



Interfacility Transport Guidelines – Mountain Lakes Region

The purpose of these guidelines is to facilitate transport of patients from rural emergency departments who need specialty care. These transports commonly encounter significant delays due to lack of available nursing or respiratory therapy staffing. Significant morbidity and mortality are not uncommon as a result of these delays. NY State law allows for local drafting and local approval of interfacility transport guidelines.

Stipulations of the guidelines include:

- o Guidelines may be used by critical care techs and paramedics only, and only if equipped and trained. Training must be approved by the pertinent service medical director and must be well documented.
 - o The sending provider remains ultimately responsible for the patient until care is turned over to the accepting/receiving hospital provider.
 - o **All unstable patients must be accompanied by *no less than* two appropriate medical practitioners in the back of the ambulance. This team may be comprised of at least one paramedic and one RN, one paramedic and one respiratory therapist or two *appropriately trained* paramedics or EMT-CCs.**
- Under no circumstances should one provider be alone in the ambulance with a ventilated patient. All ventilated patients require 2 or more appropriately trained providers.**
- o At *no time* should any individual or team transport any patient if they are uncomfortable with the patient's stability or the plan of care.
 - o Written orders from the sending provider will continue to be required for ALL interfacility transport patients and those orders are required to delineate medications to be delivered and rates of delivery. (*This is not a change from current practice. What is changing is that with these guidelines, critical care and paramedic providers will have training and guidance that they currently lack.*)
 - o All infusion medications must be started at least 15 minutes prior to transport by the sending ED staff.

○ All patients requiring IV drip medications must be on continuous cardiac monitoring prior to and during transport with vitals obtained Q15 minutes unless there is a change in the patient condition.



The Mountain Lakes REMAC's Policy regarding the Interfacility Transport of a patient with a "non-protocol drug" shall be as follows: EMT-CC's and Paramedics may provide interfacility transport care without a nurse for a patient who is need of a "non-protocol drug" if the following conditions have been met:

- **Unstable patients must be accompanied by *no less than two* appropriate medical practitioners in the back of the ambulance, regardless of the protocol or non-protocol medications to be administered. This team may be comprised of at least one paramedic and one RN, one paramedic and one respiratory therapist or two *appropriately trained* providers.**
- A standardized training and QA/QI plan must be developed in conjunction with a hospital for agency-based training of the providers who will be administering the non-protocol drug. At minimum, all IFTs for patients requiring vasoactive drugs, mechanical ventilation and/or sedation must be reviewed.
- The training plan must contain the following elements; relevant patient narrative, medication description, pharmacology and pharmacokinetics, indications and contraindications, precautions, dosage and routes.
- Training on IV Pumps or any other equipment used during the interfacility transport must also be provided.
- The medication use and training plan must be approved by the Service Medical Director.
- The agency should notify the REMAC in writing of any additional medications that have been approved by the Service Medical Director for interfacility transports. Submission to the REMAC should include training and QI plans.
- The transporting EMT must complete an agency level training/education regarding the use of the "non-protocol drug".
- Ambulances must become an Ambulance Transfusion Service to transport patients with blood/blood products.

3% saline: dose 250-500 mL bolus. Sending provider must order indicated dose. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

Must assess BP, EtCO₂ and SpO₂ at least q15 minutes during transport.

May administer with provider order for signs of medullary herniation such as irregular respiratory pattern, relative or frank hypertension, bradycardia, worsening mental status, new anisocoria.

Withhold for hypotension.

May treat headache with acetaminophen PO or IV if not already administered within the last 4 hours.

Blood and blood products: dose/rate as written by sending provider. Must use IV pump. Must be a Wadsworth Lab approved Ambulance Transport Service.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS. Suggest requesting order for PRN furosemide for transport.

Blood must be running for at least 15 minutes prior to transport.

Cardiac monitoring is mandatory. Must assess BP, EtCO₂ and SpO₂ at least q15 minutes during transport.

Monitor respiratory status and vital signs. Stop blood product if: +/-2° change in body temperature, itching, rash, new onset respiratory distress or hypoxia. Consider stopping blood if: +/-6 respirations per minute, +/-20 beats per minute in heart rate, or +/-30 mmHg in blood pressure.

Administer acetaminophen and diphenhydramine PRN fever and rash.

For respiratory distress/rales/hypoxia, may follow prehospital protocols. May appropriately adjust ventilator settings. May administer furosemide if ordered by the sending provider.

