# UR 53: Repatriation/Transfer Guidelines

Department: Regional Telephonic Medicine Ctr
Section: KPNW Region
Applies to: KPNW Region
Review Responsibility: Cynthia Horak, MD (RTMC);
Kathryn Kelly, MD (Pediatrics)

Number: UR 53
Effective: 08/09
Last Reviewed/Approved: 2/22, 2/23, 2/24

**REPATRIATION/TRANSFER GUIDELINES**
**PURPOSE**

These guidelines are utilized when determining whether a patient is stable for repatriation/transfer from a non-KP facility (inpatient or ED) to a KP-contracted or Kaiser Foundation Hospital (inpatient or ED).

In addition to these guidelines, the capability of both the sending facility and the receiving facility will be considered in addition to the appropriate provider availability.

PLEASE NOTE: "Higher Level of Care" transfers are those are done to obtain a higher level of care or service for the patient than is available at the Sending Facility. The Screening Exclusion Criteria are not used by the Regional Telephonic Medicine Center (RTMC) for transfers being considered for a higher level of care. In these cases, the sending and accepting physicians will consider both the advantages to obtaining the higher level of care and the risks of transport in order to make a decision about transfer.

SUBJECT TO CHANGE: Confirm prior to a transfer to Kaiser Sunnyside OR Kaiser Westside Medical Center that a patient weighing $\geq$550 lbs can be accommodated.

# INDEX

Burns

Cardiac

Critical Illness

Gastrointestinal Bleeding

General Surgery

Neurology, including stroke

Neurosurgery, adult

Neurosurgery, pediatric

Orthopedics

Plastic Surgery

Pediatrics

Psychiatry

Renal

Respiratory

Trauma

- Blunt
- Head and spine

# BURNS

## MILD BURNS OR BURNS OF QUESTIONABLE SEVERITY

**Stable for transfer:**

a) Patients with vital signs reflecting hemodynamic stability; and
b) Patients that received adequate initial treatment; and
c) They will advise as to the need for transfer to a burn center rather than to a Kaiser Permanente facility.

**Unstable for transfer** (Unless higher level of care requested):

a) Patients exhibiting hemodynamic instability; or
b) Patients requiring tertiary services due to other injuries or illnesses who are at a facility capable of providing appropriate care. (e.g. Smoke inhalation at a facility offering hyperbaric treatment.)

## MODERATE / SEVERE BURNS (calls from KP ED's and NKP ED's)

These are primarily higher level of care transfers to the burn unit at Legacy Randall Children's Hospital. Generally, >20% total body surface area burn will be considered for transfer.

**Candidates for Burn center: (meet any of the following):**

- 2nd & 3rd degree burns of more than 10% BSA in patients under 10 and over 50 y/o;
- 2nd & 3rd degree burns of more than 15% BSA in other age groups;
- 2nd & 3rd degree burns with serious threat of functional or cosmetic impairment that involve - face, hands, feet, genitalia, perineum and major joints;
- 3rd degree burns greater than 2% BSA any age group;
- Significant electric burn injuries including lightening injury;
- Chemical injuries with serious threat of functional or cosmetic impairment;
- Inhalation injury with burn injury;
- Circumferential burns of an extremity or chest;
- Burn injury in patients with preexisting medical disorders which could complicate management, prolong recovery, or affect mortality;
- Major trauma with burns

# CARDIAC

## GENERAL

Diagnoses to be considered in this category include but are not limited to unstable angina, acute coronary syndrome, or “rule out” MI.

**Stable for transfer:**

Patients may be appropriate for transfer consideration (Advanced Life Support (ALS) or Critical Care Transport (CCT)) as long as the following conditions are met:

1. No persistent acute EKG changes (acute injury current ST elevation or ST depression);
2. A patient who has received fibrinolytics or has unstable angina with dynamic EKG changes but otherwise stable (as defined here) is appropriate for transfer;
3. Patient has stable vital signs, and appears hemodynamically stable;
4. Patient is free of active ischemic chest pain (Pharmaceutical intervention up to and including IV nitroglycerin is acceptable), titrate dose/amount acceptable.
5. Patient has a Swan-Ganz catheter inserted but otherwise stable (as defined here) is appropriate for transfer.

