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Osteoporosis: Closing Gaps In Care To Improve Value-Based Contract Measure Outcomes

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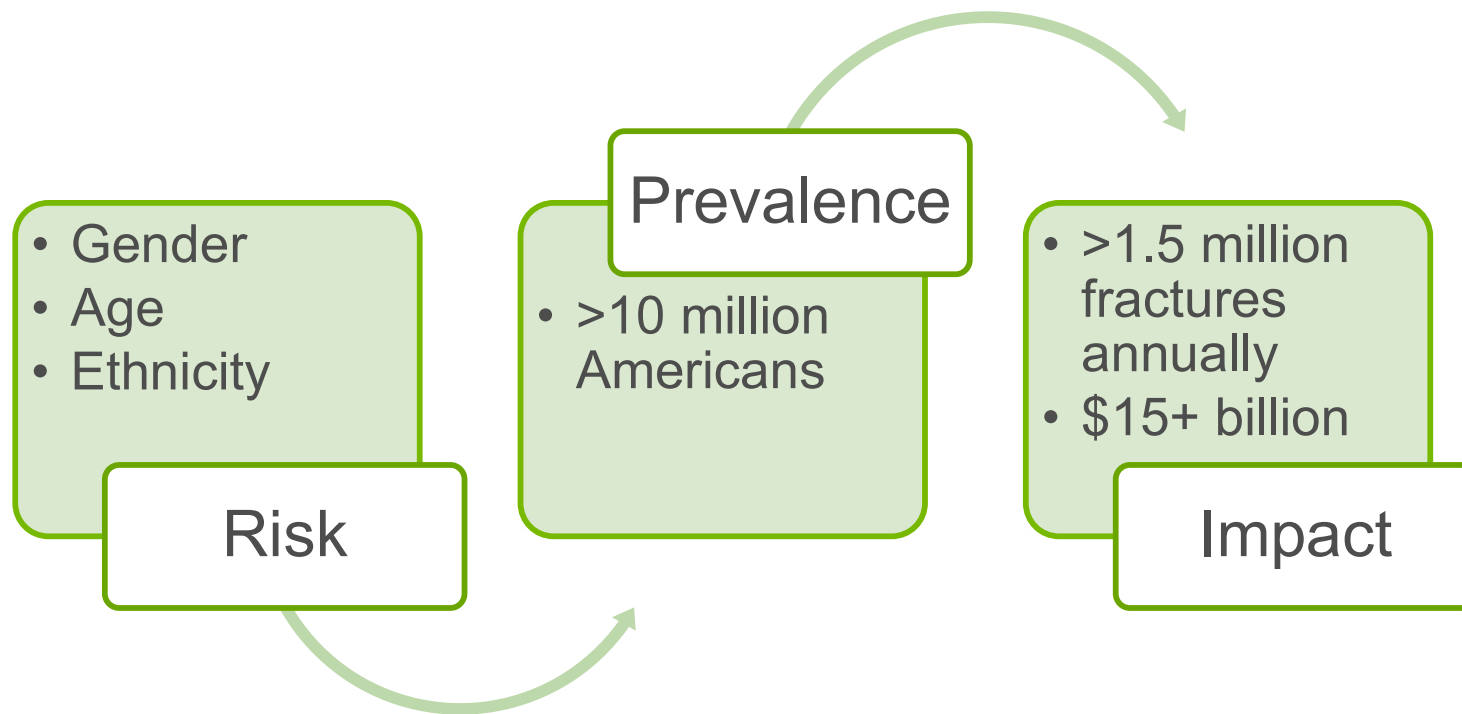
Osteoporosis: Closing Gaps In Care To Improve Value-Based Contract Measure Outcomes

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The speaker has no actual or potential conflict of interest in relation to this presentation.



Osteoporosis



Osteoporosis

- Value Based Contract (VBC) Measure
 - Osteoporosis Management in Women who had a Fracture
- Measure Definition
 - Percentage of women ages 67-85 who suffered a fracture who had either a bone mineral density (BMD) test or prescription for a drug to treat osteoporosis within 6 months after the fracture

Star Ratings



Previous Review

The impact of pharmacist interventions on osteoporosis management: a systematic review

Objective	<ul style="list-style-type: none">• Identify if pharmacists could (1) target patients at high risk for fracture not on treatments and (2) improve patient adherence to osteoporosis medication
Methods	<ul style="list-style-type: none">• The reviewers identified 3 RCTs to evaluate (one RCT each from Australia, Canada, and the United States)
Outcomes Evaluated	<ul style="list-style-type: none">• DEXA scan completed or OP treatment• Physician follow-up• Vitamin D/calcium supplementation

Previous Review

The impact of pharmacist interventions on osteoporosis management: a systematic review

Results	<ul style="list-style-type: none">• DEXA scan completed or OP treatment started ($p < 0.05$)<ul style="list-style-type: none">• Control: 14/133 (10.5%)• RPh Intervention: 28/129 (21.7%)• Calcium/Vitamin D Requirements Met ($p < 0.05$)<ul style="list-style-type: none">• Control: 25/133 (18.8%)• RPh Intervention: 39/129 (30.2%)
Key Findings	<ul style="list-style-type: none">• Pharmacist interventions may help to improve the identification of individuals at risk for osteoporosis through improved DEXA testing and improved adherence

Self-Assessment Question #1

Which of the following would be most appropriate to order in a patient with a PMH of recent fracture 4 months ago currently not on osteoporosis medication?

