Swedish Cherry Hill and First Hill Emergency Department Orientation Guide August, 2019

# Table of Contents

## Table of Contents

***Attached:**

- Red Team (CFM) Attending Clinics and Physicians List
- Green Team (FHFM) Attending Clinics and Physicians List
- Consult Services for Group Health Patients
- ED Boarding Guidelines
- Inclusion/Exclusion Criteria for Issaquah and Ballard
- Kaiser ED/UC Trauma Guidelines
- Trauma Diversion Guidelines
- EMTALA Transfer Consent Form Cheat Sheet
- Behavioral Health Patients Levels of Observation
- ED Antibiogram
- Blood Management: Indications for Transfusion – Adult
- Transfusion Reactions
- Swedish Sepsis PathwayCode STEMI Protocol
- Cardiac CTA Order Set
- ED Ventricular Assist Device Diagnostic (VAD) Orders
- ED Code Stroke Safety Pause
- Swedish Code Strokes
- See YESCARTA Adverse Reactions Management Guide Attached
- See YESCARTA Cheat Sheet Attached
- Swedish Pediatric ED Website Aid
- Swedish Pediatric Emergency Drug Sheet Aid
- Pediatric Asthma Respiratory Score Algorithm
- First Hill Zoning Maps
- Health Care Provider and Notifiable Conditions Reporting FAQ

- Standardized Procedure Set-ups
  - Arthrocentesis
  - Epistaxis
  - I&D
  - Lumbar Puncture
  - Pelvic
  - Suture

**This handbook is not intended to denote or supercede official Swedish policies. It is intended only to be a guide for new SEPS providers to learn the systems at Swedish. Every effort has been made to include the most up-to-date policies and procedures but they change fairly frequently and the standards for all departments can be found at this link from the Swedish intranet:**

**http://standards.swedish.org/deptStandards/DeptList.asp**

**The most recent version of all Emergency Services Procedures, Protocols, Policies, and Standards can be found at this link from the Swedish intranet:**

**http://standards.swedish.org/deptStandards/STNDEmergencyServices.asp**

**The most recent version of all Cardiac Cath Lab, Protocols, Policies, and Standards can be found at this link from the Swedish intranet:**

**http://standards.swedish.org/deptStandards/STNDCathLab.asp**

**The most recent version of all Neuroscience and Stroke Program Procedures, Protocols, Policies, and Standards can be found at this link from the Swedish intranet:**

**http://standards.swedish.org/deptStandards/STNDNeuroscience.asp**

**You will see references to "New EPIC" in this handbook. Swedish EPIC went through a massive change on June 15, 2019 and we are still reconciling old processes with the new EPIC.**

## Door Codes:

| First Hill | Cherry Hill |
|---|---|
| -ambulance entry 5-9-1-1-* | -ambulance entry 7-7-9-5-9 |
| -entry from parking lot 2-5-7-3-0-* | -doctor room 4-3-1-5 |
| -most carts/doors 3-3-3 or 3-3-3-3 | -doc office 4-3-1-5 |
| -doctor room 4-2-5 | -most carts/doors 1-3-5 |

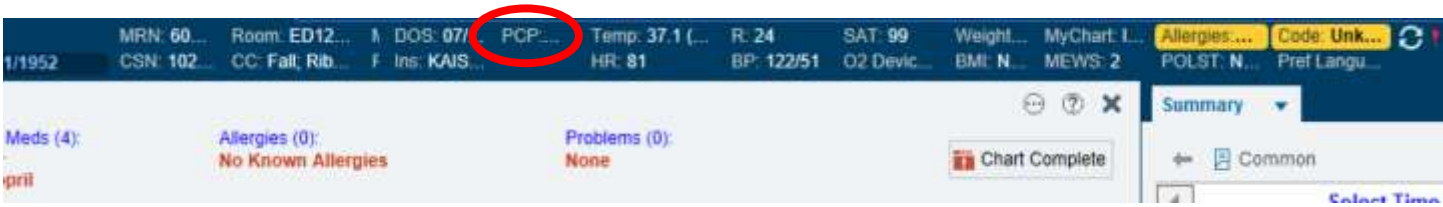
## Admissions Process

## Admissions and Transfers (Both Campuses):

We currently have 6 medicine admitting teams at Swedish as well as many specialties who admit. It will take some time to figure out who belongs to whom but, over time, you will be able to recognize the PCPs.

SHM = Swedish Hospitalist Medicine
PC = Polyclinic
PM = PacMed
KP = Kaiser Permanente (changed from "Group Health" 3/2017)
CFM = Cherry Hill Family Medicine (Red Team)
FHFM = First Hill Family Medicine (Green Team)

One good way to identify a patient's PCP, aside from asking the patient directly, is to look at the top bar on the main page of the EPIC navigator when you open a patient's chart. The PCP is listed in the 3rd column from the left (hover over it since it will be truncated) You can google the PCP Tel # from this page and sometimes the clinic will pop up.




You can also go to "Chart Review" in EPIC and to the "Notes" tab to look for notes by the PCP under department. "Swedish Family Medicine Cherry Hill" or SMG Primary Care", etc. Most KP patients have a purple banner that pops up in the chart though those with KP as a secondary insurance will not so you still need to do some digging. Polyclinic and PacMed used to have banners – that may or may not return in the new Epic in the future. You can also look through notes to see who has admitted the patient in the past.

KP (and potentially PC in the new EPIC) notes sometimes aren't available in EPIC but you can find them under "Care Everywhere" which can access some EPIC information outside of the Swedish system. You can also access records from the old (pre 6/15/19) Swedish EPIC in CareEverywhere though most records and images will be migrated into new EPIC by 12/19. If you cannot see KP records, the patient may need full registration first. The HUC can help you access this if you have questions.

At Cherry Hill, if a patient is not getting admitted to a specialty service (Neuro, Neurosurgery, or Cardiology), they get admitted to SHM or KP (only if the patient is Kaiser). It doesn't matter who their PCP is (PacMed, Polyclinic, and the resident teams only admit at First Hill). See below for KP specifics.

The two family medicine teams (Cherry Hill Red Team and First Hill Green Team) only admit to First Hill. Many of their attendings work at community clinics around Seattle. You will get used to this and there are Provider lists on the walls of all the doc stations or see attached.

- Green Team and Red Team Attending Provider Lists Attached
- Consult Services for Group Health (now KP) Patients Attached

**Kaiser Specifics:**
KP hospitalists admit to FH 24/7 and to CH 7A-7P. The SHM team will admit KP patients at CH from 8P-8A. See attached "Consult Services for Group Health/Kaiser Patients" document to see who admits whom from KP specialists. The most updated version of this document should be with the HUCs at both campuses and in the doc stations.

## Swedish Transfer and Operations Center (STOC) (currently "Swedish Command Center" (SCC)):

Currently, we cannot modify orders after they are placed because it deletes the work the SCC has done. If you change an admission order or have a question about the status of a bed request, you can call the transfer center at x66090. The only caveat is if they call you and ask you to change the admission order because it is missing the **.EDTRANSFER** dotphrase. See job aid below for details.

## Admission Orders:

To admit a patient, there is currently one order for both admitted and transferring patients. Please have your clinical impression/diagnosis entered before putting in admission order. Then, you must use **.EDTRANSFER** dotphrase to fill in details in comment section of the order. See below for job aid.

# Job Aid: Placing an ED Admit Request to a Swedish Facility

| | |
|---|---|
| **Audience:** ED Providers, Hospitalists, Nurses, HUCs, SCC/SOC staff. *Excludes Swedish Edmonds.* | **EpicCare Inpatient – ADT** |
| **Creation Date:** June, 2019 | **Last modified:** July 10th, 2019 |
| This job aid details the steps for coordinating an ED admission to a Swedish hospital. | |

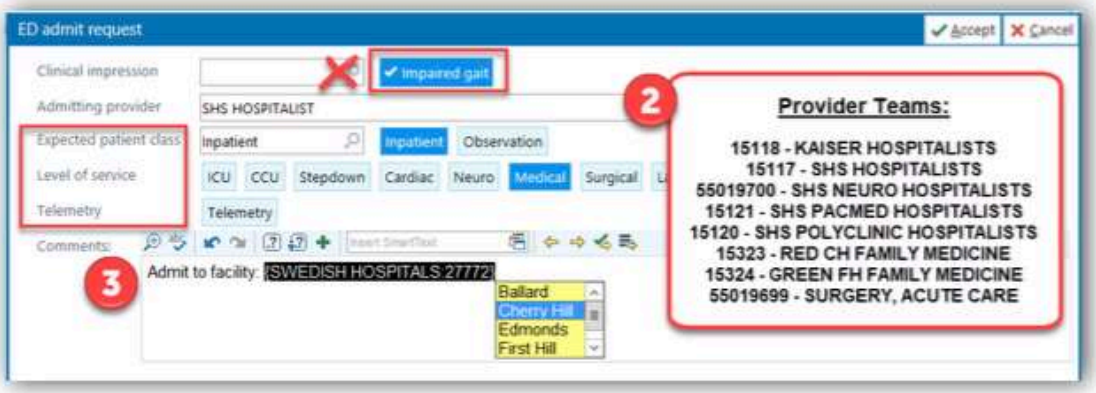
**1. Prior to placing an admission order, update the clinical impression in the 'Dispo' activity:**


***Note: It is necessary to complete this before placing the order to allow proper bed planning functionality.***

**2. The ED provider places the ADT99 order requesting the patient be admitted to the hospital:**

- **The clinical impression field will already be complete; do not update this field in the order. Select the Expected patient class, Level of service, and Telemetry fields.**
- **If admitting to the one of the hospitalist teams, select between the generic team records shown below. Otherwise, select the actual admitting provider in this field.**

**3. In the Comments field, pull in SmartPhrase .EDTRANSFER and select the admitting hospital.**




***Caution:*** ***Do not modify the order once it has been signed to prevent issues with the bed request.***



For more information about this job aid, email bestpracticeteam@swedish.org

## Boarding Patients:

We have seen a significant rise in the number of patients boarding in both EDs since 2016. Currently, we define a boarder as any patient who is in the ED >4 hours after the ED admission/transfer order has been placed or medical beds/IMCU or >2 hours for ICU. The ED MD admission/transfer order is really just a bed request, but it is time zero for the boarding process. There is currently a specified timeline for alerting the admitting teams when orders are needed and how to do so. This is detailed in the attached guidelines. Of note, the written guidelines require an "H+P" be done at 4 hours but this has been changed to require a plan of care by the accepting provider. It is important to note that the CH SHM hospitalists are the only team in CH 24/7 so they cover every boarder from every medicine team (PC, PM, Red Team, Green Team, SHM (any campus), and KP (from 7P-7A)).

# Patient Flow Between Hospitals

## Transfers Between First Hill and Cherry Hill:

In general, only Neurology, Neurosurgery, Cardiology, and Cardiothoracic surgery patients are admitted to CH. Generally, admitted patients outside of these specialties will need to be transferred from CH to FH given nursing resources and specialization and ancillary services available at FH but not CH. Given the KP volume and because KP patients can only be admitted to FH and CH, there may be times when KP general medical patients are admitted to CH. This may not apply to the other admitting teams. This will likely be directed by the CNs and the nursing supervisors. This is all in evolution and we will publicize widely if it changes.

Cardiology consults and Neurology consults can be obtained at FH. Neuro patients who will not likely need IR after discussion with NHT (TIA, strokes out of the window or those receiving tPA but don't need IR) can be admitted at FH. Discuss best site for admission with the consulting service. Select cardiac patients can be transferred from CH ED to FH floors if CH tele beds are full. Consultant preference will assist your cause when admitting to the hospitalist services at both sites.

- **Cardiology Patients Appropriate for Admission/Transfer to FH Tele Beds**
  **Inclusion Criteria:**
    - Arrhythmia management
        - Chronic Afib with rate control issues
        - Dofetilide
        - Sotalol
    - Soft R/O MI
    - NSTEMI that are asymptomatic and LVEF is normal by echo, if they initially presented to the FH ER, can stay at FH and be managed over there with plans to transfer only for cath if needed.
    - Heart Failure as a secondary diagnosis and low likelihood for mechanical intervention.
    - Endocarditis, IVDA (may be post cardiac surgery patients on several days of antibx therapy.)
    - Patients with long wait times for disposition
    - Peripherals

  **Exclusion Criteria:**
    - Cardiac patients likely to need any intervention or quaternary level care
    - Advanced heart failure patients who are established in clinic if CHF is the main admitting diagnosis.
    - EP patients

## ED to ED Transfers:

Some specialists will request an ED to ED transfer (usually CH to FH) so they can perform a procedure in the FH ED, or on the FH campus because of the specialized equipment available at FH but not at CH. For these cases, transfer the patient from CH ED and send them to FH ED via POV or EMS after consulting with the specialist and assuring they will meet patient in ED. Sometimes a patient may also need a transfer to FH ED to CH ED for an MRI or from CH ED to FH ED for a CT due to patient size. ED MD to ED MD and CN to CN communication needs to precede transfer. Please ensure all documentation is complete on these patients prior to transfer and that the plan is clearly signed out to the accepting attending.

An EMTALA transfer consent form must be filled out for ED to ED transfers or for patients being discharged and told to go directly to the other ED.

Most commonly this is done for:
Colorectal procedures
Dental Procedures
GI: Foreign body removal
ENT Procedures though some will come to CH ED
Urology Procedures though they will *very* rarely come to CH ED

## Transfers to Ballard and Issaquah Campuses:

If CH or FH are completely full, certain patients may be transferred to Ballard or Issaquah to avoid them boarding in the ED. This is generally restricted to SHM patients given that they are the only team that admits to Ballard and Issaquah. Detained or voluntary psych patients belonging to any team may be transferred to the MSU at Issaquah and admitted to SHM there while awaiting a psychiatric bed in the community as the unit is designed in part to cater to these patients.

