



Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

Initiate Orders Phase

Non Categorized

R Powerplan Open

Care Sets/Protocols/PowerPlans

- Initiate Powerplan Phase
Phase: Epoprostenol FLOLAN Inhalation, When to Initiate: _____
- Initiate Powerplan Phase
Phase: Epoprostenol FLOLAN Inh Weaning Step 1, When to Initiate: _____
- Initiate Powerplan Phase
Phase: Epoprostenol FLOLAN Inh Weaning Step 2, When to Initiate: _____
- Initiate Powerplan Phase
Phase: Mechanically Ventilated Patients (Vent Bundle) Phase, When to Initiate _____

Epoprostenol FLOLAN Inhalation

Admission/Transfer/Discharge

- Patient Status Initial Inpatient
T;N, Admitting Physician: _____
Reason for Visit: _____
Bed Type: Critical Care Specific Unit: _____
Care Team: _____ Anticipated LOS: 2 midnights or more

Vital Signs

- Vital Signs
Q15 minutes x6, q30 minutes x 2, then q 1hr after initiation or any dose change
- Pulmonary Capillary Wedge Pressure Monitoring
now and every 4 hours.

Activity

- Bedrest
Routine

Food/Nutrition

- NPO
Instructions: NPO except for medications

Patient Care

- Daily Weights
Routine, qam
- Intake and Output
Routine, q1h(std)
- O2 Sat Continuous Monitoring NSG
Routine
- Whole Blood Glucose Nsg
q4h(std)

Nursing Communication

- Nursing Communication
q15 minutes x6, q30 minutes x 2, then q1hr after initiation or any dose change, Comments: FiO2, SPO2, mPAP, CO, CI, PVR, PIP, lung sounds and pain level (PA parameters if patient has PA catheter). Continue monitoring q15 minutes x6 after discontinue.
- Nursing Communication
Obtain infusion pump from CSR, IV tubing WITHOUT injection ports, and prime epoprostenol (FLOLAN) solution. RT will pick up FLOLAN inhalation solution from pharmacy. Tubing and IV pump must be labeled "NOT FOR IV USE."
- Nursing Communication
Upon initiating epoprostenol (FLOLAN), program the IV pump to deliver a 15mL bolus to fill the nebulizer. Then after initial fill, set the infusion rate to 8mL/hour.
- Nursing Communication
Cover the epoprostenol (FLOLAN) medication bag with an amber light protection bag.





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

- Nursing Communication
Notify pharmacy as soon as the refrigerated bag is hung so that another bag can be sent and stored in the refrigerator as backup until weaning begins.
- Nursing Communication
Notify pharmacy of any potential delays in administration of epoprostenol (FLOLAN).
- Nursing Communication
When process is initiated by MD order, weaning occurs by decreasing the epoprostenol (FLOLAN) concentration. Wean from 20,000ng/50mL to 10,000ng/50mL to 5,000ng/50mL, then off (per MD order). All infusions continue to run at 8mL/hr.

Respiratory Care

- ISTAT Blood Gases (RT Collect)
T;N Stat once, Preferred Specimen Type: Arterial
- Mechanical Ventilation
Vent Settings: CMV/Assist Control Monitor q2hr and prn.
- O2 Sat-Spot Check (RT)
PRN, Special Instructions: as needed for FLOLAN use and weaning criteria up to q2hr.
- RT Communication
Special Instructions: Add one to two filters to epoprostenol (FLOLAN) exhalation line of ventilator circuit. Check PIP q2hr for increases and change filters as needed.
- RT Communication
Special Instructions: For ventilated patients, remove HME and change to heated circuit wire including on CV patients.
- RT Communication
Special Instructions: Administer epoprostenol (FLOLAN) via MiniHeart nebulizer at 2L/minute making sure the setup is secured upright.
- RT Communication
Special Instructions: Ongoing coordinate hemodynamic readings, assessments and pain level monitoring with RN.
- RT Communication
Special Instructions: Pick up epoprostenol (FLOLAN) inhalation solution from pharmacy and ensure an amber light-protective bag included. Obtain two bags upon initiation.
- RT Communication
Special Instructions: Obtain resuscitation bag with valve tee to allow nebulizer to continue while bagging patient if off ventilator.