**Unstable for transfer**: **(UNLESS HIGHER LEVEL OF CARE REQUIRED/REQUESTED)**

1. Persistent acute EKG changes (acute injury current ST elevation or ST depression);
2. Active ectopy (greater than 6 PVC’s/min. or short runs of V-Tach), acute MI.

## CARDIAC CATH / PTCA/PCI

Patients requiring cardiac catheterization/PTCA/PCI (per the community MD)
Transfer for primary PTCA can be considered if:

a) There is evidence of an acute MI;
b) There is an absolute contraindication to thrombolysis; and the facility in which the patient is being treated does not have the capability to perform the procedure.

## AORTIC DISEASE / AORTIC ANEURYSM

Criteria for management of Aortic Dissections and Aortic Aneurysms

a) Ascending Dissection - surgical emergency - requires immediate transfer to Kaiser Sunnyside MC or OHSU depending on stability and location; contact on-call cardiac surgeon to determine best disposition.
b) Type B Dissection – Call Cardiology first for advice. Cardiac Surgery needs to evaluate the case, but often medically managed in ICU;
c) Patients > 80 years of age - Cardiac Surgery needs to evaluate the case, but often medically managed;
d) Abdominal Aneurysm – Consult Vascular Surgeon on-call. This can generally be handled at any plan facility, unless higher level of care is required.

**NOTE: if transferring for higher level of care and on IABP (intra-aortic balloon pump), ensure IABP compatibility with pump at SMC.**

## CHF/PULMONARY EDEMA

Patients who may be considered **stable for transfer:**

a) Have responded to appropriate therapies;
b) Are not significantly hypoxic or dyspneic;
c) Remain alert without evidence of hypercapnea;
d) Maintain stable vital signs;
e) Have no persistent acute EKG changes (acute injury current ST elevation or ST depression);
f) Meet general cardiac criteria.

**Exclusion Criteria: Cardiac-<u>EXCEPT FOR HIGHER LEVEL OF CARE REQUESTS</u>**

Cardiovascular/Hemodynamic

- Hypotension or hypertension not controlled
    - SBP < 90 or >180. Check for baseline BP.
- On moderate-to-high-dose vasopressors

| | | |
|---|---|---|
| Norepinephrine | >10 mcg/min | >0.1 mcg/kg/min |
| Epinephrine | >10 mcg/min | >0.1 mcg/kg/min |
| Phenylephrine | >100 mcg/min | >1 mcg/kg/min |
| Dopamine | | >10 mcg/kg/min |
| Dobutamine | | >10mcg/kg/min |

- On any dose of vasopressor/inotrope without central venous access or without multiple secure peripheral catheters (central access preferred)
- Brisk ongoing hemorrhage or high risk of recurrent hemorrhage

**Other exclusion criteria**:

1. ST Elevation Myocardial Infarction (STEMI) who are within 12 hours of onset of symptoms or are having ongoing symptoms and ST elevation consistent with active ischemia.
2. Non-STEMIs whose pain/symptoms cannot be stabilized acutely with medicinal therapy and are having symptoms consistent with ongoing cardiac ischemia.
3. Ischemic syndromes with evidence of cardiogenic shock.
4. Patients with recurring sustained ventricular tachycardia or life threatening bradycardias.
5. Ischemic syndromes requiring an intra-aortic balloon pump to maintain adequate blood pressure.
6. Sustained bradycardia or tachycardia with cardiogenic shock or hemodynamic instability.
7. Valvular heart disease with cardiogenic shock and/or active ischemic symptoms.
8. Pericardial effusion with hemodynamic compromise from tamponade.
9. Patients with resuscitated sudden cardiac death on mechanical ventilation in the 24 hours post event or who are receiving therapeutic hypothermia and have not yet been re-warmed

## GENERAL

Patients with critical illness are those requiring ICU-level care.

The criteria for transfer of critically ill patients are the same regardless of whether the accepting service is Critical Care Medicine or another specialty. In all cases, there should be multisystem review of the case to determine stability for transfer.

