Background

- According to the CDC, osteoporosis affects 1 in 4 women aged 65 and over and about 1 in 20 men aged 65 and over.¹
- Denosumab is a subcutaneous injection for osteoporosis. Due to the risk of adverse effects, denosumab must be administered by a healthcare provider once every six months.
- In March 2020, the World Health Organization declared COVID-19 a global pandemic.² In response to this declaration, the manufacturer of denosumab, Amgen, temporarily warranted self-administration of the medication.
- To support treatment adherence, University of Chicago Medicine (UCM) Specialty Pharmacy aimed to safely transition patients from in-clinic to at-home administration, thus reducing patient risk for contracting COVID-19.
- The purpose of this project was to highlight initiation rates and adverse events for patients who transitioned to self-administer denosumab in the home.

Objectives

- Primary objective: Initiation rates for patients who self-administered denosumab in the home.
- Secondary objective: Adverse effects reported after self-administration in the home.

Methods

- Single-center retrospective review
- Study Duration: March 1, 2020 - November 30, 2020
- Eligible patients for transition to self-administration in the home:
  - Previously received denosumab doses in Endocrinology clinic or deemed appropriate and safe per clinic team for first dose injection
  - No reported adverse effects with previous doses
  - Able and willing to self-inject in the home
  - Initiation rates and safety data collected using Therigry® and Epic Hyperspace

Results

Figure 2: Denosumab Self-Administration Rates Following Referral to UCM Specialty Pharmacy

- Referred to UCM Specialty Pharmacy (56)
- UCM Specialty Pharmacy Out of Network (20)
- Approved to fill at UCM Specialty Pharmacy (36)
- Self-administered in the home (22)
- Did not self-administer in the home (14)

Figure 3: Denosumab Self-Administration Rates Following Approval to Fill at UCM Specialty Pharmacy

- Not ready to start medication
- Opted not to self-administer in the home
- Unable to self-administer due to high co-pay
- Self-administered in the home

Table 1: Adverse Effects Reported after Denosumab Self-Administration in the Home

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Adverse Events, n (%)</td>
<td>11 (50)</td>
</tr>
<tr>
<td>Arthralgia, n (%)</td>
<td>7 (32)</td>
</tr>
<tr>
<td>Back Pain, n (%)</td>
<td>5 (23)</td>
</tr>
</tbody>
</table>

36 patients were approved to fill through UCM Specialty Pharmacy
- 22 patients completed injection trailing and had denosumab delivered to their home for self-administration
- 14 patients did not qualify for self-administration in the home
- 9 patients had a high co-pay, 4 patients opted not to self-administer and 1 patient was not ready to start medication

Table 2: Turnaround Time for Patients who Self-Administered in the Home

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Days, Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to insurance approval</td>
<td>0</td>
</tr>
<tr>
<td>Time from referral placed to medication arriving at patient’s home</td>
<td>5 (4-8)</td>
</tr>
</tbody>
</table>

Conclusions

- UCM Specialty Pharmacy was able to quickly and safely transition patients to self-administer denosumab in order to minimize the risks of potential COVID-19 exposure.
- Results show there were no serious adverse events in patients that self-administered denosumab in the home.
- The most common barrier to self-administration was a high co-pay.
- This review showcases the ability for a health-system specialty pharmacy to identify and execute a workflow that addressed a need within the community during a pandemic

References


Disclosures

The authors of this presentation have no financial interests with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.