



Physician Orders PEDIATRIC: LEB VAD Cardiovascular Surgery Post Op Plan

Initiate Orders Phase

Care Sets/Protocols/PowerPlans

- Initiate Powerplan Phase
Phase: LEB VAD Cardiovascular Surgery Post Op Phase, When to Initiate:

LEB VAD Cardiovascular Surgery Post Op Plan

Admission/Transfer/Discharge

- Transfer Pt within current facility
Level of Care: Critical Care, To CVICU

Vital Signs

- Vital Signs w/Neuro Checks
Monitor and Record T,P,R,BP, q15min, x 2h or until stable, then q1h

Activity

- Bedrest

Food/Nutrition

- NPO
Start at: T

Patient Care

- Advance Diet As Tolerated
Advance diet as tolerated after extubation
Isolation Precautions
Intake and Output
Routine, q1h(std)
Daily Weights
Routine, qEve
NIRS Monitor
Monitor: Cerebral and Somatic
Cardiopulmonary Monitor
Routine, Monitor Type: CP Monitor
Discontinue CP Monitor
When ALL Criteria met: No NG-Tube, No PCA, No Chest Tube, No Sepsis Alert notified, PEWS of 0 and 24 hour post op.
Elevate Head Of Bed
Mouth Care
q4h(std), with Toothette oral swabs, use colostrum, if available.
Suction Patient
prn, PRN, oro/nasopharyngeal once extubated.
Replogle (NGT)
NG Tube Type: Replogle, Suction Strength: To Gravity (DEF)*
NG Tube Type: Replogle, Suction Strength: Low Intermittent
Chest Tube Care





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- To Suction At: -20cm (DEF)*
- To Suction At: -30cm
- q1h(std), strip to maintain patency q1h and PRN
- Drain Care
empty Blake/JP drains q1h
- Drain Care
PD drain to gravity.
- Indwelling Urinary Catheter Care
indwelling urinary catheter to gravity.
- Whole Blood Glucose Nsg
Routine, q1h(std)
- Whole Blood Glucose Nsg
prn, PRN
- Antiseptic Patch Apply
T;N, if child is greater than 1000grams, apply Biopatch to central line dressing site immediately postoperatively.
- Dressing Care
 - Routine, Action: Change, QWeek, CVL dressing (DEF)*
 - Routine, Action: Change, prn, PRN, occlusive dry dressings to incision sites and drain sites, if soiled or becomes non-occlusive.
- VAD Dressing Care
Action: Change, per VAD protocol
- Temporary Pacemaker Critical Care
Special Instructions: Atrial wires in situ
- Temporary Pacemaker Critical Care
Special Instructions: Ventricle wires in situ
- Initiate Post Op Pulmonary Hypertension Protocol
- VAD Communication
T;N, Draw ACT PCT (RT Collect) from patient for baseline, then draw q1h and PRN (for changes in patient status) from ECMO circuit.
- VAD Communication
T;N, Each shift verify that 1 unit PRBC's is available in the blood bank
- VAD Communication
T;N, VAD goal parameters: CVP:< ____ or > ____, MAP:< ____ or > ____, SBP:< ____ or > ____, Fluid Balance:< ____ or > ____, HR:< ____ or > ____, O2 Sat: < ____ or > ____, Temp:< ____ or > ____, Hgb: < ____ or > ____, pH: < ____ or > ____

Nursing Communication

- Nursing Communication
T;N, Volume: Place order to administer FFP's, ____ mL over 1 hour if mean arterial pressure less than ____ and central venous pressure less than ____ and HCT greater than ____.