**"Lateral" transfers** are those done between facilities which can provide the same level of care. This includes patients who are in an ICU at a non-plan hospital and those who are in an ED at a non-plan hospital that has an ICU bed available and that hospital can provide the services needed by the patient. For lateral transfers, the RTMC should use the Screening Exclusion Criteria below to determine which patients should be immediately excluded for transport. If there are no exclusion criteria present, then a potential accepting physician can be identified. The potential accepting physician will then review the case and integrate all the available information to determine if the patient is sufficiently stable for transport.

**"Higher Level of Care" transfers** are those which are done to obtain a level of care or service for the patient than is available at the Sending Facility. The Screening Exclusion Criteria are not used by RTMC for transfers being considered for a higher level of care. In these cases, the sending and accepting physicians will consider both the advantages to obtaining the higher level of care and the risks of transport in order to make a decision about transfer.

## SCREENING EXCLUSION CRITERIA FOR LATERAL TRANSFERS

The below Screening Exclusion Criteria are in place for lateral transfers, and do not apply to 1) patients with the need for a level of care available at Sunnyside or Westside, and that are not available at the originating facility (e.g. coronary intervention); and 2) patients being transported due to the need for a higher level of care (SEE ABOVE).

If exclusion criteria are present, then do not pursue transfer. Even if no exclusion criteria are present, the patient still needs to be considered stable for transport by Sending and Accepting Physicians.

### Exclusion Criteria

- Patients under 18 years of age for transfer to a Kaiser ICU

Cardiovascular/Hemodynamic

- Symptomatic hypertension
- SBP < 90 or MAP < 60
    - Exception: Baseline blood pressure is similarly low, and hypotension not related to primary diagnosis.
- On moderate-to-high-dose vasopressors

| Drug | | |
|---|---|---|
| Norepinephrine | >10 mcg/min | >0.1 mcg/kg/min |
| Epinephrine | >10 mcg/min | >0.1 mcg/kg/min |
| Phenylephrine | >100 mcg/min | >1 mcg/kg/min |
| Dopamine | | >10 mcg/kg/min |
| Dobutamine | | 10mcg/kg/min |

- On any dose of vasopressor/inotrope without central venous access or without multiple secure peripheral catheters (central access is preferred)
- Brisk ongoing hemorrhage or high risk of recurrent hemorrhage
- Other exclusion criteria as described in the Cardiac section*

Respiratory

- On ventilator with high levels of support required
    - FiO2 > 0.7
    - PEEP >14
    - Minute ventilation > 13
    - Peak pressures > 45
- < 1 hour since intubation unless intubated for airway protection
- < 6 hours since extubation
- No ABG on current ventilator settings
- Not intubated, and requiring high-flow oxygen (> 15 L/min)
- Not intubated, questionable ability to protect airway, and vomiting
- Sat < 92% or $PaO_2$ < 70 on settings achievable during transport, intubated or not intubated
    - BiPAP or CPAP-dependent (reference BiPAP Guidelines under Respiratory section)
    - Unable to be off BiPAP or CPAP for at least 2 hours (must demonstrate)
    - Exceptions:
        - Patient is DNI
        - Patient is on chronic home or SNF non-invasive ventilation and the primary acute problem is not cardio-respiratory

Neurological

- Elevated intracranial pressure (suspected or proven)
- Expanding intracranial hemorrhage or midline shift present (See NS section)
- Actively deteriorating level of consciousness or otherwise evolving neurological exam
- Received alteplase for stroke within past 24 hours and are in a Certified Stroke Center (if patient is not in a Stroke Center, transfer patient)
- Seizures: if has had 2 seizures within less than 30 min of each other, patient is excluded from transfer until 4 hours have passed without seizures and patient has returned to baseline mental status or EEG demonstrates that status epilepticus is not present
- Severe agitated delirium not safely controlled

Metabolic abnormalities

- Temp < 36 (induced or spontaneous)
- Hyperkalemia with EKG changes or K > 7 even without EKG changes
- Hyper/hyponatremia:

    Acute seizures in setting of hyponatremia

    Acute (or presumed acute) severe hyponatremia, Na<115

    Acute severe hypernatremia, Na>165
- pH < 7.25 unless part of controlled hypoventilation strategy