For signs of hypocalcemia: muscle tetany, Chovstek's sign, or paresthesia not related to anxiety, administer calcium chloride 2 g or calcium gluconate 3 g (preferred).

Dexmedetomidine: dose 0.6 - 1 mcg/kg/hr. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

This medication infusion must be started at least 30 min prior to transport.

Assess mental status.

Goal: drowsy but arousable, synchronous with ventilator, or as described by the sending provider.

May adjust dexmedetomidine dose by 0.2 mg/kg/hr every 20 minutes PRN.

Diltiazem: usual dose 10-20 mg/hr. Must use IV pump.

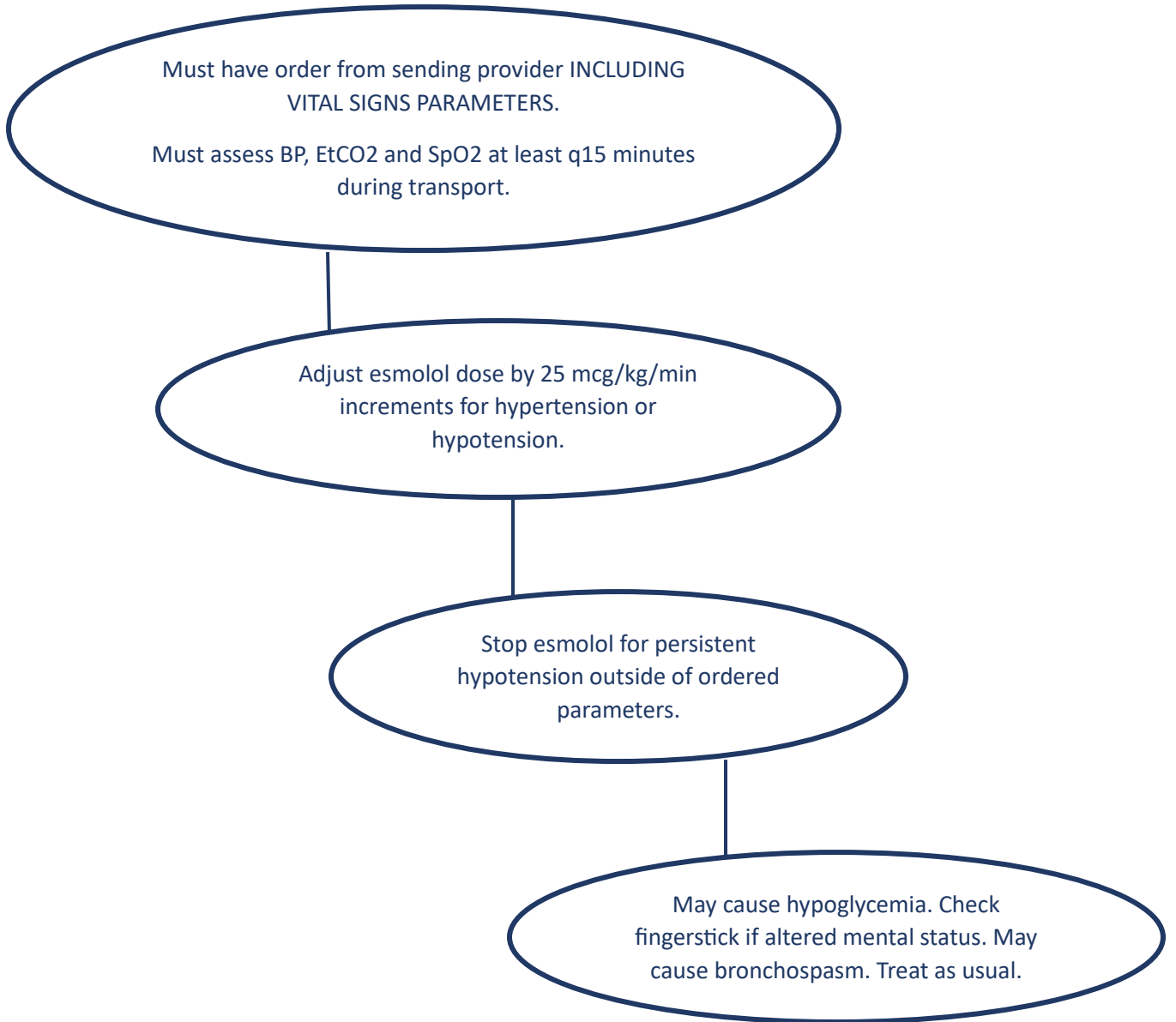
Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

Must assess BP, EtCO₂ and SpO₂ at least q15 minutes during transport.

