

Figure 2.1: Hospital Harm – Severe Hyperglycemia Logic Model

Inputs (resources)	Activities (what the hospital does)*	Outputs (direct results of the activities)	Outcomes	Impact (broad, systemic changes influenced by the quality program)
<p>Electronic Health Record (EHR) and associated data</p> <p>Hospital staff (nurses, doctors, pharmacists, nutrition staff, and others who care for the patient and input data into the EHR)</p> <p>Staff training on hyperglycemia management protocols and appropriate EHR documentation</p> <p>Clinical practice guidelines for hyperglycemia management in an inpatient setting (American Diabetes Association, Endocrine Society)</p>	<p><u>Processes of care</u></p> <ul style="list-style-type: none"> Plans for preventing and treating hyperglycemia developed for patients at risk Hypoglycemic medications appropriately dosed and timed to obtain or maintain glucose targets Real-time continuous glucose monitoring (CGM) with confirmatory point-of-care blood glucose monitoring performed for patients at risk Patients' home medications continued as appropriate Treatment plans monitored and modified as needed <p><u>Structures of care</u></p> <ul style="list-style-type: none"> Hyperglycemia management protocols using structured order sets implemented to provide guidance for glycemic management 	<p>Data showing how many patients experience severe hyperglycemia during hospitalization</p> <p>Appropriate dosing of medication and adequate monitoring of patients receiving glycemic control agents</p> <p>Reduction in severe hyperglycemia during hospitalization</p>	<p>Improvements in hospital practices for monitoring and detecting hyperglycemic events in patients at high risk for severe hyperglycemia</p> <p>Improvements in patient satisfaction</p> <p>Lower rates of hyperglycemic harms such as in-hospital mortality and infection</p> <p>Improvements in patient safety through prevention of severe hyperglycemia in patients at risk</p>	<p>Improved patient confidence: Increased patient confidence in and satisfaction with the medical system</p> <p>Health care costs/ resources: Reduction in hospital length of stay and lowering health care-associated costs</p> <p>Resource allocation: Implementing this measure may lead hospitals to implement “bundled” preventative therapies that include proactive surveillance and interdisciplinary approach to glycemic management</p>

	<ul style="list-style-type: none"> • Facility protocols developed to maintain patients on automated insulin delivery with CGM when feasible • Leverage EHR data to identify inpatients at risk 			
Feedback Mechanisms				
Hospitals that submit eCQM data for this measure to the CMS Hospital Inpatient Quality Program will receive annual performance results. Public reporting of results will be available on the Care Compare and Provider Data Catalog websites.				
Assumptions (underlying beliefs about the quality program and context)				
<p>Prevention: Hyperglycemic events are preventable in the majority of patients through appropriate nutrition and glucose management.</p> <p>Resource Availability: Hospitals have mechanisms for staff to monitor and address fluctuations in patients' glucose levels, and EHR systems are being used consistently across facilities to capture data needed to calculate measure performance.</p> <p>Adherence to Latest Guidelines and Patient Compliance: Health care providers will follow the latest evidence-based guidelines for glycemic management, and patients will comply with staff instructions.</p>				
External Factors (conditions outside the quality program's control)				
<p>Regulations: Changes in regulations, compliance requirements, and government policies.</p> <p>Clinical guidelines: Updates may require revision to measure or hospital protocols.</p> <p>Technological Advancement: Emerging technologies can both create new opportunities to streamline processes and pose challenges. For example, insulin-dosing algorithms can be used to predict insulin requirements during hospitalization.</p>				

* References and details about guidelines are available in Section 2.2: Evidence of Measure Importance of the submission form.