

Retrospective analysis of claims utilization data of medications indicated to treat osteoporosis in the Medicare Part D population

Kyle D. Knudsen, PharmD/MBA Candidate Class of 2020; S. Russell Spjut, PharmD; Julia Jarmoszko, PharmD MBA



Magellan Rx Management • Scottsdale, AZ

AMCP Nexus 2019 | National Harbor, MD

Background

- Osteoporosis is a skeletal disease characterized by low bone mass, deterioration of bone tissue, and disruption of bone microarchitecture, which results in bone fragility and an increased risk of fractures.1
- It is estimated that 10.2 million Americans 50 years or older have osteoporosis, 8.2 million of which are women.²
- Between 2000 and 2011, there were more than 4.9 million hospital admissions due to an osteoporotic fracture. This led to \$5.1 billion in annual hospital cost.³
- A study in 2011 analyzed Medicare claims data to examine if patients received proper treatment after sustaining a fragility fracture. Only 27.7% of patients were treated with an osteoporosis medication after experiencing a fracture.4
- The 2011 results may represent a gap in treatment of osteoporosis to prevent fracture in the Medicare population. Further investigation is needed to determine if the potential treatment gap continued after 2011.

Objective

• To determine if the percentage of all osteoporosis medication claims, in proportion to total overall claims, has changed in the Medicare Part D population from 2012-2017. Secondarily, to determine if any trend seen is consistent in both the oral and injectable osteoporosis medications.

Methods

- All Medicare Part D pharmacy claims, as published by the Centers for Medicare and Medicaid Services (CMS) for years 2012 through 2017, were analyzed.⁵
- The proportion of claims for medications indicated to treat osteoporosis was calculated as a percentage of the total number of Part D claims for each year.
- As the available data only reported claims by active ingredient, without information about dosage form or route of administrations, the osteoporosis medications were grouped as oral only, injectable only, and oral/injectable (table 1).
- o The utilization of each of these groups, as a percentage of total osteoporosis claims and percentage of total Medicare Part D claims, was calculated for each year.
- o The percentage change from the baseline utilization in 2012 was then calculated for subsequent years

Table 1. Osteoporosis medications grouped by available routes of administration



Recent Medicare Part D claims data suggests there may be ongoing treatment gaps in drug therapy for osteoporosis.

Results

- The data showed a decrease in osteoporosis medication claims each year of the 6 years, as compared to total Medicare Part D claims (figure 1).
 - o In 2012, osteoporosis medication claims accounted for 1.092% of all Medicare Part D claims, which decreased to 0.683% by the year 2017.*
- o This amounts to a decrease of 37.5% over this 6-year span.
- Secondarily, the utilization of oral medications decreased while injectable utilization increased (figure 2).
- o Oral utilization decreased from 91.988% of total osteoporosis medications in 2012 to 89.594% in 2017, representing a 2.7% decrease over the study time.
- o Injectable medication utilization increased from 1.9529% in 2012 to 4.2414% in 2017, representing a 117.2% increase over the study time.

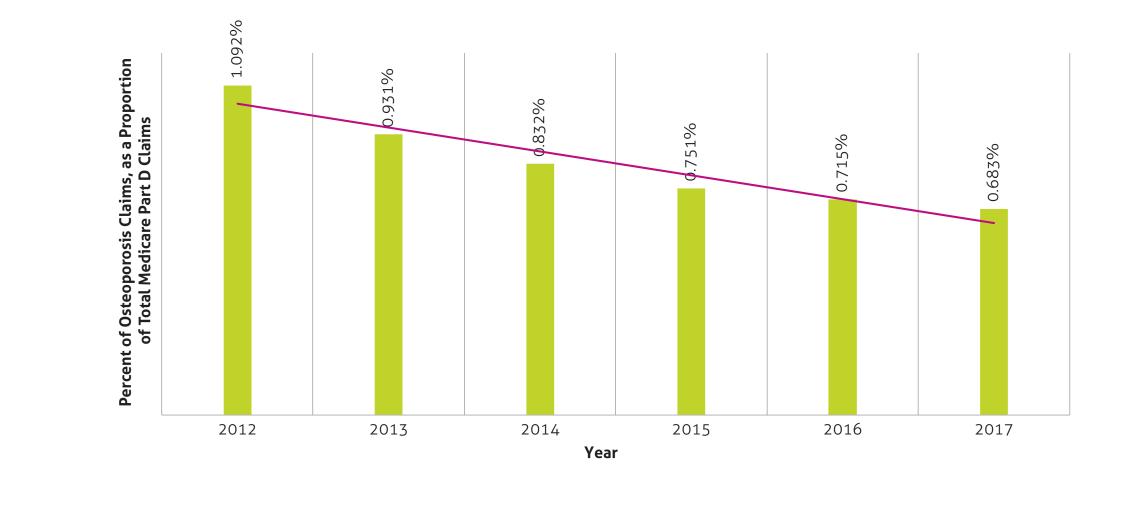
* All results from the Medicare Part D claims data for osteoporosis medications was rounded to the nearest thousandth

Table 2. Annual utilization of medications indicated to treat osteoporosis in Medicare Part D

	2012	2013	2014	2015	2016	2017
Total Medicare Part D Claims	1,125,355,326	1,254,375,056	1,357,185,457	1,432,948,647	1,479,888,096	1,450,319,879
Total Osteoporosis Claims	12,287,585	11,676,482	11,285,469	10,761,583	10,578,552	9,907,579
Percent of Osteoporosis claims, as a proportion of Medicare Part D claims	1.092%	0.931%	0.832%	0.751%	0.715%	0.683%

Results cont.