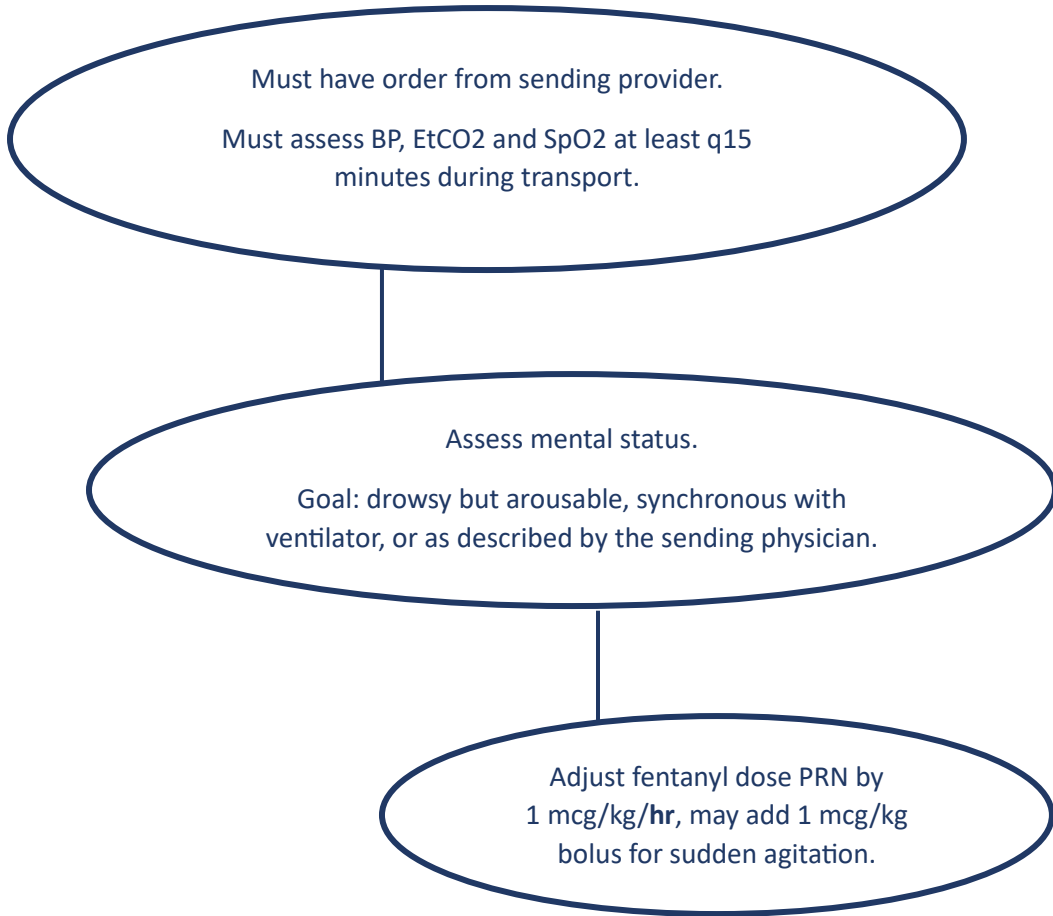
Adjust diltiazem dose by 1-5 mg/hr increments q5 min for rate control or hypotension.

Contact medical control and consider stopping diltiazem for persistent hypotension. Remember to consider primary causes not related to infusion.

Esmolol: dose 50-200 mcg/kg/min. Must use IV pump.



Fentanyl for sedation: dose 1-20 mcg/kg/hr. Must use IV pump.



Furosemide: dose/rate as ordered by sending provider.
MAY NOT take furosemide drip for more than a 2.25 hour transport under any circumstances. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

IFT provider must obtain baseline 12 lead EKG at beginning of transport.

