

ICU Continuous Infusion Neuromuscular Blockade in Mechanically Ventilated Patients [4121]

- o Please use "ICU Continuous Sedation & Analgesia Order Set" for continuous sedation and analgesic medications.
- o For use of continuous neuromuscular blockers in therapeutic hypothermia, please use the "Adult Hypothermia Post Cardiac Arrest Order Set" for appropriate dosing and monitoring parameters.
- o DVT prophylaxis is recommended for patients on neuromuscular blockade unless clinically contraindicated.
- o Maximum recommended duration typically 48 hours. Review of necessity of neuromuscular blockers every 24 hours.

Protocol

General

Nursing

Nursing (Selection Required)

<input checked="" type="checkbox"/> RASS score must be -4 before neuromuscular blockade	Routine, Until discontinued, Starting S
<input checked="" type="checkbox"/> Assess	Routine, Once Assess: Critical Care Pain Observation Tool (CPOT) LESS than 2 prior to initiation of neuromuscular blockade
<input checked="" type="checkbox"/> Obtain baseline Train of Four (TOF) prior to neuromuscular blocking agent initiation (bolus & drip). Label site and use the same site every time TOF performed.	Routine, Until discontinued, Starting S Obtain baseline Train of Four (TOF) prior to neuromuscular blocking agent initiation (bolus & drip). Label site and use the same site every time TOF performed. Obtain Train of Four (TOF) monitoring every 1 hour to achieve and maintain 2 of 4 TOF, then obtain a TOF every 4 hours. Use TOF monitoring in conjunction with clinical assessment.
<input checked="" type="checkbox"/> Nursing communication	Routine, Until discontinued, Starting S BIS Monitoring Goal of 40 to 60 for sedation. Do not hold sedation or perform spontaneous awaken trial while patient on continuous neuromuscular blocking agent.
<input checked="" type="checkbox"/> Patient position:	Routine, Until discontinued, Starting S Position: Additional instructions: Reposition patient every 2 hours to prevent pressure ulcer.
<input checked="" type="checkbox"/> Nursing communication	Routine, Until discontinued, Starting S Change IV line infusion neuromuscular blocker (cisatracurium or vecuronium) prior to extubation to ensure complete medication elimination/removal.

Medications

Infusions for Sedation

<input type="checkbox"/> fentanyl (SUBLIMAZE) or hydromorPHONE (DILAUDID) infusion - HMSJ Only (Single Response)	
<input type="checkbox"/> fentaNYL (SUBLIMAZE) 1500 mcg/30 mL infusion	intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 25 micrograms/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 25 micrograms/hour and reassess sedation within one hour. If patient requires GREATER than 200 micrograms/hour fentanyl, contact MD to re-evaluate sedation therapy. Maximum recommended dose 300 micrograms/hour.

<input type="checkbox"/> hydromorPHONE (DILAUDID) 30 mg/30 mL in sodium chloride 0.9% infusion	intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligrams/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligrams/hour and reassess sedation within one hour. If patient requires GREATER than 2 milligrams/hour hydromorphone, contact MD to re-evaluate sedation therapy. Maximum recommended dose 3 milligrams/hour.
<input type="checkbox"/> fentanyl (SUBLIMAZE) or hydromorPHONE (DILAUDID) infusion - NOT HMSJ (Single Response)	
<input type="checkbox"/> fentaNYL (SUBLIMAZE) 1500 mcg/30 mL infusion	intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 25 micrograms/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 25 micrograms/hour and reassess sedation within one hour. If patient requires GREATER than 200 micrograms/hour fentanyl, contact MD to re-evaluate sedation therapy. Maximum recommended dose 300 micrograms/hour.
<input type="checkbox"/> hydromorPHONE (DILAUDID) 15 mg/30 mL infusion	intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligrams/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligrams/hour and reassess sedation within one hour. If patient requires GREATER than 2 milligrams/hour hydromorphone, contact MD to re-evaluate sedation therapy. Maximum recommended dose 3 milligrams/hour.
<input type="checkbox"/> propofol (DIPRIVAN) infusion	
<input type="checkbox"/> propofol (DIPRIVAN) infusion	0-50 mcg/kg/min, intravenous, continuous After Initiation, reassess RASS after 30 minutes. Titrate for sedation to reach RASS goal. Once patient maintains RASS at goal, assess RASS every 4 hours. LESS than desired sedation effect: Other Specify: INCREASE rate by 5 mcg/kg/min. DESIRED sedation effect: Continue the same rate. GREATER than desired sedation effect: DECREASE rate 5 mcg/kg/min while titrating sedation to meet RASS goal, Reassess RASS every 30 minutes If patient requiring GREATER than: 50 mcg/kg/min, Contact MD to re-evaluate sedation therapy
<input type="checkbox"/> lorazepam (ATIVAN) or midazolam (VERSED) infusion - HMH, HMSL, HMSJ, HMTW, HMWB, HMSTJ (Single Response)	

