay to surgery.

## CONCLUSIONS

There are distinct risk factors associated with delay to surgery over 12 months, mainly associated with characteristics of the initial treating hospital.

Based on these findings, we have begun efforts to educate providers at surrounding hospitals about BPI treatment options, outcomes, and importance of timely surgery.

	Distance Traveled			
	≤50 miles	>50 miles	≤100 miles	>100 miles
Time to Surgery (Mean +/- SD)	292.6±216.6 days (n= 109)	269.4±184 days (n= 24)	294.1±214.5 days (n= 119)	240.4±173.9 days (n= 14)
	p= 0.63 (t-test)		p= 0.37 (t-test)	