Financial Model

Basic Osteoporosis Service (Inpatient Consults Without Follow Up or DEXA)

This model is designed to help generate the estimated financial impact for an entry-level bone health program. This tool is designed to help present hospital administration with a better understanding of the financial impact of offering bone health counseling and care coordination for patients admitted with a fragility fracture. This model assumes the establishment of a basic osteoporosis service, and includes only:

- a single hospital consult by a separate physician or APP who charges a bone health E&M visit, not under the global DRG
- additional labs while inpatient
- referral to the PCP for osteoporosis care

This model does not include:

- Patient consult post discharge
- DEXA scan
- Medication administration

What you need to know to generate your estimate:

- Number of potential inpatient consults i.e. patients over the age of 50 with the following fractures: Pelvis, femur, humerus, distal radius and vertebrae.

Include:

- All patients over 65 with these fracture types
- In patients 50-65, all low energy/fragility fractures with low bone mass on x-ray, poor bone quality in OR by surgeon notes, and/or comorbidities common for osteoporosis

Instructions:

- Using Medicare 2021 reimbursement data (provider based) below multiply total number by each line.

Example calculation (assuming 100 consults per year) of consult and lab-related revenues:

1. Initial Consult (99204) $132.88 $13,288
2. Calcium $5.16 $516
<table>
<thead>
<tr>
<th></th>
<th>Test Description</th>
<th>Revenue</th>
<th>Estimated Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Creatinine</td>
<td>$5.12</td>
<td>$512</td>
</tr>
<tr>
<td>4.</td>
<td>25 OH vitamin D*</td>
<td>$29.60</td>
<td>$2,960</td>
</tr>
<tr>
<td>5.</td>
<td>TSH</td>
<td>$16.80</td>
<td>$1,618</td>
</tr>
<tr>
<td>6.</td>
<td>PTH</td>
<td>$41.28</td>
<td>$4,128</td>
</tr>
<tr>
<td>7.</td>
<td>CBC</td>
<td>$6.47</td>
<td>$647</td>
</tr>
</tbody>
</table>

*Revenues from administration for 50,000 IU vitamin D for inpatients who have normal creatinine are not included as expected revenues are low.

**Takeaways:**

- Based on this model, which includes seeing consults once in the hospital and then referring these patients back to their PCP, the estimated revenue collected by the hospital for a consult and labs per 100 patients is $23,669.
- These are revenues that the service would collect above the DRG.
- The model depends on having a physician or APP who can bill a separate bone health E&M consult.
Financial Model

Osteoporosis Service for Inpatients with Outpatient Clinic

This model is designed to help generate the estimated financial impact for a bone health program with inpatient consults and outpatient follow up for those admitted inpatients for the first year only with DEXA. This tool is designed to help present hospital administration with a better understanding of the financial impact of offering bone health counseling, outpatient follow up, and care coordination for patients admitted with a fragility fracture.

This model includes:

- A single hospital consult by a separate physician or APP who charges a bone health E&M visit, not under the global DRG
- Additional labs while inpatient
- Patient follow up consults to one year post-fracture
- DEXA scan
- Referral to PCP/specialist for initiation of medication

This model does not include:

- Medication administration
- Outpatient consults for those not admitted/inpatient with fracture

What you need to know to generate your estimate:

- Number of potential inpatient consults, i.e. patients over the age of 50 with the following fractures: Pelvis, femur, humerus, distal radius and vertebrae.

Include:

- All patients over 65 with these fracture types
- In patients 50-65, all low energy/fragility fractures with low bone mass on x-ray, poor bone quality in OR by surgeon notes, and/or comorbidities common for osteoporosis
**Instructions:**

- Using Medicare 2021 reimbursement data (provider based) below multiply total number by each line. Add each line together to generate estimated revenue. This is just for hospital consult only **WITH** patient follow up consults in outpatient clinic and DEXA.