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- Nursing Communication
T;N, Volume: Place order to administer PRBC's _____mL over 1 hour for mean arterial pressure less than _____ and central venous pressure less than _____ and HCT less than _____.
- Nursing Communication
T;N, Place order to administer PRBC's _____mL over 1 hour for if HCT less than _____.
- Nursing Communication
T;N, Goal mean arterial pressure ____ to ____ mmHg

Respiratory Care

- LEB Critical Care Respiratory Plan(SUB)*
- Oxygen Delivery
Special Instructions: Titrate to keep O2 sat at _____ to _____%
- ISTAT POC (RT Collect)
T;N Stat, Test Select ABG | Electrolytes | Lactate, Special Instructions: Collect upon arrival to unit
- ISTAT POC (RT Collect)
T;N+60 Stat q1h For 2 occurrence, Test Select ABG | Electrolytes | Lactate
- ISTAT POC (RT Collect)
T;N+240 Stat q2h For 2 occurrence, Test Select ABG | Electrolytes | Lactate
- ISTAT POC (RT Collect)
T;N+600 Stat q4h, Test Select ABG | Electrolytes | Lactate
- ACT Point of Care (RT Collect)
Stat
- Co-oximetry (RT Collect)
Routine q12h(std)
- Nitric Oxide (RT)
20 ppm, per iNO protocol

Continuous Infusion

- D5 1/4 NS
500 mL, IV, Routine, mL/hr, Max rate 40mL/hr
- D5 1/2NS
500 mL, IV, mL/hr, Max rate 40mL/hr
- D10 1/4 NS (Pediatric) (IVS)*
Dextrose 10% in Water
250 mL, IV, Routine, mL/hr, Max rate 40mL/hr
sodium chloride
9.6 mEq
- D5W
500 mL, IV, Routine, 1 mL/hr
Comments: To be administered via one of the following: _____ CVP Line _____ LAP Line
_____ PAP Line
- Sodium Chloride 0.9% Bolus
mL, Injection, IV, once, STAT, (infuse over 15 min), (Bolus)





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- albumin, human 5% Bolus
mL, Injection, IV, once, STAT, (infuse over 30 min), (Bolus)

Vasoactive Medications

- EPINEPHrine Drip (Pediatric) (IVS)*
Dextrose 5% in Water
95 mL, IV, Routine, Reference Range: 0.01 to 0.2 mcg/kg/min
Comments: Reference Range: 0.01 to 0.2 mcg/kg/min
EPINEPHrine (additive)
5 mg, 0.1 mcg/kg/min
- NORepinephrine Drip (Pediatric) (IVS)*
Dextrose 5% in Water
96 mL, IV, Routine, Reference Range: 0.01 to 0.2 mcg/kg/min
norepinephrine
4 mg, 0.1 mcg/kg/min
- DOBUTamine Drip (Pediatric) (IVS)*
Diluent volume
250 mL, IV, Routine, Reference Range: 2 to 20 mcg/kg/min
DOBUTamine
500 mg, 10 mcg/kg/min
- Milrinone Drip (Pediatric) (IVS)*
Diluent volume
100 mL, IV, Routine, 0.25 to 1 mcg/kg/min
milrinone (additive)
20 mg, 0.5 mcg/kg/min
- Nitroglycerin Drip (Pediatric) (IVS)*
Diluent volume
250 mL, IV, Routine, Reference Range: 1 to 4 mcg/kg/min
nitroglycerin (additive) pediatric
100 mg, 1 mcg/kg/min
- NitroPRUSSIDE Drip (Pediatric) (IVS)*
Dextrose 5% in Water
98 mL, IV, Routine, Reference Range: 0.25 to 4mcg/kg/min
nitroprusside
50 mg, 1 mcg/kg/min
- NiCARDipine Drip (Pediatric) (IVS)*
Diluent volume
200 mL, IV, Routine
niCARDipine (additive)
40 mg, 1 mcg/kg/min

Electrolytes

- Calcium Chloride Drip (Pediatric) (IVS)*
Dextrose 5% in Water
30 mL, IV, Routine, Reference Range: 2 to 10 mg/kg/hr





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calcium chloride (additive)
2,000 mg, 5 mg/kg/hr