- See Inclusion/Exclusion Criteria for Issaquah and Ballard Attached

## Transfers to Other Hospitals:

## Trauma:

Significant trauma, particularly intra-abdominal solid organ injuries, GSWs, stabbings, most multi-system trauma will need to be transferred to Harborview – our surgeons will generally not manage them (for stable patients you can always call the surgeon first to ask). Ask the HUC to page the Harborview transfer center and, depending on the stability of the patient, you will talk to the general surgeon or the ED MD. The patient will usually be transported via Medic One if they are at all unstable unless AMR/NW Ambulance are quickly available.

- **KP Trauma Guidelines –** KP has more defined guidelines about which trauma patients they will admit to Swedish. For the most part, these coincide with SHM's practice though they less likely to admit patients with multiple fractures and pneumothoraces. D/w KP hospitalist for guidance. If they refuse a trauma admission, call EPRO as their surgeon at Overlake may take some.

❖ See Kaiser ED/UC Trauma Guidelines Attached

- **Rib Fractures –** We have devised some very general guidelines around where patients with rib fractures should be admitted. As background, many patients with rib fractures who look good in the ED decompensate on the floor in the days following admission. This is not something of which we are usually aware and is driving some of these triage decisions.

  Patients with multi-system trauma will need transfer to HMC. **As ED docs, we are the specialists in trauma and it is our responsibility to rule out multi-system trauma prior to admission to Swedish.**

  In general, in patients without severe lung disease, Swedish should be able to admit patients with isolated 1-3 rib fractures.

  In patients with >3 rib fractures (including flail chest), the thoracic fellow will determine where the patient should be admitted on a case by case basis.

  Elderly patients with lung disease who sustain multiple rib fractures are likely best served at HMC. As a system, we will be devising more firm guidelines around this population in the coming months.

  These are general guidelines about rib fractures which will also be shared with the Thoracic Surgery Fellow. **The Fellows will make the final determination on where the patients should be admitted.**

## Burns:

Harborview will see all burns you are concerned about, and can help determine whether they should be transferred for evaluation or to arrange expedited follow-up. Ask the HUC to call the Harborview transfer center to talk to the Burn Fellow. Stable burns can usually go POV to their ED.

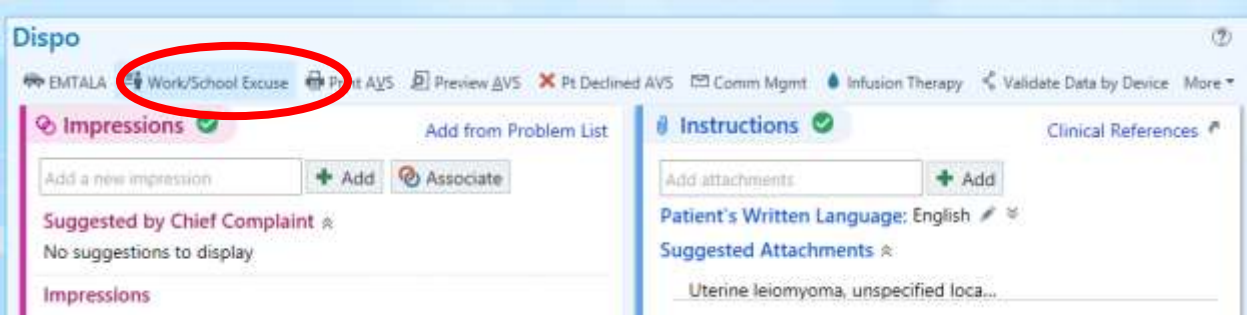
## Discharges:

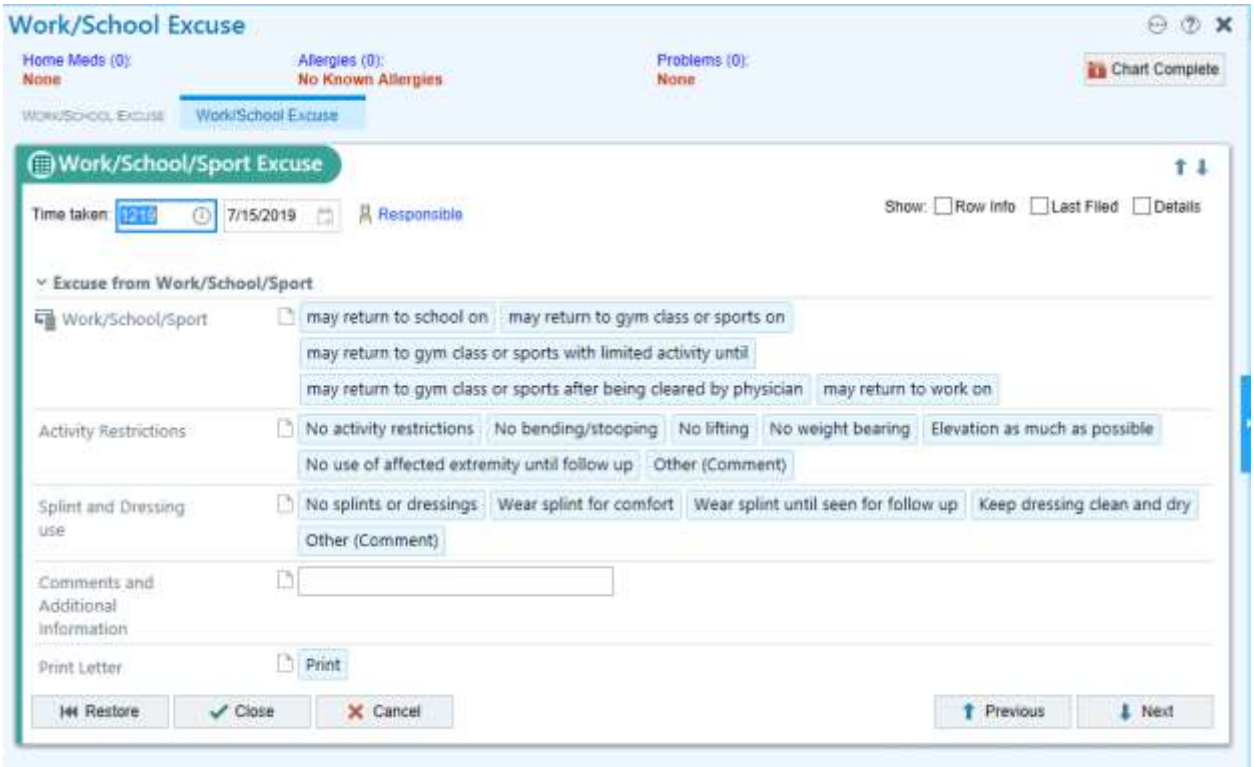
If a patient is a no-doc, we generally refer them to either Red Team or Green Team. You can also refer the under-insured to or other PCP with. Use **.DCPCP dot phrase** (steal from Mike Pirri) in the discharge AVS. Other docs/APCs may have low cost community clinic dotphrases.

Some Swedish specialists volunteer their time to provide care to low income/under-insured patients at the Swedish Community Specialty Clinic. This was developed in partnership with Project Access Northwest. The specialist will tell you if they want the patient to follow up with SCSC.

## Work/School Note:

This is at top of Dispo tab page.



## Ambulances and Clinic Call-ins:

Many in the community are still unaware that CH services are specialized for cardiac and neuro patients. ***Due to EMTALA, we cannot divert any ambulances when they call in, no matter how appropriate they are for the other campus***. ***Do not intervene in any ambulance calls to the charge RN.*** AMR and medics are frequently educated on who should go to which campus, though it is frequently frustrating where AMR ends up.

This does not apply to specific trauma patients who should be diverted to Harborview. See attached trauma diversion guidelines

- Trauma Diversion Guidelines

## EMTALA:

EMTALA is a federal law which requires that any patient who presents to an ED and requests treatment must be stabilized and treated, regardless of their ability to pay or their insurance.

**EMTALA requires that the ED MD/PA/NP performs a medical screening exam on all patients seeking care and performs necessary stabilizing treatment for any identified emergency medical conditions.** If the Emergency Medical Condition (EMC) is not resolved with treatment in the ED, the patient requires admission or an EMTALA-appropriate transfer to a facility with the capacity and capability to care for the patient.

EMTALA ends with resolution of the EMC or with admission.

## Medical Screening Exam (MSE):

An MSE must determine whether the absence of immediate medical care will likely place the patient's health in serious jeopardy (and/or fetus in actively laboring women), cause serious impairment to bodily functions, serious dysfunction of any bodily organ or part, or in the case of behavioral conditions place the health of the patient or others in serious jeopardy. In pregnant women having contractions, an MSE must determine if discharge or transfer will pose a threat to the health of the patient and/or the fetus.

- Any patient who presents to the emergency department or within 250 yards of the entire hospital campus MUST be ***offered*** a medical screening exam and an MSE must be performed if requested.
- An MSE does not need to occur if a patient (with capacity to refuse) or an appropriate decision maker refuses.
- The offering of the MSE and the risks and benefits of refusing an MSE MUST be documented in the chart.
- MSEs must be performed on/offered to all violent patients. SPD and security CANNOT remove violent patients from the department without an MSE being performed if one was requested by the patient or if there is a reasonable suspicion of an acute behavioral/psychiatric condition which might be causing lack of capacity.
- Any patient who wants to leave without being seen can do so if an acute psychiatric condition/lack of capacity is not reasonably suspected. **If lack of capacity is suspected, an MSE must be performed prior to the patient leaving.**
- **At Swedish CH and FH ED, only physicians (and PAs and NPs at FH) can perform an MSE.** Nurses can offer the MSE and document refusal but only MDs and PAs can perform the MSE.

## Emergency Medical Condition (EMC):

"A medical condition manifesting itself by acute symptoms of sufficient severity (including severe pain) such that a prudent layperson, who possess an average knowledge of health and medicine, could reasonably expect the absence of immediate medical attention to result in placing the health of the individual (or, with respect to a pregnant woman, the health of the woman or her

unborn child) in serious jeopardy, serious impairment to bodily functions, or serious dysfunction of any bodily organ or part**."**

- EMERGENCY MEDICAL CONDITIONS INCLUDE EMERGENCY BEHAVIORAL/PSYCHIATRIC CONDITIONS

  If there is reasonable suspicion that an acute psychiatric condition is present which might be causing a lack of capacity (an individual's ability to make an informed decision), an MSE must be done prior to a patient leaving to determine if a patient has capacity to leave without being seen.

If an emergency medical condition is identified, attempts must be made to stabilize the patient. This includes use of all of the resources available at the hospital including all on-call providers. If the campus you are at does not have the capability or capacity to stabilize the EMC, the patient will need to be transferred following strict guidelines to another campus (or hospital system) which does have the capacity and capability to treat the EMC.

## EMTALA Appropriate Transfers:

**A patient MUST be stabilized before transfer or the ED MD MUST ENSURE and DOCUMENT in the chart that the benefits of transferring an unstable patient outweigh the risks.**

- There must be a receiving physician at the receiving facility and this MUST be documented in the chart.
- Patient consent must be obtained prior to transfer *if possible*.
- The transfer documents MUST contain the patient consent and the ED MD certification that the benefits of transfer outweigh the risks.
- Medical records must be sent with the patient to the receiving facility.
- Medically appropriate transportation (with life support equipment/personnel if needed) must be provided for the patient.

## EMTALA Transfer Consent Form:

The consent to transfer must be filled out appropriately and completely every time. This form is the physician certification that the patient is stable for transfer or that the benefits of transfer outweigh the risk in unstable patients. It also consents the patient or representative to the risks and benefits of transfer.

This form must be filled out for every transfer (including ED to ED transfers) and patients who are discharged to go directly to another medical provider to complete stabilization of the EMC. Examples of this are patients who are discharged to go to another ED, MD office (ex: ophthalmology), or L+D.

❖ See EMTALA Transfer Consent Form Cheat Sheet Attached

TRANSFER CONSENT/PROVIDER CERTIFICATION

RECEIVING HOSPITAL ACCEPTANCE:
Name of Facility _____ Accepting LIP _____
Address _____ Facility Phone # _____

RN Report Called To (name of receiving nurse) _____ Date _____ Time _____

RN Report Called By (name of reporting nurse) _____
*Send completed Transfer Form and Provider Certification;
*Send hard copy of medical records related to the emergency condition if transferring to a non-Swedish facility

☒ The receiving facility has the available space, qualified personnel, and has agreed to accept the patient.

MODE OF TRANSPORT
☐ ALS ☐ BLS ☐ Private Vehicle (section 3 on back) ☐ Air Transport ☐ Other _____

REASON FOR TRANSFER
☐ Specialized treatment or services available at receiving facility
☐ Patient/Legal Representative request (section 1 on back)
☐ Condition is likely to deteriorate without transfer
☐ Other_____

| Risk(s) of Transfer:_____ | Benefit(s) of Transfer: _____ |
|---|---|
| _____ | _____ |
| ☒ All transfers have inherent risks of delays or accidents in transit, pain/discomfort with movement and limited medical capacity of transport. | _____ |

PATIENT CONSENT FOR TRANSFER
I have been fully informed of and understand the risks and benefits of transfer that have been explained to me. I have had all my questions answered, and I have given my consent to the transfer. I hereby release the attending provider and the hospital from all responsibility for any ill effects which may result from the transfer.

_____ _____ _____ _____
Signature of Patient/Legal Representative | Printed Name/Relation of Legal Representative | Date | Time

_____ _____ _____ _____ _____ _____
Witness #1 (if verbal or telephone consent) Date Time Witness #2 (if verbal or telephone consent) Date Time

☐ Yes, Interpreter was used as part of this process

DISCHARGE VITAL SIGNS - (*COMPLETE AT TIME OF TRANSFER*)

| Time:_____ | B/P:_____/_____ | HR:_____ | Resp. Rate:_____ | $SpO_2$:_____ | Temp:_____ |
|---|---|---|---|---|---|

PHYSICIAN CERTIFICATION OF TRANSFER (*COMPLETE AT TIME OF TRANSFER*)

The patient has undergone a medical screening exam and is transferring to a hospital that provides the necessary treatment.