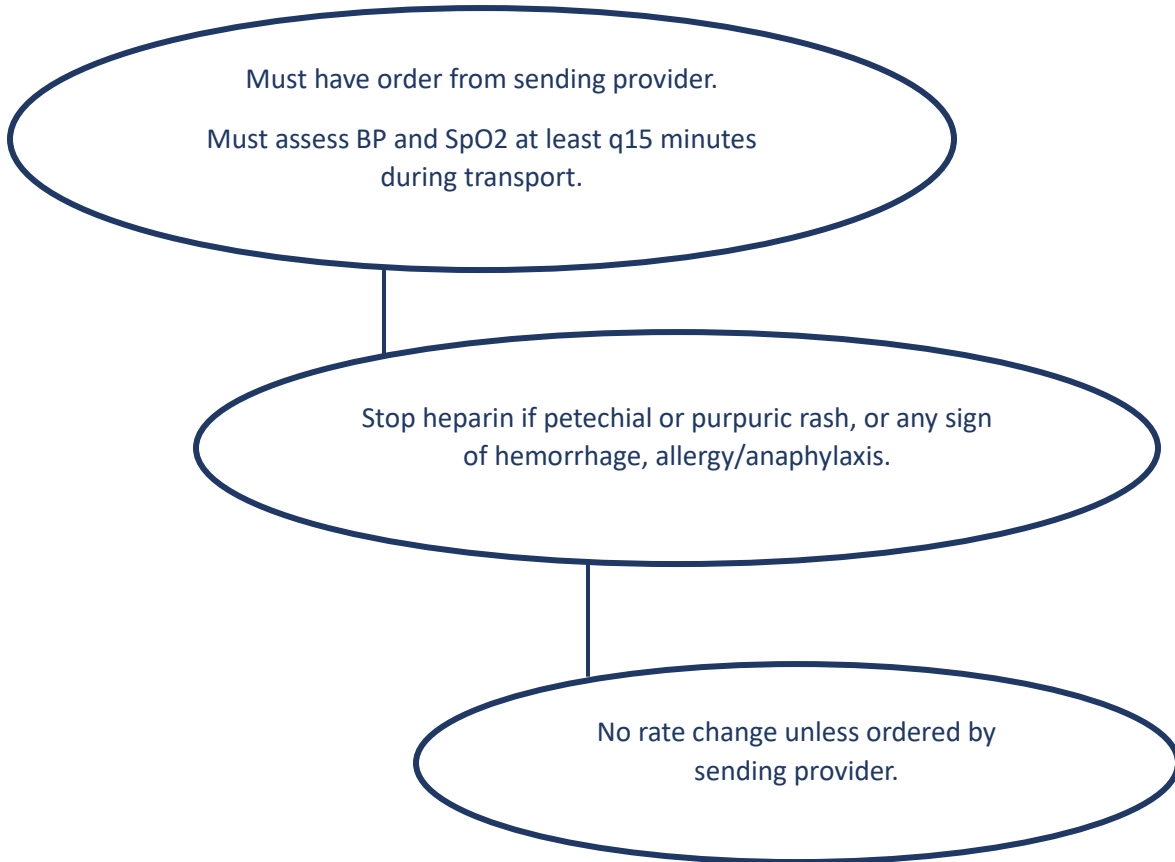
Must have obtained a potassium measurement within 30 minutes of leaving the sending facility.

Decrease furosemide dose by 0.05 mg/kg/hr increments if patient exhibits hypotension. (Normal rate is 0.05- 0.20 mg/kg/hr.)

Stop furosemide for: hypotension, muscle cramps, tetany, or U waves.

If transport lasts for ≥ 2.25 hours because of unforeseen circumstances (vehicle malfunction, etc.), obtain EKG immediately at beginning of hour #3, assess for U waves and call sending provider. Sending provider must be updated; and EKG findings, patient condition, and reason for delay must be discussed. Sending provider must then give specific orders for continuing care.

Heparin: dose and rate as ordered by sending provider. Must use IV pump.



Insulin: dose/rate as ordered by sending provider.
MAY NOT take insulin drip for more than 2.25 hour transport under any circumstances. Must use IV pump.
Potassium measurement must occur and result *at most* 30 minutes before initiating transport.

Must have order from sending provider.

Cardiac monitoring and AT LEAST q1 hour fingersticks (or Dexcom) are required. Start of and end of trip fingersticks are also required.

