



# Sustained Hypoglycemia Reduction Using eGlycemic Management System<sup>®</sup> to Manage Insulin Infusion Therapy Among Critical Care Patients

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## OBJECTIVE

Identify whether reductions in hypoglycemia have been sustained among critical care patients receiving insulin infusion therapy managed using the technology-enabled eGlycemic Management System<sup>®</sup> (eGMS<sup>®</sup>).

\* eGlycemic Management System<sup>®</sup> is a registered trademark of Glytec, LLC on behalf of Aseko, Inc. All Rights Reserved.

## METHOD

Grady Hospital, a 640-bed academic medical center in Atlanta, Georgia, conducted a retrospective review of critical care patients with persistent hyperglycemia >180 mg/dL who received insulin infusion therapy in an ICU (medical, surgical, cardiovascular neuroscience or burn) or step-down unit.

The primary endpoints were percentages of blood glucose readings (BGs) <40 mg/dL and <70 mg/dL.

The review compares patients whose therapy was managed using eGMS<sup>®</sup> to those whose therapy was managed using standard protocols (“usual care”).

Data was collected for the period of October 2016 through December 2019. (NOTE: (eGMS<sup>®</sup> was implemented at Grady Hospital the month of December 2016.)

This review is in follow up to a previous review in which data was collected for the period of October 2016 through December 2018. Usual care endpoints of 0.44% BGs <40 mg/dL and 2.44% BGs <70 mg/dL were carried forward from the previous review to this review.

## CONCLUSION

Reductions in hypoglycemia among critical care patients receiving insulin infusion therapy can be achieved and sustained effectively and efficiently using the technology-enabled eGlycemic Management System<sup>®</sup> (eGMS<sup>®</sup>), with 98% lower incidence of BGs <40 mg/dL when compared to usual care and 87% lower incidence of BGs <70 mg/dL.

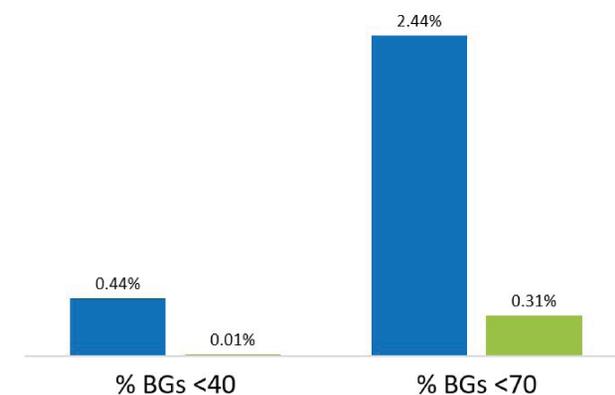
## RESULT

Reductions in hypoglycemia among critical care patients receiving insulin infusion therapy using eGMS<sup>®</sup> have been sustained over the three-year period since the system was implemented at Grady Hospital.

The average percentage of BGs <40 mg/dL within the eGMS<sup>®</sup> population was .02% over the initial (previous) review period of October 2016 through December 2018 and was 0.01% over the (extended) follow-up review period of October 2016 through December 2019. This compares to a rate of 0.44% within the usual care population.

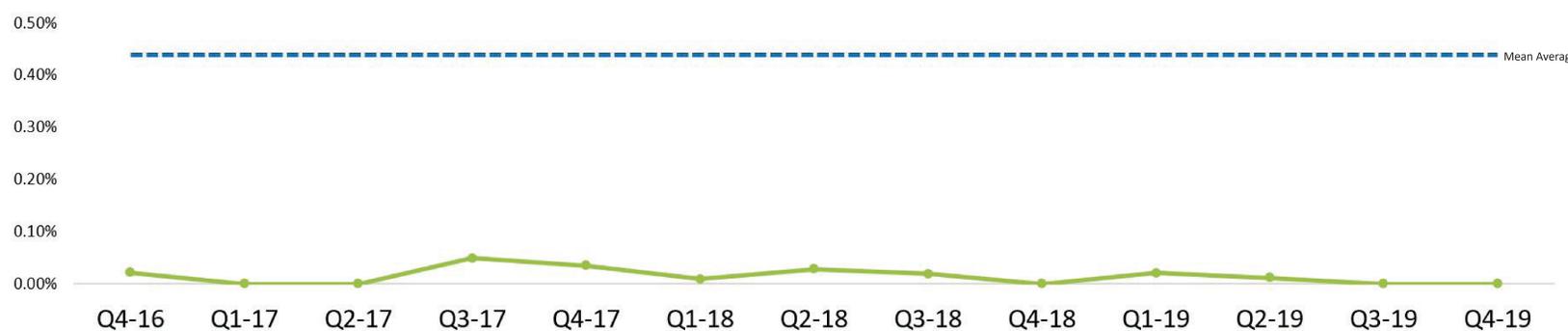
The average percentage of BGs <70 mg/dL within the eGMS<sup>®</sup> population was 0.32% over the initial (previous) review period and was 0.31% over the (extended) follow-up review period. This compares to a rate of 2.44% within the usual care population.

Incidence of Hypoglycemia (% BGs) Over 3 Years eGMS<sup>®</sup> Use  
Data Review: October 2016-December 2019



- Intravenous Insulin Infusion Therapy Managed With Standard Protocols (“Usual Care”)
- Intravenous Insulin Infusion Therapy Managed With eGMS<sup>®</sup>

Incidence of Hypoglycemia <40 mg/dL (% BGs) Over 3 Years eGMS<sup>®</sup> Use  
Data Review: October 2016-December 2019



Incidence of Hypoglycemia <70 mg/dL (% BGs) Over 3 Years eGMS<sup>®</sup> Use  
Data Review: October 2016-December 2019