☐ STABLE – The patient has been stabilized within reasonable medical probability no material deterioration of the patient's condition is likely to result from transfer.

*OR*

☐ UNSTABLE – The patient is unstable but expected medical benefits of transfer outweigh potential risks associated with transfer.

Based on this examination and the information available to me at the time of transfer, I certify that the benefits of transfer are outweighed by the risks reasonably anticipated at the receiving facility.

_____ _____ _____ _____
Signature of Physician | Printed Name | Date | Time

PATIENT LABEL

SWEDISH
SEATTLE, WASHINGTON



CC706 Risk Management and Compliance, 6/2017, version 7

## Behavioral Health Patients:

Behavioral health patients will be evaluated by both the physician and the medical social worker (MSW). In King County, MD/DOs including psychiatrists do not have the authority to detain or hospitalize behavioral health patients. We can and do temporarily detain them and provide medical clearance while in the ED. Medical clearance is determined through evaluation of medical complaints, including intoxication, and laboratory/toxicology analysis. The MSW may have to wait for intoxication to clear or the medical issue to be resolved to evaluate the patient. Once stabilized or sober (BAC < 0.1%), they are referred to county DCRs (Designated Crisis Responders) if MSW/MD feel detainment is needed. DCRs can take up to 6 hours to arrive and asses a patient in the ED and determine if patient should be detained or hospitalized. In some cases, such as revoked LROs (Less Restrictive Orders) they actually have up to 12 hours to assess the patient.

Patients who need social work evaluation who do not require DCR involvement can be evaluated when "clinically sober." A BAC < 100 is only required for DCR referrals or referrals to community resources.

## Precautionary Hold Policy:

All patients arriving via ambulance with police interaction, IVT or ITA patients (see below for definition), pre-hospital threats (to self or others), history of violence against health care workers, or those arriving in restraints need immediate evaluation by the ED Physician, CN, and social worker to obtain the ambulance report. This is called a precautionary hold. A decision is made at that time (based largely on EMS report and SPD paperwork) to either keep or remove the restraints placed by EMS or initiate new restraints. If restraints are indicated, a Code Gray Transfer will be called to transfer the patient from ambulance stretcher to ED stretcher in restraints. A Code Gray (see below for definition) will also be called if restraints are needed in patients who arrive in handcuffs or shackles and are exhibiting behavior requiring restraints.

## Code Gray:

For patients needing locked restraints, a Code Gray is called. When a Code Gray is called, it will be announced overhead throughout the hospital and the ED Physician must be present though we do not participate in the actual restraint placement. Security will rush to the ED and they and staff will restrain the patient before the Code Gray is cleared. A short huddle will be called after the patient is restrained with all members of the care team to discuss the code.

IVT (involuntary treatment) patients are brought in by EMS after being held by police and sent to the ED for psychiatric evaluation/medical clearance and possible detainment. SPD will provide IVT paperwork or accompany the patient to the ED. An IVT can only by lifted by a MSW after medical clearance in the ED.

ITA (Involuntary Treatment Act) patients are detained under court order prior to arrival and are usually in the ED just for medical clearance and placement. The level of observation needed in these patients can range from elopement precautions to restraints and a Code Gray may need to be called on arrival.

## Restrained/Held Patient:

If patients state or are deemed to be suicidal, homicidal, or are deemed to be a threat to themselves or others and the ED Physician has determined they do not have decision making capacity at that time, there exists a spectrum of observation levels to keep the patient safe. Restraining a patient is making the determination that s/he does not have capacity to make decisions and is taking away her/his civil rights. This is often needed, but it is obviously a big deal and the goal is to use the least restrictive option, which is often suicide/elopement precautions. De-escalation techniques should be used (if safe) to avoid restraint placement as well. Patients exhibiting agitation from acute psychosis should be medicated with appropriate anti-psychotics just as patients with ACS should be medicated for their chest pain. We do not "chemically restrain" patients at Swedish by policy. We "treat their agitation" with meds.

### Behavioral Health Levels of Observation:

1. No Behavioral Health Hold:
   Voluntary patients.
   No Code Gray will be called if patient chooses to leave.

2. Suicide/Elopement Precautions:
   Patient receives a purple gown.
   PSA is assigned to observe the patient.
   Belongings are collected and inventoried and stored away from the patient.
   A behavior safe patient environment should be created.
   Patient informed that Code Gray will be called if s/he attempts to leave.

3. Seclusion
   This is related to staff and patient safety. The patient is kept in a room alone and not allowed to leave.
   No visitors are allowed. Staff interaction should be limited only to absolutely essential tasks. If you would let them walk to the bathroom alone for example, they should not be in seclusion.
   Patient informed that Code Gray will be called if s/he attempts to leave.

4. Restraint for Violence
   Must be placed by security during Code Gray.
   Physician must document clearly what behaviors prompted restraint placement.
   Physician must frequently evaluate if patient is safe for restraint removal or document which behaviors warrant continued restraint use.

We never use locked 2 point restraints except during the very short progressive release process. All locked restraints are 4 point or more (chest strap, spit hood).

5. Restraint and Seclusion
   This should be extraordinarily rare and likely means the patient needs more medication to treat their agitation.
   This requires two separate orders (restraint and seclusion)
   There should be a very detailed note if you ever need to use this
   Now that FH ED (and soon CH ED) have seclusion rooms, any time the door is closed (even unlocked) with a restrained patient inside, that is by definition restraint and seclusion. If you walk by a room with a restrained patient inside, either the door shouldn't be closed or you need to place both orders and a detailed note as to why that is happening. It is usually not the intention of the physician.

❖ See Behavioral Health Patients Levels of Observation Attached

## Behavioral Health Orders:

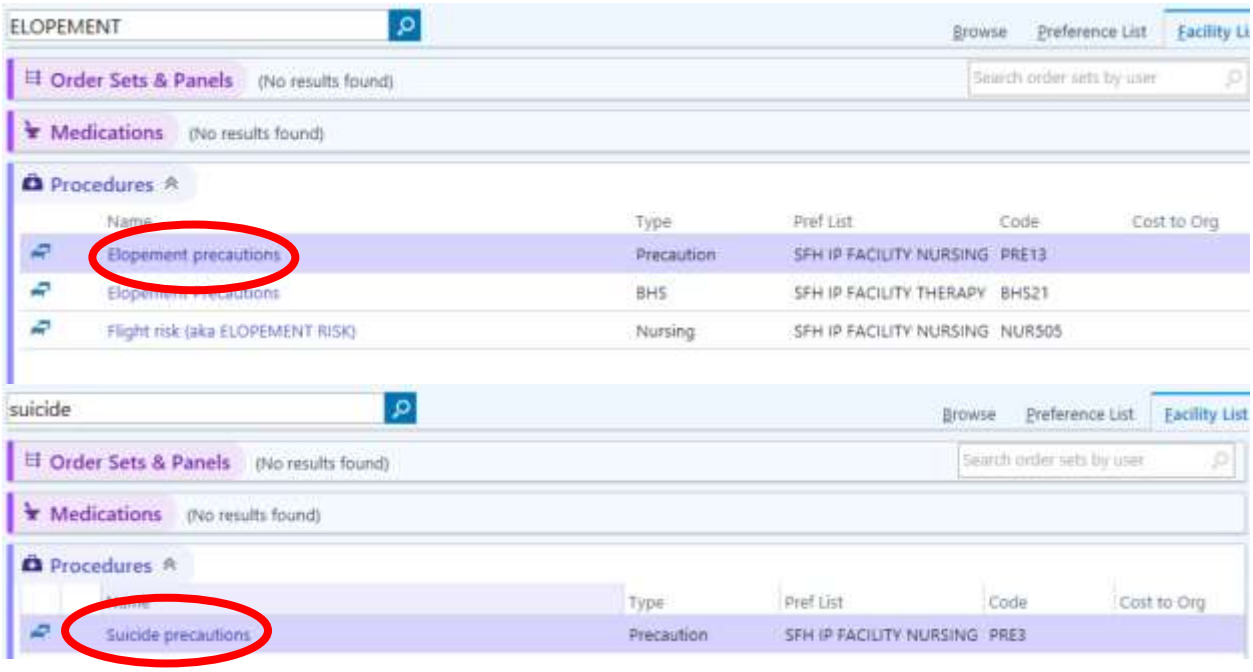
## Law Enforcement (Incarcerated) Patients:

Patients who arrive in handcuffs or shackles must be accompanied by law enforcement if they are to remain in shackles or handcuffs. We do not restrain patients who arrive in handcuffs/shackles unless they exhibit agitated behavior requiring restraints for staff or patient safety. Handcuffs/shackles must be removed if patients are restrained via locked 4 points. Patients accompanied by law enforcement may remain in handcuffs and shackles but they cannot be handcuffed to a piece of furniture.

## Suicide and Elopement Precautions:

While the suicide and elopement precautions can be initiated by staff, a physician must place this order within the hour. There is no separate F2F (Face to Face) note required, however documentation should be done in physician note. The correct order for this is **ELOPEMENT PRECAUTIONS** or **SUICIDE PRECAUTIONS.** Suicide Precautions requires a 1:1 sitter.

- Sitter - 1:1 for SI patient but sitter can watch multiple elopement precaution patients
- Purple Gown/Paper Scrubs
- No Face to Face needed
- No order Renewal needed
- No Nurse Flowsheet needed
- Continues until discontinued
- Sitter writes note every 2 hours




## Seclusion/Restraint Orders:

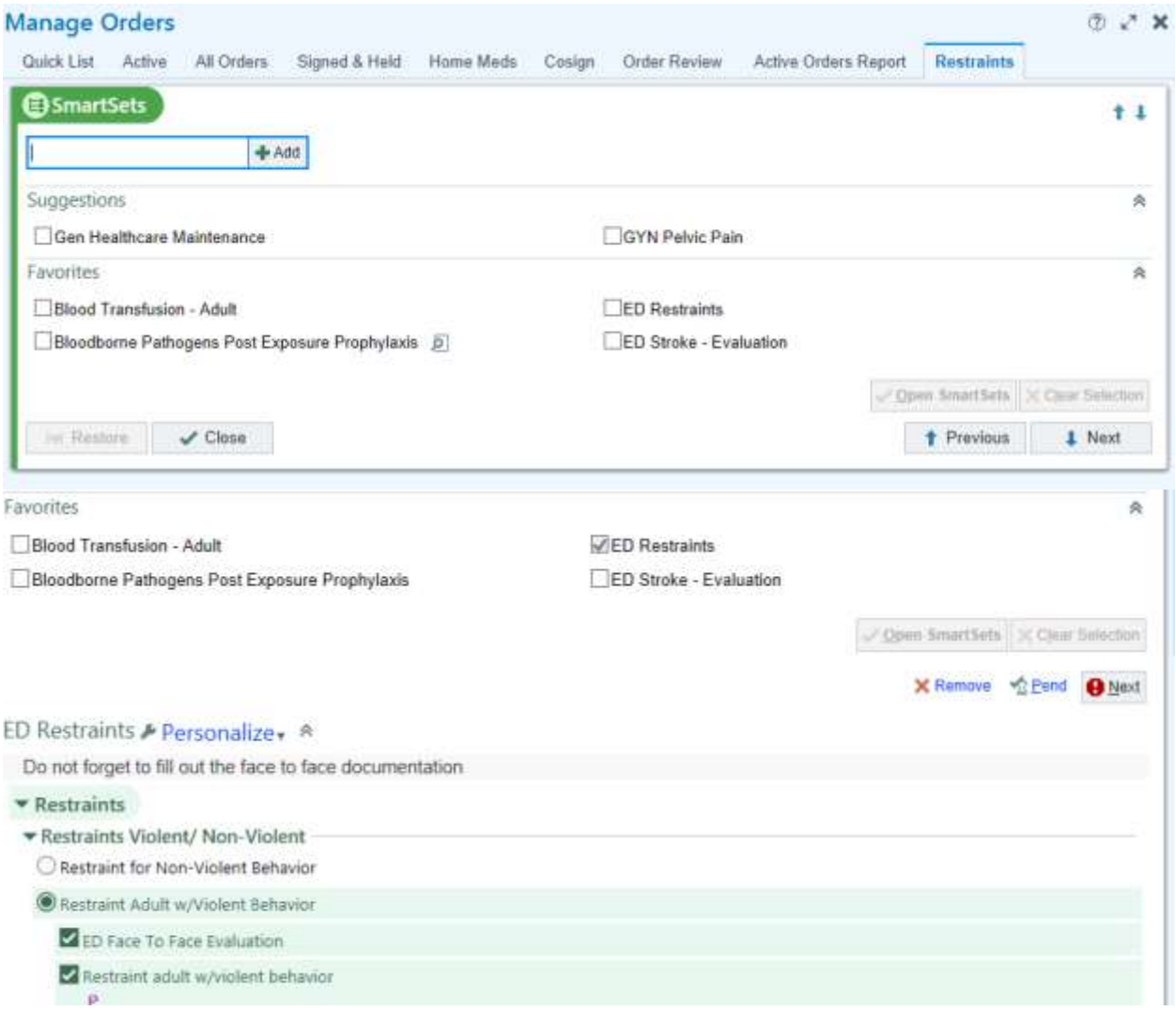
The hospital is monitored very closely on the timing of restraint orders and Face to Face evaluation notes and we have no room for error. Appropriate restraint order and F2F note must be placed before or immediately after a patient is placed in seclusion or restraints. **No verbal orders** are allowed for seclusion/restraints.

