Physician Orders ADULT: Liver and Kidney Transplant Post Op Plan

Initiate Orders Phase
Care Sets/Protocols/PowerPlans
☑ Initiate Powerplan Phase
  Phase: Liver and Kidney Transp Postop Phase, When to Initiate:________________________
☐ Initiate Powerplan Phase
  Phase: Mechanically Ventilated Patients (Vent Bundle) Phase, When to Initiate:________________________

Liver and Kidney Transp Post Op Phase
Non Categorized
☐ Add To Problem List
  Problem: S/P kidney transplant
☐ Add To Problem List
  Problem: S/P liver transplant
☐ Add To Problem List

Vital Signs
☑ Vital Signs
  q15minutes x 4, q30minutes x 2, then q1h
☑ Pulmonary Capillary Wedge Pressure Monitoring
  q4h(std)

Activity
☑ Bedrest
  Routine

Food/Nutrition
☑ NPO
  Instructions: NPO except for medications

Patient Care
☐ VTE Other SURGICAL Prophylaxis Plan(SUB)*
☑ Daily Weights
  qam
☑ Intake and Output
  Routine, q1h(std)
☑ Turn Cough Deep Breathe
  Routine, q1h-Awake
☑ Incentive Spirometry NSG
  Routine, q1h-Awake
☑ O2 Sat Monitoring NSG
  Routine
☑ Nasogastric Tube
  Suction Strength: Low Intermittent, Clamp for medications as tolerated
☑ Dressing Care
  Routine, Action: Change, Location: Central Line, Wednesday, and PRN for soiled, loosened and moist dressings
☑ Indwelling Urinary Catheter Care
  q-shift, PRN
☑ Continue Foley Per Protocol
  Reason: s/p Organ Transplant
☑ SCD Apply
  Apply To Lower Extremities
☑ Whole Blood Glucose Nsg
  q4h(std)
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Ordering Physician MUST complete order details of Date and Time below:(NOTE)*

Transplant Organ Perfusion Date and Time

Nursing Communication

- Nursing Communication
  Notify Transplant Research Coordinator of patient arrival to ICU

Respiratory Care

- ISTAT Blood Gases (RT Collect)
  T:N Stat once
  NOTE: If a mechanical ventilator is needed please order the Mechanically Ventilated Patient Phase (Vent Bundle Phase) in this Plan.(NOTE)*

- RT Communication
  once, Special Instructions: Once patient is extubated, discontinue ABG order

Continuous Infusion

- D5 1/2 NS
  1,000 mL, IV, 30 mL/hr

Replacement Fluids

- 1/2 NS replacement fluid order below is active for 24 hours. If a longer duration is necessary, modify the duration details.(NOTE)*

- 1/2NS
  1,000 mL, IV, (for 24 hr ), replacement fluid, Replace UOP q1h, see comments for rates
  Comments: Urine output per hour IV fluid per hour 1-300 mL
  replace 100% of urine output 301-500 mL replace 80% of urine output
  greater than 500 mL replace 60% of urine output

- Nursing Communication
  Contact physician within 24 hours after initiation of 1/2 NS replacement fluid order to determine if order is necessary beyond 24 hours.

Medications

If enrolled in research study, please check for research protocol and orders.(NOTE)*

Immunosuppression Medications

- +1 Hours mycophenolate mofetil
  1 g, Oral Susp, NG, bid, Routine, To be given at 0600 and 1800
  Comments: Once extubated and tolerating PO change route to PO

Anti-infectives

- +1 Hours ampicillin-sulbactam
  1.5 g, Injection, IV Piggyback, q6h, Routine, (for 2 dose)
  Comments: Coordinate first dose with antibiotics given in surgery.
  If allergic to Penicillin/Cephalosporins place both orders below:(NOTE)*

- +1 Hours clindamycin
  600 mg, IV Piggyback, IV Piggyback, q8h, Routine, (for 2 dose)
  Comments: Coordinate first dose with antibiotics given in surgery.

- +1 Hours aztreonam
  1 g, IV Piggyback, IV Piggyback, q8h, Routine, (for 2 dose)
  Comments: Coordinate first dose with antibiotics given in surgery.

- +1 Days valganciclovir
  450 mg, Oral Susp, NG, QODay, Routine
  Comments: CMV prophylaxis

- +1 Hours nystatin 100,000 units/mL oral suspension
  5 mL, Oral Susp, PO, tid
  Comments: Swish and Swallow. For fungal prophylaxis

- +3 Days sulfamethoxazole-trimethoprim SS
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80 mg, Tab, PO, q48h, Routine
   Comments: Please give at bedtime. PCP prophylaxis
If allergic to Sulfadiazine place order below:(NOTE)*
☐ +3 Days dapsone
   25 mg, Tab, PO, QDay

