

# Patient Care Guidelines (Demo)

Take a look at what is possible when hosting your protocols, policies and training documents with us. These protocols don't not constitute medical advice and are merely examples!

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Adult - Medical

# Diabetic Disorders

Applies to: Blood glucose less than 70 mg/dL or greater than 300 mg/dL **\*\*and\*\***

- Patient-reported low or high blood glucose
- Diabetic patients with other medical symptoms (e.g., vomiting)
- Altered mental status
- Alcohol intoxication, suspected
- Seizure
- Stroke symptoms
- Unresponsive patients
- Cardiac arrest

Exclusion Criteria: None

## History

- Past medical history
- Medications
- Drug allergies
- Last Meal
- Last BGA check

## Signs and Symptoms

- Altered mental status
- Combative / irritable
- Diaphoresis
- Seizures
- Abdominal pain
- Nausea / vomiting
- Weakness
- Dehydration
- Deep / rapid breathing

## Differentials

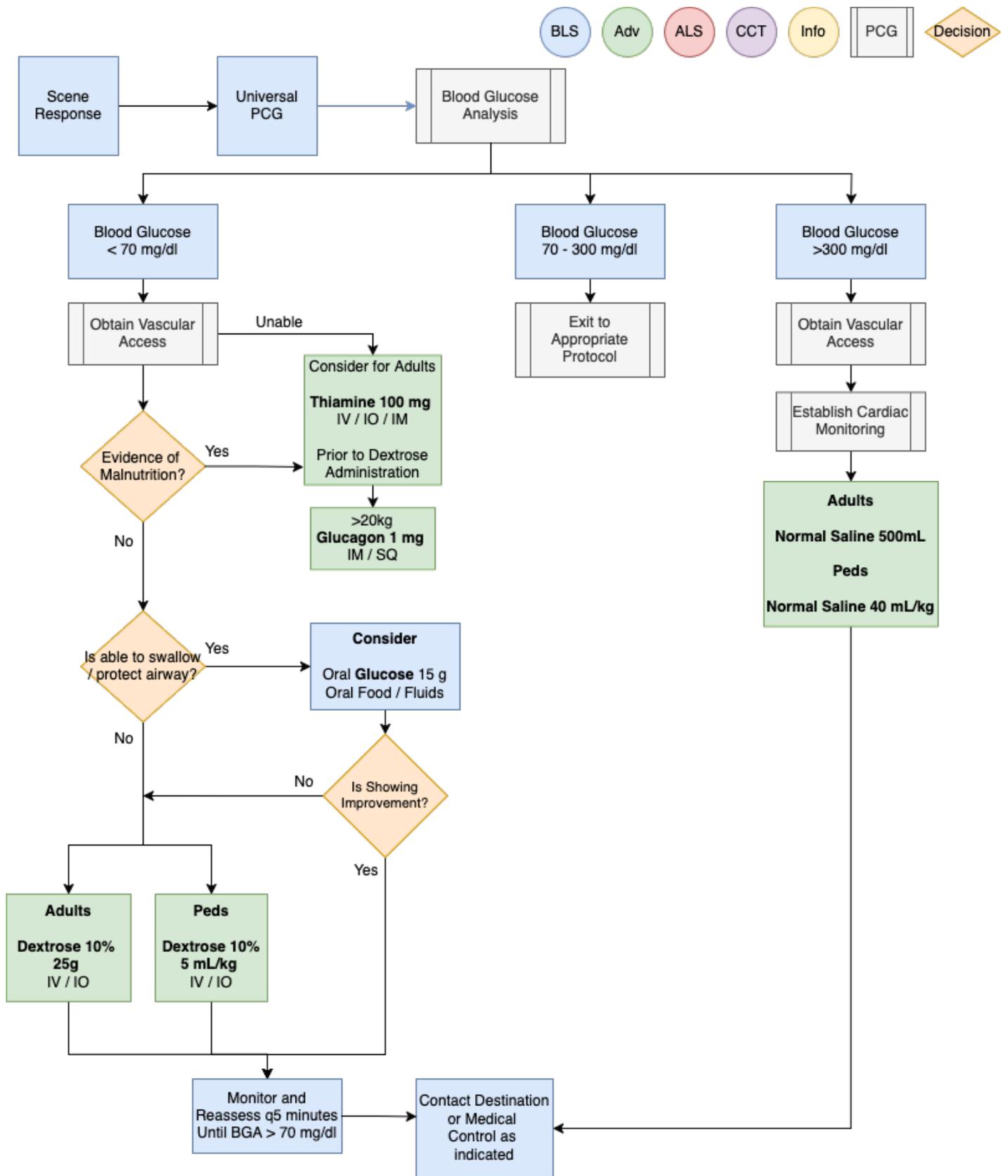
- Alcohol / drug use
- Toxic ingestion

- Trauma; head injury
- Seizure
- CVA
- Altered baseline mental status

## Pearls

- Patient's refusing transport to medical facility after treatment of hypoglycemia:
  - Blood sugar must be  $\geq 80$ , patient has ability to eat and availability of food with responders on scene.
  - Patient must have known history of diabetes and not taking any oral diabetic agents.
  - Patient returns to normal mental status and has a normal neurological exam with no new neurological deficits.
  - Must demonstrate capacity to make informed health care decisions. See Universal Patient Care Protocol UP-1. Otherwise contact medical control.
- Hypoglycemia with Oral Agents:
  - Patient's taking oral diabetic medications should be encouraged to allow transportation to a medical facility. They are at risk of recurrent hypoglycemia that can be delayed for hours and require close monitoring even after normal blood glucose is established.
  - Not all oral agents have prolonged action so Contact Medical Control or NC Poison Control Center for advice. Patient's who meet criteria to refuse care should be instructed to contact their physician immediately and consume a meal.
- Hypoglycemia with Insulin Agents
  - Many forms of insulin now exist. Longer acting insulin places the patient at risk of recurrent hypoglycemia even after a normal blood glucose is established.
  - Not all insulins have prolonged action so Contact Medical Control for advice.
  - Patient's who meet criteria to refuse care should be instructed to contact their physician immediately and consume a meal.
- Congestive Heart Failure patients who have Blood Glucose  $> 250$ :
  - Limit fluid boluses unless patient has signs of volume depletion such as, dehydration, poor perfusion, hypotension, and/ or shock.
