

Geriatric Fracture Patients/Families Have Poor Health Literacy and Long Length of Stay in Post-Acute Care Facilities: A Prospective Study

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Purpose: Health literacy (HL) includes a patient's comprehension of their medical condition and treatment plan. Geriatric patients with low HL can have poor outcomes. Geriatric fracture patients are often discharged to post-acute care (PAC) facilities (inpatient rehabilitation facilities = IRF, skilled nursing facilities = SNF). PAC is associated with high expenditures but no evidence of better outcomes. Medicare mandates that a care plan must be communicated ≤ 8 days of admission to PAC. However, many patients/families present to their first orthopaedic follow-up (2-3 weeks post-injury) with no knowledge of their PAC plan. Our objective was to investigate patients'/families' HL of their PAC and evaluate the influence of intervention at hospital discharge by the treating orthopaedic team on HL and length of stay (LOS).

Methods: Patients >65 years of age treated for fracture at a Level I trauma center from April 2018-November 2020 then discharged to PAC were prospectively enrolled at their first orthopaedic clinic visit. Patients with dementia were included only with family present, and family was encouraged to participate for all patients. Participants completed a survey asking: (1) facility name, (2) physician, (3) social worker, (4) discharge goals (activity, equipment, care, etc), and (5) discharge date. Beginning January 2019, patients/families were given verbal/written orthopaedic instruction prior to hospital discharge detailing important questions to ask on arrival to PAC. Bivariate comparisons were performed with Fisher exact test, t test, and Wilcoxon rank sum.

Results: 207 patients were enrolled (Control: $n = 106$; Intervention: $n = 101$), with mean age 79 years. The mean HL score for all patients/families was 2.4 out of 5. 93.7% were able to identify the facility, 44.9% could name their physician and 28.0% could name their social worker. Only 37.2% could identify goals for discharge, and only 35.7% were aware of their anticipated discharge date. There was no significant difference in HL scores (2.4 vs 2.3, $P = 0.49$) or median LOS (22 vs 28 days, $P = 0.14$) comparing the Control and Intervention groups. Family involvement (68%) did slightly improve HL score (2.6 vs 1.9, $P < 0.001$), but did not impact LOS (median 24 vs 35 days, $P = 0.21$). Patients discharged to IRF had better HL scores (3.4 vs 2.2, $P < 0.001$), shorter LOS (median 15 vs 30 days, $P < 0.001$), and trended toward improved knowledge of discharge goals (48.1% vs 35.6%, $P = 0.2$) than those in SNF.

Conclusion: Geriatric fracture patients and families discharged to PAC have poor overall HL of their care plans (mean 2.4 out of 5) and long LOS (median 26 days). Family involvement and discharge to IRF can improve HL and LOS, but orthopaedic intervention at hospital discharge had no significant effect. Systemic changes are necessary to improve geriatric HL and PAC.