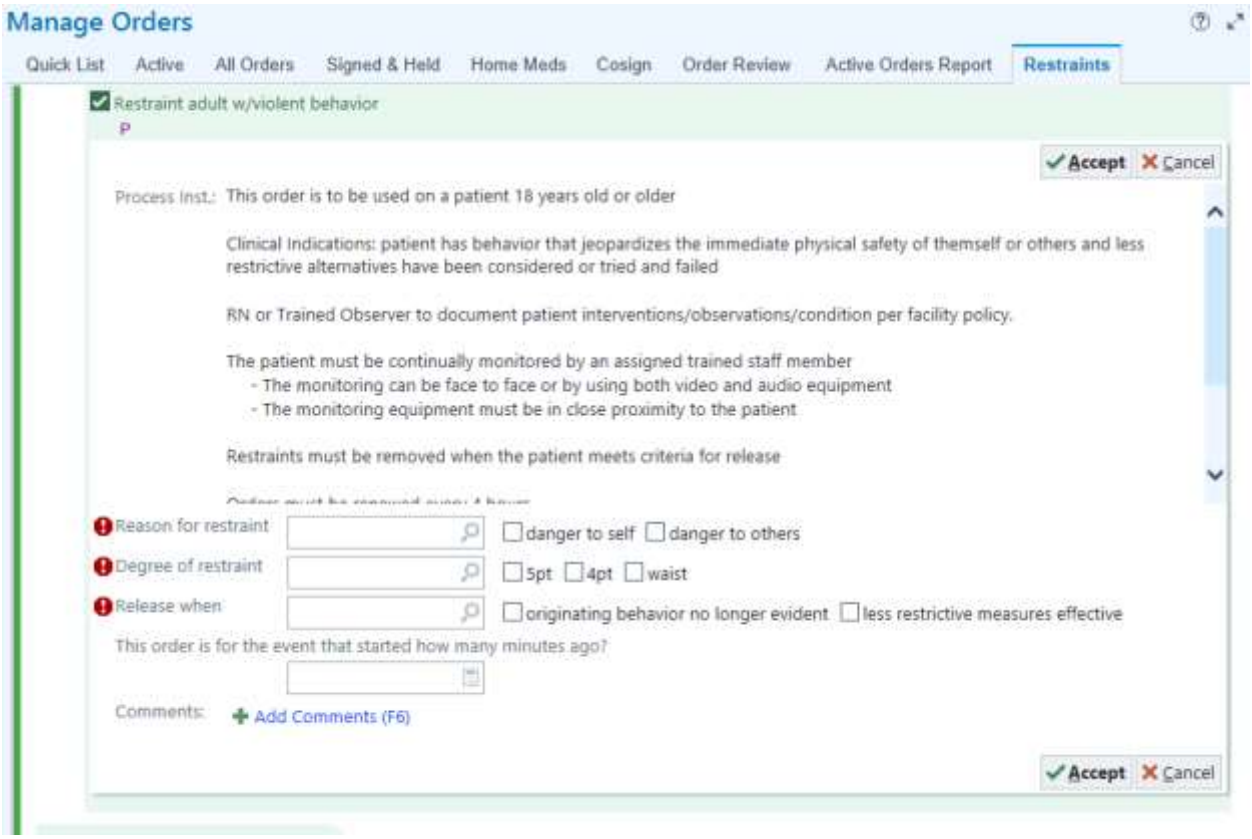
- The only appropriate method to place an *initial* order for restraints is via the EPIC Smartset **ED Restraints**.
- **Seclusion orders and F2F for seclusion are placed separately outside of the smartset.**
- **Restraint and seclusion orders must be renewed every 4 hours** (see below for order specifics). For the renewal orders only, you should use adhoc restraint orders from EPIC and not the smartset. If you go into Manage Orders → Active Orders, a renewal option is frequently available if the order has not expired.
- Restraint/seclusion orders must be DC'd by the physician when they are removed. If restraints/seclusion orders are DC'd but the patient subsequently needs to go back in restraints or seclusion, a new order and F2F via the smartset is needed.

## Restraint Orders:

### ED Restraints Smartset

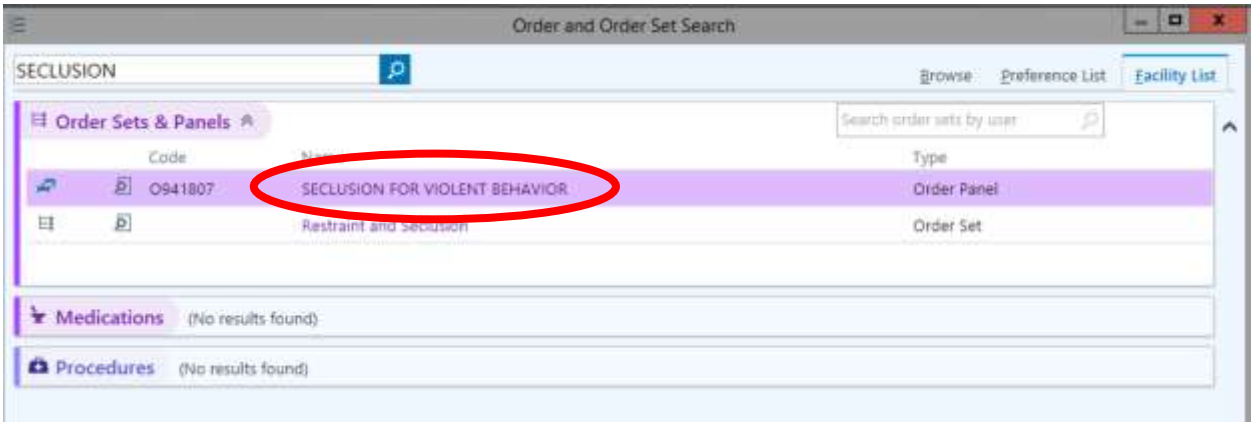
- The Smartest includes the F2F template which mandates that this note is completed prior to signing the order. Click on “edit” to open the note.
- Both non-violent and violent restraints are included here so DO NOT USE adhoc restraint orders (except for peds patients) for the *initial* seclusion restraint order.
- Caveat: Currently the non-violent and violent restraint notes are the same since we got new EPIC. This is changing and the appropriate restraint note for non-violent restraints will be **.EDNONVIOLENTRESTRAINT**. Soon, this note should be incorporated into the smartset. Until that note is live, edit the non-violent note to indicate the actual reasons you are placing patients in restraints.



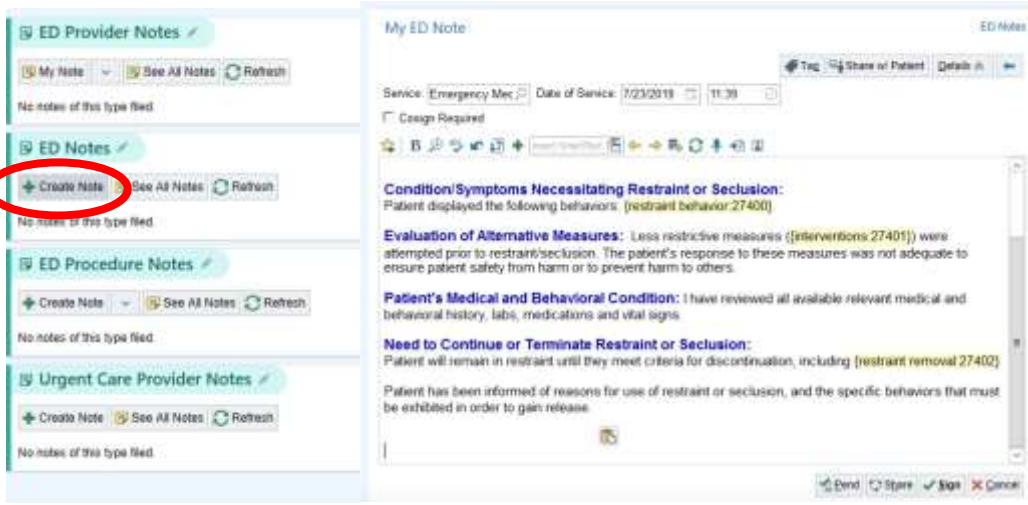



## Seclusion Orders:

- Seclusion orders are not included in the Smartset




- You will need to place an ad-hoc seclusion order and a separate note (not your ED provider note as you can only have one per encounter) for the F2F using **.EDRESTRAINT**.




## Order Specifics:

### Restraint for Violence – Adult

- Locked 4 point restraints (except briefly 2 point during progressive release process)
- PSA required
- Order and F2F required before or immediately after placement
- Re-order every 4 hours (place on 00:00, 04:00, 08:00, 12:00, 16:00, 20:00, 24:00 schedule)
- New F2F required every 24 hours (it should be very very very rare for a patient to be in restraints for violence for >24 hours)
- Order must be modified if 5$^{th}$ or 6$^{th}$ point (waste strap, chest strap, or spit hood) is added

### Seclusion for Violence

- PSA required
- Order and F2F required before or immediately after placement
- Re-order every 4 hours (place on 00:00, 04:00, 08:00, 12:00, 16:00, 20:00, 24:00 schedule)
- New F2F required every 24 hours (it should be very very very rare for a patient to be in seclusion for 24 hours)

### Restraint for Medical Interference – Adult

- Soft (unlocked) two point restraints
- No PSA needed
- Order and F2F required within 1 hour of placement
- Re-order every 24 hours
- New F2F required every 24 hours

## Restraints for Violence for Pediatric Patients:

- Pediatric restraint orders are restricted to 1 hour (< 9 yrs old) and 2 hours (9-17 yrs old).
- This is the only restraint type where the initial order will be placed via an adhoc order instead of using the smartset.

| | | | | |
|---|---|---|---|---|
| RSTR0011 | Restraint for Violence-Peds ages 9 - 17 | 2 HR RESTR | Restraints | FACILITY PROCEDUI |
| RSTR0011 | Restraint for Violence-Peds under age 9 | 1 HR RESTR | Restraints | FACILITY PROCEDUI |

- You still need a F2F before or immediately after placement and you must create an "ED Notes" and and insert **.EDRESTRAINTS** smartphrase into a separate note.

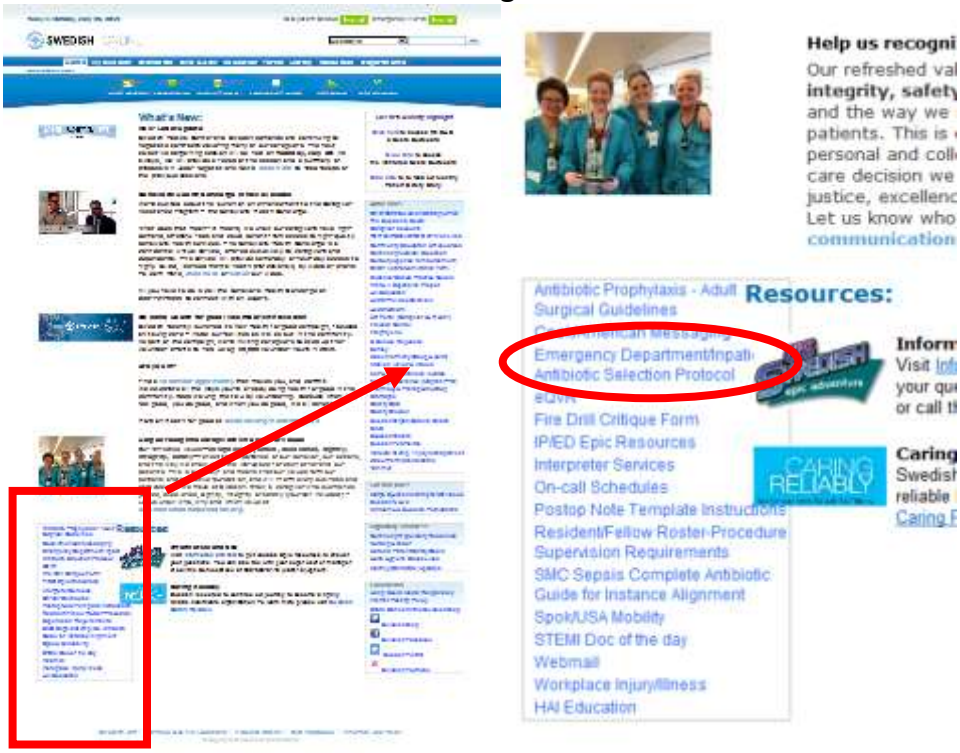
## Boarding Detained/Voluntary Patients:

Once a patient has been detained by the DCR (or sometimes for voluntary psych admits) and it has been established that there are no available psychiatric beds, the patient should be admitted to the medicine service at the MSU at Issaquah to board while awaiting placement. DCRs often arrive 1-2 MD shifts after the initial MD has evaluated the patient. DCRs are required to speak with a physician and document that we agree with the detainment and we have to do this on patients we did not primarily see. We are also now required to give them the time of medical clearance. All signed-out patients, including psych patients, should be seen by the new ED MD at least once a shift and a note should be placed in the chart. Any behavior changes prompting cessation, continuation, new restraints should be documented by the new ED MD.

# ED Processes and Procedures

## Antibiogram for ED:

**Located on swedishonline.swedish.org website**




- See ED Antibiogram Attached

## Blood Transfusion:

For any patient requiring blood products an established protocol and order set is in place for any of the multiple scenarios that can occur. All blood products should be ordered by the LIP when possible though, in an emergency, a RN can take a verbal order to initiate the process. When possible, consent including risks and benefits should be obtained by the physician/APC. The patients' RN can obtain the actual signature on the Verification of Informed Consent for Blood Transfusion form, but only *after* the LIP obtains oral consent.

Most blood products can be ordered using the **Blood Transfusion-Adult** order set. All patients will need a type and screen which can be ordered within this order set. The order set

has options for Transfuse Crossmatched, Transfuse Uncrossmatched and HOLD . Order set pictures below.