*Cardiac Exclusion Criteria **<u>(unless higher level of care request)</u>**

1. ST Elevation Myocardial Infarction (STEMI) who are within 12 hours of onset of symptoms or are having ongoing symptoms and ST elevation consistent with active ischemia.
2. Non-STEMIs whose pain/symptoms cannot be stabilized acutely with medicinal therapy and are having symptoms consistent with ongoing cardiac ischemia.
3. Ischemic syndromes with evidence of cardiogenic shock.
4. Patients with recurring sustained ventricular tachycardia or life-threatening bradycardias.
5. Ischemic syndromes requiring an intra-aortic balloon pump to maintain adequate blood pressure.
6. Sustained bradycardia or tachycardia with cardiogenic shock or hemodynamic instability.
7. Valvular heart disease with cardiogenic shock and/or active ischemic symptoms.
8. Pericardial effusion with hemodynamic compromise from tamponade.
9. Patients with resuscitated sudden cardiac death on mechanical ventilation in the 24 hours post event or who are receiving therapeutic hypothermia and have not yet been re-warmed.

## USE OF CRITICAL CARE TRANSPORT (CCT)

Critical Care Transport service is provided by MetroWest Ambulance.

# GASTROINTESTINAL BLEEDING

## GENERAL

Due to the nature of GI bleeds and the lack of specific markers, the RTMC MD should always overlay their medical knowledge and judgment when determining the stability for transfer of these cases.

### Stable for transfer:

a) Patient has stable vital signs including orthostatics where indicated;
b) GI hemorrhage inactive without evidence of current brisk bleed;
c) Stable CBC or H/H as compared to baseline;
   1) Patients may require transfusion at the community ED prior to transfer;
   2) Transfusion may also be continued during transfer if indicated. (Note: RN transport may be needed when patient is receiving blood transfusion).

### Unstable for transfer (unless higher level of care required):

a) Patient has unstable vital signs (hemodynamically unstable- see Critical Care Exclusion Criteria, pg 6-8) after resuscitation is completed;
b) Patient has an active brisk bleed from rectum or NG tube (if used), i.e. maroon-colored stool with decreasing H&H (decrease in Hgb >1 g/dl);
c) Evidence of esophageal obstruction with airway compromise or inability to manage secretions;
d) Patient requires urgent transfusion not available in the ED.

## GENERAL SURGERY

Includes patients with diagnoses such as appendicitis, cholecystitis, diverticulitis, and SBO.

**Stable for transfer:**

a) Patient has stable vital signs; and
b) Normal neurologic exam without airway compromise; and
c) Stable HCT without significant active bleeding; and
d) GS guidelines
e) If transporting to KP facility, patient is ≥16 years of age

**Unstable for transfer (unless higher level of care required):**

a) Patient has unstable vital signs (see Critical Care Exclusion Criteria, pg 6-8); or
b) Patient has active or significant potential for airway compromise or deterioration; or
c) Patients with evidence of ongoing significant bleeding.

### General Surgery Transfer Guidelines (Non-Trauma)

**Stable for Transfer**, assuming facility and provider availability at Plan facility:

a. Patient has stable vital signs, good general appearance
b. No signs of a surgical abdomen
c. Antibiotics if applicable have been started
d. Acute abdominal series +/or abdominal/pelvic CT scan if performed does not demonstrate;
  1) Free air
  2) Acute Dissecting AAA (discussion with vascular surgeon will occur as needed)
  3) Ischemic Small Bowel
  4) Air in the Biliary Tree (not post procedural)
  5) Ruptured Appendix
  NOTE: 1), 3), 4) and 5) will be discussed with surgeon prior to transfer
e. Early Appendicitis
  1) Onset of symptoms and physical exam consistent with early presentation
  2) Reading of abdominal CT by radiologist indicates "Early Appendicitis"
f. Sending facility has no plans or opportunity to operate for >6 hours
g. If transporting to KP facility, patient is ≥15 years of age. If age <15, transport to DCH.

# NEUROLOGY including STROKE

## CVA - Ischemic Stroke

### Stable for transfer:

Patient has:
1) stable vital signs;
2) stable neurologic exam; determined optimally by a neurologist at non-plan facility, if available;
3) symptoms/deficit stable;
4) head CT scan (CTA, if facility has the capability) should be done prior to making decision to transfer patient to a non-neurosurgical facility (always request that a copy of CT/CTA accompany the patient in transfer).