Diuretics

- Lasix Drip (Pediatric) (IVS)*
Dextrose 5% in Water
30 mL, IV, Routine, Reference Range: 2.5 to 10 mg/kg/day
furosemide (additive) pediatric
100 mg, 5 mg/kg/day
- Bumex Drip (Pediatric) (IVS)*
Dextrose 5% in Water
30 mL, IV, Routine, 2.5 to 10 mcg/kg/hr
bumetanide (additive)
2.5 mg, 4 mcg/kg/hr

Anticoagulants

- Heparin Drip (Pediatric) (IVS)*
Diluent volume
heparin (additive)
25,000 units

Sedatives

- FentaNYL Drip (Pediatric) (IVS)*
Dextrose 5% in Water
15 mL, IV, Routine
fentanyl (additive)
500 mcg, 1 mcg/kg/hr
- MorPHINE Drip (Pediatric) (IVS)*
Dextrose 5% in Water
49.5 mL, IV, Routine
morPHINE (additive)
5 mg, 0.05 mg/kg/hr
- Midazolam Drip (Pediatric) (IVS)*
Dextrose 5% in Water
15 mL, IV, Routine
midazolam (additive)
50 mg, 0.1 mg/kg/hr

Paralytics

- Vecuronium Drip (Pediatric) (IVS)*
Diluent volume
30 mL, IV, Routine
vecuronium (additive)
30 mg, 0.1 mg/kg/hr
- Cisatracurium Drip (Pediatric) (IVS)*
Diluent volume
20 mL, IV, Routine





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cisatracurium (additive)
40 mg, 3 mcg/kg/min

Medications

- +1 Hours** ceFAZolin
25 mg/kg, *Ped Injectable, IV Piggyback, q6h, Routine, (for 8 dose), For Pump Cases, Max dose = 1 gram*
- +1 Hours** ceFAZolin
25 mg/kg, *Ped Injectable, IV Piggyback, q6h, Routine, (for 4 dose), For Non-Pump Cases, Max dose = 1 gram*
Vancomycin may be given if patient has allergy to cephalosporins(NOTE)*
- +1 Hours** vancomycin
10 mg/kg, *Ped Injectable, IV, q8h, Routine, (for 6 dose), Max dose = 1 gram*
- +1 Hours** ondansetron
0.1 mg/kg, *Injection, IV Piggyback, q6h, PRN Nausea/Vomiting, Routine, Max dose = 4mg*
- +1 Hours** pantoprazole
1 mg/kg, *Injection, IV Piggyback, q24h, Routine, Max dose = 40mg*
- +1 Hours** famotidine
0.25 mg/kg, *Injection, IV, q12h, Routine, Max Daily Dose = 40 mg/day*
- +1 Hours** diphenhydrAMINE
1 mg/kg, *Ped Injectable, IV, q6h, PRN Nausea, Max dose = 50 mg*

Anti-Hypertensives

- +1 Hours** hydrALAZINE
0.2 mg/kg, *Ped Injectable, IV, q4h, PRN Hypertension, (Maximum dose = 20 mg)*
Comments: Administer one dose and MD to evaluate if dose change needed.
- +1 Hours** phentolamine
0.1 mg/kg, *Ped Injectable, IV, q1h, PRN Other, specify in Comment*
Comments: SBP > ____, Mean BP > ____ Comment: Max dose=5mg

Analgesics

- +1 Hours** morphine
0.1 mg/kg, *Injection, IV, q1h, PRN Pain, STAT, Max dose = 5 mg*

Anti-pyretics

- +1 Hours** acetaminophen
10 mg/kg, *Liq, PO, q4h, PRN Pain or Fever, Max Dose = 75 mg/kg/day up to 4g/day*
Comments: For temperature greater than 38
- +1 Hours** acetaminophen
10 mg/kg, *Supp, PR, q4h, PRN Pain or Fever, Max Dose = 75 mg/kg/day up to 4g/day*
Comments: For temperature greater than 38