<p>() lorazepam (ATIVAN) 60 mg/30 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour lorazepam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 milligrams/hour. Indication(s): Sedation</p>
<p>() midazolam (VERSED) 60 mg/30 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour midazolam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 milligrams/hour. Indication(s): Sedation</p>
<p>[] lorazepam (ATIVAN) or midazolam (VERSED) infusion - HMW Only (Single Response)</p>	
<p>() LORAZepam (ATIVAN) 30 mg/30 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour lorazepam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 milligrams/hour. Indication(s): Sedation</p>
<p>() MIDAzolam in 0.9% NaCl (VERSED) 55 mg/55 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour midazolam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 milligrams/hour. Indication(s):</p>
<p>[] lorazepam (ATIVAN) or midazolam (VERSED) infusion - HMSTC (Single Response)</p>	

<p>() LORAZepam (ATIVAN) 60 mg/30 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour lorazepam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 micrograms/hour. Indication(s): Sedation</p>
<p>() MIDAZolam (VERSED) 30 mg/30 mL infusion</p>	<p>intravenous, continuous If LESS than desired sedation effect: administer ordered BOLUS dose IV Once and increase rate by 0.5 milligram/hour then reassess sedation in one hour. If DESIRED sedation effect: Continue the same rate. Reassess sedation within 4 hours. If GREATER than desired sedation effect: Decrease rate by 0.5 milligram/hour and reassess sedation within one hour. If patient requires GREATER than 5 milligram/hour midazolam, contact MD to re-evaluate sedation therapy. Maximum recommended dose 10 milligrams/hour. Indication(s): Sedation</p>

Neuromuscular Blockers (Single Response) (Selection Required)

() Synchronous ventilation or moderate-severe ARDS P/F ratio < 150 or to facilitate ventilation with intermittent dosing option

Consider an intermittent dosing strategy over continuous infusion to facilitate protective lung ventilation. Continuous infusion recommended for patients with persistent ventilator dyssynchrony, requirement of ongoing deep sedation, prone ventilation, or persistently high plateau pressures.

<p>[] cisatracurium (NIMbex) injection</p>	<p>0.15 mg/kg, intravenous, once, For 1 Doses</p>
<p>[] vecuronium (NORCURON) injection</p>	<p>0.1 mg/kg, intravenous, once, For 1 Doses</p>
<p>[] cisatracurium (NIMbex) infusion</p>	<p>1 mcg/kg/min, intravenous, continuous Intensivist-driven titration of 1 mcg/kg/min every 1 hour to a maximum dose of 10 mcg/kg/min based on ventilator dyssynchrony, plateau pressure and desaturation. Intensivist to adjust dose by modifying the order.</p>

() Immobility, open chest, increased intra-abdominal pressure, and elevated ICP (Single Response)

() cisatracurium (NIMbex) Continuous Infusion **"Followed by" Linked Panel**
 Recommended for patients with renal or hepatic failure.