### Unstable for transfer (unless higher level of care request for transfer):

Patient has:
1) unstable vital signs (see Critical Care);
2) unstable neurologic exam;
3) ≥1/4 hemisphere infarct
4) cerebellar or cortical hematomas with midline shift;
5) brainstem involvement
6) intracerebral hemorrhage/cerebral hematoma;
7) acute surgical intervention indicated and available at treating facility;
8) symptoms consistent with evolving stroke;
9) patient not surgical candidate but with impending demise, unless patient’s family requests transfer to Kaiser.

Other Considerations:
1) Receiving facility must be within 2 hours transit time.
2) The decision to administer thrombolytics for acute CVA rests with the treating physician.
3) For an anterior circulation infarct that is outside the window for appropriate thrombolytics (<3 hours) but <6 hours of onset, patient must be considered for intravascular intervention at appropriate facility for transfer.
4) For a posterior circulation infarct that is within 24 hours of onset, discuss case with KP neurologist to determine if patient is appropriate for intravascular intervention and the most appropriate facility to receive the patient.

**Exclusion Criteria: (unless higher level of care, not in a stroke center)**

Neurological

- Elevated intracranial pressure
- Expanding intracranial hemorrhage or midline shift present
- Actively deteriorating level of consciousness or otherwise evolving neurological exam
- Seizures: if has had 2 seizures within less than 30 min of each other, patient is excluded from transfer until 4 hours have passed without seizures and patient has returned to baseline mental status or EEG demonstrates that status epilepticus is not present
- Severe agitated delirium not safely controlled

## NEUROSURGERY, ADULT

**Patients in Non-KP EDs**

**Normal CT**

Patients presenting with traumatic closed head injuries with a normal CT and Glasgow Coma Scale ≥13 will be transferred to a KP facility (or other facility, as deemed appropriate) when observation is indicated.

Patients presenting with traumatic closed head injuries with a normal CT and Glasgow Coma Scale <13 will be transferred to KSMC and evaluated by the Neurosurgeon to determine why GCS is so low, complete any indicated toxicology screen, and conduct other tests as indicated. If admission to another service is deemed more appropriate, the RTMC will arrange the admission and the Neurosurgeon will communicate with the accepting Physician and/or family if requested.

**Abnormal CTs**

All acute intracranial bleeds and cervical spinal cord injuries in non-KP neurosurgical EDs should have an onsite neurosurgical consult to ensure their safe transfer if available and indicated. If it is determined that the patient is not a candidate for neurosurgical intervention, the neurosurgeon will notify the hospitalist or intensivist and the patient will be admitted to that service with neurosurgery as consult. Neurosurgeon will communicate with the family if requested.

Spine:
Patients with spinal injury and subjective or objective neurologic deficit should be transferred to KSMC. Consult spine on call. Patients less than 18 years of age should be referred to DCH.

- Reference Trauma section
- Reference Critical Care Exclusion Criteria
- Reference Higher Level of Care

## NEUROSURGERY, PEDIATRIC

General issues: Need to communicate with the Pediatric Neurosurgeon on call regarding each case. All cases should be referred to OHSU/Doernbecher.

a) The patient should receive care in a setting capable of providing all services required by a child, including care for potential complications;
b) Neonatal neurosurgical cases must be in a facility with Neonatal ICU level 3-4 capability (depending on severity);
c) Patients who will likely require Pediatric ICU (PICU) services may only be transferred to Doernbecher PICU (unless also suffering severe burns which would require Legacy Randall Children's Hospital PICU);
d) Patients with coma or depressed Glasgow Coma Score require pediatric intensive care services.
    --All pediatric patients <18 should be cared for at Doernbecher/ OHSU by the trauma service;
    --Glasgow coma score (GCS) < 10;

