

## Background

Previous systematic reviews have shown emphasis on discharge information to reduce readmission rates while a prospective study showed limited English proficiency and low education levels to increase the chances of misinterpreting discharge information [1,2]. There have not been many studies associating English proficiency with readmission rates.

## Methods

We obtained IRB approval through our institution. Then we conducted a retrospective review of patients who were readmitted to the Jefferson New Jersey hospitals within 30 days between July 1 2020 to June 30 2022 utilizing the Qlik App. The app identified patients who met the criteria of readmission within our study timeframe. We collected information such as age, race, length of stay, admission primary diagnosis, amount of readmission days per primary diagnoses, and English versus non-English preferred language. We used an independent T-test for our statistical analysis.

## Results

We identified 5445 patients meeting our criteria of which 5246 (96.3%) patients' preferred language was English while 199 (3.7%) patients had Non-English preferred language. We performed an independent Sample T-test to compare the average days of readmission for each principle diagnosis comparing Non-English patients and English speaking. We found there to be a significant difference between Non-English patients and English-speaking readmission patients (two-sided p-value- 0.003: 95% CI -129, 203) when sum of variances are not assumed.

## Conclusion

We found a significant difference between readmission days for non-English patients when compared to English-speaking patients. However, we have a drastically higher proportion of patients in the English proficient arm than the non-English proficient arm which is our confounding factor. Future studies looking at multi-center studies may help highlight the significant differences between readmission rates amongst English and non-English proficient populations.

	Levene Test for Equality of Variances	T Test for the mean	t	Df	Two Sided P	Standard Deviation	95% Confidence Interval	Lower	Upper
Sum of Readmission Days	Equal variances	.435	.51	.434	.332	.665	36.787	84.823	-129.650
	Non Equal Variances			3.117	.002	.006	36.787	11.802	12.04

Table 1. Independent T test of Sum of Readmission Days of English vs Non English Speakers. Equal variances are not assumed.

## References

1. Santomassino M, Costantini GD, McDermott M, Primiano D, Slyer JT, Singleton JK. A systematic review on the effectiveness of continuity of care and its role in patient satisfaction and decreased hospital readmissions in the adult patient receiving home care services. *JB Libr Syst Rev.* 2012;10(21):1214-1259. doi 10.11124/01938924-201210210-00001. PMID: 27820460.
2. Karliner LS, Auerbach A, Nápoles A, Schillinger D, Nickleach D, Pérez-Stable EJ. Language barriers and understanding of hospital discharge instructions. *Med Care.* 2012 Apr;50(4):283-9. doi 10.1097/MLR.0b013e318249c949. PMID: 22411441; PMCID: PMC3311126.