<p>[] Obtain baseline Train of Four</p>	<p>1 each, Other, once</p>
<p>[] cisatracurium (NIMbex) infusion</p>	<p>1-10 mcg/kg/min, intravenous, continuous **PROGRAM INFUSION PUMP WITH WEIGHT NOTED IN ORDER MEDICATION DOSED BY IDEAL BODY WEIGHT** Initiate infusion at 1mcg/kg/min. Titrate by 0.5 mcg/kg/min every hour to achieve 2 of 4 Train of Four (TOF). Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF GREATER than 2 of 4, INCREASE infusion rate by 0.5 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF 2 of 4, CONTINUE the same infusion rate, then repeat TOF in 4 hours. IF TOF LESS than 2 of 4, DECREASE infusion rate by 0.5 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. Max dose 10mcg/kg/min.</p>

<input type="checkbox"/> cisatracurium (NIMbex) IV Bolus and Continuous Infusion		"Followed by" Linked Panel
Recommended for patients with renal or hepatic failure.		
<input type="checkbox"/>	Obtain baseline Train of Four	1 each, Other, once
<input type="checkbox"/>	cisatracurium (NIMbex) IV bolus	0.15 mg/kg, intravenous, once, For 1 Doses
<input type="checkbox"/>	cisatracurium (NIMbex) infusion	1-10 mcg/kg/min, intravenous, continuous **PROGRAM INFUSION PUMP WITH WEIGHT NOTED IN ORDER MEDICATION DOSED BY IDEAL BODY WEIGHT**
Initiate infusion at 1mcg/kg/min. Titrate by 0.5 mcg/kg/min every hour to achieve 2 of 4 Train of Four (TOF). Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF GREATER than 2 of 4, INCREASE infusion rate by 0.5 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF 2 of 4, CONTINUE the same infusion rate, then repeat TOF in 4 hours. IF TOF LESS than 2 of 4, DECREASE infusion rate by 0.5 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. Max dose 10mcg/kg/min.		

<input type="checkbox"/> vecuronium (NORCURON) Continuous Infusion		"Followed by" Linked Panel
Use caution in patients with renal or hepatic dysfunction		
<input type="checkbox"/>	Obtain baseline Train of Four	1 each, Other, once
<input type="checkbox"/>	vecuronium (NORCURON) infusion	0.8-1.5 mcg/kg/min, intravenous, continuous **PROGRAM INFUSION PUMP WITH WEIGHT NOTED IN ORDER MEDICATION DOSED BY IDEAL BODY WEIGHT**
Initiate infusion at 0.8mcg/kg/min. Titrate by 0.1 mcg/kg/min every hour to achieve 2 of 4 Train of Four (TOF). Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF GREATER than 2/4, INCREASE infusion rate by 0.1 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF 2 of 4, CONTINUE the same infusion rate, then repeat TOF in 4 hours. IF TOF LESS than 2 of 4, DECREASE infusion rate by 0.1 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. Max dose 1.5mcg/kg/min.		

<input type="checkbox"/> vecuronium (NORCURON) IV Bolus and Continuous Infusion		"Followed by" Linked Panel
Use caution in patients with renal or hepatic dysfunction		
<input type="checkbox"/>	Obtain baseline Train of Four	1 each, Other, once
<input type="checkbox"/>	vecuronium (NORCURON) IV bolus	0.1 mg/kg, intravenous, once, For 1 Doses
<input type="checkbox"/>	vecuronium (NORCURON) infusion	0.8-1.5 mcg/kg/min, intravenous, continuous **PROGRAM INFUSION PUMP WITH WEIGHT NOTED IN ORDER MEDICATION DOSED BY IDEAL BODY WEIGHT**
Initiate infusion at 0.8mcg/kg/min. Titrate by 0.1 mcg/kg/min every hour to achieve 2 of 4 Train of Four (TOF). Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF GREATER than 2/4, INCREASE infusion rate by 0.1 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. IF TOF 2 of 4, CONTINUE the same infusion rate, then repeat TOF in 4 hours. IF TOF LESS than 2 of 4, DECREASE infusion rate by 0.1 mcg/kg/min. Monitor TOF every hour to achieve and maintain 2 of 4 TOF. Once at 2 of 4 TOF, repeat TOF in four hours. Max dose 1.5mcg/kg/min.		

Ophthalmic Lubricant

<input checked="" type="checkbox"/> artificial tears ointment	Both Eyes, every 4 hours Place and close patient's eyelid while on continuous neuromuscular blocking agent.
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Labs

Cardiology

Imaging

Other Studies

Respiratory

Rehab

Consults

For Physician Consult orders use sidebar

Additional Orders