Implementation of a Nurse Practitioner Fracture Liaison to Improve Outcomes in Post-Fracture Patients

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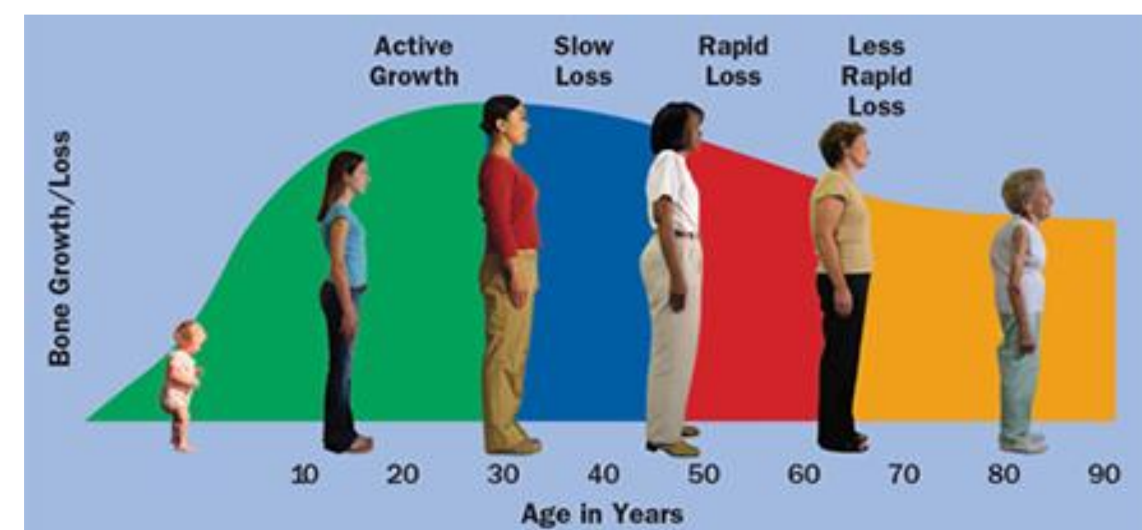
Purpose

Improvement is needed in osteoporosis screening and post-fracture care. Nurse practitioners can play an important role in improving care. This project aims to decrease the number of care gaps in osteoporosis management for Medicare Advantage post-fracture patients by implementing a nurse practitioner fracture liaison.



Background

In the United States, there are millions of people who have osteoporosis or are at high risk due to low bone mass (National Institute of Health, 2014). Twenty percent of patients who have a fragility fracture will have another fracture within five years (Keshishian et al., 2017). Also, up to 30% of patients that have a hip fracture die within one year (United States Preventive Services Task Force, 2018).