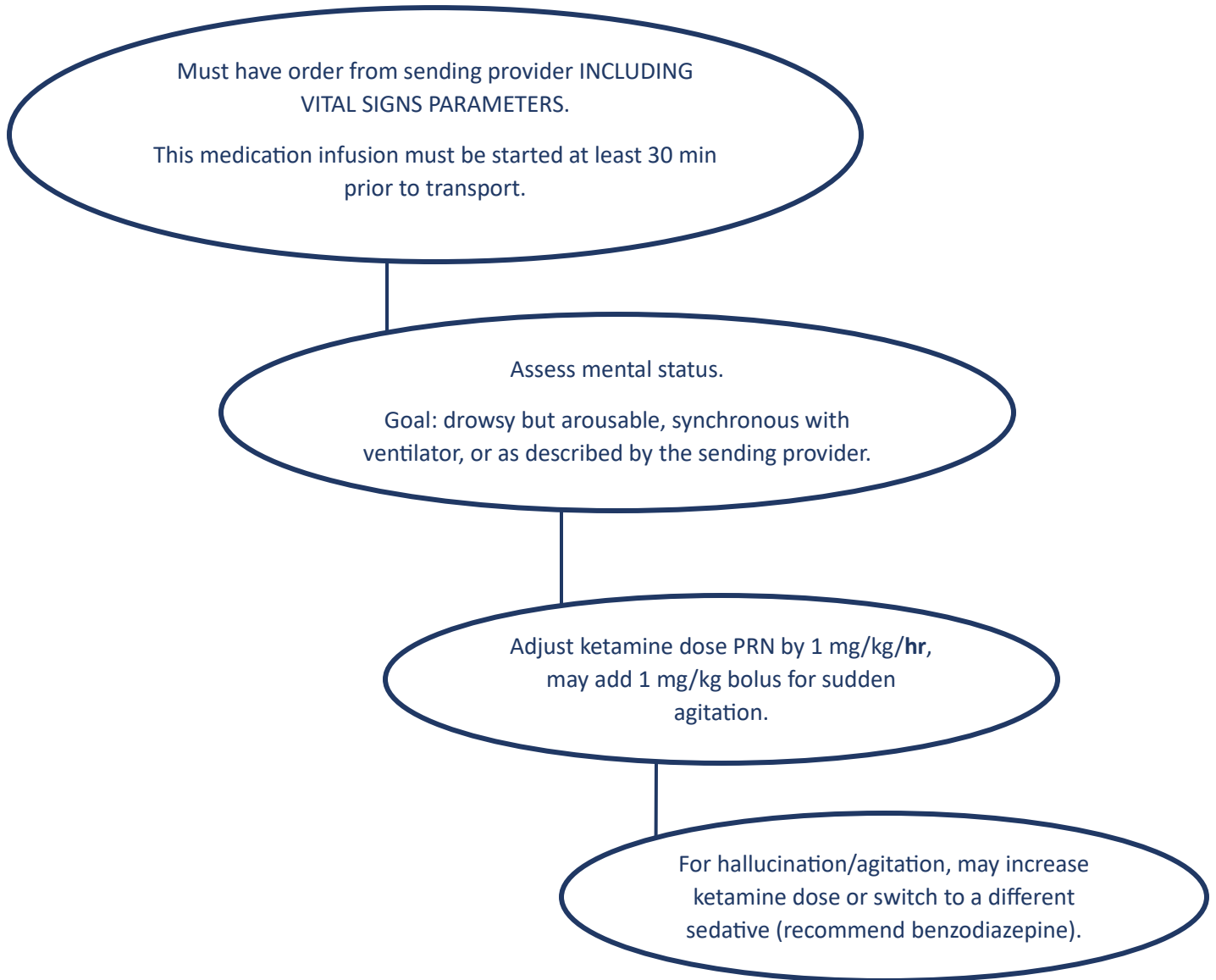
Assess mental status continuously.

Check fingerstick if altered or showing other signs of hypoglycemia.