**Example calculation (assuming 100 inpatient consults):**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Initial Consult (99204)</td>
<td>$132.88</td>
<td>$13,288</td>
</tr>
<tr>
<td>2.</td>
<td>Calcium</td>
<td>$5.16</td>
<td>$516</td>
</tr>
<tr>
<td>3.</td>
<td>Creatinine</td>
<td>$5.12</td>
<td>$512</td>
</tr>
<tr>
<td>4.</td>
<td>Vitamin D</td>
<td>$29.60</td>
<td>$2,960</td>
</tr>
<tr>
<td>5.</td>
<td>TSH</td>
<td>$16.80</td>
<td>$1,680</td>
</tr>
<tr>
<td>6.</td>
<td>PTH</td>
<td>$41.28</td>
<td>$4,128</td>
</tr>
<tr>
<td>7.</td>
<td>CBC</td>
<td>$6.47</td>
<td>$647</td>
</tr>
<tr>
<td>8.</td>
<td>Follow Up (99213)</td>
<td>$65.46</td>
<td>$6,219</td>
</tr>
<tr>
<td>9.</td>
<td>Six month (99214)</td>
<td>$95.77</td>
<td>$9,098</td>
</tr>
<tr>
<td>10.</td>
<td>12 month (99214)</td>
<td>$95.77</td>
<td>$9,098</td>
</tr>
<tr>
<td>11.</td>
<td>DEXA</td>
<td>$67.03</td>
<td>$5,027</td>
</tr>
</tbody>
</table>

**Notes/Assumptions:**

- Out of 100 inpatients, this assumes only 95% will be eligible for follow up due to patients who are lost to follow up (e.g. those who do not relocate or expire)
- Out of 100 inpatients, this assumes only 75% will go on to get DEXA
- Revenues from administration for 50,000 IU vitamin D for inpatients who have normal creatinine is not included as expected revenues are low

**Takeaways:**

- When the estimates are added together, the total revenue for inpatient consults and outpatient follow up consults for the first year only is $56,134 per year
- These are revenues that the service would collect above the DRG
- The model depends on having a physician or APP who can bill a separate bone health E&M consult
Financial Model
Osteoporosis Service (Femur Only) with Outpatient Clinic

This model is designed to help generate the estimated financial impact for a bone health program with inpatient consults and outpatient follow up as it relates to femur fracture patients only. This tool is designed to help present hospital administration with a better understanding of the financial impact of offering bone health counseling, outpatient follow up, and care coordination for patients admitted with a femur fracture.

This model assumes the establishment of an osteoporosis service, and includes:

- A single hospital consult by a separate physician or APP who charges a bone health E&M visit, not under the global DRG
- Additional labs while inpatient
- Patient follow up consults to one year post-fracture
- DEXA scan
- Referral to PCP/specialist for initiation of medication

This model does not include:

- Medication administration
- Other fracture types (i.e. tibia, fibula, humerus, vertebra)

What you need to know to generate your estimate:

- Number of potential inpatient consults (i.e. patients over the age of 50 with femur fractures)

Include:

- All patients over 65 with femur fractures
- In patients 50-65, all low energy/fragility femur fractures with low bone mass on x-ray, poor bone quality in OR by surgeon notes, and/or comorbidities common for osteoporosis

Instructions:
Using Medicare 2021 reimbursement data (provider based) below multiply total number by each line.

Example calculation (assuming 100 femur fracture consults* per year) of consult and lab related revenues:

1. Initial visit (99204) $145.53 $14,553
2. Calcium $5.16 $516
3. Creatinine $5.12 $512
4. Vitamin D $29.60 $2,960
5. TSH $16.80 $1,680
6. PTH $41.28 $4,128
7. CBC $6.47 $647
8. Follow up (99214) $87.35 $8,298
9. Six month (99213) $56.97 $5,412
10. 12 month (99213) $56.97 $5,412
11. DEXA $67.03 $5,027

Notes/Assumptions:
- Out of 100 femur patients, this assumes only 95% will be eligible for follow up due to patients who are lost to follow up (e.g., those who do not relocate or expire)
- Out of 100 inpatients, this assumes only 75% will go on to get DEXA
- Revenues from administration for 50,000 IU vitamin D for inpatients who have normal creatinine is not included as expected revenues are low

*The following femur ICD-10-CM Diagnosis Codes are associated with the example calculation above:
- M80.851A - M80.852A
- M84.351A - M84.352A, M84.359A, M84.451A - M84.453A, M84.459A, M84.651A - M84.652A, M84.659A

Takeaways:
- Based on this model, which includes seeing consults once in the hospital and for outpatient follow up consults, the estimated revenue collected by the hospital for femur fracture consults and associated labs for the first year only, per 100 patients, is $49,145
- These are revenues that the service would collect above the DRG
- The model depends on having a physician or APP who can bill a separate bone health E&M consult
Financial Model