NOTE: If a mechanical ventilator is needed please order the Mechanically Ventilated Patient Phase (Vent Bundle Phase) in this Plan.(NOTE)*

Medications

Nebulization

- Inhaled Epoprostenol 1 mg/50 mL (Flolan) (IVS)*
epoprostenol (additive)
1 mg, NEB, q8h, Routine
Comments: Concentration: 20,000 ng/mL. FOR INHALATION ONLY. NOT FOR IV USE. Expires 8 hours at room temperature. Refrigerate when not in use. Expires 48 hours refrigerated. Cover with amber light-protective bag. Fixed rate of 8 mL/hr - do not change rate at any time during treatment.
epoprostenol sterile diluent
50 mL, 8 mL/hr

Laboratory

NOTE: Labs for first 24 hours(NOTE)*

- SV O2 Measured
STAT, T;N, once, Type: Blood, Nurse Collect
- CBC
STAT, T;N, once, Type: Blood





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

- CMP
STAT, T;N, once, Type: Blood
- DIC Panel w/D-Dimer Quant(SUB)*
- PT/INR
STAT, T;N, once, Type: Blood
- APTT
STAT, T;N, once, Type: Blood
- Fibrinogen Level
STAT, T;N, once, Type: Blood
- Magnesium Level
STAT, T;N, once, Type: Blood
- Phosphorus Level
STAT, T;N, once, Type: Blood
- NOTE: AM Labs(NOTE)*
- SV O2 Measured
Routine, T;N, qam, Type: Blood, Nurse Collect
- CBC
Routine, T;N, qam, Type: Blood
- CMP
Routine, T;N, qam, Type: Blood
- Magnesium Level
Routine, T;N, qam, Type: Blood
- Phosphorus Level
Routine, T;N, qam, Type: Blood
- PT/INR
Routine, T;N, qam, Type: Blood
- APTT
Routine, T;N, qam, Type: Blood

Diagnostic Tests

- Chest 1 VW
T;N, Reason for Exam: SOB(Shortness of Breath), Stat, Portable
Comments: Comment: Flolan Treatment in Progress
- Chest 1 VW
T+1; 0400, Reason for Exam: SOB(Shortness of Breath), Routine, Portable
Comments: Comment: Flolan Treatment in Progress
- Chest 1 VW
T+2; 0400, Reason for Exam: SOB(Shortness of Breath), Routine, Portable
- Chest 1 VW
T+3; 0400, Reason for Exam: SOB(Shortness of Breath), Routine, Portable

Consults/Notifications/Referrals

- Consult MD Group
Reason for Consult: Epoprostenol inhalation treatment, (Pulmonology Consult)
- Notify Physician-Continuing
Notify For: nebulizer overflow-stat
- Notify Physician-Continuing
 - Notify For: Hypotension systolic blood pressure less than or equal to _____mmHG (DEF)**
 - Notify For: Hypotension systolic blood pressure less than or equal to 90mmHG*
- Notify Physician-Continuing
 - Notify For: decline in PaO2/FiO2 ratio by 5mmhg (DEF)**
 - Notify For: decline in PaO2/FiO2 ratio by 10mmhg*





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

- Notify For: decline in PaO₂/FiO₂ ratio by 15mmHg
- Notify For: decline in PaO₂/FiO₂ ratio by ____mmHg
- Notify Physician-Continuing
 - Notify For: increase in CVP by 5% (DEF)*
 - Notify For: increase in CVP by 10%
 - Notify For: increase in CVP by 15%
 - Notify For: increase in CVP by _____%
- Notify Physician-Continuing
 - Notify For: decrease in cardiac index by 5% (DEF)*
 - Notify For: decrease in cardiac index by 10%
 - Notify For: decrease in cardiac index by 15%
 - Notify For: decrease in cardiac index by ____%
- Notify Physician-Continuing
 - Notify For: cardiac index less than 2.0
- Notify Physician-Continuing
 - Notify For: increase in mPAP by 5% (DEF)*
 - Notify For: increase in mPAP by 10%
 - Notify For: increase in mPAP by 15%
 - Notify For: increase in mPAP by ____%
- Notify Physician-Continuing
 - Notify For: sustained increase in mean pulmonary artery pressure by 2mmHg (DEF)*
 - Notify For: sustained increase in mean pulmonary artery pressure by 3mmHg
 - Notify For: sustained increase in mean pulmonary artery pressure by 4mmHg
 - Notify For: sustained increase in mean pulmonary artery pressure by 5mmHg
- Dietitian Consult/Nutrition Therapy
 - Type of Consult: Other, please specify, Special Instructions: Nutrition Assessment, 0
- Medical Social Work Consult
 - Routine, Reason: Other, specify, Assist with resources for transition for discharge.

Epoprostenol FLOLAN Inh Weaning Step 1

Nursing Communication

- Nursing Communication
 - During weaning phases, request bag from pharmacy two hours prior to the end of current bag.

