

Adverse Drug Events (ADE)
Hypoglycemic Agents Action Bundle

Core Strategies

<p>Leadership</p>	<ul style="list-style-type: none"> • Identify administrative, quality and pharmacy leaders to champion ADE reduction strategies, including hypoglycemic agents. • Set aims, goals and timelines for practice changes. • Develop training programs on hypoglycemic agents for all providers, pharmacists and nursing staff. • Implement high-risk medication policies that clearly delineate roles and responsibilities of providers, pharmacists and nursing.
<p>Prevent</p>	<p>Hypoglycemic Agents:</p> <ul style="list-style-type: none"> • Establish blood glucose targets for specific population such as critically ill patients, post-surgical patients, pregnant patients with gestational diabetes mellitus (GDM) or pre-existing diabetic, and pediatric/neonates. • Create and implement blood glucose monitoring guidelines to address existing diabetic patients, hyperglycemia acquired in hospital, pregnant patients with GDM or pre-existing diabetic and pediatric/neonates. • Ensure processes are in place to manage insulin procurement, storage, preparation and dispensing. <ul style="list-style-type: none"> ○ Use individualized insulin pens, or have pharmacy prepare individual scheduled intermediate or long-acting insulin on patient care units. ○ Remove or minimize stock of insulin on patient care units. ○ Pharmacist review all insulin orders prior to insulin availability in automated dispensing cabinets. ○ Double-checks required for non-standard insulin concentrations or in override emergent situations by two professionals. ○ Pharmacy prepares all insulin infusions, dilutes insulin and concentrated (U-500) insulin. ○ Limit the number of insulin infusion standard concentrations to one. • Effectively display the patient’s insulin standard record, blood glucose results, and carbohydrate intake in order to efficiently and accurately assess patient status. • Eliminate the use of sliding insulin dosage scales: convert to basal/bolus insulin dosing. If a sliding scale is used, standardize it through the use of a protocol and preprinted order form or computer order set that clearly designates the specific increments of insulin coverage.

	<ul style="list-style-type: none"> • Implement judicious use of independent double checks of subcutaneous insulin.
Prevent (continued)	<ul style="list-style-type: none"> • Establish and implement standard practices for situational subcutaneous insulin (e.g. non-standard concentrations, basal prandial dosing with conversion to oral and pre-operatively). • Establish and implement insulin protocols for patients in ICU, diabetic ketoacidosis and hyperosmolar hyperglycemic state. • Establish and implement standards for oral and injectable non-insulin hypoglycemic agents. • Ensure a policy is in place and staff are educated on the use of patient self-management of insulin pumps, including that the patient must meet cognitive requirements.
Detect	<ul style="list-style-type: none"> • Ensure processes are readily available following a hypoglycemic reaction: to adjust the insulin dose; implement blood glucose (BG) monitoring protocol after intervention (e.g. D50 or glucagon); and prevent plan to reduce reoccurrences. • Instruct patients/families on symptoms to monitor for signs of hypoglycemia and when to contact a health care provider for assistance.
Mitigate	<ul style="list-style-type: none"> • Streamline formulary for insulin type to a single brand source with approved substitutions. • Ensure policy/process is in place to administer all insulin infusions via an IV pump with capability to program max/min infusion rates, overrides and alerts-recommend smart pump technology. • Independent double checks required for all insulin administration. • Utilize alerts to flag changes in patient condition and hypoglycemic triggers such as: <ul style="list-style-type: none"> ○ NPO status, dietary and/or nutritional changes, surgery, acute illness (e.g. sepsis, acute renal or liver failure) and any additions or changes in medication that may affect blood glucose levels. • Ensure coordination processes are available for blood glucose checks with meals and insulin administration, including monitoring for an inconsistency with nutritional intake and a fixed prandial dosing. • Include in hand-off communication for patients on hypoglycemic agents, the patients last blood glucose level (date/time) and the last dose of insulin or oral agent, as well as any pertinent patient assessment that may cause a hypoglycemic event.
Performance and Variation	<ul style="list-style-type: none"> • Conduct an interdisciplinary failure modes and effects analysis (FMEA) within your facility to identify organization-specific sources of failure with the use of hypoglycemic medications. • Present your performance compared to others to the board and other key stakeholder groups.

Moving Towards Zero

Leverage Expert Teams and IT Embed	<ul style="list-style-type: none"> • Interface EHR with laboratory systems to provide alerts to practitioners when action is needed. • Develop and Implement hypoglycemic protocols for vulnerable populations such as elderly, pediatric, and obese patients.
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Safety in Process	
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Moving Towards Zero (continued)

Patient and Family	<ul style="list-style-type: none"> • Engage patients and care givers to understand how to take their medications, potential drug/food interactions and how to identify symptoms that indicate harm. • Remind patients of the importance in having a medication list whenever they visit a provider and have him/her review it. • Develop a robust communication plan to share information and to ensure timely follow-up with the next provider at time of discharge from the hospital.
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Hardwiring

Culture	<ul style="list-style-type: none"> • Encourage collaboration across ranks and disciplines to seek solutions to patient safety problems. • Promote transparency of results from display on units to the board and public.
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