Tennessee Pharmacist Coalition on Medication Safety
Glucose Management Gap Analysis

Updated 07/24/2015

Tennessee Pharmacist Coalition
Glucose Management Gap Analysis

Glucose Management Practices			
Gap Analysis Questions	**Yes**	**No**	**If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.**
1a) The facility has assigned responsibility for coordinating glucose monitoring functions	☐	☐	
1b) The facility has a process in place to ensure fields contained in standard protocols/order sets/flow sheets are consistently populated (manually or automatically) with key information, including at a minimum:			
i. The patient's diagnosis	☐	☐	
ii. Allergies	☐	☐	
iii. Most recent pertinent laboratory results	☐	☐	
1c) The facility has standard policies and practices in place for managing the initiation and maintenance of glycemic control therapy which include:			
i. The specific medication used (e.g., list specific meds)	☐	☐	
ii. The condition being treated	☐	☐	
iii. The potential for drug interactions	☐	☐	
iv. The potential for patient specific interactions	☐	☐	
v. The facility has a protocol in place to determine the need to hold anti-hyperglycemic therapy based on key criteria (e.g., blood glucose levels, drug-drug interactions, certain procedures)	☐	☐	
vi. The facility has a protocol in place to determine the need to manage hypoglycemic events caused by anti-hyperglycemic therapy based on key criteria	☐	☐	
vii. The facility has a process in place to ensure that anti-hyperglycemic agents are used for the appropriate indication	☐	☐	
1d) The facility has standard policies and practices in place for initiating a glycemic control protocol:			
i. Diabetic Ketoacidosis protocol	☐	☐	
ii. Hyperglycemia protocol			
iii. Hypoglycemia protocol	☐	☐	
1e) The facility has standard policies and practices in place for initiating additional monitoring:			
i. Routine blood glucose finger sticks (e.g., before and after meals and at bedtime)	☐	☐	
ii. Routine laboratory serum glucose and creatinine	☐	☐	

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ADE Prevention and Mitigation Practices for Glucose Management			
Gap Analysis Questions	**Yes**	**No**	**If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.**
2a) Insulins are included in the organization's defined list of high alert medications	☐	☐	
2b) A system is in place to alert health care practitioners to significant drug interactions for patients on insulin therapy	☐	☐	
2c) A system is in place to remind the prescriber to evaluate the need for initiating and reinitiating therapy when glycemic agents are being held	☐	☐	
2d) A pharmacy managed system is in place for glycemic agent drug shortage or supply issues which outlines how standard medication safety processes will be followed	☐	☐	
2e) The facility has a process in place to prevent IV insulin orders from being entered into the pharmacy system without including proper assessment of blood glucose levels	☐	☐	
2f) The facility uses smart infusion pumps for the IV administration of insulin with functionality employed to:			
i. Intercept and prevent wrong dose errors	☐	☐	
ii. Intercept and prevent wrong infusion rate errors	☐	☐	
Therapeutic Practices			
Gap Analysis Questions	**Yes**	**No**	**If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.**
3a) The facility has a process in place, using a standardized tool, to address and document the following prior to initiating anti-hyperglycemic therapy:			
i. Insulin naïve or insulin tolerant	☐	☐	
ii. Oral anti-hyperglycemic therapy naïve or oral anti-hyperglycemic therapy tolerant			
iii. Recent injury, trauma, surgery, etc.	☐	☐	
iv. Indication for anti-hyperglycemic therapy (i.e. Type 1 Diabetes or Type 2 Diabetes)	☐	☐	
v. ADEs experienced while receiving any previous anti-hyperglycemic agent	☐	☐	
vi. Glucose management history	☐	☐	
vii. Drug/drug interactions	☐	☐	
viii. Patient specific interactions	☐	☐	
ix. The facility has a process in place for pharmacists to assist with identification of alternative anti-hyperglycemic agents when contraindications exist	☐	☐	

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x. The indication and therapeutic goal for glucose management therapy is documented in the patient's medical record and communicated to pharmacy for monitoring and managing patient therapy	☐	☐	
3b) The facility has processes in place for timely access to routine blood glucose monitoring results	☐	☐	
3c) For critical test results reporting, the facility has defined acceptable lengths of time between assessments:			
i. Blood glucose monitoring assessment	☐	☐	
ii. Treatment of abnormal blood glucose values	☐	☐	
iii. The receipt of results by a health care provider and clinically appropriate anti-hyperglycemic dose changes	☐	☐	