Osteoporosis Service with Outpatient Clinic for Inpatient/Outpatient Referral with Medication

This model is designed to help generate the estimated financial impact for a bone health program with inpatient consults and outpatient follow up for admitted inpatients and others referred directly for outpatient services for one year only with DEXA and treatment. This tool is designed to help present hospital administration with a better understanding of the financial impact of offering bone health counseling and outpatient follow up for both inpatients and outpatients with fragility fracture. This model includes:

- For admitted inpatients, a single hospital consult by a separate physician or APP who charges a bone health E&M visit, not under the global DRG
- For admitted inpatients, additional labs in hospital
- Patient follow up consults to one year post-fracture
- DEXA scan
- Medication

What you need to know to generate your estimate:

- Numbers of potential inpatient consults with the following fractures: Pelvis, femur, humerus, distal radius and vertebrae
- All patients over 65
- In patients 50-65, all low energy/fragility fractures with low bone mass on x-ray, poor bone quality in OR by surgeon notes, and/or comorbidities common for osteoporosis
- Number of potential outpatients who would be referred for outpatient service. These can include:
  - Any patient with a vertebral compression fracture or low trauma fracture treated outpatient, e.g., a middle-aged female with a distal radius fracture
  - Any patient found to have osteoporosis incidentally upon x-ray review, not currently on osteoporosis treatment
  - Any patient found to have osteoporosis on DEXA, osteopenia on DEXA with a high FRAX score
Instructions:

- Using Medicare 2021 reimbursement data (provider based) below multiply total number by each line. Add each line together to generate estimated revenue. This is just for hospital consult only WITH patient follow up in clinic, DEXA and treatment.

Example calculation (assuming 100 inpatient consults and 50 outpatient referrals):

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Reimbursement</th>
<th>Estimated Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Consult (99204)</td>
<td>$132.88</td>
<td>$13,288</td>
</tr>
<tr>
<td>Calcium</td>
<td>$5.16</td>
<td>$516</td>
</tr>
<tr>
<td>Creatinine</td>
<td>$5.12</td>
<td>$512</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>$29.60</td>
<td>$2,960</td>
</tr>
<tr>
<td>TSH</td>
<td>$16.80</td>
<td>$1,680</td>
</tr>
<tr>
<td>PTH</td>
<td>$41.28</td>
<td>$4,128</td>
</tr>
<tr>
<td>CBC</td>
<td>$6.47</td>
<td>$647</td>
</tr>
<tr>
<td>Follow Up (99213)</td>
<td>$65.46</td>
<td>$6,219</td>
</tr>
<tr>
<td>Six month (99214)</td>
<td>$95.77</td>
<td>$9,098</td>
</tr>
<tr>
<td>12 month (99214)</td>
<td>$95.77</td>
<td>$9,098</td>
</tr>
<tr>
<td>DEXA</td>
<td>$67.03</td>
<td>$5,027</td>
</tr>
<tr>
<td>Prolia (profit margin)</td>
<td>$77.50</td>
<td>$2,422</td>
</tr>
<tr>
<td>Reclast (profit margin)</td>
<td>$120</td>
<td>$3,750</td>
</tr>
</tbody>
</table>

Assumptions

- Inpatient revenues from administration for 50,000 IU vitamin D for inpatients who have normal creatinine is not included as expected revenues are low
- Out of 100 inpatients, this assumes only 95% will be eligible for follow up due to patients who are lost to follow up (e.g. those who do not relocate or expire)
- Out of 100 inpatients, only 75% will go on to get DEXA and treatment
- 50 additional outpatients will be referred to the osteoporosis service, all of whom will have DEXA and treatment
- Out of all inpatient and outpatients treated (75 inpatient and 50 outpatient): 25% will refuse treatment; 25% will be placed on oral bisphosphonates; 25% will be placed on Prolia; and 25% will be placed on Reclast. Only revenues associated with administration of Prolia and Reclast are included above for the purposes of this model
Takeaways:

- When the estimates are added together, the total revenue for inpatient consults and outpatient follow up for inpatients and direct referrals to the osteoporosis service for the first year only is $59,315 per year.
- These are revenues that the service would collect above the DRG.
- The model depends on having a physician or APP who can bill a separate bone health E&M consult.
- This model does not include follow up consults beyond one year from existing patients who continue to be followed and treated.