# ORTHOPEDIC

## GENERAL

**Stable for transfer**:

a) Patients with stable vital signs;
b) Patients with closed fracture without neurovascular compromise
   Note: Displaced **acetabular** fractures are not usually repatriated.
   Note: closed tibial fractures sustained with high energy mechanisms of injury will require some objective evidence indicating normal (or near normal) compartment pressures even in the setting of normal neurovascular status.
c) Patients with open fractures without neurovascular compromise.
   i. Grade 1, <1 cm laceration- can potentially go to OR more than 6 hours from the time of injury, check with on call KP orthopedist.
   ii. Grade 2, >1 cm laceration- ideal to get to OR within 6 hours from the time of injury, but decision of time to surgery is left to the discretion of the KP orthopedist.
      - Do not transfer if it has been >4 hours since the time of injury, unless the sending facility is unable to deliver care or get the patient to the OR in a timely fashion.
   iii. Grade 3 would be handled at a trauma center.
   iv. Distal phalanx can be managed with ER/urgent care washout and antibiotics only, does not need urgent OR.
d) Pediatric closed fractures can be handled at KSMC. Check with on-call KP orthopedist.

NOTE: For each case the RTMC MD is expected to provide complete information to the orthopedist including:

- Patient's age and gender;
- Time of the injury;
- Mechanism of the injury;
- Extent of injury including all systems;
- Current location of the patient;
- Name and phone number of the current treating physician, if requested;
- Estimated transportation time.

**Unstable for transfer (Unless higher level of care is requested):**

a) Patients with unstable vital signs (see Critical Care Exclusion Criteria);
b) Patients with evidence of vascular compromise;
c) Patients with evidence of compartment syndrome;
d) Patients with multiple trauma/multiple system injuries that cannot be managed within the Kaiser Permanente system;
e) Patients with amputation injury requiring reimplantation.
f) Gustillo Fracture Classification, Grades II-III (see description of Grade I above)

## O.M.F.S./H.N.S./Plastic Surgery

### GENERAL

Mandibular fractures, facial fractures, laceration repairs, epistaxis, etc.

**Stable for transfer:**

a) Patient has stable vital signs;
b) Normal neurologic exam without airway compromise;
c) Stable HCT without significant active bleeding;
d) Significant oral edema should be evaluated by non-Plan ENT when available prior to transfer.

**Unstable for transfer (unless higher level of care required):**

a) Patient has unstable vital signs (see Critical Care Exclusion Criteria);
b) Patient has active or significant potential for airway compromise;
c) Patients with evidence of ongoing significant bleeding or epistaxis.

## PEDIATRICS

### GENERAL

Pediatric cases are managed by the Kaiser Pediatrician on call at Doernbecher, who can be reached by calling the OHSU transfer center at 503-494-7000 or by paging the pediatrician directly (contact number on staff availability). If the child is felt to be critically ill or injured, then the Pediatric ICU attending physician at Doernbecher would manage the case/transfer. Also of note, the Doernbecher PANDA (Pediatric and Neonatal Doernbecher Ambulance) transport team may use air transport, typically at the discretion of the pediatric ICU attending physician at DCH. Closed fractures requiring closed reduction can typically be handled at KSMC or KWMC, therefore transfer to Doernbecher may not be indicated.

Common pediatric diagnoses encountered include, but are not limited to, asthma, croup, dehydration, head injuries, infections and poisonings.

**Stable for transfer**:

1) Patients with vital signs reflecting hemodynamic stability;
2) Patients who received adequate initial treatment;
3) Patients accepted by Kaiser Permanente pediatric Doernbecher hospitalist MD or PICU attending on call. Appropriate mode of transfer is arranged (ACLS or PANDA).

**Unstable for transfer (Unless higher level of care requested):**

1) Patients exhibiting hemodynamic instability;
   NOTE: We may opt to transfer (in particular PANDA) if the sending facility is not able to stabilize as the transport team often is better skilled in getting the patient stabilized than some of our local ER's.
2) KP pediatric MD unwilling to accept due to clinical concerns.

Decisions will be made by Doernbecher KP hospitalist and PICU attending.

## GENERAL

**Medical Clearance –** The patient is determined to be medically cleared when all medical conditions have been evaluated and treated so that the patient could return home if there was no underlying psychiatric condition. The extent of the evaluation to determine medical clearance is at the discretion of the treating physician in consultation with the Brookside on-call MD. Specific drug or alcohol levels are not required unless clinically pertinent to the medical clearance. However, most cases require toxicology screening.

