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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

Risk
- Gender
- Age
- Ethnicity

Prevalence
- >10 million Americans

Impact
- >1.5 million fractures annually
- $15+ billion

Clynes et al. (2020). British medical bulletin
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

Clynes et al. (2020). *British medical bulletin*
Star Ratings

- Measure Rating
  - Based on percentage of patients meeting the measure

- CMS Star Rating
  - Scale of 1 – 5 stars
  - 4 or 5 stars is “above average”

- Reimbursement
  - Amount paid is dictated based on the star rating
### The impact of pharmacist interventions on osteoporosis management: a systematic review

<table>
<thead>
<tr>
<th>Objective</th>
<th>Identify if pharmacists could (1) target patients at high risk for fracture not on treatments and (2) improve patient adherence to osteoporosis medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods</td>
<td>The reviewers identified 3 RCTs to evaluate (one RCT each from Australia, Canada, and the United States)</td>
</tr>
</tbody>
</table>
| Outcomes Evaluated | DEXA scan completed or OP treatment  
|               | Physician follow-up  
|               | Vitamin D/calcium supplementation |
The impact of pharmacist interventions on osteoporosis management: a systematic review

Results

- DEXA scan completed or OP treatment started ($p<0.05$)
  - Control: 14/133 (10.5%)
  - RPh Intervention: 28/129 (21.7%)
- Calcium/Vitamin D Requirements Met ($p<0.05$)
  - Control: 25/133 (18.8%)
  - RPh Intervention: 39/129 (30.2%)

Key Findings

- 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
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
   [Green Highlighted]
c) PET Scan
d) Full body CT scan
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?

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
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

<table>
<thead>
<tr>
<th>Inclusion Criteria*</th>
<th>Exclusion Criteria*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Fractures of the fingers, toes, face, or skull</td>
</tr>
<tr>
<td>Aged 67 to 85 years old</td>
<td>Currently on osteoporosis medication</td>
</tr>
<tr>
<td>Recent Fracture (≤6 months)</td>
<td></td>
</tr>
</tbody>
</table>

*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

- Patient Identified
- Confirm Fracture
- Validate VBC Non-Compliance
- DEXA Completed
- DEXA Ordered
- Send PCP Message
- Patient Outreach to Schedule DEXA
- Follow-up Message
- Care Gap Closed
## Baseline Characteristics

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

<table>
<thead>
<tr>
<th></th>
<th>Payor 1</th>
<th>Payor 2</th>
<th>Payor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 (% gaps closed)</td>
<td>1 (25%)</td>
<td>2 (40%)</td>
<td>3 (50%)</td>
</tr>
<tr>
<td>2021 (% gaps closed)</td>
<td>3 (41%)</td>
<td>3 (42%)</td>
<td>1 (29%)</td>
</tr>
<tr>
<td>Net Change (% change)</td>
<td>+ 2 (+16%)</td>
<td>+ 1 (+2%)</td>
<td>- 2 (-21%)</td>
</tr>
</tbody>
</table>
Secondary Outcomes

<table>
<thead>
<tr>
<th>Patients Reviewed (N = 54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care gaps closed, n (%)</td>
</tr>
<tr>
<td>RPh time invested</td>
</tr>
<tr>
<td>Total, n (hours)</td>
</tr>
<tr>
<td>Per patient, mean ± SD (minutes)</td>
</tr>
</tbody>
</table>

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
Acknowledgements

Mentors

- Sarah Pfaehler, PharmD, MBA, BCPS
- Rachel Steele, PharmD, BCACP
References

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