Limited Health Literacy and its Impact on Patient Comprehension of Reasons to Return to the Emergency Department
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Introduction & Objective:
Health literacy has traditionally been measured through metrics of numeracy, reading comprehension, and word recognition. Yet, it is increasingly recognized that these metrics may not be applicable to the outcome of interest: empowering patients to “make appropriate health decisions” pertinent to their specific condition (Koh et al, 2012). Our objective is to investigate the impact of health literacy on patient comprehension of healthcare provider instructions given at discharge to patients presenting with low acuity complaints in the emergency department (ED).

Methods:
Our study consists of a cross-sectional analysis of 54 patients presenting to an urban academic ED in Baltimore, MD. Health literacy was estimated using patient scores on the Health Literacy Skills Instrument-Short Form (HLSI-SF) (Bann et al, 2012). Comprehension of ED discharge instructions was estimated using patient scores on the Comprehension Assessment Tool (CAT). Adapted from an instrument developed by Engel et al (2012) at Northwestern University, components of the CAT consist of 4 Domains: Medication Regimen, Home Care Regimen, Reasons to Return to the Emergency Department, and Recommended Follow-up Clinic Care. Six patients who did not complete both the HLSI-SF and the CAT instruments were excluded.

Results:
In our preliminary analysis, we performed a bivariate regression to determine the association of health literacy with patient comprehension of discharge instructions and found a trend between HLSI-SF and CAT scores (p<0.2). Because the CAT consists of 4 Domains, we hypothesized that some domains might exert greater influence than others in the relationship between health literacy and patient comprehension of discharge instructions. We found one Domain (Reasons to Return to the Emergency Department) to have marginal statistical significance (p<0.055), whereas the other Domains did not demonstrate any significance. We then controlled for other factors including race, age, gender, and triage level. After adjusting for gender, we saw definitive statistical significance between patients’ understanding of Reasons to Return to the Emergency Department and their health literacy score (p<0.046).

Discussion:
Actual literacy requirements to administer the HLSI-SF are not present to the same degree as for the CAT, which is primarily administered verbally. It could be argued the disadvantages that limited health literacy patients encounter with self-management of their healthcare can be overcome via verbal review of healthcare provider instructions that focus primarily on action items (Domains) in healthcare.

However, prior studies have described limited health literacy as an independent risk factor for hospital reutilization after discharge (Kangovi et al, 2014; Kansagara et al, 2011; Mitchell et al, 2012). By extension, limited health literacy may also be a risk factor for repeat ED utilization (LeCalle & Rabin, 2010; Enard & Ganelin, 2013). Our preliminary findings indicate that health literacy, adjusted for gender, appears to have a clear association with patient understanding of reasons to return to the ED.

Implications:
Helping patients to better understand reasons to return to the ED could have significant implications for reducing preventable ED visits among patients with limited health literacy. Elucidating this relationship could potentially yield improved health outcomes, as well as greater cost-effectiveness and systems efficiency for ED-based healthcare. To achieve these goals, further study is warranted to better understand this complex relationship.