**You do not need to Type and Cross blood at Swedish if you are not sure you are going to need the blood. Once you type and screen, the blood banks have plenty of blood availably quickly.**

Uncrossmatched O PRBCs are available under the Transfuse Uncrossmatched section of the order set. A tech or RN will facilitate getting the blood but the MD must sign a paper Transfusion Report authorizing the transfusion. Before any uncrossmatched blood products are given a type and screen must be drawn. Within this section of the order set there is also an OB hemorrhage order which approximates a massive transfusion protocol (MTP) at First Hill and provides 6U PRBC, 6 Plasma, 1 Platelet and 2 Pooled Cryo. An MTP can be ordered at Cherry Hill by calling the SMC transfusion service lab. This will be available at First Hill Shortly.

Pediatric and neonatal blood transfusions are done outside of this order set using individual orders for type and screen, preparing products and transfusing products. Please see the Blood management: Blood Administration (Pediatric) policy in the Swedish standards section for more information.

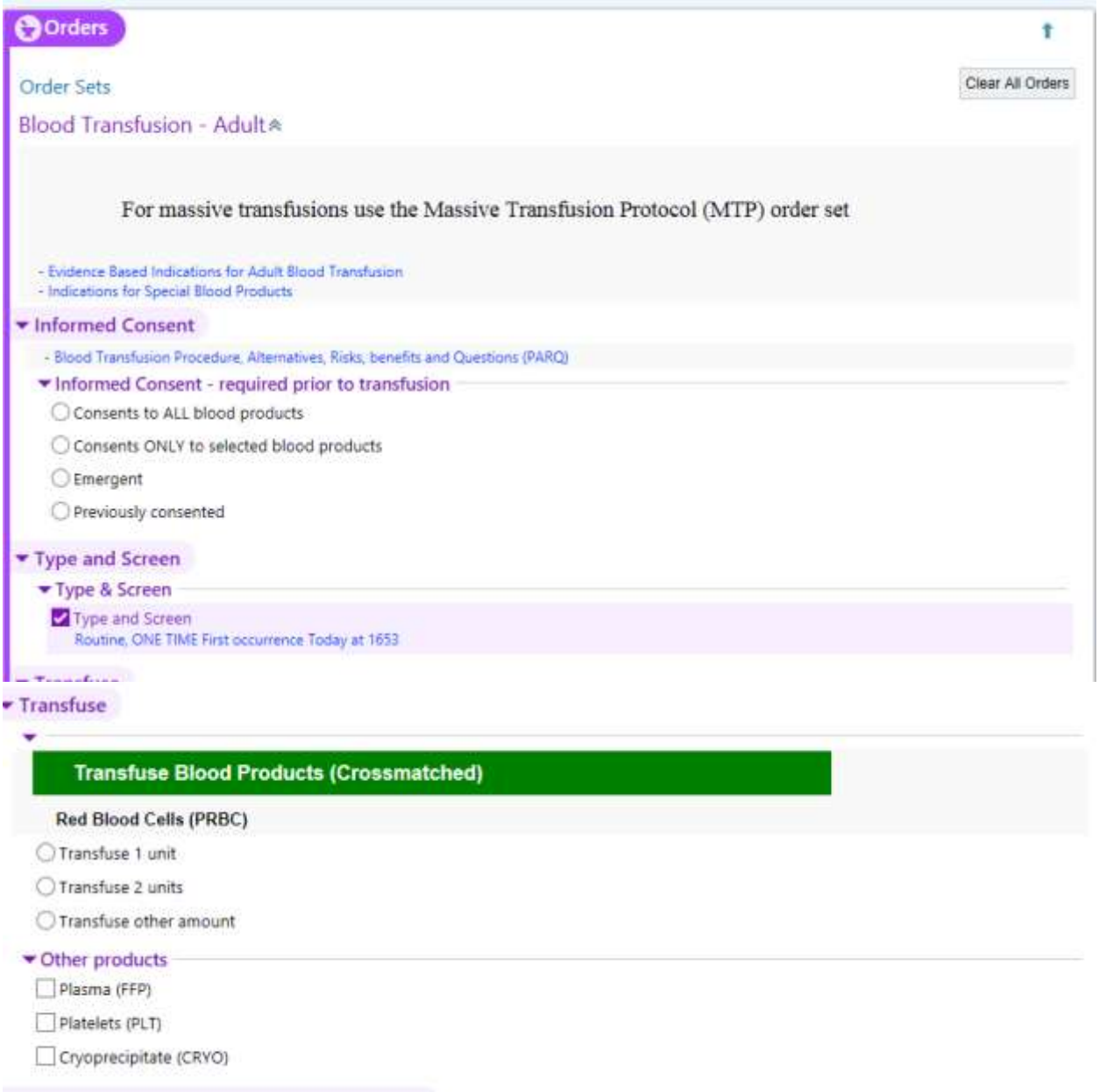
An effort is being made to reduce blood product usage due to low blood product supply both at a local/national level. Specific indications for blood product transfusion are provided by SMC though they should never replace clinical judgment. **There is a push to consider transfusing only one unit of PRBCs in hemodynamically stable anemic patients who are being admitted as the 2nd unit has often been found to be unnecessary.**

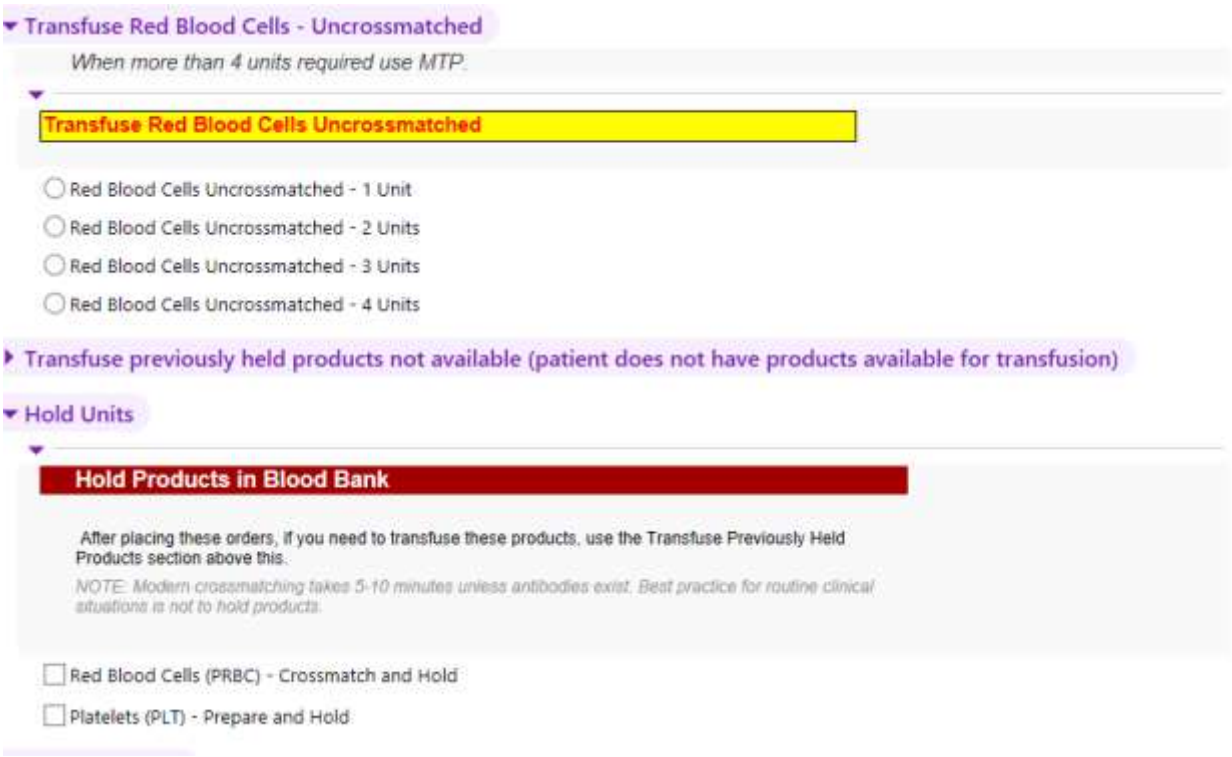
- ❖ See Blood Management: Indications for Transfusion – Adult Attached

Any patient receiving blood products needs to be observed closely for transfusion reactions. If suspected, the transfusion should be stopped immediately. As indicated, Tylenol, antihistamine and other supportive therapies can be provided. There is a Swedish clinical protocol for suspected transfusion reaction included attached.

- ❖ See Transfusion Reactions Attached

**Adult Blood Transfusion Order Set**


Orders
Order Sets
Clear All Orders
Blood Transfusion - Adult
For massive transfusions use the Massive Transfusion Protocol (MTP) order set
- Evidence Based Indications for Adult Blood Transfusion
- Indications for Special Blood Products
Informed Consent
- Blood Transfusion Procedure, Alternatives, Risks, benefits and Questions (PARQ)
Informed Consent - required prior to transfusion
Consents to ALL blood products
Consents ONLY to selected blood products
Emergent
Previously consented
Type and Screen
Type & Screen
Type and Screen
Routine, ONE TIME First occurrence Today at 1653
Transfuse
Transfuse Blood Products (Crossmatched)
Red Blood Cells (PRBC)
Transfuse 1 unit
Transfuse 2 units
Transfuse other amount
Other products
Plasma (FFP)
Platelets (PLT)
Cryoprecipitate (CRYO)

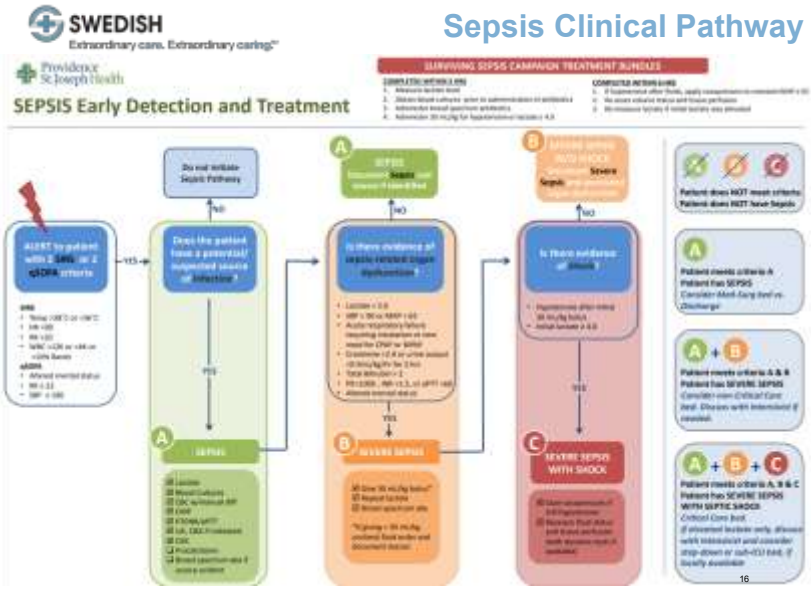

Transfuse Red Blood Cells - Uncrossmatched
When more than 4 units required use MTP.
Transfuse Red Blood Cells Uncrossmatched
Red Blood Cells Uncrossmatched - 1 Unit
Red Blood Cells Uncrossmatched - 2 Units
Red Blood Cells Uncrossmatched - 3 Units
Red Blood Cells Uncrossmatched - 4 Units
Transfuse previously held products not available (patient does not have products available for transfusion)
Hold Units
Hold Products in Blood Bank
After placing these orders, if you need to transfuse these products, use the Transfuse Previously Held Products section above this.
NOTE: Modern crossmatching takes 5-10 minutes unless antibodies exist. Best practice for routine clinical situations is not to hold products.
Red Blood Cells (PRBC) - Crossmatch and Hold
Platelets (PLT) - Prepare and Hold

## Code Sepsis:

- If you suspect severe sepsis/septic shock, alert the CN of code sepsis - you will/should get a sepsis BPA ("best practice advisory") pop-up in epic based on SIRS critiera and suspicion of infection. Since the triage nurse has to enter the suspicion for infection, this may not fire. Cutoff for lactate is >2 for severe sepsis. The ICU will be alerted to a possible admission and the ICU physician will be alerted via text page as a heads up.
- Immediately weigh the patient, give 30 cc/kg bolus LR wide open not on a pump, obtain blood cultures, give appropriate antibiotics
  - Caveat: If you are concerned about fluid overload, you do not have to give the 30 cc/KG bolus but you MUST document why using the **.SWEDISHSEPSIS** dotphrase.
- You MUST also place the "sepsis management" order. This triggers background tracking and influences our quality incentives. It does not actually order any interventions.
- After 30 cc/kg LR, if the patient has an SBP < 90, MAP < 65, or lactate > 4, alert the CN and patient should go to the ICU. At this time, discuss patient with ICU physician. If patient does not qualify, admit to IMCU or floor if stable.
- If the patient initially responds to the bolus but then BP/MAP dip below or lactate climbs above thresholds, call code sepsis patients should go to ICU even if they again respond to fluids (this may change soon as we get better monitoring on the floors)
- You MUST use the **.SWEDISHSEPSIS** dotphrase whenever treating severe sepsis or septic shock

We are supposed to get a great EPIC sepsis orderset back in November. Don't use the one in there currently as it is outdated.

