

Hypoglycemia Risk Reduction

Executive Summary

Project Sponsor: Dr. Eric Shirley, VISN 1 Chief of Primary Care

Stakeholder Groups: VISN 1 Primary Care, VISN 1 Clinical Informatics



Purpose

Hypoglycemia risk due to overtreatment is a dangerous and costly problem throughout healthcare organizations resulting in negative patient outcomes, and unnecessary medication costs. In July 2013 approximately 4.5% of the VISN 1 Diabetic Veteran population was at risk for hypoglycemia and potential overtreatment. The purpose of this project was to develop strategies to continuously bring attention to this cohort of patients.

Methods

Our approach was to explore and test a hypoglycemia risk reduction report and clinical reminder previously implemented at VISN 12. The clinical reminder helps clinicians identify patients at risk for hypoglycemia. Patients within the “at risk” cohort are Veterans who are taking either insulin or a sulfonylurea, whose last HgbA1c was under 7.0, and who are over age 74 or have been diagnosed with dementia or cognitive impairment. Pre and post-implementation data were collected and analyzed to determine the impact of this work. A small cost analysis study (n=17) was completed to determine the approximate savings per patient due to hypoglycemic therapy relaxation.

Results

The hypoglycemia risk reduction report and clinical reminder were implemented at all VISN 1 sites by VISN 1 Clinical Informatics. The reminder requires minimal effort to complete but has high impact on patients potentially at risk. This increased clinician buy-in, which was critical to successful implementation and use of the clinical reminder. Data from three months pre and post-implementation of the clinical reminder show a statistically significant reduction (18.3%) in the number of patients at risk (Figure 1).

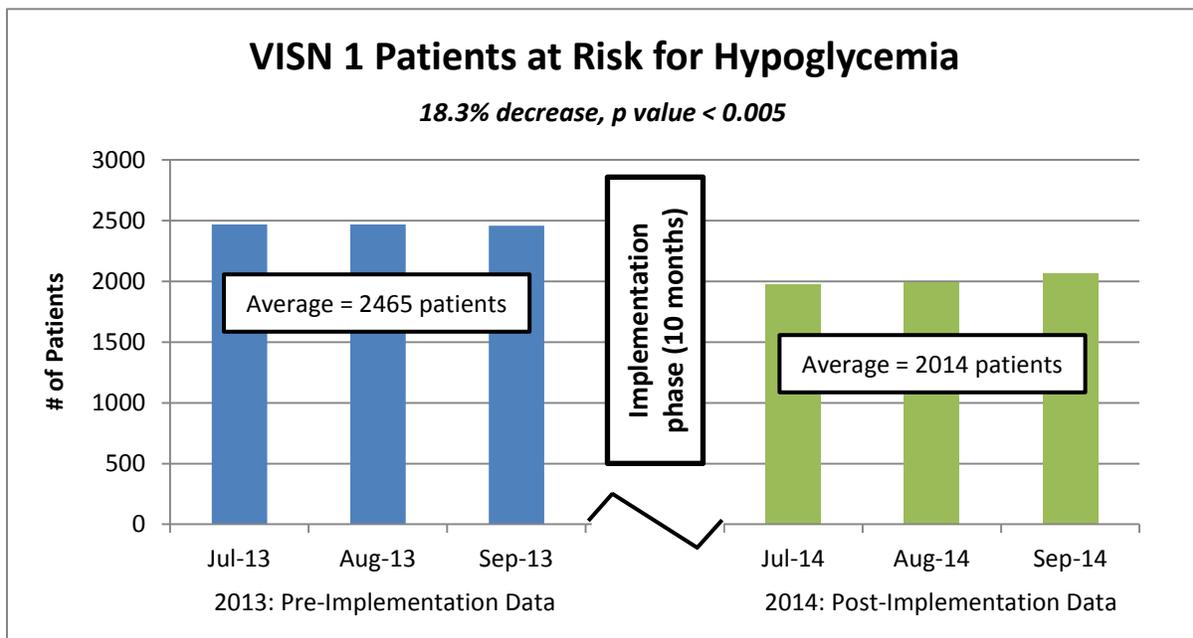


Figure 1: VISN 1 Patients at Risk for Hypoglycemia

Providers in VISN 1 used the clinical reminder to relax treatment for 241 patients between January 2014 and September 2014. This relaxation of hypoglycemic management is estimated to have avoided over \$300,000 in medication costs (Figure 2). Additional cost avoidance from falls, ED visits, and other sources may have been realized but were not evaluated.