Figure 1. Percent of osteoporosis claims as a proportion of total Medicare Part D claims (2012-2017)



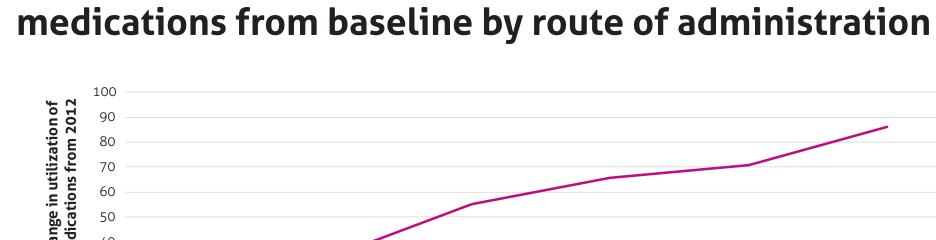


Figure 2. Percent change in utilization of osteoporosis

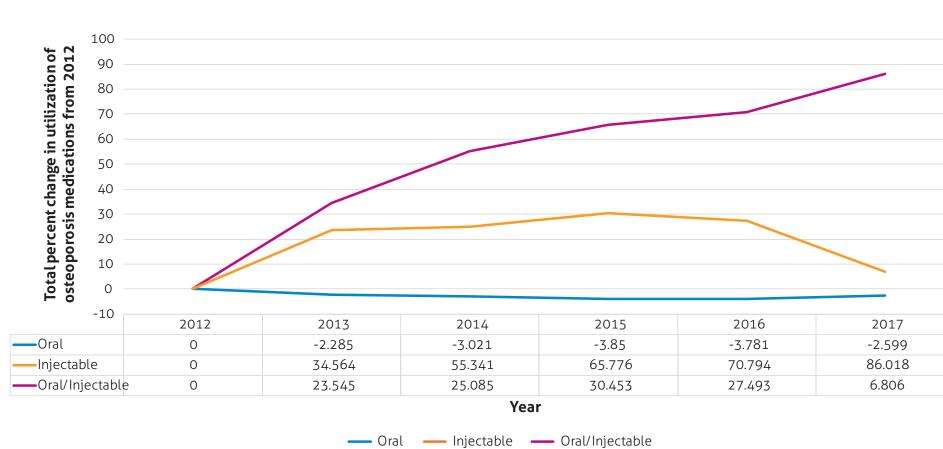


Table 3. Number of Medicare Part D claims for osteoporosis medications separated by route of administration

- -	2012	2017	201/	2015	2016	2017
	2012	2013	2014	2015	2016	2017
Oral	11,303,100	10,495,569	10,069,474	9,522,477	9,367,003	8,876,584
Injectable	239,963	306,849	358,191	377,207	389,399	420,217
Oral/injectable	744,522	874,064	857,804	861,899	822,150	610,778

Conclusion

- The study was limited by the level of detail in publicly available CMS datasets. Additional research is needed to determine if the decrease in osteoporosis claims over this time period is consistent across all Medicare benefits and cost impacts this trend may cause.
- The decrease in total claims for osteoporosis medications, as a percent of all claims in the Medicare Part D population, helps support data seen in other studies regarding the potential gap in utilization of drugs to treat osteoporosis.

References

- . Cosman F, de Beur SJ, LeBoff MS, et al. Clinician's guide to prevention and treatment of osteoporosis. Osteoporos Int. 2014; 25(10): 2359-2381.
- . Wright NC, Looker AC, Saag KG, et al. The recent prevalence of osteoporosis and low bone mass in the United States based on bone mineral density at the femoral neck or lumbar spine. J Bone Miner Res.2014;29(11):2520-2526.
- Singer A, Exuzides A, Spangler L, et al. Burden of illness for osteoporotic fractures compared with other serious diseases among postmenopausal women in the United States. Mayo Clin Proc. 2015;90(1):53-62.
- 4. Keshishian A, Boytsov N, Burge R, et al. Examining the treatment gap and risk of subsequent fractures among females with a fragility fracture in the US Medicare population. Osteoporos Int. 2017;2485-2494.
- 5. Centers for Medicare & Medicaid Services. Medicare Part D Drug Spending Dashboard & Data. URL: https:// www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Information-on-Prescription-Drugs/MedicarePartD.html [accessed 2018 Dec and 2019 Jan].