

# Rapid-cycle Improvement Program

## Glycemic Management Assessment



### WHAT IS THIS TOOL?

This assessment allows hospitals to identify opportunities for improvement to reduce the risk of an adverse drug event related to poor glycemic management. Use this tool to interview unit-based staff and compare current practices with recommended evidence-based best practices.

### WHO SHOULD USE THIS TOOL?

Hospital-based quality improvement teams focused on reducing glycemic ADEs.

### ASSESSMENT PROCESS:

- Review the hospital's internal policies and protocols.
- Review electronic medical records for select patients to evaluate the presence of documented assessments and interventions.
- Complete the assessment with unit-based staff from multiple areas in the hospital to ensure that unit-to-unit variation is accounted for in any hospital-wide action plans developed as a result of the assessment.
- Review responses with your EQIC project manager for additional guidance and next steps.

EVIDENCE-BASED PRACTICE	PRACTICE IN PLACE?	NOTES
<b>ORGANIZATIONAL STRUCTURE AND CULTURE</b>		
An interdisciplinary team or committee focused on glyceemic ADE prevention meets regularly.	Yes    No	
This team reports to the hospital quality improvement committee or board of directors.	Yes    No	
The hospital has identified an executive sponsor.	Yes    No	
The hospital has a performance improvement program in place.	Yes    No	
Policies/protocols have been developed and updated with current guidelines/evidence-based recommendations.	Yes    No	
New treatments, equipment designed to assist with treatment and prevention are frequently evaluated.	Yes    No	
Patient stories are shared with frontline staff and board members.	Yes    No	
<b>DATA COLLECTION AND REPORTING</b>		
Hyper and hypoglycemic rates are tracked regularly.	Yes    No	
Rates are delineated by unit location.	Yes    No	
The hospital uses a standardized reporting mechanism (i.e. dashboard) to track rates and outcomes.	Yes    No	
Data is shared with clinicians, frontline staff and key stakeholders.	Yes    No	
<b>STAFF EDUCATION</b>		
Staff that receive education and training on hyper and hypoglycemic prevention strategies include ( <i>check all that apply</i> ):	Providers Frontline staff Clinical support staff Transport staff Environmental staff	

EVIDENCE-BASED PRACTICE	PRACTICE IN PLACE?	NOTES										
<b>STAFF EDUCATION (CONTINUED)</b>												
Staff education about signs and symptoms of hyper and hypoglycemia is provided:	At orientation Annually Other; describe: _____											
A subject matter expert and/or certified diabetes educator is available to staff as needed.	Yes      No											
Bedside staff are educated about: <ul style="list-style-type: none"> <li>• Proper insulin administration.</li> <li>• Managing common bedside issues, such as what to do when the nutritional source is interrupted or a patient is unable to eat a meal.</li> <li>• How to convert to subcutaneous insulin dosing.</li> <li>• Basal-bolus glycemic management.</li> <li>• Carbohydrate counting.</li> </ul>	<table border="0"> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
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<b>PATIENT AND CAREGIVER EDUCATION AND SELF-MANAGEMENT</b>												
Patients and caregivers are educated on proper insulin dose measurement and self-administration, including injection and site rotation.	Yes      No											
Patients and caregivers can use a blood glucose meter or continuous glucose monitor during hospitalization and are educated on how to check glucose levels and understand the results.	Yes      No											
Patients and caregivers are educated on how to calculate carbohydrates in meals and adjust insulin doses.	Yes      No											
Patients and caregivers are educated on the signs and symptoms of hypo and hyperglycemia and actions to take when either occur.	Yes      No											
Patient self-management competency is determined by assessing: <ul style="list-style-type: none"> <li>• Cognitive and physical skills to self-administer.</li> <li>• Ability to perform self-monitoring of blood glucose.</li> <li>• Proficiency in estimating carbohydrates.</li> </ul>	<table border="0"> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> <tr> <td>Yes</td> <td>No</td> </tr> </table>	Yes	No	Yes	No	Yes	No					
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Yes	No											

EVIDENCE-BASED PRACTICE	PRACTICE IN PLACE?		NOTES
<b>PATIENT AND CAREGIVER EDUCATION AND SELF-MANAGEMENT</b> (CONTINUED)			
The patient, nursing staff and physician agree when patient self-management is appropriate.	Yes	No	
A certified diabetes educator provides patient and care partner education.	Yes	No	
<b>GLYCEMIC MANAGEMENT</b>			
Basal insulin or a basal plus bolus correction insulin regimen is the preferred treatment for non-critically ill hospitalized patients with poor oral intake or those who are taking nothing by mouth.	Yes	No	
An insulin regimen with basal, prandial and correction components is the preferred treatment for non-critically ill hospitalized patients with good nutritional intake.	Yes	No	
When admitted to the hospital, the patient's outpatient hyperglycemic therapy is transitioned to basal/nutritional/correction insulin therapy.	Yes	No	
An HbA1C level is obtained from all patients with diabetes or hyperglycemia (blood glucose $\geq 140$ mg/dL) admitted to the hospital.	Yes	No	
Point of care glucose meters are used for monitoring glucose.	Yes	No	
The target pre-meal BG level for all patients is 100-180 mg/dL.	Yes	No	
Blood glucose monitoring is performed: <ul style="list-style-type: none"> <li>• Before meals for patients who are eating.</li> <li>• Every four to six hours for patients who are not eating.</li> <li>• Every 30 minutes to two hours for patients receiving intravenous insulin.</li> </ul>	Yes Yes Yes	No No No	
Validated, computerized insulin order sets provide clinical decision support guidance for dividing insulin total daily dose into the appropriate treatment components (basal, nutritional and correction) based on glycemic fluctuations.	Yes	No	
Patients' blood glucose trends are assessed daily, and appropriate insulin and diet adjustments are made.	Yes	No	