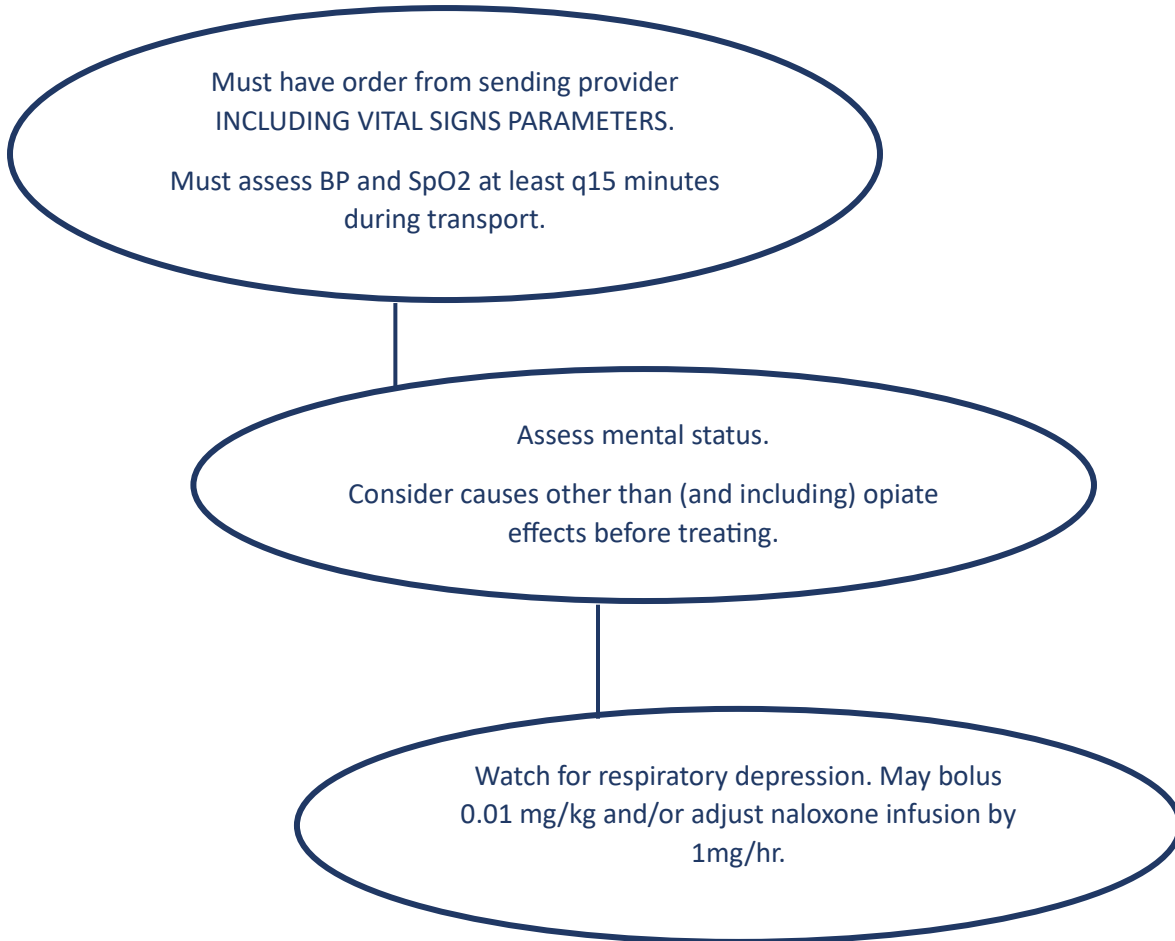
For blood glucose < 250, start D5 crystalloid at 150 mL/hr or at rate ordered by sending physician. Consult sending physician regarding stopping insulin infusion.

If transport lasts for ≥ 2.25 hours because of unforeseen circumstances (vehicle malfunction, etc.), obtain EKG immediately at beginning of hour #2, assess for U waves and call sending provider. Sending provider must be updated; and EKG findings, patient condition and reason for delay must be discussed. Sending provider must then give specific orders for continuing care.