- a) X-ray of previous fracture location
- b) DEXA Scan
- c) PET Scan
- d) Full body CT scan

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- ☒ b) DEXA Scan
- c) PET Scan
- d) Full body CT scan

Self-Assessment Question #2

Which of the following patients would be evaluated under this study protocol?

- a) 85-year-old male who had a humerus fracture 3 months ago with no DEXA scan history and currently is prescribed alendronate
- b) 45-year-old female who had a tibia fracture 8 months ago with no DEXA scan history and not currently on osteoporosis medication
- c) 77-year-old female who had a facial fracture s/p MVA 2 months ago with no DEXA scan history and not currently on osteoporosis medication
- d) 69-year-old female who had a hip fracture 4 months ago with her last DEXA scan being completed in 2018 and is not currently on osteoporosis medication

Self-Assessment Question #2

Which of the following patients would be evaluated under this study protocol?

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Setting

Parkview Health

- Not-for-profit, community-owned organization
- Largest healthcare organization in NE IN
 - Provides services to NE IN, NW OH, SE MI
- 10 hospital health system
 - Over 200 primary care clinics



Purpose

- Goal
 - Improve individual measure star rating for fracture and osteoporosis in Parkview's value-based contracts
- Objectives
 - Improve patient care by closing care gaps
 - Maximize reimbursement from Centers for Medicare and Medicaid Services (CMS) with respect to VBCs by closing care gaps

Design

- Retrospective cohort
- Single center: Parkview Health
- Timeframe: September 2021 – February 2022

Inclusion Criteria*	Exclusion Criteria*
<ul style="list-style-type: none">• Women• Aged 67 to 85 years old• Recent Fracture (≤ 6 months)	<ul style="list-style-type: none">• Fractures of the fingers, toes, face, or skull• Currently on osteoporosis medication

*All patients included in this review were reported by the VBC plan as **not** meeting the fracture and osteoporosis measure

Endpoints

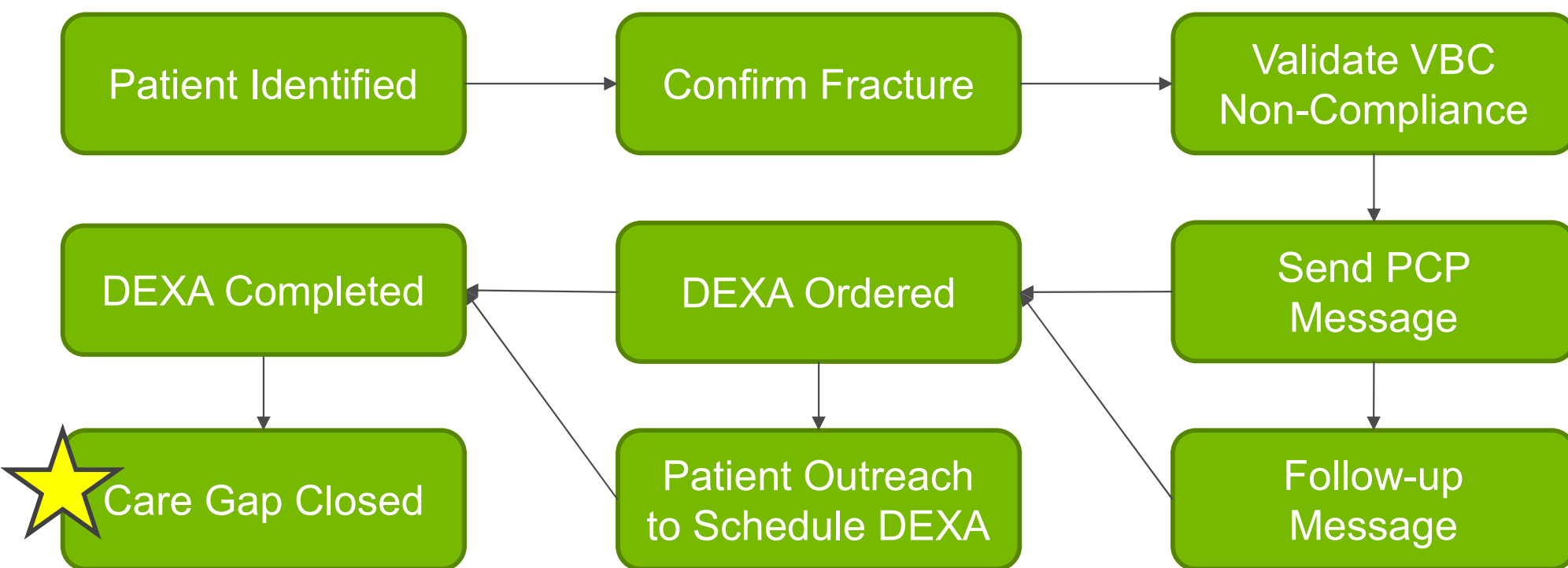
Primary

- Change in Star rating from 2020 to 2021 for fracture and osteoporosis in Parkview's VBCs

