Improving prevention, monitoring, and counseling practices regarding secondary osteoporosis among dermatology residents prescribing chronic glucocorticoids

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THE PROBLEM
- Glucocorticoid therapy is the most common cause of secondary osteoporosis with fractures occurring in 30 to 50% of patients on long-term therapy.¹
- Chronic prednisone is used to treat numerous dermatologic conditions.
- Current guidelines suggest that bisphosphonates should be part of the therapeutic regimen for prednisone therapy above a dose of 7.5 mg/d for treatment lasting 3 months or more.²
- The practice gap of prescribing glucocorticoids but not bisphosphonates has been identified in the field of dermatology.³
- Bisphosphonates have been shown to significantly prevent glucocorticoid-induced bone loss in patients with immunobullous disease treated with long-term glucocorticoids.⁴ However, duration of bisphosphonate therapy was often unsatisfactory.⁵
  - Also, osteoporosis monitoring with DEXA scans are often not documented or performed at appropriate intervals.⁵

PROJECT GOAL
For patients on chronic glucocorticoid therapy, residents will include a “medication monitoring problem” about glucocorticoid-induced osteoporosis in the assessment and plan of 90% of patient encounters. The “problem” must address prevention, monitoring, and counseling.

PROJECT PLAN
1. Apex SmartText templates were created for chronic prednisone monitoring that included three parts addressing glucocorticoid-induced osteoporosis prevention with bisphosphonates and Calcium/Vitamin D, monitoring with DEXA scans, and counseling about lifestyle modifications. An educational handout SmartPhrase was also created for the AVS in Apex to reinforce counseling about lifestyle modifications.

RESULTS

<table>
<thead>
<tr>
<th>Month</th>
<th>Jul-13</th>
<th>Aug-13</th>
<th>Sep-13</th>
<th>Oct-13</th>
<th>Nov-13</th>
<th>Dec-13</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
</tr>
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<tbody>
<tr>
<td>Percent of encounters that met goal for given month</td>
<td>75</td>
<td>80</td>
<td>85</td>
<td>90</td>
<td>95</td>
<td>100</td>
<td>75</td>
<td>80</td>
<td>85</td>
<td>90</td>
<td>95</td>
</tr>
</tbody>
</table>

LESSONS LEARNED
Creation of Apex templates along with educational sessions were effective ways to elicit changes in resident work-flow and improve patient care.

REMAINING QUESTIONS
Our project did not include assessment of patient compliance with prevention recommendations (i.e., were patients actually taking recommended dose of Calcium/Vitamin D and/or bisphosphonate). Similarly, residents had the option to document deferring bisphosphonate management and DEXA monitoring to the patient’s PCP, however data was not collected to confirm whether or not these goals were actually met by the PCP.

MOVING FORWARD
This project was successful at raising awareness of a significant practice gap in Dermatology, this type of project could easily be expanded to include things such as appropriate Pneumocystis pneumonia or herpes simplex prophylaxis for patients on immunosuppressive medications.

REFERENCES