Fracture Liaison Service Evaluation During Admission for Fragility Femur Fracture Increases Rates of Bone Health Intervention and Outpatient Follow-up

Alex James Demers¹, Lori Sue Fitton, Steele McCulley, Irving Delgado-Arellanes, Aspen Miller¹, Natalie Ann Glass, J Lawrence Marsh², Michael C Willey³

¹University of Iowa Hospitals and Clinics, ²Dept Of Orthopaedics, ³University Of Iowa Hospitals

INTRODUCTION: Fracture liaison services (FLS) can be effective for secondary fracture prevention, however patient identification and successful follow up in clinic remains challenging. This study aims to 1) evaluate the impact of FLS evaluation during hospital admission for fragility femur fracture on rates of bone health interventions and outpatient follow-up, 2) compare post fracture complication rates associated with FLS evaluation, and 3) identify factors predicting outpatient follow-up attendance.

METHODS: Retrospective review identified patients 50 years and older undergoing operative fixation of a femur fracture at a level I academic trauma center from January 1, 2021 to June 1, 2022. Patients were stratified by inpatient FLS evaluation. Clinic follow-up, DXA acquisition, nutritional interventions, osteoporosis medication initiation, and complications were documented up to 1 year postoperatively. Statistical analyses were performed with an $\alpha \leq 0.05$.

RESULTS: 233 patients met inclusion criteria with 54.9% receiving an inpatient FLS evaluation. Patients with an evaluation were more likely to be referred (95% vs 22%, p<0.0001) and present (54% vs 17%, p<0.0001) to bone health clinic, have higher rates of vitamin D (95% vs 41%, p<0.0001), calcium (88% vs 35%, p<0.0001), and protein supplementation (66% vs 29%, p<0.0001), DXA acquisition (51% vs14%, p<0.0001), and osteoporosis medication prescription (38% vs 17%, p=0.0003). There was no difference in rates of refracture, subsequent fracture, nonunion, or mortality. Younger patients had increased outpatient clinic attendance.

DISCUSSION AND CONCLUSION: Inpatient FLS evaluation during hospital admission for fragility femur fracture increases rates of bone health clinic follow-up, osteoporosis intervention, and DXA scan acquisition.