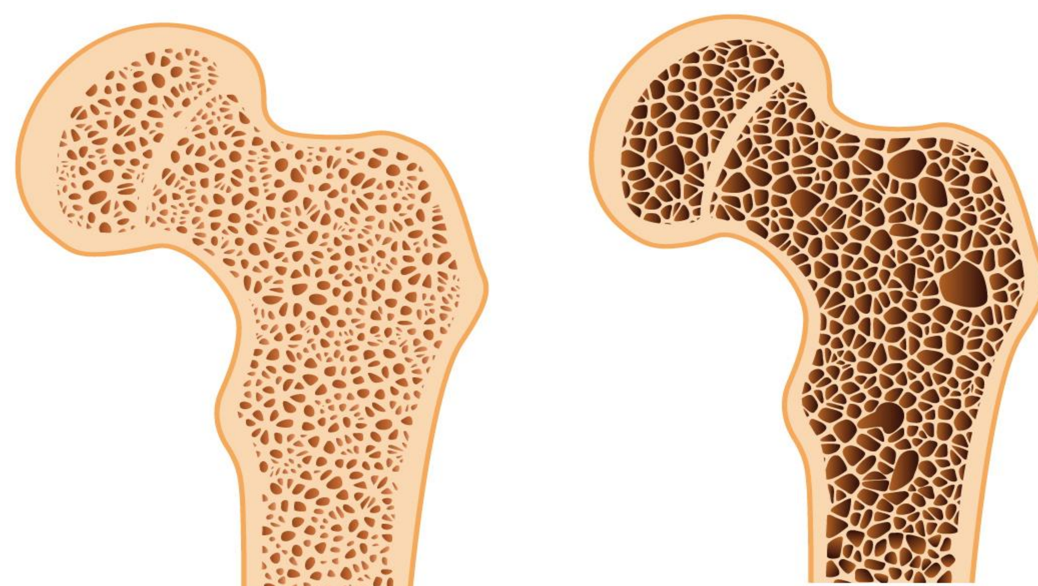
Many osteoporosis-related fracture patients are not being screened or followed up after their first fragility fracture (International Osteoporosis Foundation, 2018). Evidences shows that having a fracture liaison service decreases the number of subsequent fractures (de Bruin, Wyers, van den Burgh, & Geusens, 2017). However, despite the years of evidence on the effectiveness of fracture liaison programs, there continues to be a gap in secondary osteoporosis care such as recommended screening and treatment (Keshishian et al., 2017). The Medicare Star Ratings for this measure also remain low despite current intervention.

Nearly 13.4% of Lee County adults age 50 and older have osteoporosis. This percentage fails to meet the Healthy People 2020 target of 5.3% or lower.

(Professional Research Consultants, 2017).

Using a fracture liaison service showed an increase in osteoporosis treatment and DEXA screening as well as a decrease in re-fracture rates and mortality.

(Mitchell, 2013; Nayak & Greenspan, 2018; Wu et al., 2018).



Healthy bone | Osteoporosis

Methods

This project follows the Institute for Healthcare Improvement (2018) Plan-Do-Study-Act Model.

Plan - The PICO question is "Will implementation of a nurse practitioner fracture liaison improve quality outcomes in Medicare Advantage post-fracture patients?"

Do - Patients who are not on osteoporosis treatment and have not had a DEXA scan will be offered a home comprehensive assessment and education. A visit note will be sent to the primary care provider.

Study - The number of open HEDIS gaps and the Medicare Star Ratings from provider groups at the beginning and at the end of the project will be compared. The process of data collection will occur over a 3 month period.

Act - The data analysis and results will be summarized and presented to administration. If the findings show an improvement, they will be used to support expanding the use of a nurse practitioner fracture liaison statewide.

Setting: WellMed Southwest Florida, a managed service organization for Medicare Advantage patients.
Inclusion Criteria: Women age 65 and over who have had a fragility fracture and have an open Healthcare Effectiveness Data and Information Set osteoporosis management quality gap.
Exclusion Criteria: Patients who have had a DEXA scan two years before the fracture or 6 months after the fracture and who are already being treated for osteoporosis.
Sampling Strategy: Qualified patients are identified through a quality measure database, which provides information on individuals with open osteoporosis management gaps at WellMed. In January 2019, 61 patients were identified. Following the removal of ineligible patients, patients that met exclusion criteria and patients whose provider group opted not to participate, a total of 25 patients remained.
Outcome Measures: HEDIS scores and Medicare Star Ratings.