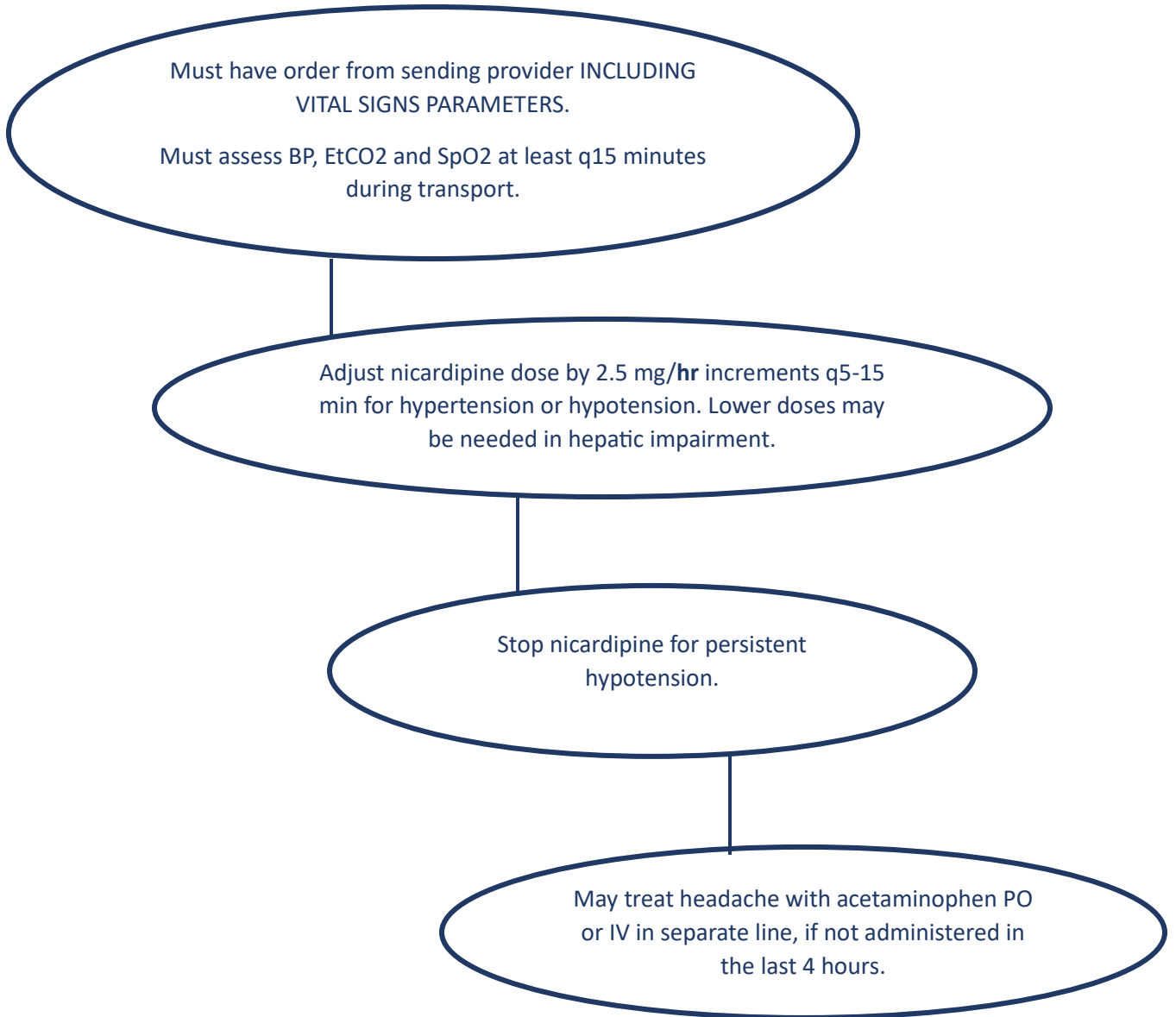
Ketamine: dose 1-2.5 mg/kg/hr. Must use IV pump.