- In extreme circumstances with no IV / IO access and no response to glucagon, D50 can be administered rectally, Contact Medical Control for advice.

## Navigate



## References

### Protocols

### Pharmacology

- [Dextrose 10%](#)
- Dextrose 50%
- [Glucagon](#)
- [Glucose](#)

## **Procedures**

- Vascular Access

# Pain Management

**Applies to:** Patient presents with a painful condition that would benefit from treatment with an analgesic. This includes DNR/MOLST patients and patients being pre-medicated for a painful procedure.

**Exclusion Criteria:** Medication specific hypersensitivity/allergy. Active Labor.

## History to consider

- Age
- Location
- Duration
- Severity (1 - 10)
- If child use Wong-Baker faces scale
- Past medical history
- Medications
- Drug allergies

## Signs and Symptoms to note

- Severity (Pain scale)
- Quality
- Radiation
- Relation to movement
- Respirations
- Reproducible
- Increased upon palpation

## Differentials to consider

- Per the specific protocol
- Musculoskeletal
- Visceral (abdominal)
- Cardiac
- Pleural/ Respiratory
- Neurogenic
- Renal (colic)

## Pearls

- Do not administer Acetaminophen to patients with history of liver disease or known to have consumed large amounts of ETOH.
- Fentanyl, Morphine and Ketamine should be reserved for acute pain.
- For patients in Moderate pain for instance, you may use the combination of an oral medication and parenteral if no contraindications are present.
- **Ketamine**
  - May use Ketamine in combination with opioids to limit total amount of opioid administration
  - Avoid in patients who have cardiac disease or uncontrolled hypertension.
  - Avoid in patients with increased intraocular pressure such as glaucoma.
  - Avoid use in combination with benzodiazepines due to depressed respiratory drive

## Navigate



Customize as needed

Contact Destination or Medical Control as indicated

## References

### Protocols

- Nausea / Vomiting

## **Pharmacology**

- Fentanyl Citrate
- Morphine
- Ketamine
- Acetaminophen
- Ofirmev
- Ibuprofen

## **Procedures**

- Vascular Access
- Pain Assessment

# Pharmacology

# Dextrose 10%

## GENERIC NAME

Dextrose

## TRADE NAME

Dextrose 10

## DESCRIPTION

Dextrose is a simple sugar that is rapidly metabolized by the body, providing quick restoration of blood glucose levels.

## HOW SUPPLIED

Prefilled bag: 25 grams/250 ml (10% solution)

## INDICATIONS

- Hypoglycemia

## CONTRAINDICATIONS

- No major contraindications for IV administration of Dextrose.
- Known or suspected CVA (stroke) in the absence of hypoglycemia.

## MECHANISM OF ACTION

Rapidly restores blood glucose levels in cases of hypoglycemia.

## SIDE EFFECTS

- Local venous irritation and potential tissue necrosis if IV infiltration occurs.