EVIDENCE-BASED PRACTICE	PRACTICE IN PLACE?		NOTES
<b>GLYCEMIC MANAGEMENT (CONTINUED)</b>			
A plan for preventing and treating hypoglycemia and hyperglycemia is established for each patient.	Yes	No	
A consult with an internal medicine physician or endocrinologist is completed for patients whose blood glucose is difficult to control.	Yes	No	
<b>INSULIN ADMINISTRATION</b>			
Providers are prompted to consider discontinuing oral agents when initiating insulin orders.	Yes	No	
A standardized insulin infusion regimen is used for critically ill patients.	Yes	No	
Insulin pumps have a dedicated line.	Yes	No	
<b>NUTRITION</b>			
Nutritional needs are assessed for each patient with diabetes.	Yes	No	
Nutritional consults are available for patients with diabetes with co-morbid conditions such as malnutrition or obesity.	Yes	No	
Orders indicate that meal delivery and nutritional insulin coverage are coordinated.	Yes	No	
Carbohydrate counting is provided by hospital nutritional services for each meal.	Yes	No	
Dieticians are consulted as necessary.	Yes	No	
<b>PATIENTS WHO HAVE DIABETES AND SURGERY</b>			
A preoperative risk assessment is performed for patients with diabetes who are at high risk for ischemic heart disease and those with autonomic neuropathy or renal failure.	Yes	No	
Blood glucose is monitored at least every two to four hours while the patient is taking nothing by mouth and dosed with rapid-acting insulin as needed, including before, during and after surgery.	Yes	No	
Patients are educated about necessary adjustments to their diabetic medications and nutrition prior to surgery.	Yes	No	

EVIDENCE-BASED PRACTICE	PRACTICE IN PLACE?		NOTES
<b>PATIENTS WHO HAVE DIABETES AND SURGERY (CONTINUED)</b>			
Subcutaneous insulin administration is used to achieve and maintain target glucose levels for ambulatory short procedures (under four hours).	Yes	No	
IV insulin infusion is used for patients undergoing longer procedures (more than four hours).	Yes	No	
<b>DISCHARGE PLANNING</b>			
Patients and caregivers are notified about any changes in their home medication list prior to discharge, and discontinued or newly prescribed medications are highlighted.	Yes	No	
Patients are provided verbal and written instructions on their diabetes management plan.	Yes	No	
Patients are encouraged to follow up with their primary care provider as soon as possible.	Yes	No	
The hospital provides the PCP with documentation of medication lists with changes and summaries of the patient's glycemic control.	Yes	No	
Oral agents are resumed one to two days prior to discharge.	Yes	No	
If a new insulin regimen is required at discharge, it is instituted at least one day prior to discharge to allow assessment of the efficacy of the transition.	Yes	No	
Patients are educated about necessary adjustments to their diabetic medications and nutrition prior to surgery.	Yes	No	

**THIS TOOL IS BASED ON:**

Society of Hospital Medicine. "The Glycemic Control Implementation Guide" <https://www.hospitalmedicine.org/globalassets/clinical-topics/clinical-pdf/gcni-guide-m4.pdf>

"Approved: Revisions to Advanced Certification Requirements for Inpatient Diabetes Care," Joint Commission Perspectives® vol. 36, no. 11 (November 2016).

Thompson, R., et al, "2014 Perioperative Glucose Control Best Practices," Washington State Hospital Association. [https://www.wsha.org/wp-content/uploads/Best-Practices-Perioperative-Glucose-Control\\_June2015\\_SubmittedtoSocietyofHospitalistMedicine.pdf](https://www.wsha.org/wp-content/uploads/Best-Practices-Perioperative-Glucose-Control_June2015_SubmittedtoSocietyofHospitalistMedicine.pdf) (Accessed December 22, 2020).

American Diabetes Association, "Diabetes Care in the Hospital: Standards of Medical Care in Diabetes—2022," [https://diabetesjournals.org/care/article/45/Supplement\\_1/S244/138924/16-Diabetes-Care-in-the-Hospital-Standards-of](https://diabetesjournals.org/care/article/45/Supplement_1/S244/138924/16-Diabetes-Care-in-the-Hospital-Standards-of)

Desemone, James, Inpatient Glycemic Management 101, EQIC webinar, April 26, 2022

Desemone, James, Inpatient Glycemic Management 201: Optimizing glucose management in hospitalized patients, EQIC webinar, May 24, 2022

Mendelsohn Curanaj, Felicia A., Seley, Jane J., Perioperative glycemic management, EQIC webinar, June 28, 2022

Mendelsohn Curanaj, Felicia A., Seley, Jane J., Medication Management and Discharge Planning, EQIC webinar, July 26, 2022