**Stable for transfer:**

a) Patients with vital signs reflecting hemodynamic stability;
b) Patients that received adequate initial evaluation and treatment;
c) Patients meeting medical clearance criteria for transfers directly to psych facilities.

**Unstable for transfer (Unless higher level of care requested):**

a) Patients exhibiting hemodynamic instability;
b) Patients with significant overdoses and evidence of pending cardiovascular complications (i.e.: TCA's).

NOTE: Doernbecher Children's Hospital Inpatient Pediatric Ward does not accept medically stable/cleared psychiatric patients who are awaiting inpatient or residential psychiatric treatment.

Hemodialysis patients exhibiting volume overload or electrolyte imbalance and are often in need of urgent or emergent dialysis.

Patients on sustained low-efficiency dialysis (SLED) can be repatriated at Sunnyside Medical Center whereas patients on continuous renal replacement therapy (CRRT) cannot be repatriated. Patients need to be able to be on intermittent not continuous dialysis. They can only move when able to be off CRRT for 15 hours and then transferred to SLED.

### Stable for transfer:

a) Patients with vital signs reflecting hemodynamic stability;
b) Renal failure patients presenting with serum potassium below 7.0 without EKG changes (second potassium may need to be obtained after medical therapy at the community ED);
c) Patients with appropriate mental status;
d) Patients with adequate oxygenation with low or moderate O2 supplementation.

- Before repatriating dialysis patients, make sure the nephrologist on call is notified and that dialysis capacity has not been exceeded
- Notify the hospitalist so they can admit the patient

### Unstable for transfer (Unless higher level of care requested):

a) Patients exhibiting hemodynamic instability;
b) Renal failure patients with serum potassium above 7.0.
c) Patients with pulmonary edema not responsive to initial medical therapy and in need of emergent dialysis to avoid respiratory failure

### RENALTRANSPLANT PATIENTS:

The patient can receive related care at the transplant facility for a maximum of 3 months post-transplant. After 3 months the patient is usually transferred for care to their home Kaiser Permanente facility. The appropriate nephrologist on call should be consulted after hours to aid in the disposition of these cases.

**Other Organ transplants**: Refer to NTN Database for information on: Centers of Excellence (COE), transplant Coordinator’s name, Transplant MD’s name and case rate ending date.

# RESPIRATORY

## GENERAL

Note that the Pulmonary Service is not an admitting service at KSMC. The following sections address certain respiratory therapies that may be encountered when considering transport of patients to any accepting service.

## Oxygen Therapy

Patients cannot be transported on high flow nasal cannula oxygen. Adequate oxygenation on flows up to 15 L/min by mask must be demonstrated prior to transport. Reference Critical Care Exclusion Criteria.

## NIV, BiPAP, CPAP

Ventilatory support with noninvasive ventilation (NIV), BiPAP, or CPAP is not considered to be as reliable as invasive ventilation and has only been proven to be effective for a limited number of indications.

**Lateral Level of Care Transfers or Transfers to a Lower Level of Care**
Lateral transfers should not be initiated for patients who are dependent on NIV, Bi-pap, or CPAP. "Dependency" is defined as being unable to be off the device at least 2 hours. However, after demonstrating NIV/BiPAP/CPAP independency at the Sending Facility, NIV/BiPAP/CPAP can and should be utilized during transport if it has been a part of the treatment regimen up until that point.

Exceptions—lateral transfers may be considered in these situations:

1. NIV/BiPAP/CPAP is being used for palliative purposes
2. DNI and DNR status
3. Patient is on chronic home NIV/BiPAP/CPAP and the acute medical problem is not cardio-pulmonary
4. NIV/BiPAP/CPAP is being used for COPD or CHF, and a physician privileged in advanced airway management is part of the transport team.

In all cases of lateral transfer, an RT or nurse with competency in administering non-invasive ventilation must be part of the transport team. This implies that Critical Care transport will typically be required.

**Transfers to Achieve a Higher Level of Care**
Alternatives to transporting a patient on NIV, BiPAP or CPAP should be thoroughly explored before deciding on transport for a higher level of care. Consideration should be given to intubation prior to transport. Keeping the patient at the sending facility long enough to demonstrate improvement in the clinical respiratory status and in blood gas results on noninvasive therapy is strongly encouraged prior to transport.