## AUTHORIZATION

**EMT:** Not authorized

**AEMT:** Standing order

**Paramedic:** Standing order

## DOSAGE

- **Adult:** 250 ml IV/IO wide open, may repeat once if blood glucose remains < 60 mg/dL.
- **Pediatric:** 5 ml/kg (0.5 g/kg) IV/IO, may repeat once if blood glucose remains < 60 mg/dL.

## ADMINISTRATION NOTES

- If desired dose is  $\leq$  100 ml, draw the required amount of D10 into a syringe and administer via slow IV/IO push using the port closest to the patient.
- If the desired dose is > 100 ml, administer by running wide open as a piggy-back to Normal Saline.

# Glucagon

## GENERIC NAME

Glucagon Hydrochloride

## TRADE NAME

None

## DESCRIPTION

Glucagon is used to increase blood glucose levels, particularly in cases where an IV line cannot be immediately established. Intramuscular (IM) administration results in a quicker onset than subcutaneous (SQ) and is therefore the preferred route.

## HOW SUPPLIED

Vial: 1 mg powder (activated by injection of 1 cc sterile water)

## INDICATIONS

- Hypoglycemia

## CONTRAINDICATIONS

- Allergy or hypersensitivity to Glucagon

## MECHANISM OF ACTION

Glucagon increases circulating blood glucose levels by promoting the breakdown of stored glycogen to glucose. Return to consciousness typically occurs within 5-20 minutes after administration. However, Glucagon may lose its effectiveness if given within the previous 48 hours.

## SIDE EFFECTS

- Hypotension
- Dizziness
- Headache
- Nausea and vomiting

## ADDITIONAL INFORMATION

After administration of Glucagon, the patient should eat a carbohydrate-rich meal as soon as possible to prevent recurrent hypoglycemia.

## AUTHORIZATION

**EMT:** Not authorized

**AEMT:** Not authorized

**Paramedic:** Standing order

## DOSAGE

- **Adult:** 1 mg IM/SQ
- **Pediatric < 20 kg:** Refer to specific dosages listed in the 402 - Drug Dosage Chart - Pediatric
- **Pediatric > 20 kg:** 1 mg IM/SQ

# Glucose

## GENERIC NAME

Glucose

## TRADE NAME

Glucose, Insta-Glucose

## DESCRIPTION

Oral glucose is used to provide supplemental glucose in cases of hypoglycemia. It is administered when the patient is conscious and able to swallow.

## HOW SUPPLIED

Tube: 15 gm

## INDICATIONS

- Hypoglycemia

## CONTRAINDICATIONS

- Allergy or hypersensitivity to glucose
- Patient is not awake or unable to swallow

## MECHANISM OF ACTION

Oral glucose restores blood sugar levels in patients experiencing hypoglycemia.

## SIDE EFFECTS

- None

## AUTHORIZATION

**EMT:** Standing order

**AEMT:** Standing order

**Paramedic:** Standing order

## DOSAGE

- **Adult:** 15 gm (1 tube) orally
- **Pediatric:** 15 gm (1 tube) orally

# Fentanyl Citrate

## GENERIC NAME

Fentanyl Citrate

## TRADE NAME

Fentanyl

## DESCRIPTION

Fentanyl is a potent narcotic analgesic used for pain management. It acts quickly and has a short duration of action, making it suitable for trauma patients experiencing pain.

## HOW SUPPLIED

Prefilled Syringe: 100 mcg/2 ml

## INDICATIONS

- All trauma patients with pain

## CONTRAINDICATIONS

- Allergy or hypersensitivity to Fentanyl
- Acute respiratory compromise or bradycardia

## MECHANISM OF ACTION

Fentanyl Citrate binds with opiate receptors in the central nervous system, altering the perception of and emotional response to pain.

## SIDE EFFECTS

- Nausea
- Vomiting
- Abdominal cramps
- Headache
- Anxiety
- Respiratory depression

## AUTHORIZATION

**EMT:** Not authorized

**AEMT:** Not authorized

**Paramedic:** Standing order

## **DOSAGE**

- **Adult:**

- IV/IO/IM: 100 mcg, may repeat once after 10 minutes (max 200 mcg total)
- IN: 200 mcg (administer half in each nostril), may repeat once after 10 minutes (max 400 mcg total)
- For patients  $\geq$  65 years: 25 mcg per dose, titrate to effect

- **Pediatric:**

- IV/IO/IM: 1 mcg/kg, may repeat once after 10 minutes (max 72 mcg total)
- IN: 2 mcg/kg (administer half in each nostril), may repeat once after 10 minutes (max 144 mcg total)