Secondary

- Percentage of care gaps closed
- Pharmacist-hours for interventions/recommendations

Intervention Walkthrough



Baseline Characteristics

	Patients Reviewed (N = 54)
Age, median (IQR)	74 (70-78)
Serum Calcium, median (IQR)	9.4 (9.1-9.7)
Fracture Location, n (%)	
Fibula/Tibia	2 (3.7)
Hand/Wrist	6 (11.1)
Hip	7 (12.9)
Foot/Ankle	13 (24.1)
Ulna/Humerus/Radius	24 (44.4)
Vitamin D/Calcium Supplementation, n (%)	33 (62)

Primary Outcome

	Star Rating		
	Payor 1	Payor 2	Payor 3
2020 (% gaps closed)	1 (25%)	2 (40%)	3 (50%)
2021 (% gaps closed)	3 (41%)	3 (42%)	1 (29%)
Net Change (% change)	+ 2 (+16%)	+ 1 (+2%)	- 2 (-21%)

Secondary Outcomes

	Patients Reviewed (N = 54)
Care gaps closed, n (%)	23 (42.6%)
RPh time invested	
Total, n (hours)	20.5
Per patient, mean \pm SD (minutes)	22.8 \pm 4.7

54 Patients
Identified



32 DEXA Scans
Ordered



22 DEXA Scans
Completed
1 Osteoporosis
Medication Started

Discussion



- Assessed every patient reported to have a fracture as reported by insurance
- Improved Parkview's overall star rating for the osteoporosis measure
- Closed 42.6% of care gaps (so far)

- Single center, small sample size
- Pharmacist-PCP outreach
- Communication via staff messages within EPIC
- Patients with fractures at end-of-year 2021 will still impact Star rating

Future Directions

- Follow-up for Star rating changes and cost impact
- Integration into current workflow for ambulatory care pharmacists
 - With changes to patient evaluation derived from the experiences in this study

Conclusion

- Pharmacists, in collaboration with primary-care providers, can improve the care of women with a fracture
 - Via obtaining either a DEXA scan or initiating osteoporosis medication
- Further cost analysis needs to be done to determine if the change in plan reimbursement is greater than the cost of pharmacist time to complete these interventions

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References

- Clynes, M. A., Harvey, N. C., Curtis, E. M., Fuggle, N. R., Dennison, E. M., & Cooper, C. (2020). The epidemiology of osteoporosis. *British medical bulletin*, 133(1), 105–117. <https://doi.org/10.1093/bmb/ldaa005>
- Rosen CJ. The Epidemiology and Pathogenesis of Osteoporosis. [Updated 2020 Jun 21]. In: Feingold KR, Anawalt B, Boyce A, et al., editors.
- Elias MN, Burden AM, Cadarette SM. The impact of pharmacist interventions on osteoporosis management: a systematic review. *Osteoporos Int*. 2011;22(10):2587-2596. doi:10.1007/s00198-011-1661-7
- Mark J. Bolland, Andrew B. Grey, Greg D. Gamble, Ian R. Reid, Effect of Osteoporosis Treatment on Mortality: A Meta-Analysis, *The Journal of Clinical Endocrinology & Metabolism*, Volume 95, Issue 3, 1 March 2010, Pages 1174–1181, <https://doi.org/10.1210/jc.2009-0852>
- Richard Eastell, Clifford J Rosen, Dennis M Black, Angela M Cheung, M Hassan Murad, Dolores Shoback, Pharmacological Management of Osteoporosis in Postmenopausal Women: An Endocrine Society Clinical Practice Guideline, *The Journal of Clinical Endocrinology & Metabolism*, Volume 104, Issue 5, May 2019, Pages 1595–1622, <https://doi.org/10.1210/jc.2019-00221>
- Nayak, S., & Greenspan, S. L. (2019). A systematic review and meta-analysis of the effect of bisphosphonate drug holidays on bone mineral density and osteoporotic fracture risk. *Osteoporosis international : a journal established as result of cooperation between the European Foundation for Osteoporosis and the National Osteoporosis Foundation of the USA*, 30(4), 705–720. <https://doi.org/10.1007/s00198-018-4791-3>
- Compston, J., Cooper, A., Cooper, C., Gittoes, N., Gregson, C., Harvey, N., Hope, S., Kanis, J. A., McCloskey, E. V., Poole, K., Reid, D. M., Selby, P., Thompson, F., Thurston, A., Vine, N., & National Osteoporosis Guideline Group (NOGG) (2017). UK clinical guideline for the prevention and treatment of osteoporosis. *Archives of osteoporosis*, 12(1), 43. <https://doi.org/10.1007/s11657-017-0324-5>
- Föger-Samwald, U., Dovjak, P., Azizi-Semrad, U., Kerschán-Schindl, K., & Pietschmann, P. (2020). Osteoporosis: Pathophysiology and therapeutic options. *EXCLI journal*, 19, 1017–1037. <https://doi.org/10.17179/excli2020-2591>

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