Other Medications
☐ Transplant Insulin Sliding Scale Protocol Plan(SUB)*
   ☐ +1 Hours famotidine
       20 mg, Injection, IV Push, q12h, Routine
       Comments: Reduce frequency to q24h for CrCl less than 50 mL/min.
   ☐ +1 Hours pantoprazole
       40 mg, Injection, IV Push, QDay, Routine
   ☐ phytonadione
       10 mg, IV Piggyback, IV Piggyback, q8h, Routine, (for 3 dose )
       Comments: Begin first dose immediately post-op arrival to TICU.
   ☐ +1 Hours cloNIDine
       0.1 mg, Tab, NG, q4h, PRN Hypertension, Routine, PRN SBP greater than 180 mmHg or DBP greater than 90 mmHg
   ☐ +1 Hours LORazepam
       0.5 mg, Injection, IV Push, once, PRN Agitation, Routine
       Comments: discontinue once patient is extubated
Place only one order below : (NOTE)*
☐ +1 Hours morphine
   ☐ 2 mg, Injection, IV Push, q4h, PRN Pain, Severe (8-10), Routine (DEF)*
       Comments: discontinue once patient is extubated
   ☐ 1 mg, Injection, IV Push, q4h, PRN Pain, Moderate (4-7), Routine
       Comments: discontinue once patient is extubated
If patient is allergic to morPHINE place one order below:(NOTE)*
☐ +1 Hours HYDROmorphine
   ☐ 1 mg, Injection, IV Push, q4h, PRN Pain, Severe (8-10), Routine (DEF)*
       Comments: discontinue once patient is extubated
   ☐ 0.5 mg, Injection, IV Push, q4h, PRN Pain, Moderate (4-7), Routine
       Comments: discontinue once patient is extubated
If Hepatitis B Prophylaxis needed for core antibody positive donor, consider placing order below:(NOTE)*
☐ +1 Hours entecavir
   0.5 mg, Tab, NG, QDay, Routine
   Comments: Once extubated and tolerating PO, change route to PO.

Laboratory
NOTE: Labs for first 24 hours(NOTE)*
☐ O2 Saturation Meas Oximetry
   STAT, T;N, once, Type: Blood, Nurse Collect
☐ CBC
   STAT, T;N, once, Type: Blood, Nurse Collect
☐ CMP
   STAT, T;N, once, Type: Blood, Nurse Collect
☐ Calcium Ionized
   STAT, T;N, once, Type: Blood, Nurse Collect
☐ PT/INR
   STAT, T;N, once, Type: Blood, Nurse Collect
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☑️ PTT  
*STAT, T;N, once, Type: Blood, Nurse Collect*

☑️ CBC  
*Time Study, T;N+480, q8h x 5 occurrence, Type: Blood, Nurse Collect*

☑️ AST  
*Time Study, T;N+480, q8h x 5 occurrence, Type: Blood, Nurse Collect*

☑️ Potassium Level  
*Time Study, T;N+480, q8h x 5 occurrence, Type: Blood, Nurse Collect*

☑️ Glucose Level  
*Time Study, T;N+480, q8h x 5 occurrence, Type: Blood, Nurse Collect*

☑️ PT/INR  
*Time Study, T;N+480, q8h x 5 occurrence, Type: Blood, Nurse Collect*

NOTE: AM Labs(NOTE)*

☑️ SV O2 Measured  
*Routine, T+1;N, qam, Type: Blood, Nurse Collect*

☑️ CBC  
*Routine, T+1;N, qam x 5 day, Type: Blood, Nurse Collect*

☑️ CMP  
*Routine, T+1;N, qam x 5 day, Type: Blood, Nurse Collect*

☑️ PT/INR  
*Routine, T+1;N, qam x 3 day, Type: Blood, Nurse Collect*

☑️ PTT  
*Routine, T+1;N, qam, Type: Blood, Nurse Collect*

NOTE: If patient transplanted for Hepatitis B Virus, place order below:(NOTE)*

☑️ Hepatitis B Antibody  
*Routine, T+7;N, once, Type: Blood, Nurse Collect*

Diagnostic Tests

☑️ Chest 1 VW  
*T;N, Reason for Exam: Other, Enter in Comments, Stat, Portable  
Comments: Reason: Post Transplant*

Consults/Notifications/Referrals

☑️ Notify Physician For Vital Signs Of  
*Notify: surgical transplant resident or fellow, BP Systolic > 180, BP Diastolic > 90, BP Systolic < 100, BP Diastolic < 60, Celsius Temp > 38.3, Heart Rate > 120, Heart Rate < 60, Oxygen Sat < 94, Urine Output < 20, Blood Glucose < 60, Blood Glucose > 200*

☑️ Notify Physician-Continuing  
*Notify: surgical transplant resident, Notify For: Platelets less than 25,000 per microliter and/or Phosphorus Level less than 3 mg/dL*

☑️ Dietitian Consult/Nutrition Therapy  
*Type of Consult: Nutrition Management*

☑️ Transplant Coordinator Consult  
*Reason for Consult: Transplant patient arrival to ICU*

☑️ Medical Social Work Consult  
*Routine, Reason: Other, specify, Psychosocial Assessment*

☐ Physical Therapy Initial Eval and Tx  
*Routine*

Mechanically Ventilated Patients Phase

Non Categorized

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

Patient Care

☑ Elevate Head Of Bed

☐ 30 degrees or greater if systolic blood pressure is greater than 95 mmHg

☑ Reposition ETT (Nsg)

☐ 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 msecs 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

☐ +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
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- **+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, (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** HYDROMorphone
  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

- **+1 Hours** HYDROMorphone
  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
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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 haloperidol. *If SAS is not met in 6 hrs, call MD. Call MD if 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-titrare 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-titrare 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