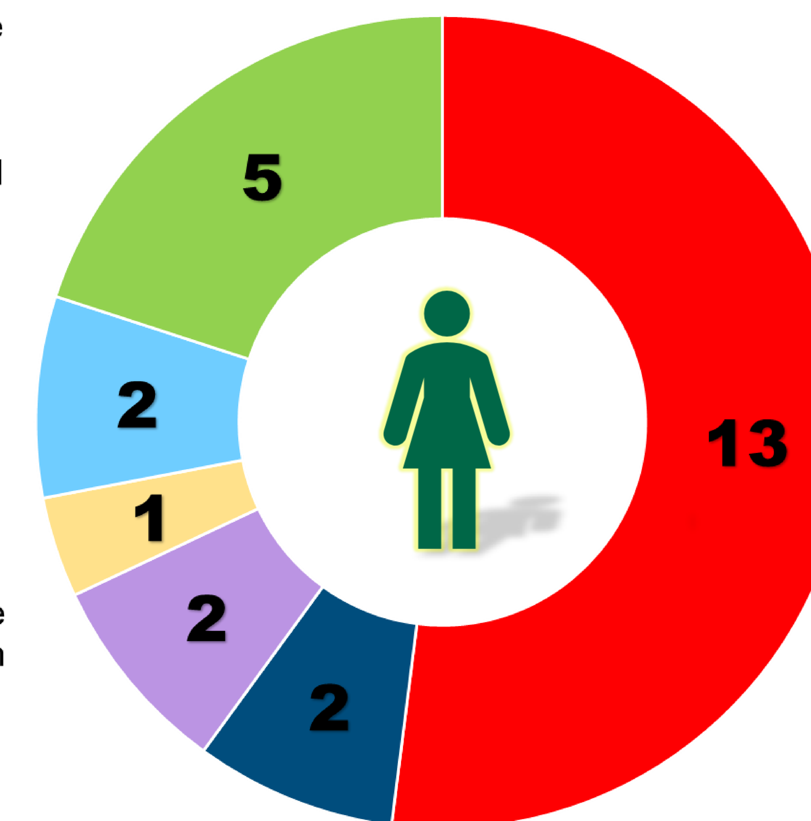
Intervention

- The eligible 25 patients were called to see if they have already had a bone density test or were on any medications to treat osteoporosis.
- If not, they were offered a home visit including: GE Qualitative Calcaneal Ultrasound, fracture risk assessment, fall risk screening, and thorough education.
- If they were not interested, education was provided over the phone, and they were assisted with scheduling a follow up with their primary care provider to order bone density testing.
- If they accepted the in-home intervention, the nurse practitioner visited them to perform the above interventions.
- A copy of the calcaneal ultrasound report, FRAX score, fall risk assessment score, and visit note were sent to their primary care provider
- The patients were referred to the primary care provider to determine further treatment and final clinical decisions.

