Background
HOPA, the Hematology/Oncology Pharmacy association, recommends rounding up or down to the nearest vial size when it is within 10% of the ordered medication dose. Dose-rounding is a strategy used to minimize waste and decrease costs of biologics, monoclonal antibodies, and cytotoxic agents. Integrating an automated dose-rounding policy into an electronic health record (EHR) system can lead to a potential of millions in cost savings on oncology infusions.

Objective
Investigate the potential savings of cost-rounding of oncology infusions. Determine whether dose-rounding chemotherapy agents is an effective cost-saving strategy at an institution. Demonstrate the cost savings of institutions that have integrated an automated dose-rounding policy into their EHR system.

Methods
There are both retrospective and prospective studies that have been performed to look at the potential cost savings of certain medications and chemotherapy. A retrospective chart studies, such as Chillari et al., reviewed body surface area dosed parental chemotherapy within a certain time period to calculate potential cost savings and drug waste reductions from dose-rounding. Prospective studies implemented a dose-rounding protocol that automatically rounded physician’s orders to the nearest vial size if it was within 10% of the original dose.

Discussion
Chillari et al. suggests that dose rounding is an effective cost saving tool in low-volume oncology clinics by calculating a potential savings of $53,760 if a policy were implemented. Patel and Le performed a retrospective chart review of rituximab orders over a 24-month period showed a potential cost-savings of $84,000 if doses were rounded up or down to the nearest vial size. Winger et al. reviewed 126 biologic anticancer agents and calculated a reduction in drug waste of 42% and a potential savings of $24,434 within a 3-month time period. Park et al. estimated a savings of $106,640 per year through standardized infliximab dose rounding. A prospective study conducted through the University of Michigan cost-rounded 24 high frequency used infusion medications and found a total of $3,601,728 in savings with an average savings of $1,432 per dose.

Conclusion
Dose-rounding has shown to significantly minimize cost and waste at different types of medical institutions.

References

Potential Cost Savings According to Study Period

Potential Cost Savings from Dose Rounding
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