If transport must take place using NIV, the transport team should be assembled with the best available skills in NIV and advanced airway management available in a time frame consistent with patient safety. Efforts should be made to enlist both an RT or RN with NIV competency and a physician with advanced airway management skills for the transport team.

**Higher Level of Care Transports**
Critical Care Transport should be used whenever possible. However, if the use of CCT would result in a delay which would put the patient at risk, then transport without the CCT can be considered as part of the decision-making process which weighs the overall risks and benefits of transfer.

# TRAUMA

## GENERAL

Major, multi-system trauma would never be appropriate for repatriation to a KP hospital in the acute setting.

## PENETRATING: (GUN SHOT WOUND / STAB WOUND) –DO NOT TRANSFER

### Blunt Trauma-

For patient in a non-KP facility

a) Chest: Stable for transfer if:

1) Hemodynamically stable during 2-hour observation; and
2) Chest x-ray, EKG without change; and
3) ABG pH > 7.3, pO2 > 65, pCO2 < 50; and
4) No signs of aortic disruption - CT scan or aortogram.

b) Abdomen: Stable for transfer if:

1) Hemodynamically stable during 2-hour observation; and
2) CT scan performed prior to transfer shows no signs of acute injury to spleen, liver, or pancreas; no free fluid, free air, or pelvic fracture.

### Trauma Criteria

For KP patients presenting at a non-KP facility. Transfer to Trauma Center if:

a) Critical Trauma Victim (CTV): an **adult** victim of blunt or penetrating trauma, which results in any of the following alterations in vital signs.

| | |
|---|---|
| Respirations | < 12 or > 30 |
| Pulse | < 50 or > 130 |
| Systolic BP | < 80 |

b) Moderate Trauma Victim (MTV): a victim of blunt or penetrating trauma with parameters to consider for trauma center designation including:

1) Mechanism of injury - pedestrians struck by auto, ejection from vehicle;
2) Unable to follow commands;
3) Abnormal capillary refill;
4) Age <5 or > 65 years old and with precarious previous medical histories;
5) Prolonged extrication;
6) Fatalities involved in the event;
7) Adults with systolic BP < 90 or children with systolic BP <60;
8) No spontaneous eye opening;
9) Penetrating cranial injury;
10) Penetrating thoracic injury between the midclavicular lines;
11) Gunshot wound (GSW) to trunk
12) Blunt injury to chest with unstable chest wall (flail chest);
13) Penetrating injury to neck;
14) Diffuse abdominal tenderness following blunt trauma;
15) Fall from height >15 feet;
16) Intrusion of motor vehicle into passenger space

Patients with an acute isolated **head trauma** and persistent Glasgow Coma scale of 14 or less should be referred to KSMC.

Patients with an isolated **spinal injury** and subjective or objective neurologic deficit should be transferred to KSMC. Consult Spine on call.

**Stable for transfer:**

a) Patient has stable vital signs;
b) Stable neurologic exam without evolving deficit;
c) Determination of stability by neurosurgeon at non-Plan facility, if available;
d) Spinal fracture immobilized appropriately prior to transfer if determined to be stable by treating physician.

**Unstable for transfer (unless higher level of care):**

a) Patient has unstable vital signs;
b) Patient has unstable neurologic exam;
c) Patients with acute epidural, subdural, or subarachnoid hemorrhage, especially with midline shift (at facilities where neurosurgical service are available);
d) Patients with unstable spine fractures or spine fractures with deficit at facilities with appropriate surgical services available.

## SPECIAL GROUP CONSIDERATIONS

**For Medicare Members**

| Source | Policy |
|---|---|
| CMS Coverage Manuals | None |
| National Coverage Determinations (NCD) | None |
| Local Coverage Determinations (LCD) | None |
| Local Coverage Article | None |
| Kaiser Permanente Medical Policy | Due to the absence of a NCD or LCD, Kaiser Permanente has chosen to use their own Clinical Review Criteria, "Repatriation/Transfer Guidelines" for medical necessity determinations for Medicare members. |

Added Choice/POS: members may access non-KP facilities for routine and post-emergency care under their Tier 2 and Tier 3 benefits, however prior-authorization is required.