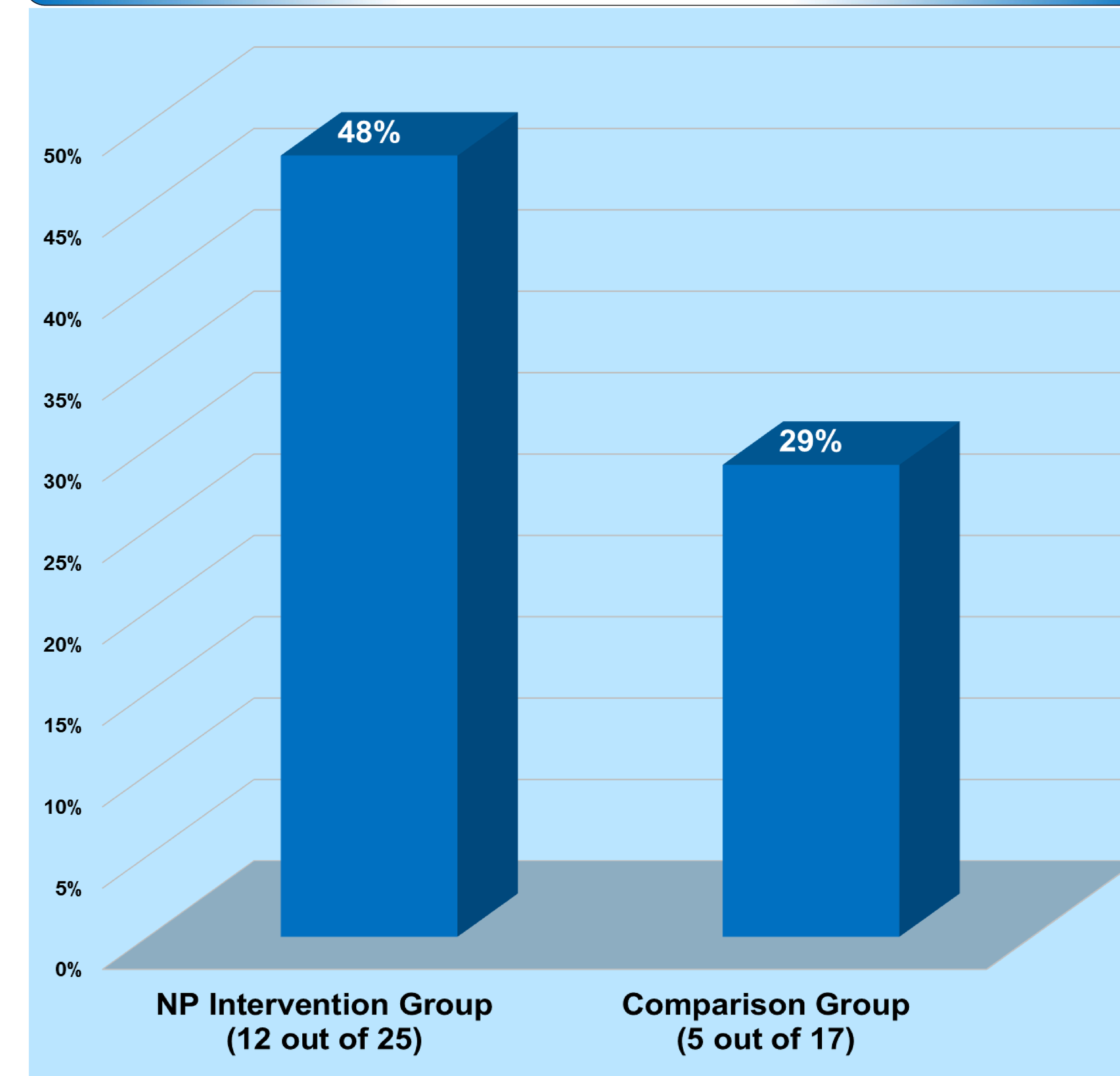
Results

Total of 25 Eligible Participants

- Patients who were unable to be contacted
- Patients with a gap that expired before they could be reached
- Patients with a gap closed by PCP before they could be reached
- Patient who refused all interventions
- Patients who had the telephone intervention and scheduled with radiology
- Patients who had a full intervention with the nurse practitioner



