

# Initiative to Improve Osteoporosis Management by Adapting the Fracture Liaison Service for Outpatient Use

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## Purpose

The purpose of this project was to evaluate whether the creation of a Fracture Liaison Service (FLS) model in an outpatient gynecology clinic would improve the identification and management of postmenopausal women, 50 and older, at risk of fracture.

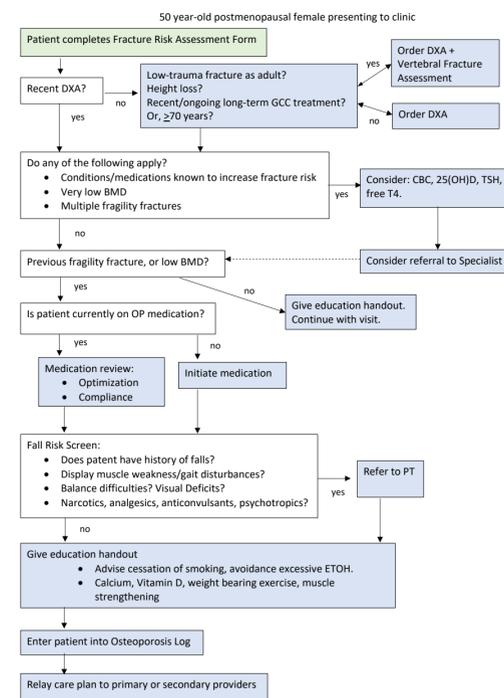


## Background

- Osteoporosis is one of the most prevalent debilitating diseases<sup>1</sup>, yet it remains underdiagnosed<sup>2</sup> and undertreated<sup>3</sup>.
- Postmenopausal women are especially vulnerable as menopause inflicts key changes on bone physiology that are often unrecognized until a fracture occurs<sup>4</sup>.
- Screening, treatment, and pharmacologic adherence rates are dismal even among high risk groups<sup>2</sup>.
- Fracture prevention strategies are often not addressed by primary care clinicians<sup>5</sup>.
- FLS models have resulted in increased treatment, reduced mortality, and reduced subsequent fracture rates<sup>6</sup>.
- Few studies have applied the FLS model to a primary care setting.

## Methods

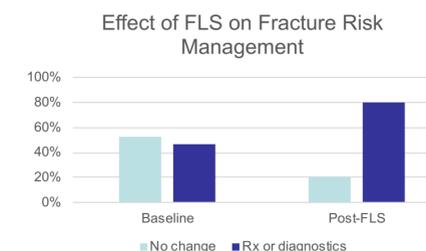
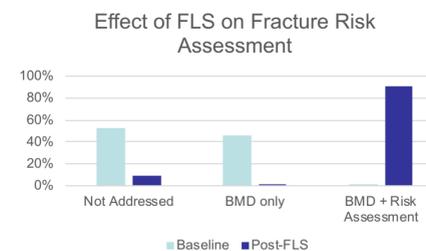
- The International Osteoporosis Foundation's Best Practice Framework (BPF) was adapted to reflect the setting.
- An algorithm was created to assist with standardization of screening.
- To facilitate time constraints, a patient intake form was created based on best practice guidelines.
- Educational materials were created for dissemination to standardize prevention measures discussed by the provider.
- Local referral networks were outlined and a follow-up and tracking protocol was initiated.



## Results

Adherence to algorithm components were assessed via convenience sampling over an 8-week implementation period. The pre-implementation screening was analyzed via retrospective chart reviews.

- A Mann-Whitney U test determined a significant difference in pre QI intervention (M=17.70) screening compared to post QI intervention (M=45; U=0.00, p<.05).
- Adherence to the algorithm occurred in 90% of patients meeting inclusion criteria (N=33).
- Of those, 80% met criteria for the initiation or modification of pharmacologic treatment or additional diagnostics.
- New diagnoses of osteoporosis during the initial visit occurred in 16% of participants based solely on history or previously unfulfilled diagnostics.



## Discussion

- Adaptation of the BPF created a FLS model that incorporates seamlessly into a routine outpatient gynecology appointment.
- Adherence to the FLS model significantly improved the identification and management of postmenopausal women at risk of fracture.
- Undiagnosed and untreated osteoporosis, resulting from care continuity failure, was identified as a result of the FLS model.
- Women Health Care Providers are well equipped to close the osteoporosis treatment gap for patients under their care.

## Limitations

Limitations of this study include a short implementation period and a small sample size. Further research is needed regarding the FLS model's effect on the rate of management adherence.

## Acknowledgements

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## References

- Wright et al (2014) JBMR, 29(11)
- Gillespie & Morin (2017) Am J Med, 130
- Boudreau et al (2017) J Am Geriatr Soc, 65
- Lupsa & Insogna (2015) Endo Metab Clin, 44
- Ensrud & Crandall (2017) Ann Int Med, 167
- Noordin et al (2018) Int J Surg, 54