Impact of Patient Behaviors and Attitudes on Teriparatide Adherence in A Medicare Part D Population

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BACKGROUND

Under the Medicare Part D prescription drug plan, federal payments for a beneficiary’s drug purchases stops when an annual spending limit of $2,700 (2009) is reached, and resumes after the beneficiary spends an additional $1,650 in out-of-pocket costs ($4,350 total; 2009). This coverage gap (CG) has implications for patients’ choices and financial decisions, especially with regard to more costly medications. Teriparatide is an injectable drug indicated for the treatment of osteoporosis. Premature discontinuation of osteoporosis medications may lead to long-term complications. More research is needed to understand and address barriers to adherence among Part D recipients.

OBJECTIVE AND METHODS

Cross-sectional, descriptive study to assess the associations of patient attitudes and characteristics with their self-reported discontinuation or completion of teriparatide. ‘Discontinuation’ was defined as self-reported stopping of teriparatide prior to completion of treatment. ‘Completion’ was defined as self-report of having taken the full drug for the course of treatment.

A mailed questionnaire was used to survey a cohort of Humana members drawn from a claims database with membership, demographics, doctor fill information (approved). These results describe factors associated with discontinuation, not the causes thereof. The findings may not be generalizable outside of this population of health plan members and may be susceptible to responder bias. Self-report measures may be affected by recall bias. Mailed questionnaires, though less costly, are more subject to incomplete responses than are in-person or telephone measures.

RESULTS

Table 1. Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Complete* n=171</th>
<th>Discontinued** n=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>76.6±7.3</td>
<td>74.6±8.6</td>
</tr>
<tr>
<td>Caucasion (%)</td>
<td>97.13</td>
<td>94.47</td>
</tr>
<tr>
<td>Married (%)</td>
<td>77.77</td>
<td>47.89</td>
</tr>
<tr>
<td>Income ($&lt;60,000</td>
<td>35.59</td>
<td>16.54</td>
</tr>
</tbody>
</table>

Table 2. Factors Associated with Discontinuation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking a teriparatide medication break</td>
<td>1.358</td>
<td>(1.151, 1.594)</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>Using less medication during the coverage gap</td>
<td>1.105</td>
<td>(0.901, 1.379)</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Talking to the doctor about cutting down medication costs</td>
<td>0.671</td>
<td>(0.414, 1.058)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Annual Income $25,000 – $30,000</td>
<td>1.404</td>
<td>(1.303, 1.506)</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>Seeing improvements in one’s osteoporosis</td>
<td>0.804</td>
<td>(0.562, 0.991)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Belief that taking teriparatide is very important to one’s health</td>
<td>0.852</td>
<td>(0.584, 1.246)</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Table 1. Participant Characteristics

Table 2. Factors Associated with Discontinuation

DISCUSSION

• Middle income participants (annual earnings of $30,000–$59,999), and participants who reported using cost-cutting strategies such as using less teriparatide during the coverage gap, were at greater risk for discontinuing teriparatide.

• Middle income patients may not qualify for LIS, and thus, may adopt strategies such as taking teriparatide medication ‘breaks’ and using less medication to control teriparatide costs with their doctor.

• Conversely, participants were more likely to complete treatment if they viewed taking the drug as very important to their health, and if they were not concerned about seeing improvements in their osteoporosis.

LIMITATIONS

These results describe factors associated with discontinuation, not the causes thereof. The findings may not be generalizable outside of this population of health plan members and may be susceptible to responder bias. Self-report measures may be affected by recall bias. Mailed questionnaires, though less costly, are more subject to incomplete responses than are in-person or telephone measures.

CONCLUSION

• Understanding patient characteristics, beliefs, and attitudes may be helpful in predicting decisions around adherence to teriparatide implication

• Further studies may shed light on the effects of discontinuation on health outcomes, e.g. prospective studies linking self-reports to claims to determine whether treatment completion predicts better health outcomes as compared to discontinued treatment.

SELECTED REFERENCES


Tseng, C.W., Brook, R.H,. Keeler, E., Steers, W.N., & Mangione, C.M. (2004). Cost-benefit analysis of competitive Health annual research meeting, Indianapolis, IN; Lilly and company, 2009

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Figure 1. Participant Flow

Figure 2. Cut Down on Teriparatide Use During CG among Teriparatide Discontinuers and Completers

Figure 3. Talked to the Doctor About Teriparatide Costs among Teriparatide Discontinuers and Completers

Figure 4. Teriparatide Discontinuation by Income

Figure 5. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 6. Teriparatide Discontinuation by Income

Figure 7. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 8. Teriparatide Discontinuation by Income

Figure 9. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 10. Teriparatide Discontinuation by Income

Figure 11. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 12. Teriparatide Discontinuation by Income

Figure 13. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 14. Teriparatide Discontinuation by Income

Figure 15. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 16. Teriparatide Discontinuation by Income

Figure 17. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 18. Teriparatide Discontinuation by Income

Figure 19. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers

Figure 20. Teriparatide Discontinuation by Income

Figure 21. Agreement on Seeing Improvement in Osteoporosis among Teriparatide Discontinuers and Completers