- ❖ See Swedish Sepsis Pathway Attached



## Code PERT (320-PERT):

- PE response team – includes CH intensivist (cardiac if available), Cardiovascular surgery, Interventional radiology, who will all come to a decision about if intervention on a patient with a PE is needed – pulmonectomy, catheter directed TPA, IA TPA, or usual heparinization

1. First calculate the sPESI score

| | |
|---|---|
| Age >80 years | 1 |
| Cancer | 1 |
| Chronic heart failure or pulmonary disease | 1 |
| Pulse > 110 | 1 |
| Systolic BP <100 | 1 |
| Arterial oxyhemoglobin saturation <90% | 1 |

2. If the sPESI is 0, Low risk PE → page hospitalist, anticoagulation
3. If the sPESI is ≥1 → calculate BOVA Score

| | |
|---|---|
| Heart Rate>110 | 1 |
| Systolic BP 90-100 | 2 |
| Elevated Troponin | 2 |
| RV Dysfunction | 2 |

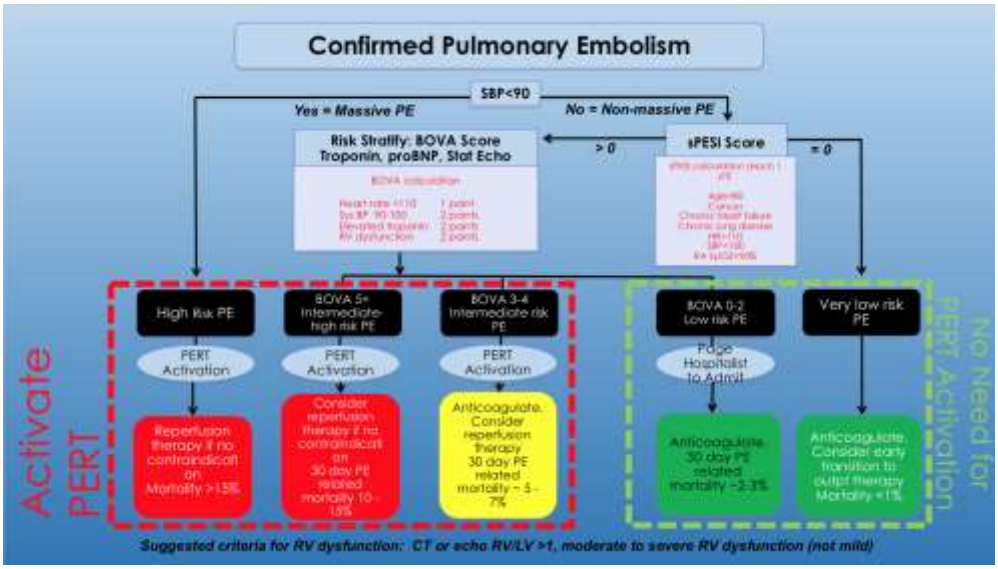
4. If the BOVA Score is 0-2 → Low risk PE → page hospitalist, anticoagulation
   If the BOVA Score is 3-4 → Intermediate risk PE → Activate PERT
   If the BOVA Score is 5+ → High risk PE → Activate PERT
5. The CH intensivist will call you back to discuss the case and then either activate the PERT team for further discussion or recommend an intervention. The intensivist will coordinate activity with the rest of the PERT team.
6. If the patient is unstable or coding, and you suspect PE but cannot get a CTA, it is worth it to call this code
7. Smart phrase **.pert1** or PERT in smart text box – steal from Dr Selander's list for now.

❖ Code PERT Flowchart and sPESI Score Attached

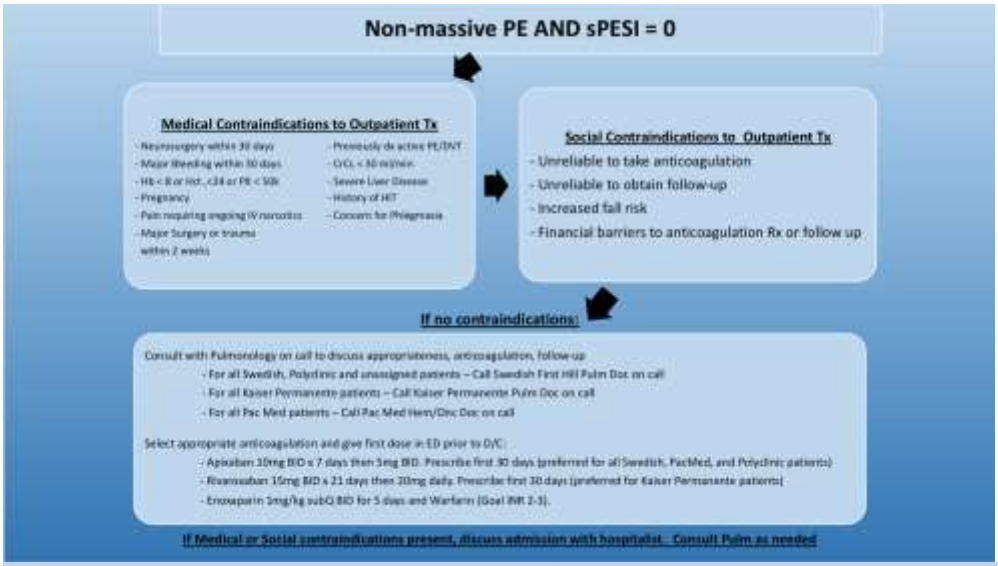
## Low Risk PEs:

- We currently have a process for treating low risk PEs as outpatients with prescribed follow-up

- See PERT/Outpatient PE Pathway Below




-




## Anticoagulation Considerations

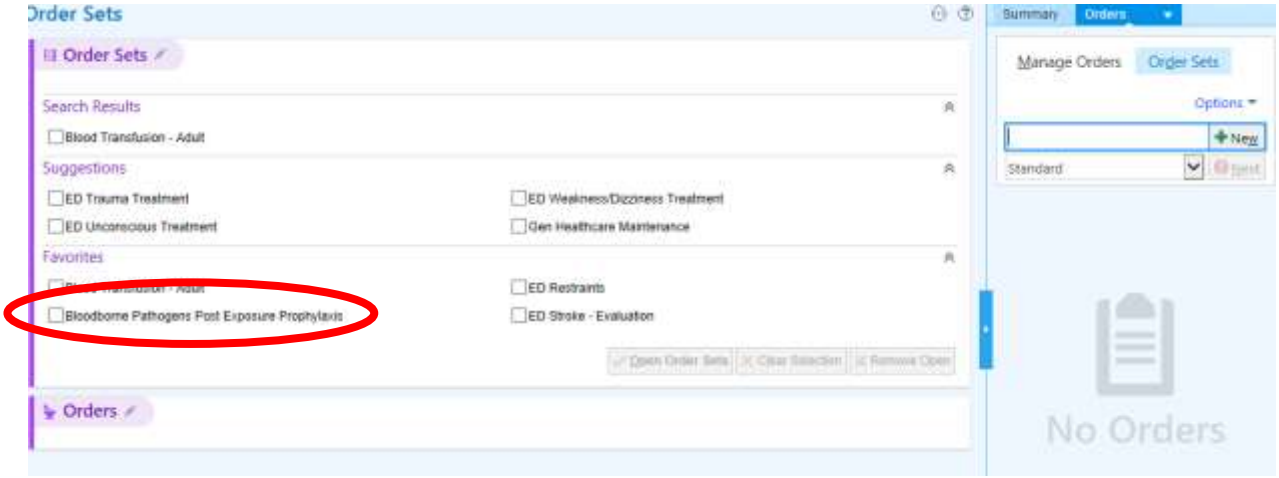
- Apixaban has online coupon ( .eleqisdiscountcard dot phrase in Epic )
  - https://mprsetrial.mckesson.com/6822/landingPage.html?src=PROVIDENCELCT#
  - $10 co-pay for commercially insured and 30 days free if no commercial insurance
  - Apixaban associated with slightly decreased bleeding risk in afib pts
- Rivaroxaban has online coupon for commercially insured only
  - https://www.xarelto-us.com/xarelto-patient-assistance/savings-card
- Kaiser does not honor these coupons
  - KP patients should get rivaroxaban
  - If ability to pay a concern, should get apixaban + voucher but must fill at non-KP pharmacy
- All patients must be discussed with Pulmonology and have follow-up plan arranged before discharge

## Occupational Exposure Protocol (after Employee Health hours):

For needle sticks, the CN can assist by contacting staff managing source patient and to review case with Nursing Supervisor. Orders are now in EPIC for this and no longer on paper. If employee wants baseline HIV test, you must provide pre- and post-test counseling.

If HIV PEP is indicated, provide first dose in ED, and a Rx. Consult ID if any question about updated HIV PEP recommendations, or if source patient is known HIV/rapid HIV is positive in order to design appropriate regimen. Order appropriate labs if PEP will be prescribed: CBC, hepatic function, BMP
Tetanus prn
Follow up: Employee Health, in some cases with ID. Non-employees (such as us) do not follow up with employee health but with our PCPs or with ID.

Based on new protocol, the ED will (hopefully) be bypassed for most needle sticks.



Order Sets

Clear All Orders

## Bloodborne Pathogens Post Exposure Prophylaxis

Personalize

### Studies

#### Labs - Bloodborne Pathogens Post Exposure Prophylaxis

- [ ] Hepatitis B Surface AB
- [ ] Hepatitis B Surface AG
- [ ] Hepatitis C AB
- [ ] HIV AG/AB, 4th Gen, Reflex
  ASAP, ONE TIME
- [ ] HIV Type 1 and 2 AB Screen
- [ ] Pregnancy, Urine, Qual
  ASAP, ONE TIME

#### Labs - PEP Treatment

- [ ] CBC with Differential
  ASAP, ONE TIME
- [ ] Comprehensive Metabolic Panel
  ASAP, ONE TIME
- [ ] Pregnancy, Serum, Qual

### Medications

#### HIV Post Exposure Prophylaxis

Recommended HIV post exposure prophylaxis regimens:

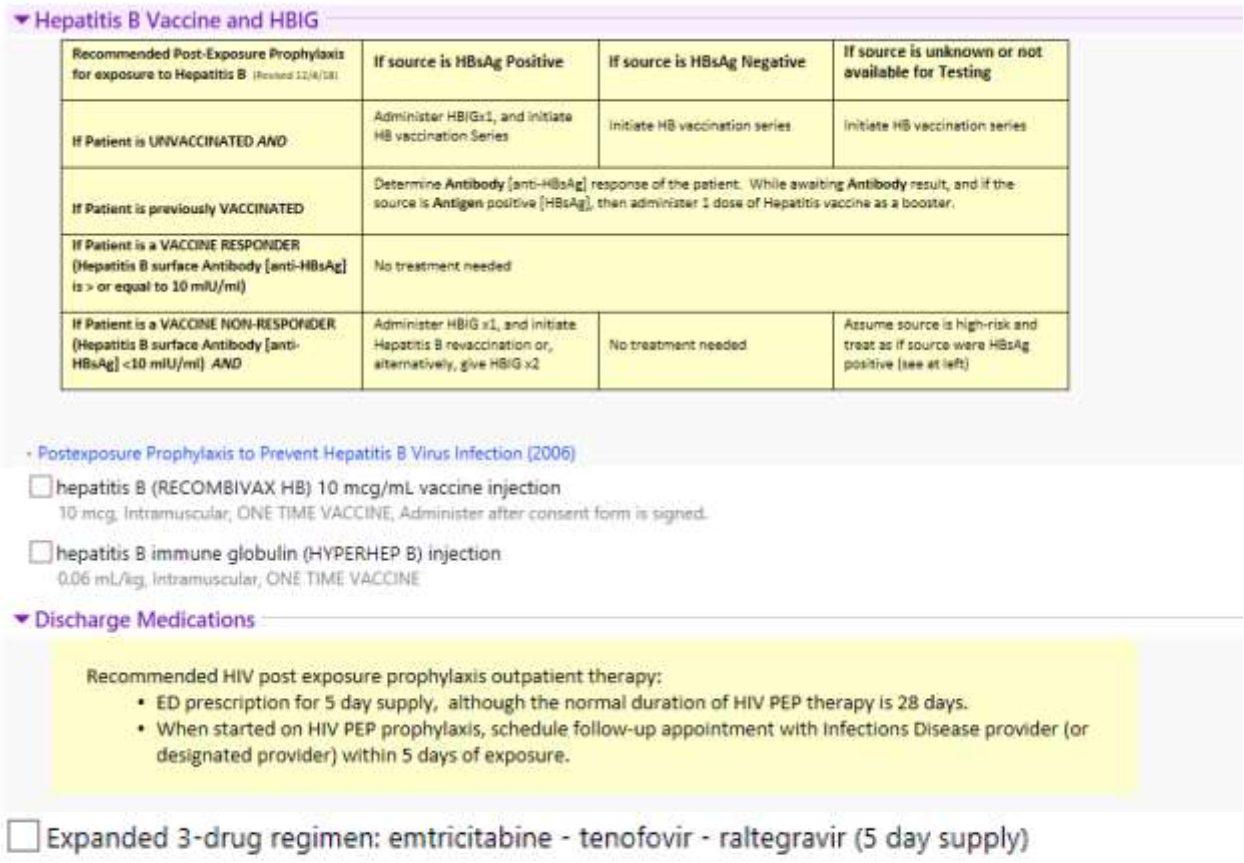
- First-line regimen for HIV PEP is a combination of emcitricabine/ tenofovir (Truvada ) and raltegravir.
- For pregnant patients or for HIV exposures when the source patient is at risk for having HIV medication resistance, consult with Infectious Diseases or contact the national **PEP Hotline 1-888-448-4911** To determine the optimal PEP prophylaxis regimen.