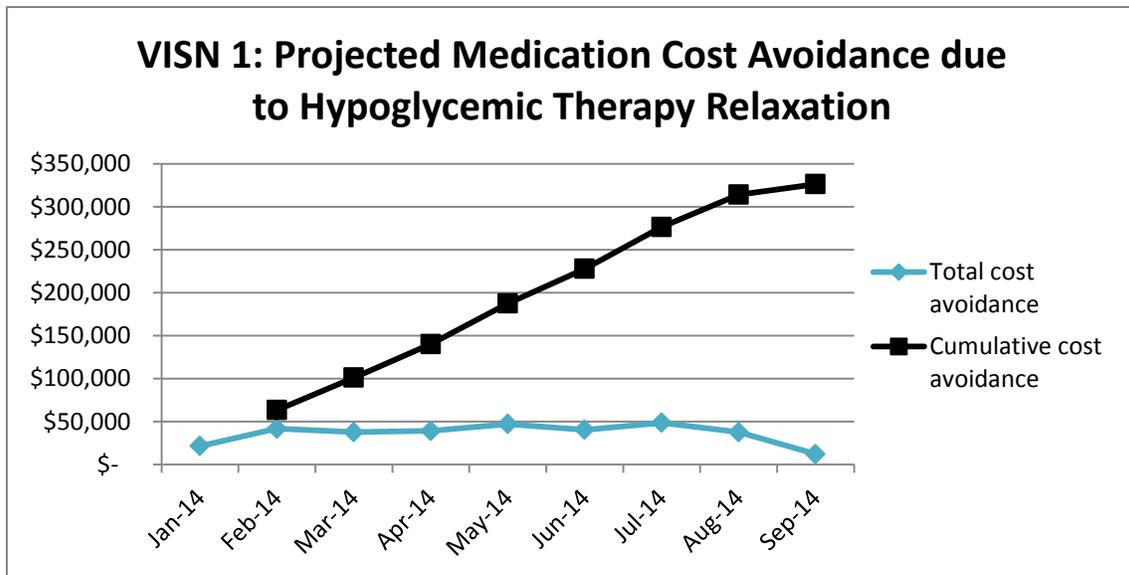


Figure 2: VISN 1 Projected Medication Cost Avoidance due to Hypoglycemic Therapy Relaxation (Cumulative)

Conclusions

This project serves as an example of targeting the “correct” problem for clinicians since the reminder requires little effort but has high impact. As a result, feedback from providers was very positive. If this work is spread throughout VHA and similar results are realized, over 11,000 patients would be evaluated and removed from the “at risk” cohort, over 7,000 patients would have their hypoglycemic management relaxed, and VHA would avoid an approximate \$9.5 million in medication costs.

New England VERC and VISN 1 look forward to sharing these methods and results with other VISNs and hospital systems to bring additional focus to the issue of overtreatment in this area and others. After monitoring the implementation data and discussing the methods and results, our team recommends the following to others looking to take on this work:

- 1) Communicate and engage with Primary Care clinicians, endocrinologists, diabetes educators, relevant sub-specialists, and other partners who should be involved in reducing potential overtreatment.
- 2) Develop a user-facing design based on clinician feedback to ensure the reminder can be implemented into daily workflow.
- 3) Use a project charter to clearly define participant roles and responsibilities.
- 4) Model VISN 12’s approach to evaluating data and use standardize names for health factors to capture actions and comments from the clinical reminder.
- 5) Reach out to New England VERC and VISN 1 with questions and to access the clinical reminder and report structure.

For more information, please contact [New England VERC](#) or [Dr. Eric Shirley](#), VISN 1 Primary Care.