



Implementing an Osteoporosis Screening and Treatment Protocol for Patients with Fragility Fractures

Lyndsey Slape MSN, FNP-C

Problem

- Osteoporosis is a chronic disease that is a global concern and bone health should be prioritized before a fracture occurs.
- According to the American Orthopedic Association (2022), osteoporosis is the most common bone disease in the U.S, and it is a "silent condition" until a fracture occurs (AOA, 2022a).
- Sustaining a fragility fracture is an indicator of poor bone health and increases secondary fracture risk to 86% (AOA, 2022b).
- An estimated 80% of patients with fragility fractures in the U.S. will not receive the appropriate post-fracture care for osteoporosis (AOA, 2022b).

Background

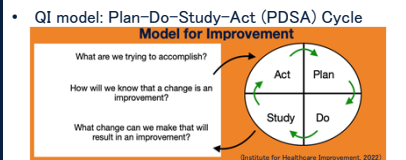
- Population screening using fracture risk assessment tools and BMD significantly reduced osteoporotic fractures and should be the standard of care (Merlijn et al., 2020).
- DEXA is considered the gold standard when diagnosing osteoporosis.
- An order initiated on the first outpatient orthopedic clinic visit for a DEXA scan, after meeting the intervention threshold on the FRAX questionnaire, is a promising step the orthopedic team can take to identify osteoporosis in a patient with a fragility fracture.
- Educating patients on weight-bearing and resistance exercises, fall prevention, smoking cessation, limiting alcohol intake, and supplementation of calcium and vitamin D can improve bone health (Lems et al., 2017).

Methods

- Setting: Texas Tech University Health Sciences Center El Paso (TTUHSC EP) Orthopedic Surgery and Rehabilitation Clinic Hand Service.
- 10-day reflective practice performed with a review of patients to identify a quality improvement project utilizing best practice guidelines.
- Translational Framework: Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model.



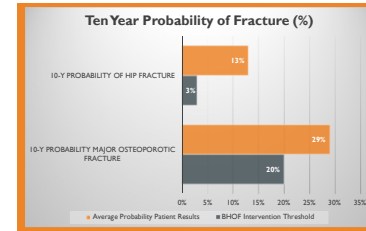
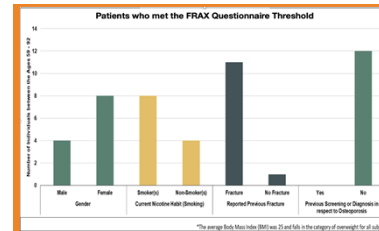
- The PICOT question for the project was as follows:
 - Population: Males and females, 50 years and older, with fragility fractures
 - Intervention: Implementation of a bone health protocol
 - Comparison: No bone health protocol being performed
 - Outcome: Increase osteoporosis identification and treatment rates
 - Time: Over a period of 4 weeks



- Each patient with a suspected fragility fracture completed a FRAX questionnaire to estimate their 10-year probability of fracture.
- If the patient met the intervention threshold on the FRAX questionnaire, they were given an order to obtain a DEXA scan to assess bone density.

Results

- 17 patients presented to their first follow-up visit after sustaining a DRF that required ORIF and qualified for inclusion in the protocol.
- 12 patients met the intervention threshold on the FRAX questionnaire.
- These 12 patients were given an order for BMD testing by DEXA, a prescription for supplementation with vitamin D and calcium, and provided oral and written educational materials about osteoporosis during the clinic visit.



- 7 of the 12 patients had scheduled their DEXA appointment and started supplementation with calcium and Vitamin D.
- 3 patients pending to schedule their DEXA.
- 2 patients (uninsured) expressed concern with the affordability of obtaining a DEXA scan and did not start supplementation.

Conclusions

- Screening helped identify post-fracture patients at high risk of a future fracture.
- The project confirmed the feasibility of implementing a bone health protocol in the hand clinic.
- The orthopedic community can be leaders to close the post-fracture treatment gap by providing high-quality, age-appropriate screening.

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Project Aim: Initiate a bone health protocol with the use of osteoporosis screening, DEXA testing when indicated, patient education, and medications