- U.S. Public Health Service Recommendations

- [ ] Expanded 3-drug regimen: emtricitabine - tenofovir - raltegravir

#### Immunizations

- [ ] tetanus-diphtheria-acellular pertussis (Tdap) vaccine injection
  For booster immunization. Keep in refrigerator. Give patient education information.
- [ ] tetanus-diphtheria (DECAVAC, Td) vaccine injection
  0.5 mL, Intramuscular, ONE TIME VACCINE, If patient previously received Tdap after age 10 years. Keep in refrigerator. Give patient education information



▼ Hepatitis B Vaccine and HBIG

| Recommended Post-Exposure Prophylaxis for exposure to Hepatitis B (Revised 12/4/18) | If source is HBsAg Positive | If source is HBsAg Negative | If source is unknown or not available for Testing |
|---|---|---|---|
| If Patient is UNVACCINATED *AND* | Administer HBIGx1, and initiate HB vaccination Series | Initiate HB vaccination series | Initiate HB vaccination series |
| If Patient is previously VACCINATED | Determine **Antibody** [anti-HBsAg] response of the patient. While awaiting **Antibody** result, and if the source is **Antigen** positive [HBsAg], then administer 1 dose of Hepatitis vaccine as a booster. | | |
| If Patient is a VACCINE RESPONDER (Hepatitis B surface Antibody [anti-HBsAg] is > or equal to 10 mIU/ml) | No treatment needed | | |
| If Patient is a VACCINE NON-RESPONDER (Hepatitis B surface Antibody [anti-HBsAg] <10 mIU/ml) *AND* | Administer HBIG x1, and initiate Hepatitis B revaccination or, alternatively, give HBIG x2 | No treatment needed | Assume source is high-risk and treat as if source were HBsAg positive (see at left) |

· Postexposure Prophylaxis to Prevent Hepatitis B Virus Infection (2006)

☐ hepatitis B (RECOMBIVAX HB) 10 mcg/mL vaccine injection
10 mcg, Intramuscular, ONE TIME VACCINE, Administer after consent form is signed.

☐ hepatitis B immune globulin (HYPERHEP B) injection
0.06 mL/kg, Intramuscular, ONE TIME VACCINE

▼ Discharge Medications

Recommended HIV post exposure prophylaxis outpatient therapy:
- ED prescription for 5 day supply, although the normal duration of HIV PEP therapy is 28 days.
- When started on HIV PEP prophylaxis, schedule follow-up appointment with Infections Disease provider (or designated provider) within 5 days of exposure.

☐ Expanded 3-drug regimen: emtricitabine - tenofovir - raltegravir (5 day supply)

## OxyFree ED:

All Swedish EDs are “oxy free”. Many EDs in the state have followed suit. This means, in general, we do not prescribe any narcotics other than hydrocodone. We do not treat chronic pain with IV narcotics in the ED. We do not refill narcotic or benzo prescriptions in the ED. This is not a hard and fast rule but it is tracked and we try very hard to follow it. We were one of the few states to decrease oxy related deaths and this is, in large part, due to this policy. Please note that prescribing narcotics outside this rule can make it very difficult for your colleagues in future visits.

You can include the dot phrase in your discharge instructions if patients have questions. Most of our patients are now aware of the policy. **.oxyfree** (may need to steal from Dr. Selander)

## Suboxone:

We will soon be dispensing suboxone in the ED for MAT at both EDs with a warm handoff to outpatient services. This will not require the DEA waiver as we will not be prescribing for outpatient use. More details to come as we plan to roll out Q3 2019.

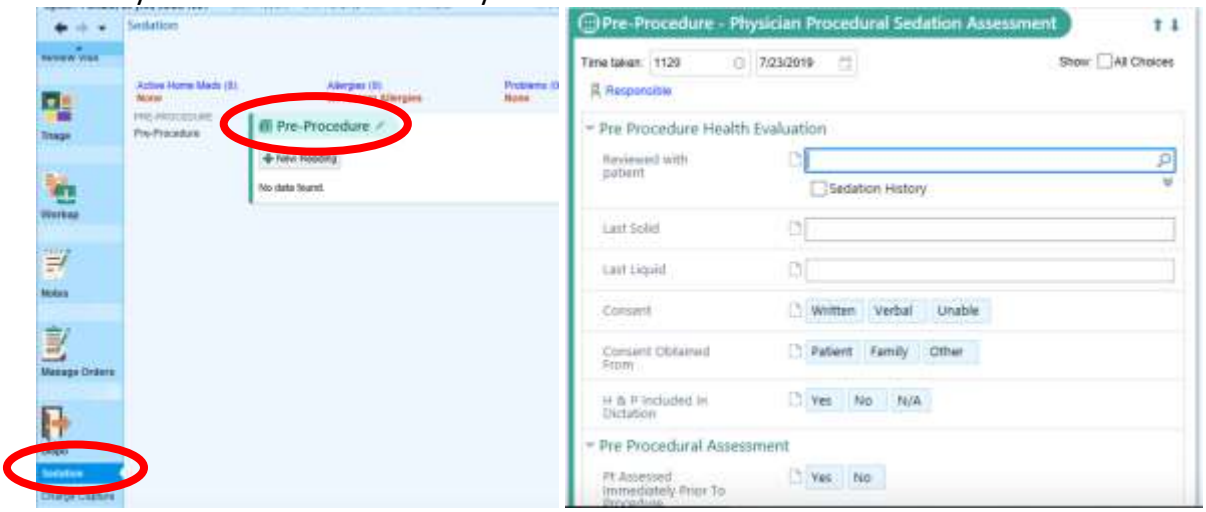
## Procedural Sedation:

Start your H+P before (all but truly emergent) procedural sedations as the sedation navigator references it.

- **You must have a hand-signed consent form for all procedures performed under sedation.** Write, for example, "arthrocentesis *under sedation*" at the top of the form. This will need to be scanned into the chart at the end of the visit.

## Sedation Navigator in EPIC:

You may have to wrench this into your sidebar.




## Urinary Tract Infections:

Currently we are working with ID and pharmacy to standardize care of ED UTIs. While there is no formal policy in place there are a few helpful guidelines. Other recommendations coming.

1. No culture on uncomplicated UTIs. Young, otherwise healthy females without structural abnormalities or systemic systems.
2. Macrobid is the first choice antibiotic for uncomplicated UTI with Cr clearance above 60.
3. Second choices Bactrim DS or Keflex for 5-7 days. Third choice single dose fosfomycin (reserve for patients with compliance issues)
4. For men with uncomplicated cystitis/urethritis (no prostatitis, epididymitis/orchitis, pyelo, catheterization) culture urine, perform GC urine testing. Consider treating presumptively for those at risk for STI especially under 35. 1$^{st}$ line antibiotics would be Bactrim DS and Levaquin. 2$^{nd}$ line would be cephalosporin like Keflex or omnicef.
5. Women with pyelonephritis should receive 1 g ceftriaxone IV plus Keflex dosed at 1000mg TID for 10 days or Levaquin IV and Levaquin or Cipro PO at home for 7 days. Third line would be Bactrim. Culture all urine.

# Selected Specialties

## General Info:

Swedish primary care patients, CFM, FHFM, no doc patients usually get referred to the specialist on call unless they have seen a particular specialist in the past. (Mine the chart review notes to look for this). For example, PC cardiology should be consulted for a CFM patient who has seen a PC cardiologist in the past.

PC, PacMed, KP patients should be referred to the specialist from those teams if they exist/are on call. There are some instances where those teams will participate in the general unassigned patient call schedule and be the appropriate consultant no matter to whom they belong as primary patients. It can be a bit complicated determining the proper GI consultant for example. The HUCs will be helpful to figure this out. Both PacMed and KP have links from the Swedish homepage. Go to "On-call schedules" and then click "Kaiser Permanente" or "PacMed" tabs for the specialty call schedules. For polyclinic, have the HUC page the PC operator.

Many specialties at FH do not admit their own patients if at all medically complicated. OB/GYN tends to admit their own patients. In some cases, orthopedics, urology, and podiatry will admit medically uncomplicated patients. Patients with GI problems are admitted to the Hospitalist or Family Medicine teams. Cardiovascular surgery usually admits their own patients at CH. General Surgery and Thoracic Surgery generally admit their own patients at FH. Transplant Surgery almost always admits patients recently transplanted. Oncology is 50/50. It is best to ask the consultant who they would like to admit the patient but they will usually offer this on their own.

## Cardiology:

For SHV (Swedish Heart and Vascular) and PC (Polyclinic) Cardiology patients, call the Cardiologist from 7A-7P and they will call SHM to admit for them. After 7, call SHM to admit. Call Cardiology at all hours for consults if concerned about specific questions on ekg, management, etc. You should not have to routinely call cardiology for routine chest pain admits or uncomplicated NSTEMI cases.

For KP cardiology patients, call KP cardiologist. The KP hospitalist will admit their patients. KP patients who have a STEMI will fall into the general STEMI protocol described below and will be admitted to the cardiologist who does the STEMI, then signed out by the interventionalist to the KP hospitalist.

Unassigned patients who need a Cardiology consult or admission will be admitted to the Cardiologist on call.

## Code STEMI:

There is a STEMI doc on call for the day/night shifts. Regardless of a patient's primary Cardiologist, the STEMI doc is called for all STEMIs. If the EKG is questionable, you can talk with the STEMI doc before activating a code STEMI.

We have lifenet at CH and receive medic EKGs before the medic call. ***Activate code STEMI if the medic calls a STEMI in the field even without seeing the EKG***.

You will sometimes get STEMI patients from Swedish Ballard, FH, or Issaquah. The STEMI will be called at the other hospital and an ED doc to ED doc conversation will need to happen. All STEMI patients arriving (from Medics or transfers from other EDs) will receive a safety pause by one of the CH ED docs. This is a quick check of VS and stability of the patient. If the patient is stable and the team is in the cath lab, the patient will go down to the lab with the rapid response team and medics. They are frequently in the ED for less than 3 minutes and the rate limiting step is often getting them registered.

For Code STEMI safety pause documented under "ED Provider" note in EPIC
**.edstemisafety** (can steal from Mike Pirri)

If a patient is unstable or requires intubation, resuscitate in the ED as needed. The Cardiologists frequently request moderately unstable patients be rushed to the lab to resuscitate there. If there will be a delay > 90 minutes, discuss tPA with the cardiologist. If the patient is unstable on arrival, also consult ASAP with the STEMI doc.

Call a Code STEMI for First Hill STEMI patients who will be transported to CH by Medics (this is usually a walk-in patient since EMS does not typically bring these to FH). You will need to talk to the CH ED Physician as well as on call STEMI Cardiologist. In very very rare cases when the patient is too unstable for transfer to CH, a STEMI can be done at FH though the cath lab is minimally stocked and FH does not have the backup devices or CV surgery backup like CH. We call these "salvage STEMIs" where the patient is on 3 pressors and cannot get in an ambulance to CH. These should happen extraordinarily rarely, if ever.

- Code STEMI Protocol Attached

## Cardiac CTA:

Patients without known cardiac disease but a concerning story and/or risk factors who arrive during the daytime (8a-5p) hours at CH are possible candidates for a Coronary CTA. You can always talk to Cardiology about ordering this test as many are recommending it in lieu of admission. There are specific heart rate criteria (60bpm or below), an order set is no longer active in new EPIC but you can refer to it in the attached old version to see what you need to order when. Use metoprolol IV 5mg q 5min to reach this goal.

- Cardiac CTA Order Set (from old EPIC) Attached

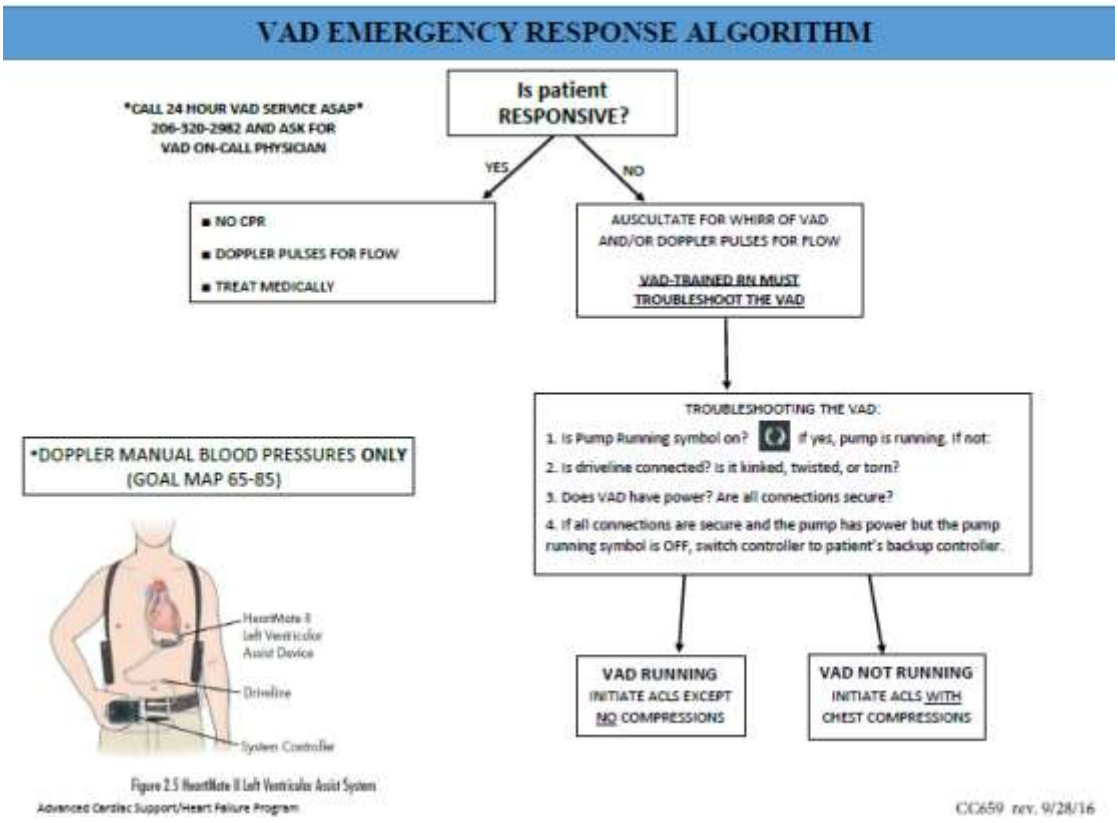
## VAD (Ventricular Assist Device):

Starting in 2017 Swedish Heart and Vascular began rolling out a VAD program at the Cherry Hill Campus. The on-call VAD provider should be paged immediately during the initial ED MD assessment of any patient presenting to the ED with a VAD with a potential VAD related complaint (Pump issue, chest pain, syncope, SOB, GI bleeding). There will be a provider on call 24/7 who can be reached at 206-320-2982. An EPIC order set was available in old EPIC for VAD patients from which standard orders such as labs, fluids, antibiotics and appropriate pressors could be ordered. See attached for what it contained. For emergent presentations, there is a VAD emergency response algorithm (below) which should be followed. All VAD patients needing admission should be admitted to 4E or the CVICU.