Medications

- Inhaled Epoprostenol 0.5 mg/50 mL (Flolan) (IVS)*
 - epoprostenol (additive)
 - 0.5 mg, NEB, q8h, Routine
 - Comments: Concentration: 10,000 ng/mL. FOR INHALATION ONLY. NOT FOR IV USE. Expires 8 hours at room temperature. Refrigerate when not in use. Expires 48 hours refrigerated. Cover with amber light-protective bag. Fixed rate of 8 mL/hr - do not change rate at any time during treatment.
 - epoprostenol sterile diluent
 - 50 mL, 8 mL/hr

Consults/Notifications/Referrals

- Notify Physician-Continuing
 - Upon initiating epoprostenol wean, notify MD of deterioration of patient condition and determine if patient condition is stable for continued wean.

Epoprostenol FLOLAN Inh Weaning Step 2

Medications

- Inhaled Epoprostenol 0.25 mg/50 mL (Flolan) (IVS)*





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

epoprostenol (additive)

0.25 mg, NEB, q8h, Routine

Comments: Concentration: 5,000 ng/mL. FOR INHALATION ONLY. NOT FOR IV USE. Expires 8 hours at room temperature. Refrigerate when not in use. Expires 48 hours refrigerated. Cover with amber light-protective bag. Fixed rate of 8 mL/hr - do not change rate at any time during treatment.

epoprostenol sterile diluent

50 mL, 8 mL/hr

Mechanically Ventilated Patients Phase

Non Categorized

R Mechanically Ventilated Pt (Vent Bundle) Care Track
T;N

Patient Care

- Elevate Head Of Bed
30 degrees or greater if systolic blood pressure is greater than 95 mmHg
- Reposition ETT (Nsg)
T;N, QDay, Rotate tube from one side to the other to reduce the risk of skin breakdown.
- ETT Subglottic Suction
 - Low Continuous, 20mmHg, Applies to ETT with the Hi-Lo suction capability. (DEF)**
 - Low Intermittent, 40mmHg, Applies to ETT with the Hi-Lo suction capability.*
 - Low Intermittent, 60mmHg, Applies to ETT with the Hi-Lo suction capability.*
 - Low Intermittent, 80mmHg, Applies to ETT with the Hi-Lo suction capability.*
 - Low Intermittent, 100mmHg, Applies to ETT with the Hi-Lo suction capability.*
 - Low Intermittent, 120mmHg, Applies to ETT with the Hi-Lo suction capability.*
- Mouth Care
Routine, q2h(std)
- Nursing Communication
Call MD if higher than any of the following maximum doses of medications is required. LORazepam 6 mg in 3 hours, Fentanyl 500 mcg/hr, propofol 100 mcg/kg/min, midazolam 7mg/hr
- Nursing Communication
If SAS goal not met in 6 hours, call MD for further orders
- Nursing Communication
If receiving haloperidol, patient must be on cardiac monitor - call MD for QTc prolongation greater than or equal to 500 msec and HOLD haloperidol
- Nursing Communication
Once SAS goal is met initially, reassess and document SAS score q2hrs
- Nursing Communication
If the patient is on sedation medication other than propofol, begin turning off the sedation medications at 8am for the sedation vacation process
- Nursing Communication
Notify Respiratory for Weaning Assessment at 8am if a Vacation Sedation is initiated,

Respiratory Care

- Mechanical Ventilation
- Reposition ETT (Nsg)
QDay, Rotate tube from one side to the other to reduce the risk of skin breakdown.

Medications

- +1 Hours** docusate
100 mg, Liq, NG, bid, Routine
Comments: HOLD for diarrhea
- +1 Hours** famotidine
20 mg, Tab, NG, bid, Routine
Comments: reduce to 20 mg daily if creatinine clearance is less than 50 mL/min





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

- +1 Hours** famotidine
20 mg, Injection, IV Push, bid, Routine
Comments: reduce to 20 mg daily if creatinine clearance is less than 50 mL/min
- +1 Hours** pantoprazole
40 mg, Granule, NG, QDay, Routine
- +1 Hours** pantoprazole
40 mg, Injection, IV Push, QDay, Routine
- +1 Hours** Chlorhexidine For Mouthcare 0.12% Liq
15 mL, Liq, Mucous Membrane, bid, Routine
Comments: for mouthcare at 0800 and 2000.
- VTE MEDICAL Prophylaxis Plan(SUB)*
- VTE SURGICAL Prophylaxis Plan(SUB)*
- Sequential Compression Device Apply
T;N, Apply to Lower Extremities

