

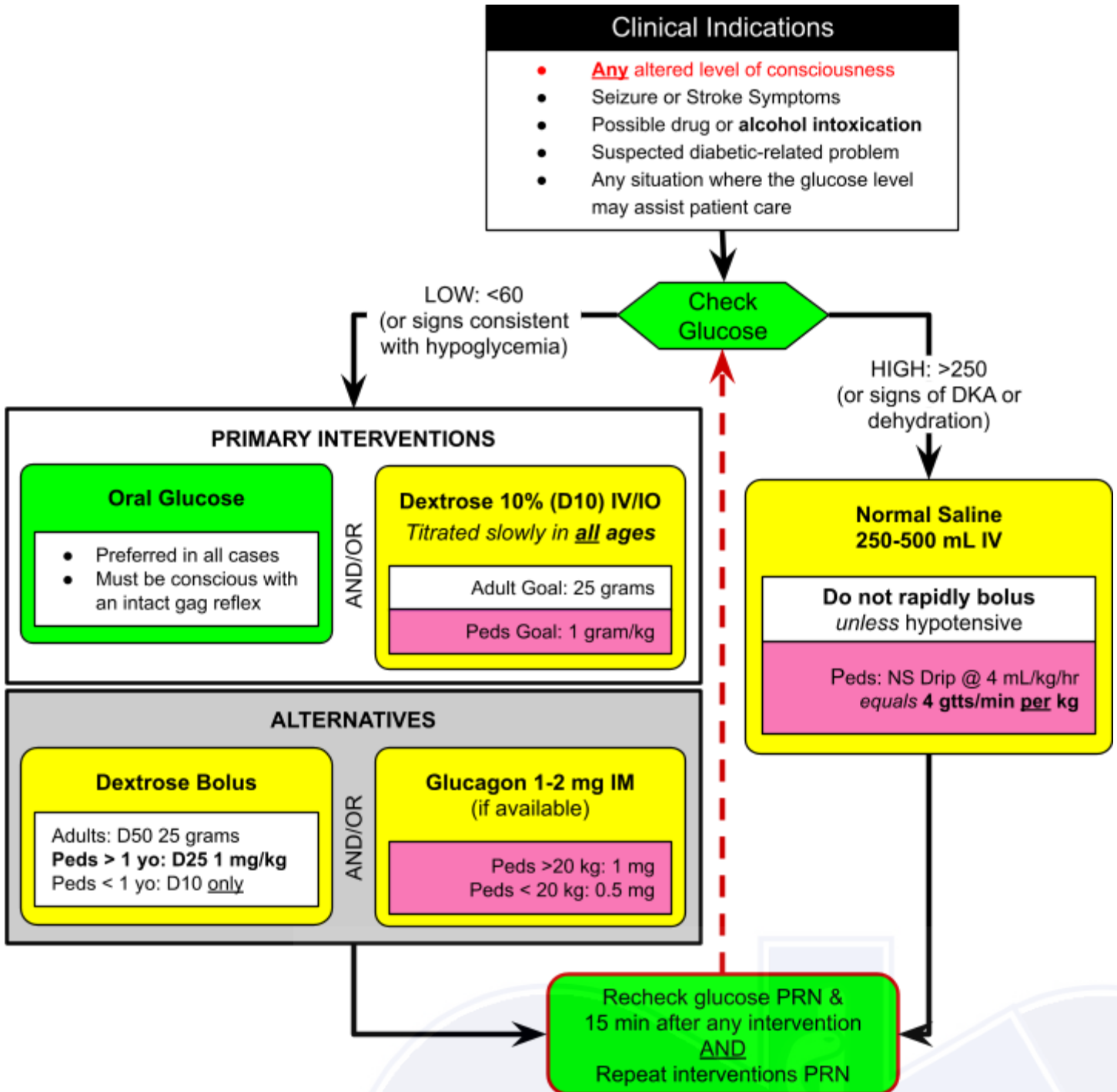
1-04
GLUCOSE CHECK/
MANAGEMENT

EMT may check fingerstick glucose
if service specific training and
check-off is provided

First Responder
EMT
AEMT
Paramedic

Clinical Indications

- **Any altered level of consciousness**
- Seizure or Stroke Symptoms
- Possible drug or alcohol intoxication
- Suspected diabetic-related problem
- Any situation where the glucose level may assist patient care



1-04
GLUCOSE CHECK/
MANAGEMENT

EMT may check fingerstick glucose
if service specific training and
check-off is provided



Procedure (GLUCOSE CHECK):

1. Gather and prepare equipment.
2. Cleanse site with chlorhexidine or other appropriate antiseptic wipe.
3. Place the correct amount of blood on the reagent strip or site on glucometer per the manufacturer's instructions.
 - a. If sample taken from venous (i.e. IV) stick is not consistent with clinical symptoms, recheck using a finger stick or heel stick (capillary blood) sample.
4. Time the analysis as instructed by the manufacturer.
5. Document the glucometer reading and treat the patient as indicated by the analysis and protocol.

NOTE: If glucometer does not function, returns an error, or returns a reading not consistent with clinical symptoms/presentation, perform quality assurance test immediately after the call and notify a supervisor as appropriate.

REFUSAL OF CARE [*also see Z-03, Non-Transport/Refusal of Care*]:

- While medically (and legally) competent adults have the right to refuse transport, in the following situations patients should strongly be encouraged to be evaluated in an ED:
 - Unexplained hypoglycemia
 - Taking oral diabetic medications
 - Unable to take food by mouth
 - No other competent adult available to monitor the patient

KEY POINTS HYPOGLYCEMIA:

- It is safer to assume and treat for hypoglycemia (than euglycemia or hyperglycemia) if unable to verify glucose or doubt of validity of reading exists.
- Always consider other causes of altered mental status [**M-04**] in patients who do not respond (or only partially respond) to treatment of hypoglycemia: Stroke/CVA [**M-08**], Seizure [**M-09**], Sepsis/infection [**M-06**], Overdose/Intoxication [**E-03**], etc.)
- Do not let alcohol or other intoxicants confuse the clinical picture. Alcoholics do not have reserves to maintain normal glucose levels and frequently develop hypoglycemia.

KEY POINTS HYPERGLYCEMIA:

- Patients often complain of polyuria (excessive urination), polydipsia (excessive thirst), weight loss, fatigue/weakness, nausea/vomiting, and nonspecific abdominal pain.
- Because of the (often substantial) volume depletion, hyperglycemia is first treated with fluids which often will begin to normalize blood glucose.
- **Diabetic Ketoacidosis (DKA):**
 - Inability of the cells to take up/use glucose results in the release of counterregulatory hormones (epinephrine, cortisol, glucagon, growth hormone) ultimately resulting in worsened hyperglycemia and acidosis.
 - Generally begins with **abdominal pain and vomiting**, progressing to **altered mental status and hyperventilation** due to the acidosis.
 - PEDIATRICS: susceptible to developing cerebral edema while treating DKA. Should receive a maintenance infusion of saline & *only bolus if hypotensive*.
- **Hyperglycemic Hyperosmolar NonKetotic Syndrome (HHNK):**
 - Typically occurs in elderly diabetic patients over days to weeks.
 - Results in volume from an osmotic diuresis (due to glucose dumping into the urine and pulling in large amounts of free water).
 - Generally presents with altered mental status and profound dehydration.

QI Review Parameters:

1. {Pending}