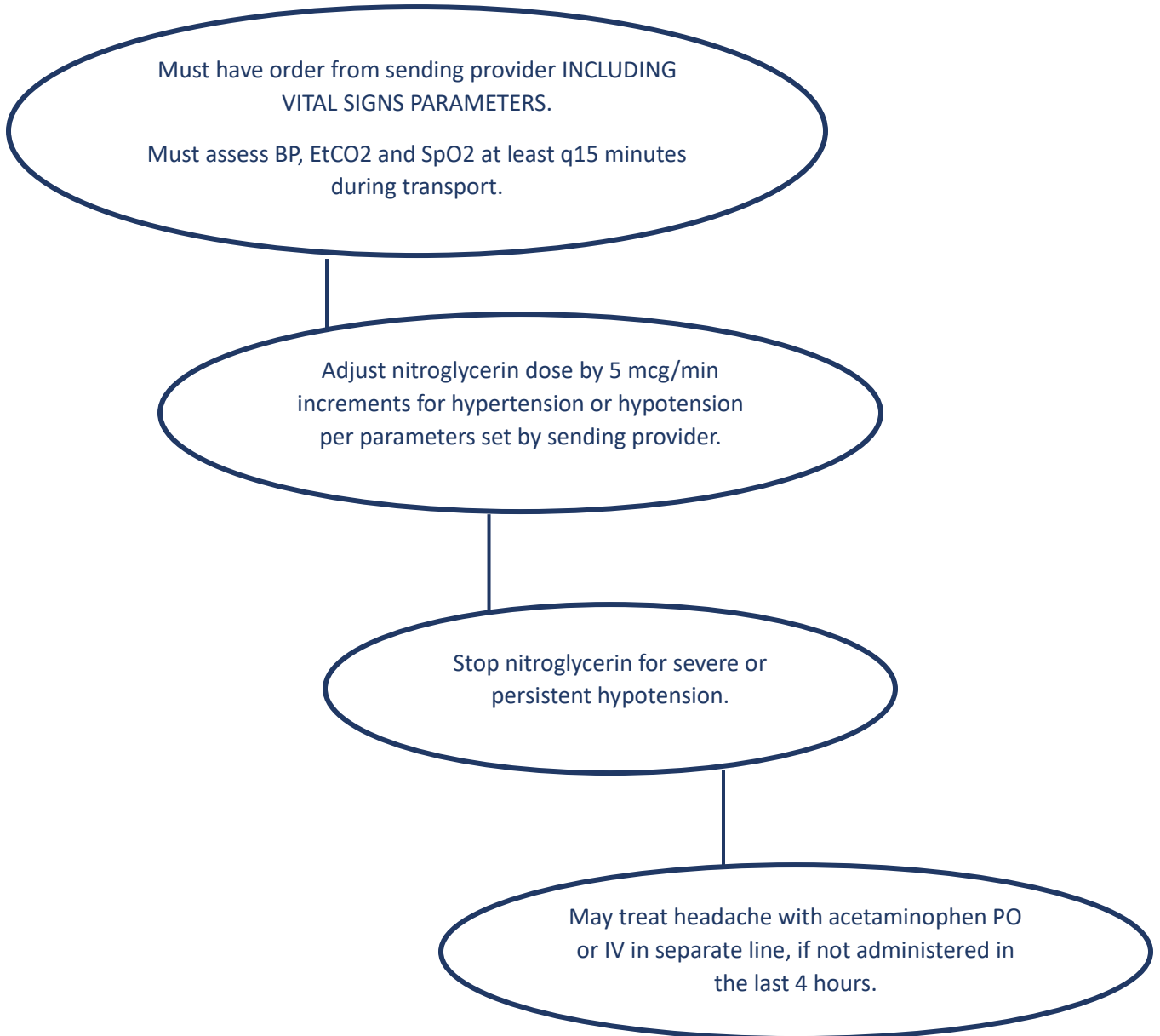
Naloxone: dose 2-10 mg/hr. Must use IV pump.



Nicardipine: dose 5-15 mg/hr. Must use IV pump.



Nitroglycerin: dose 5-20 mcg/min. Must use IV pump.



Octreotide: dose 50 mg/hr. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.
Must assess BP and SpO2 at least q15 minutes during transport.

Assess mental status.
Check fingerstick if altered. Administer D10 if hypoglycemic. Stop octreotide if glucose >350 mg/dl.

Watch for symptomatic or dangerous cardiac arrhythmias (severe bradycardia/ventricular tachycardia) and stop octreotide if seen. The most likely cause of sinus tachycardia in GI bleeding patients is blood loss. Treat accordingly.

Propofol: dose 5-50 mg/kg/min. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

Must assess BP, EtCO₂ and SpO₂ at least q15 minutes during transport.

Assess mental status.

Goal: drowsy but arousable, synchronous with ventilator, or as described by the sending provider.

Adjust propofol dose PRN by 5-10 mg/kg/min, may add 0.5 mg/kg bolus for sudden agitation.

For hypotension, may decrease propofol dose, increase/initiate vasopressor dose, or both.

Vasopressin: dose 0.01-0.1 units/min. Must use IV pump.

Must have order from sending provider INCLUDING VITAL SIGNS PARAMETERS.

Must assess BP, EtCO₂ and SpO₂ at least q15 minutes during transport.

Adjust vasopressin dose by 0.01 units/min increments OR as ordered by the sending provider for hypertension or hypotension.

Contact medical control for persistent hypotension. Consider causes other than inadequate pressor dosing.

Midazolam: dose 1-20 mg/hr. Must use IV pump.