Bowel Care

- +1 Hours** glycerin suppository (pediatric)
1 supp, *Supp, PR, q24h, PRN Other, specify in Comment, Routine*
Comments: For no stool for 24 hours
- +1 Days** polyethylene glycol 3350





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8.5 g, Powder, PO, QDay, PRN Constipation, Routine
 Comments: to be started morning after procedure

- +1 Days** polyethylene glycol 3350
 17 g, Powder, PO, QDay, PRN Constipation, Routine
 Comments: to be started morning after procedure
- +1 Days** docusate
 2.5 mg/kg, Oral Susp, PO, bid, Routine, (1 mL = 10 mg)
 Comments: to be started morning after procedure
- +1 Days** docusate
 50 mg, Cap, PO, bid, Routine
 Comments: to be started morning after procedure
- +1 Days** docusate
 100 mg, Cap, PO, bid, Routine
 Comments: to be started morning after procedure

Electrolytes

- +1 Hours** potassium chloride
 0.5 mEq/Kg, Ped Injectable, IV, q4h, PRN Other, specify in Comment, Routine
 Comments: Potassium less than or equal to 3.5, Max dose = 40 mEq
- +1 Hours** potassium chloride
 1 mEq/Kg, Ped Injectable, IV, q4h, PRN Other, specify in Comment, Routine
 Comments: Potassium less than or equal to 3, Max dose = 40 mEq
- +1 Hours** calcium chloride
 10 mg/kg, Injection, IV, q4h, PRN, Routine
 Comments: Calcium less than 1.3, Max dose = 1 gram
- +1 Hours** magnesium sulfate
 15 mg/kg, Injection, IV, q4h, PRN Other, specify in Comment, Routine
 Comments: Magnesium less than 2.0, Max dose = 2 grams

Diuretics

- +1 Hours** furosemide
 1 mg/kg, Ped Injectable, IV Push, q6h, Routine, Max dose = 40 mg
- +1 Hours** furosemide
 1 mg/kg, Ped Injectable, IV Push, q8h, Routine, Max dose = 40 mg
- +1 Hours** furosemide
 1 mg/kg, Ped Injectable, IV Push, q12h, Routine, Max dose = 40 mg
- +8 Hours** bumetanide
 0.025 mg/kg, Ped Injectable, IV, q24h, Routine
 Comments: Check with MD prior to administration of first dose
- +8 Hours** Diuril pediatric
 3 mg/kg, Ped Injectable, IV, q12h, Routine
 Comments: Check with MD prior to administration of first dose

Respiratory Medications

- +1 Hours** albuterol (MDI)





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2 puff, MDI, INH, q4h, Routine, (for 6 dose), 1 puff = 90 mcg

Laboratory

- BNP
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- Troponin-I
STAT, T;N, once, Type: Blood, Nurse Collect
- Antithrombin III Level
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- Amylase Level
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- Lipase Level
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- CBC
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- CMP
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- PT/INR
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- PTT
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- Fibrinogen Level
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- Magnesium Level
STAT, T;N, once, Type: Blood, Nurse Collect
Comments: Collect upon arrival to unit.
- CBC
Routine, T;N+720, once, Type: Blood, Nurse Collect
- CMP
Routine, T+1;0400, once, Type: Blood, Nurse Collect
- PT/INR
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- PTT