Oral Glucose Management Practices

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
6a) The facility has standard processes in place for initiation of oral anti-hyperglycemic therapy, which include:	☐	☐	
i. Collection of baseline lab values prior to prescribing oral anti-hyperglycemic agents	☐	☐	
ii. Drug/drug interactions	☐	☐	
iii. History of ADEs to oral anti-hyperglycemic agents	☐	☐	
iv. Recent trauma or surgery	☐	☐	
v. Administering oral anti-hyperglycemic agents at the same time(s) each day	☐	☐	
vi. Transitioning the patient from one oral anti-hyperglycemic agent to another	☐	☐	
vii. Renal adjustment policy that is individualized for each agent	☐	☐	
viii. Monitoring and/or discontinuing oral anti-hyperglycemic agent therapy	☐	☐	
ix. Management of hypoglycemic events	☐	☐	
x. Reversal agents are on formulary with policies for appropriate use	☐	☐	

Parenteral Glucose Management Practices

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
7a) The facility has processes in place specific for parenteral insulin therapy			
i. Safely managing therapy	☐	☐	
ii. Monitoring, discontinuing, and/or reinitiating therapy	☐	☐	
iii. Method to determine therapeutic efficacy	☐	☐	
iv. Standard facility-designed protocol and order sets (P&T approved)	☐	☐	

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Parenteral Glycemic ADE Prevention and Mitigation Practices

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
8a) The facility has processes in place to eliminate errors in preparation, storage, and dispensing which includes:			
i. Utilizing unit dose products	☐	☐	
ii. Limiting concentrations of insulin stored in automated dispensing machines, including U-300 and U-500 availability	☐	☐	
iii. Dispensing individually prepared IV solutions of insulin in limited concentrations	☐	☐	
iv. Dispensing commercially prepared solutions of insulin in limited vial or pen sizes	☐	☐	
v. Policies and procedures in place for insulin administration, including appropriate syringe use	☐	☐	
vi. Policies and procedures in place if insulin pens are used	☐	☐	
vii. Policies and procedures for home parenteral use products, including GLP-1 agonists (i.e. Bydureon), U-300 and U-500 insulin	☐	☐	
viii. Policies and procedures in place for inpatient use of insulin pumps	☐	☐	
8b) The facility has a process in place to perform an independent double-check for parenteral IV insulin infusions (e.g., with smart pump technology or nurse double-check) with:			
i. Each new bag given	☐	☐	
ii. Each rate change	☐	☐	
i. Converting to other forms of insulin therapy (e.g., vials and pens)	☐	☐	

Parenteral Glycemic Therapeutic Strategies

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
9a) The facility has processes in place to initiate and monitor response to therapy including:			
i. A baseline A1c	☐	☐	
ii. Scheduled blood glucose monitoring	☐	☐	
iii. Laboratory tests with standard intervals for assessment	☐	☐	
iv. Documentation of prior disease and medication history	☐	☐	
v. Protocol is in place for critically ill medical patients	☐	☐	
vi. Inpatient chart review for drug and/or disease state interactions, including changes in diet or functional status	☐	☐	

Critical Thinking and Knowledge Strategies

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
10a) The facility provides interdisciplinary education on glucose management, which includes:			
i. Initial training for new hires and existing staff, including protocols and guidelines	☐	☐	
ii. Post-test incorporating a case-study approach to demonstrate proficiency	☐	☐	
iii. Plan for targeting gaps in knowledge	☐	☐	

iv. Ongoing glucose management education is provided to direct care staff when new relevant information is available	☐	☐	

Patient Education

Gap Analysis Questions	Yes	No	If answered "No" – identify the Specific Action plan(s) including persons responsible and timeline to complete.
11a) When initiating anti-hyperglycemic therapy, patients/caregivers receive verbal and written information on purpose, action, side effects, and monitoring	☐	☐	
11b) The facility has a process in place to educate patients and families on anti-hyperglycemic agents, using teach-back method, to ensure safe therapy including:			
i. Indication	☐	☐	
ii. Symptoms for monitoring	☐	☐	
iii. Dietary issues	☐	☐	
iv. Drug interactions	☐	☐	
v. Monitoring requirements	☐	☐	
vi. Duration of therapy	☐	☐	
vii. Potential adverse effects	☐	☐	
viii. Lifestyle modifications	☐	☐	
ix. Sick day protocol	☐	☐	
x. Altering dosage forms	☐	☐	
11c) Pharmacists are available for consultations to assist with patient education when any health care practitioner identifies a patient who is at risk for non-adherence	☐	☐	

Adapted from:

Anticoagulation Agent Adverse Drug Event Gap Analysis – Component of the Medication Safety Road Map © 2012 Minnesota Hospital Association

Venous Thromboembolism (VTE) Prevention Strategies Gap Analysis – Component of the Medication Safety Road Map © 2013 Minnesota Hospital Association

Revisions by:

Tennessee Pharmacist Coalition on Medication Safety Best Practices Sub-Committee

References:

The Joint Commission Sentinel Event Alert