Effective Date : September 1, 2018
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Next Review: September 2021

Authority: Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9

DEFINITION:

Elevated blood glucose levels (Hyperglycemia) can be a medical emergency. High glucose levels in Type 1 diabetics can cause diabetic ketoacidosis (**DKA**). High glucose in Type 2 diabetics can cause hyperosmolar hyperglycemic non-ketoacidosis (**HHNK**).

DKA and HHNK are both characterized by: thirst and increased urination, drowsiness, confusion, dehydration, nausea, vomiting and missed medication doses
DKA patients may also have: fruity odor on breath, deep and rapid respirations (Kussmaul Respirations).

Both DKA and HHNK can be life threatening if left untreated. Both DKA and HHNK are associated with possible infections and patients with hyperglycemia should be screened for potential sepsis (**POLICY ADULT M3 SEPSIS**).

BLS TREATMENT:
OXYGEN: as appropriate, goal to maintain SPO2 at least 94%, Assist ventilations as necessary.
VITALS: assess vitals
BLOOD SUGAR CHECK: test blood sugar

ALS TREATMENT:
MONITOR: treat rhythm as appropriate
BLOOD SUGAR CHECK: test blood sugar
CAPNOGRAPHY: utilize waveform capnography, ETCO2 readings of **25mmHg or less** is suggestive of acidosis (DKA)
IV ACCESS: rate as appropriate, if patient has a systolic BP less than 90, administer 250 ml fluid boluses until systolic BP is greater than 90. Reassess patient after each bolus for signs of fluid overload (severe pedal edema, rales, etc.).
DKA: If blood sugar is **greater than 400 mg/dl**, and the patient has an ETCO2 reading **less than or equal to 25mmHg**, **AND** the patient shows no signs of fluid overload, administer **500 ml bolus**, reassessing patient for signs of fluid overload after 500 ml infused.
HHNK: If blood sugar is **greater than 400 mg/dl** and the patient shows signs of dehydration (dry mucous membranes, poor skin turgor, headache, etc.) **AND** the patient shows no signs of fluid overload, administer **500 ml bolus**, reassessing patient for signs of fluid overload after 500 ml infused.