Magellan Rx MANAGEMENT

Waste Management

Dose Rounding Opportunity Analysis of Injectable Monoclonal Antibodies

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Purpose

- To assess the potential impact of a health plan-led vial size rounding program on three infusible monoclonal antibodies, bevacizumab, infliximab, and rituximab.

Background

- Monoclonal antibodies used for autoimmune and oncology conditions, specifically, often cost thousands of dollars per infusion.
- Because these agents, such as bevacizumab, infliximab, or rituximab, are available in fixed vial sizes and are usually dosed based on weight, there is an opportunity for payers to reduce costs, while maintaining quality, through a program targeting vial size rounding.
- Available literature suggests the dose of most monoclonal antibodies can be adjusted to be within +/- 5% of the prescribed dose with minimal impact on efficacy or safety.
  - There is further evidence that some prescribers may be willing to accept dose rounding recommendations up to 10%.
- While available literature has demonstrated potential savings impact of dose rounding monoclonal antibodies within specific treatment facilities, there is limited information evaluating the potential impact on cost savings from a health plan perspective.

Methods

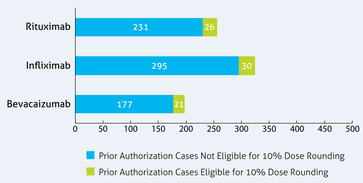
- The opportunity analysis was executed using the Medicare and commercial prior authorization data of two regional health plans with approximately 5.6 million covered lives.
- Prior authorization requests for bevacizumab, infliximab, and rituximab received between January 1, 2016 and March 31, 2016 were evaluated.
  - Data collected from each prior authorization request included patient weight, dosing frequency, and approval duration.
  - Total dose per infusion was then estimated based on FDA-dosing recommendations and patient weight.
- A request was determined to be eligible for dose rounding if the calculated dose per infusion could be rounded down within 10% to achieve more efficient vial size utilization.
- Potential savings for eligible requests were calculated based on approval duration using average sales price (ASP)+6% for Medicare cases and ASP+15% for commercial cases.

Disclosures

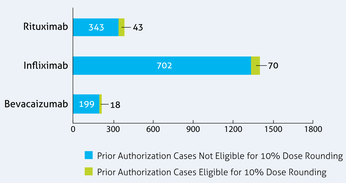
- This research was conducted by Magellan Rx Management, Newport, RI, without external funding.

Results

Health Plan 1: Prior Authorizations Reviewed by Product



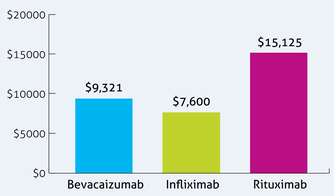
Health Plan 2: Prior Authorizations Reviewed by Product



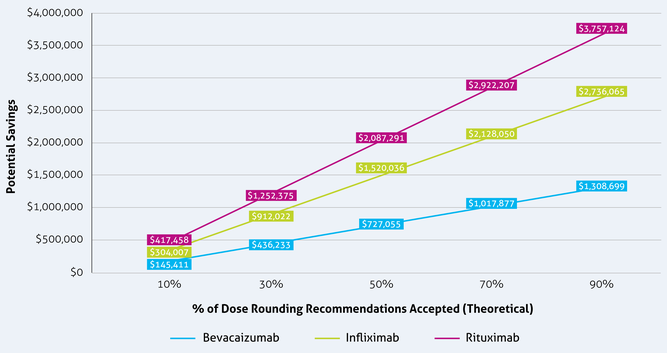
Potential 10% Dose Rounding Savings for Bevacizumab, Infliximab, and Rituximab Between January 1 and March 31, 2016

Population	Bevacizumab	Infliximab	Rituximab
Health Plan 1	$196,700	$256,203	$414,695
Health Plan 2	$166,927	$503,814	$628,950
Total Savings	**$363,527**	**$760,018**	**$1,043,645**
Extrapolated Potential Annual Savings	$1,454,110.40	$3,040,072	$4,174,581

Average Potential Savings per Eligible Case



Annual Savings Potential By Dose Rounding Recommendation Acceptance Rate



Discussion

- Between January 1st and March 31st, 2016, 415, 1,028, and 617 prior authorization requests were reviewed for bevacizumab, infliximab, and rituximab, respectively with an average approval duration of 9.2 months.
  - Of these cases, it was determined that 9.4%, 9.7%, and 11.2% would have been eligible for dose optimization.
- If all eligible doses were rounded to the nearest available vial size, there would have been a potential total savings of $2,167,191 ($363,528, $760,018, and $1,043,645 for bevacizumab, infliximab, and rituximab, respectively) for cases reviewed in the first quarter of 2016.
- Assuming a provider acceptance rate of 30%, the annual savings opportunity would be approximately $0.04 PMPM.
- Limitations of this study include:
  - Estimated dose rounding savings are based only on anticipated use reflected on prior authorization requests rather than actual claims data.
  - Total predicted dose was estimated based on FDA-approved dosing protocols and may have differed in actual practice.

Conclusion

- Prior authorization data for bevacizumab, infliximab, and rituximab revealed that there is a significant savings opportunity associated with a potential payer-led vial size rounding program.
- While not all prescribers may be willing to round within 10%, even low prescriber acceptance rates may lead to significant savings.
- This opportunity will likely be able to be extended to additional infusible medications when the dose is based on body weight or body surface area.
  - Further analysis should be performed to predict potential savings from other infusible monoclonal antibodies and oncology medications.

References

- Francis SM et al. Potential cost savings associated with dose rounding antineoplastic monoclonal agents. J Oncol Pharm Pract. Published online May 2014.
- Patel S and Le Ann. Rounding rituximab dose to nearest vial size. J Oncol Pharm Pract. Published online October 2012.
- Winger BJ, Clements EA, Deyoung JL, et al. Cost savings from dose rounding of biologic anticancer agents in adults. J Oncol Pharm Pract 2011; 17: 246–251.