

## Enhanced Readability of Discharge Summaries Decreases Provider Phone Calls in the Post-Hospital Setting

*Asad J. Choudhry, MBBS, Moustafa Younis, MBBS, Mohamed D. Ray-Zack, MBBS, Amy Glasgow, Elizabeth B. Habermann, PhD, MPH, Stephanie Heller, MD, FACS, Henry J. Schiller, MD, FACS, Martin D. Zielinski, MD, FACS, Nadeem N. Haddad, MD  
Mayo Clinic, Rochester, MN*

**INTRODUCTION:** Disparities in health literacy are increasingly cited as a barrier to patient involvement in their own care. In our previous study, patient discharge instructions were found to be written at a substantially greater readability level than the 6th grade level as recommended by the AMA and NIH. We hypothesize that improving the readability of discharge instructions will decrease phone calls and readmission rates in the post-hospital setting.

**METHODS:** A prospective observational study of adult trauma patients From 9/2015-8/2016 was conducted. Discharge instructions were edited to improve readability in 8/2015, patients admitted prior to this intervention From 8/2014-8/2015 were compared to the prospective cohort. The Flesch-Kincaid Grade Level (FKGL), a universally accepted scale for evaluating the readability of medical information, was used. Differences in phone calls and readmission rates prior to, and following discharge template edits, were analyzed.

**RESULTS:** A total of 1006 patients were included (pre-intervention n=493, post-intervention n=513), patients' education level were similar in both groups (table 1). The median discharge instruction readability levels in the post-intervention group was significantly lower {8.6,95%-CI 8.8-8.9 vs 10.0,95%-CI 10.0-10.2,p<0.0001}. The number of phone calls per 100 patients was 2.4 times lower in the post-intervention group {22 vs 9,p<0.0001}. There was no difference in

Characteristic	Pre-intervention	Post-intervention	p-value
Age, mean (SD)	56 (22)	56 (22)	0.98
Sex, n	M=310, F=183	M=334, F=179	0.56
TBI, n (%)	186 (52)	174 (48)	0.46
Blunt vs Penetrating, n	B=468, P=23	B=490, P=22	0.77
Highest educational grade level achieved, median (IQR)	9 (7-9)	9 (7-9)	0.17

readmission rates (8.5% vs 8.6%, p=0.97).

**CONCLUSIONS:** Enhanced readability of discharge instructions was associated with fewer phone calls in the post-hospital setting. Improved readability may enhance health literacy, lessening the burden on providers. Further improvements to readability of discharge instructions must be made in order to meet AMA and NIH guidelines.