Sedation

Refer to Patient Care Section/Nursing communication orders for medication monitoring parameters.(NOTE)*
Choose Sedation Goal per Riker Sedation Agitation Scale (SAS) Goal of 3-4 recommended (NOTE)*

- Sedation Goal per Riker Scale
 - Goal: 3 (Sedated) (DEF)*
 - Goal: 4 (Calm/Cooperative)
- Propofol Orders Plan(SUB)*
- +1 Hours** LORazepam
1 mg, Injection, IV Push, q30min, PRN Other, specify in Comment, Routine
Comments: To maintain SAS goal (Maximum of 6 mg in a 3 hr period). If patient is over-sedated, hold dose until SAS goal achieved. Call MD if patient requires more than 20 mg/day.
- +1 Hours** midazolam
1 mg, Injection, IV Push, q1h, PRN Other, specify in Comment, Routine
Comments: To maintain SAS goal. If patient is over-sedated, hold dose until SAS goal achieved. Call MD if patient requires more than 20 mg/day.
- +1 Hours** midazolam 1mg/mL/NS 50 mL PreMix
50 mg / 50 mL, IV, Routine, titrate
Comments: Initiate at 1 mg/hr. Titrate by 0.5mg/hr every 15 minutes until SAS goal achieved. Maximum dose 7 mg/hr
- +1 Hours** dexmedetomidine infusion (ICU Sedation) (IVS)*
Sodium Chloride 0.9%
100 mL, IV, Routine, (for 72 hr), Titrate
Comments: Concentration: 4 mcg/mL Initiate infusion at 0.2 mcg/kg/hr. Titrate by 0.1 mcg/kg/hr every 30 minutes to reach goal sedation of Riker 3-4. DO NOT BOLUS dose at any time. DO NOT TITRATE MORE FREQUENTLY THAN EVERY 30 MIN.
dexmedetomidine (additive)
400 mcg

Pain Management

Choose one of the orders below, morPHINE is not recommended if creatinine clearance is less than 50 mL/min, in liver failure or SBP less than 90mmhg or MAP less than 65 mmhg.(NOTE)*

- +1 Hours** morphine
2 mg, Injection, IV Push, q1h, PRN Pain, Moderate (4-7), Routine
- +1 Hours** HYDROmorphine
0.5 mg, Injection, IV Push, q1h, PRN Pain, Moderate (4-7), Routine
- +1 Hours** morphine
4 mg, Injection, IV Push, q1h, PRN Pain, Severe (8-10), Routine





Physician Orders ADULT: Epoprostenol (FLOLAN) Inhalation Plan

- +1 Hours** HYDROmorphine
1 mg, Injection, IV Push, q1h, PRN Pain, Severe (8-10)
- +1 Hours** fentaNYL 10 mcg/mL in NS infusion
2,500 mcg / 250 mL, IV, Routine, Titrate
Comments: Concentration 10 mcg/mL
Initial Rate: 50 mcg/hr; Titration Parameters: 50 mcg/hr every 10 min to SAS goal per MD orders. Max Rate: 500 mcg/hr

Refractory Agitation

Place order below for agitation that persists despite adequate sedation & analgesia. Refer to Patient Care Section/Nursing communication orders for medication monitoring parameters.(NOTE)*

- +1 Hours** haloperidol
2 mg, Injection, IV Push, q1h, PRN Agitation, Routine
*Comments: Cardiac monitor required. *If Qtc greater than 500 msec, hold haldoperidol. *If SAS not met in 6 hrs, call MD. Call MD is patient requires more than 20 mg/day.*

Sedation Vacation Daily

- Sedation Vacation
qam, see Order Comment:
Comments: For patients receiving continuous infusions, lighten/discontinue sedation and pain medications at 0800 daily (or more often as indicated by MD/required by nsg unit) until the patient is awake, can follow commands, or until they become uncomfortable or agitated. Resume sedation infusion at 1/2 the previous rate and re-titrate to SAS goal. If SAS goal still achieved without active therapy, do not restart sedation. If patient becomes agitated, resume sedation infusion at 1/2 the previous rate & re-titrate to SAS goal (document on the nursing flow sheet)
- Ventilator Weaning Trial Medical by RT

Consults/Notifications/Referrals

- Notify Physician-Continuing
Notify: MD, Notify For: QTc prolongation on cardiac monitor greater than or equal to 500msecs and HOLD haloperidol

| | | | |
|------|------|-----------------------|-----------|
| Date | Time | Physician's Signature | MD Number |
|------|------|-----------------------|-----------|

***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

