

Quality Improvement Initiative to Reduce Severe Hyperglycemia in Hospitalized Patients Receiving High-dose Glucocorticoids

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Project Aim: Improve detection of hyperglycemia related to administration of high-dose glucocorticoids in hospitalized patients with cancer, and to aid the primary oncology team with hyperglycemia management.

Background

- Inpatient hyperglycemia has been associated with increased length of stay, and higher morbidity and mortality.
- Glucocorticoids are associated with an increased risk of hyperglycemia and the development of overt diabetes.
- Glucocorticoid induced hyperglycemia is most often postprandial therefore often not identified on morning and overnight basic metabolic panels.
- Glucocorticoid induced hypoglycemia is commonly unidentified and undertreated despite the well-established negative impact it can impart to patients.



SAT 158

Methods

 The target population consisted of patients admitted to Wilmot Cancer Center, a high-level cancer care facility in a large academic medical center, who were receiving high-dose glucocorticoids and had a blood glucose >180 mg/dl. Baseline measurements: Baseline diabetes status and home diabetes regimen Percentage with severe hyperglycemia and intervention that occurred Readmission rates and glycemic related hospitalizations subsequently 	12 mont
Intervention #1: Best Practice Advisory	Agree Neutra Disagree
atient has a blood bse >180 mg/dl while on high-dose glucocorticoids → Best Practice Advisory fires to alert team of hyperglycemia → Provider prompted to monitor glucose with point-of-care-testing (POCT) glucose with a link to order POCT testing → Potential hyperglycemia	 18- pat PO(Ger
Intervention #2: Insulin Management Guide	
tential hyperglycemia detected → Best Practice Advisory with link to order set with insulin recommendations → Insulin ordered per recommendations for specific high-dose glucocorticoids patient receiving → Potential hyperglycemia intervened on and potentially prevented	Severe H
Intervention #3. Patient Education Tool	• Exp
	• Exp
Patient education tool on hyperglycemia curated by a registered dietician containing information about hypoglycemia, hyperglycemia, and carbohydrate counting.	• Ass



Outcomes Patients Identified with Hyperglycemia with POCT Ordered Prior to BPA ths after BPA **Survey to Oncology Providers:** I would like to continue the use of BPA for inpatient care. -month data review shows the BPA continues to help identifying tients with hyperglycemia in whom POCT testing is indicated. CT testing rates and rates of BPA firing appear stable. nerally, less insulin than recommended was ordered. **Glucose Trends on Inpatient Units of Intervention** Hypoglycemia BG<70 Hyperglycemia (BG>300)

> 0.00% 1.00% 2.00% 3.00% 4.00% 5.00% 6.00% 7.00% 8.00% 9.00% 10.00% Prior to BPA 18 months after BPA

Future Plans

plore why POCT testing not ordered when indicated.

- Intentional, alarm fatigue, other?
- plore barriers to using Insulin Management Guide.
- Intentional, unfamiliar providers, other?

sess readmission rates of patients, diabetes development and use of project tools long term.