Percentage of HEDIS Measure Gaps Closed Among Osteoporosis Patients



Limitations

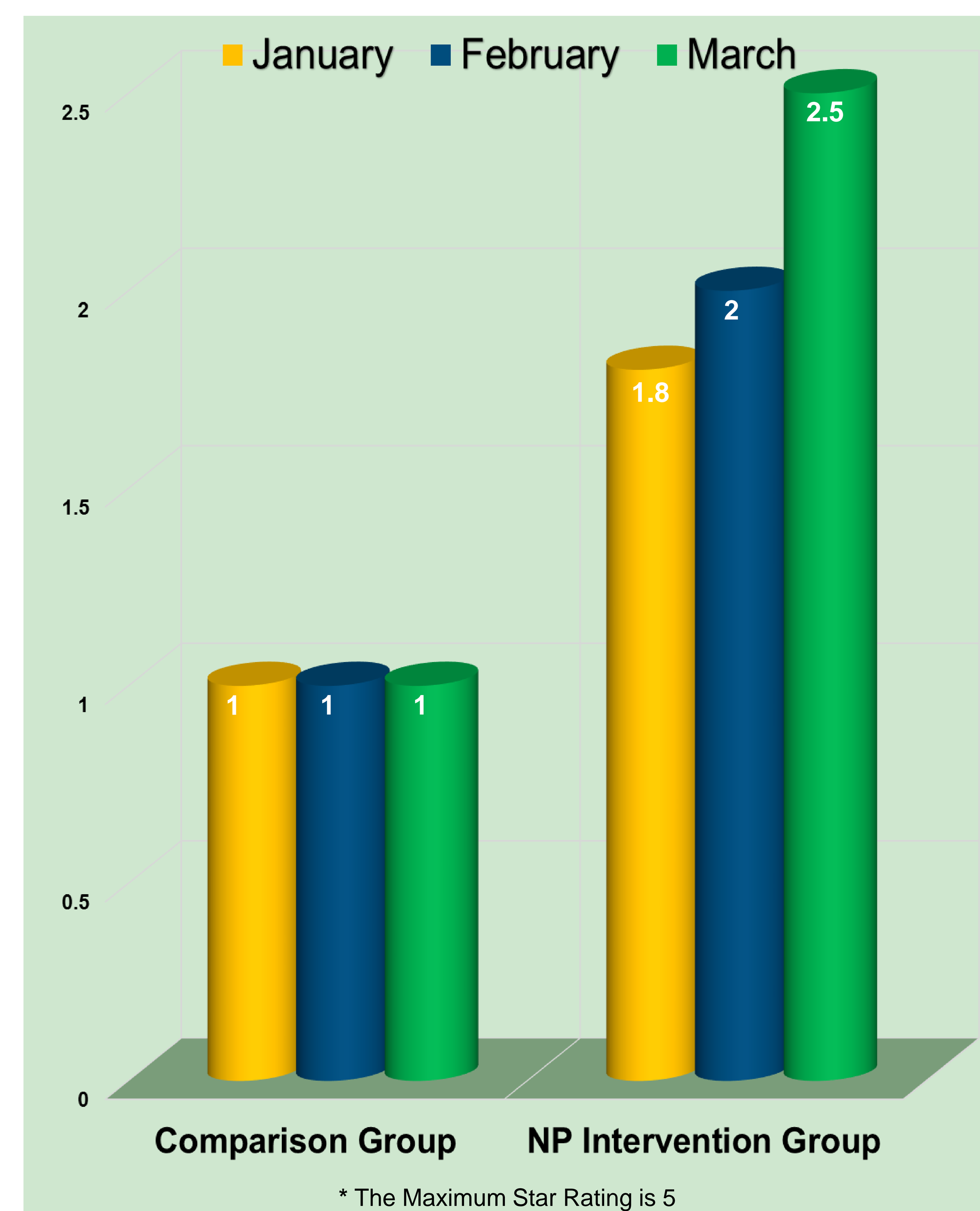
- A large provider group opted out of the intervention. This limited the number of qualifying patients for this project.
- Poor success rates with contacting patients by telephone. Many patients did not return the call or did not answer the phone.
- The Medicare Star Rating was difficult to impact due to provider group size variability and the fact that new patients are having fractures at the same time as current patients' gaps are closing.

Discussion

This quality improvement project demonstrated that the use of a nurse practitioner fracture liaison can be very effective in closing HEDIS osteoporosis quality gaps and can have a positive impact on Medicare Star Ratings for this measure. The percentage of HEDIS measures closed in the NP intervention group was 48% in comparison to non-NP intervention group of 29%. Medicare Star Ratings also showed an increase from January to March from 1.8 to 2.5 in the NP intervention group.

An additional method of contacting patients needs to be used to reach more patients. Developing a letter for patients with open osteoporosis gaps to educate them about their risks and inviting them to have the NP come to their homes or contacting them by phone may improve recruitment of patients into this program. Also, including their primary care provider's name in the letter and assuring them the results will be sent to their PCP can increase patients' confidence. The outcomes of this project provided evidence to provider groups of the benefits in utilizing the nurse practitioner fracture liaison role to close gaps. The results also support the usefulness of expanding the role statewide.

Star Ratings of Provider Groups



* The Maximum Star Rating is 5

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References are available upon request

University of South Florida College of Nursing

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