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- Routine, T+1;0400, q24h, Type: Blood, Nurse Collect*
- Hepzyme
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- Fibrinogen Level
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- D-Dimer Quantitative
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- Antithrombin III Level
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- HIT/Heparin Platelet Antibody
Routine, T+1, q24h, Type: Blood, Nurse Collect
- TEG-LeBonheur
Time Study, T+1;0800, q24h, Type: Blood, Nurse Collect
- CBC
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- CRP
Routine, T+1;0400, q24h, Type: Blood, Nurse Collect
- BNP
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- BNP Pro
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- Troponin-I
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- Amylase Level
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- Lipase Level
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- LDH
Routine, T+1;0400, qam x 3 day, Type: Blood, Nurse Collect
- Plasma Hemoglobin
Routine, T+1, q24h, Type: Blood, Nurse Collect
- CMP
Routine, T+2;0400, qam x 3 day, Type: Blood, Nurse Collect
- Magnesium Level
Routine, T+2;0400, qam x 3 day, Type: Blood, Nurse Collect
- Methemoglobin
Time Study, T;N, q12h, Type: Blood, Nurse Collect
Comments: If patient on inhaled nitric oxide.
- Prealbumin
Routine, T+1, once, Type: Blood, Nurse Collect





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- Phosphorus Level
Routine, T+1, once, Type: Blood, Nurse Collect
- Triglyceride
Routine, T+1, once, Type: Blood, Nurse Collect
- Prealbumin
Routine, T+1;0400, Monday, Type: Blood, Nurse Collect
- Phosphorus Level
Routine, T+1;0400, Monday, Type: Blood, Nurse Collect
- Triglyceride
Routine, T+1;0400, Monday, Type: Blood, Nurse Collect
- Platelet Mapping
Routine, T+1, qam x 7 day, Type: Blood, Nurse Collect
- Platelet Mapping
Routine, T+7, MonThu x 7 day, Type: Blood, Nurse Collect
- Platelet Mapping
Routine, T+14, Monday, Type: Blood, Nurse Collect

Diagnostic Tests

- Electrocardiogram
Start at: T;N, Priority: Stat, Reason: Other, specify, Post-op cardiovascular surgery, Transport: Portable, Perform upon arrival to unit
Comments: Perform upon arrival to unit
- Chest 1VW Frontal
T;N, Reason for Exam: Other, Enter in Comments, Stat, Portable
Comments: Reason for exam: Post-op cardiovascular surgery. Perform upon arrival to unit
- Chest 1VW Frontal
T+1, 0600, Reason for Exam: Other, Enter in Comments, Routine, Portable
Comments: Reason for exam: Post-op cardiovascular surgery.
- Chest 1VW Frontal
T+2, 0600, Reason for Exam: Other, Enter in Comments, Routine
Comments: Reason for exam: Post-op cardiovascular surgery.
- Echocardiogram Pediatric (0-18 yrs)
Start at: T+1, 0600, Priority: Routine, Reason: Other, specify, Other reason: Assess LVEF, LVSF, LVEDD, Intraventricular septal position, right ventricular function:
Comments: Assess LVEF, LVSF, LVEDD, Intraventricular septal position, right ventricular function: qualitative, tricuspid

Consults/Notifications/Referrals

- Notify Physician-Continuing
Notify For: Notify if chest tube output is 10mL/kg/hr or greater, leakage, dislodgement, or for other significant changes in chest tube output.
- Notify Physician-Continuing
Notify For: Notify if urinary output is < 1mL/kg/hr.





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- Notify Physician-Continuing
Notify For: Notify if patient experiences nausea/vomiting.
- Nutritional Support Team Consult
Routine, Reason: Parenteral Nutrition Support
- Dietitian Consult/Nutrition Therapy
- Medical Social Work Consult
Reason: Assistance at Discharge
- Consult Pastoral Care
Reason for Consult: Family Support
- Child Life Consult
T+2;N Routine
- Physical Therapy Ped Eval & Tx
T+2;N, Routine
- Occupational Therapy Ped Eval & Tx
T+2;N, Routine

Date	Time	Physician's Signature	MD Number
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***Report Legend:**

- DEF - This order sentence is the default for the selected order
- GOAL - This component is a goal
- IND - This component is an indicator
- INT - This component is an intervention
- IVS - This component is an IV Set
- NOTE - This component is a note
- Rx - This component is a prescription
- SUB - This component is a sub phase, see separate sheet
- R-Required order