- ❖ See ED Ventricular Assist Device Diagnostic (VAD) Orders (from old EPIC) Attached

It is normal for VAD patients to have no pulse or heart rate. Blood pressure is measured using a manual blood pressure cuff and a doppler US and is normally between 65-85. Pulse ox may not function and is usually inaccurate.

Find the most updated protocols by going to Standards on Swedish online and then go to the Advanced Cardiac Support/ Advanced Cardiac Failure Program Department section and then click the link for Ventricular Assist Device (VAD): Clinical Practice Guidelines Booklet



## Cardiology Follow Up:

It is very difficult to get a next day stress test currently so, if you feel it is needed, the patient will likely need admission.

We would like you to use the HEART score to stratify chest pain patients.

Heart Score:

Navigate to Clinical Tools → Scoring Tools → HEART Score For Major Adverse Cardiac Events
Import score into chart with
**.EDHEARTSCOREFORMAJORADVERSECARDIACEVENTS**

| | | |
|---|---|---|
| History | Highly suspicious<br>Moderately suspicious<br>Slightly suspicious | 2<br>1<br>0 |
| ECG | Significant ST deviation<br>Nonspecific repolarization disturbance/LBTB/PM<br>Normal | 2<br>1<br>0 |
| Age | ≥65 years<br>>45 and <65 years<br>≤45 years | 2<br>1<br>0 |
| Risk factors | ≥ 3 risk factors or hx of atherosclerotic dz<br>1-2 risk factors<br>No risk factors known | 2<br>1<br>0 |
| Troponin | ≥3x normal<br>>1 and <3 x normal limit<br>≤1x normal limit | 2<br>1<br>0 |
| Total | ***+***+***+***+*** = | *** |

**Risk factors for atherosclerotic disease:**
Hypercholesterolemia Cigarette smoking
Hypertension Positive family history
Diabetes Obesity

Low risk patients can likely go home with urgent follow-up (see below). For moderate risk patients, we will hopefully have a pathway for obs admission in place by the end of 2019. Until then, they will require admission.

You can arrange urgent follow up for patients with SHV through a referral order. Indicate how urgently the patient needs to be seen, though 2-3 days is reasonably the earliest it will happen.

You cannot guarantee next day follow up via this order and please **DO NOT PROMISE THEY WILL GET A STRESS TEST**. Stress tests have to be approved by insurance first.

In discharge navigator go to the Discharge Orders area and place order for REF12SWA. In the space for referred to: "rapid referral clinic", *change priority to ASAP or STAT*. Please free to free text any other information you need to share.

In your discharge paperwork AVS, use the dot phrase
**.CARDIOLOGYRAPIDREFERRALS.** The language is below.

“You are being referred to Swedish Heart and Vascular for ****. You will receive a call in the next 24 - 48 hours to schedule an appointment or feel free to call (206) 215-4545. Please let the operator know that you have a Cardiology Rapid Referral. It is recommended that you contact your insurance provider to make sure that our providers are "IN NETWORK". If Swedish is "OUT OF NETWORK", please call your primary care physician for an alternate referral. You can reach Provider Relations for questions about Insurance at (206) 215-2979.By the time you read this, the below instructions will probably be obsolete as there will be an order in EPIC to refer patients to cardiology.”

# ED Rapid Cardiology Referrals in the Providence Instance of EPIC

## 1) In the Dispo Screen enter a new discharge order for "REF12SWA"

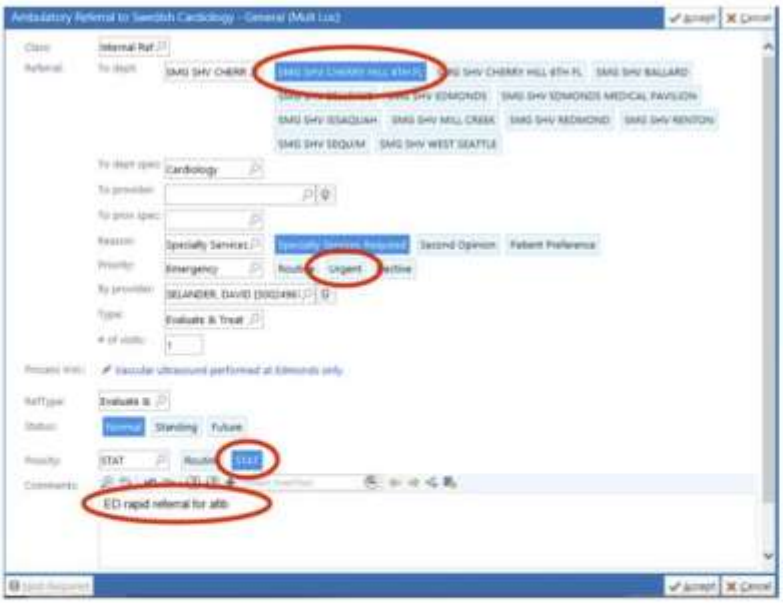
You must select "Database" to find the order


## 2) Fill out the order

a) Indicate the campus at which the patient prefers follow up

b) Make sure it is marked "Urgent" *OR* "STAT", and *NOT* "Routine"

c) Write "ED Rapid Referral for _____" in the comments section




## 3) Insert "CARDIOLOGYRAPIDREFERRALS" into your discharge instructions.

You can share this from David Selander or Brenna Born.

You can arrange urgent cardiology follow up for PC patients by contacting Merry Walsh who is their RN coordinator. You can CC your EPIC note into her in-basket but you have to talk to a PC cardiologist first. You can also just give the main clinic number.

You can arrange urgent follow up for KP cardiology patients by calling EPRO.

## Cardiothoracic Surgery:

Cardiothoracic surgery will see patients in both EDs if they are sick but they admit to CH. They generally like to be consulted on all their patients who are remotely peri-operative. They will often admit their patients as well.

## Critical Care:

Patients are admitted to the Intensivist. CH ICU specializes in Cardiac, Neuro, Neurosurgery patients. In general, all CH ED patients requiring ICU should be admitted to the CH ICU to stabilize and not be transferred to FH unless there is a clear reason to do so. Historically, we used to transfer medical ICU patients to FH so you may get some pushback. Do what's best for the patient and contact the medical director if you run into issues. There is both a Neurointensivist and a Cardiac intensivist 7a-7p at CH though, some nights, one Intensivist covers both units. FH ICU patients are admitted to the intensivist. IMCU patients (only at FH) are admitted to the appropriate admitting hospitalist team.

- Special Circumstances:
  - Due to prior bad outcomes, patients with a K+ above 7.0 cannot go into an ambulance and must stay at originating campus. If you medically treat below 7.0, recheck with poct labs 20 minutes prior to patient being transported to make sure the K is still below 7

  - Patients who require bipap during transfer cannot be transferred. If they can come off bipap safely for 30 minutes, they can transfer but if they need it continuously, they cannot get in an ambulance.

## Code Sepsis:

See above

- ❖ See Swedish Sepsis Pathway Attached

## Code PERT (320-PERT):

See above

- ❖ Code PERT Flowchart and sPESI Score Attached

## Colorectal Surgery:

The fellows will often perform procedures in the FH ED in case the patient needs to go to the OR at FH. Patients in the CH ED will need to be transferred to the FH ED. See above for ED to ED transfer protocol. They should be first call for colorectal issues unless the patient already has a general surgeon that they have seen for a similar issue (such as prior episode of diverticulitis).

## Dental:

There is a dental residency and they will see patients at FH. The residents will almost always come to ED and want to be called on all oral-related cases. They will often ask to send CH patients to FH as there is a panorex at FH and not at CH. See above for ED to ED transfer protocol.

For cases that need urgent (but not immediate) dentistry follow up, you can give patients the golden ticket to get next day follow up. Insert and fill out **.dentalref** (steal from Mike Pirri) into the discharge instructions. They bring the ticket to the clinic by 6:45 AM the following day and will be seen at some point that day.

For all others, you can include a list of low cost dental clinics in their discharge instructions **.dentalclinics**

## ENT:

ENT only operates at FH. If a patient needs operative intervention by ENT, they will likely need to be transferred to FH. See above for ED to ED transfer protocol.

## General Surgery:

Patients will need to be admitted to FH. Surgery residents at FH will see most surgery admits in the FH ED. All stable patients at CH needing general surgery will need to be transferred. Kaiser has surgery PAs who will likely see their patients in the ED at FH. Polyclinic and PacMed have separate surgery call schedules, though on occasion will cross cover.

*The Swedish General Surgery residents help manage GS patients for all attendings from Swedish, PM, and PC. KP does not participate with the GS residents.*

## GI:

For foreign body removal, you will likely have to transfer the patient to FH ED for endoscopy in the ED or in the endoscopy suite. They very rarely will have the equipment at CH to do the

scope though CH does not have dedicated endoscopy suites or general surgery follow up immediately available if there is a complication. See above for ED to ED transfer protocol.

- **GI Bleeds:**
  Please use the Blatchford GI bleed score to determine the level of care the patients will need on admission. This is not validated for triage and the GI docs will usually defer to you on how sick the patient is and where they should go. Calculate the score in Clinical Tools→Scoring Tools→ GI Blatchford Bleeding Score and then import it into your note using **.EDBLATCHFORDSCORE** for all GI bleeds admitted for behind the scenes data tracking purposes.


## Nephrology:

24/7 on call schedule is used rather than contacting patient's primary Nephrologist for admitted patients. You or the hospitalist are responsible for contacting the on call Nephrologist to orchestrate HD for admitted ESRD patients on HD. *Patients with a K above 7 cannot be placed in an ambulance* and thus cannot transfer to another campus even in emergent cases until the K is lowered or the patient gets HD.

Contact the Nephrologist on call for emergent HD. Patients requiring emergent HD can be dialyzed in the IMCU and ICU at FH and ICU and tele at CH. The bed crunch has made it difficult to get timely HD on patients in emergent need. We have instituted a policy to facilitate emergent HD in the downtown EDs

# Indications/Protocol for Emergency Hemodialysis in the Emergency Departments (Cherry Hill and First Hill):

- Fluid overload with impending intubation
- Potassium > 8 with concerning EKG changes (dysrhythmia, widened QRS, conduction block) which is not responsive to one round of traditional therapy (calcium/insulin/glucose/bicarb/albuterol)
- No HD capable ICU bed available within two hours of HD orders being placed by nephrology
- Circumstances may dictate emergent HD in other patients and the consultant nephrologist will have the final say on the need for emergent HD in the ED

**Certain ED Rooms have had sinks fitted with HD machine hookups**

- CH ED Rooms 13 and 14
- FH ED Rooms 1, 20, 22

**Protocol after patient needing emergent HD is identified**

1. ED MD consults nephrology
2. Nephrology will place orders
3. ED charge nurse notifies nursing supervisor and ICU CN of need for ICU bed.
4. ED charge nurse notifies HD nurse (contact information below)
5. Nursing supervisor and ED charge nurse coordinate location of HD with HD nurse
6. ED MD contacts admitting intensivist if a bed is found.

**HD Nurse Contact**

- Day Shift (0700-1930):
  - CH: Call Dialysis Charge Nurse (Daytime Pager 206 998-4388)
  - FH: Call Dialysis Charge Nurse
- Night Shift:
  - CH: Call Northwest Kidney Center
  - FH: Call operator to have dialysis nurse paged

**ED RN Responsibilities During HD in the ED**

The ED RN will remain responsible for frequent vital signs, reassessment of patient, monitoring of rhythms, and documentation as per norm. The HD nurse will only manage dialysis.

## Neurology:

Call the neurologist on call if a consult is needed. If a patient has seen an outpatient Neurologist, you can call them for non-inpatient issues. All inpatient Neurology needs are handled by NHT (Neuro-hospitalist Team) even if the patient has an outpatient Neurologist. If a patient needs Neurology follow-up after discharge, you can include a list of neurology providers in their discharge instructions by using **.BSneuro** (from Benjamin Seo's smartphrase manager) or **.dcneurofollowup** (from Mike Pirri) .

- **Epilepsy:**
  Consults for patients with new seizures or without an epilepsy doctor go to NHT. For patients in the Epilepsy Clinic, page Epilepsy on call. If you would like a patient to follow up with epilepsy as an outpatient, insert **.epilepsy** (can steal from Ben Seo) or **.dcseizure** (steal from Mike Pirri) into their discharge instructions for follow up information.

- **CVA:**
  If the patient is within **4.5 hours from last known normal**, call a code stroke. Consult NHT for patients outside of the window. They usually admit CVA/TIA patients who are not medically complicated from 7A-7P. After 7P, the SHM team will admit the patient, but you should still call NHT to discuss 24/7.

## Code Stroke:

- This varies depending on if patient is at CH or FH.

## Strokes Presenting to CH:

+FAST and LAMS 0-3 and LKN (last known normal <4.5 hours --> CODE STROKE ACTIVATED --> To CT/CTA
+FAST and LAMS 0-3 and LKN >4.5 hours --> Subacute CVA work-up (and Code Stroke NOT activated)
+FAST and LAMS 4-5 and LKN <4.5 hours --> CODE STROKE & IR ACTIVATED --> To CT/CTA
+FAST and LAMS 4-5 and LKN 4.5-24 hours --> CODE IR ACTIVATED --> To CT/CTA

- If an EMS crew is bringing in a patient with a good CVA history and a firm last known normal in the window, the patient is quickly assessed in the ambulance bay, including a fingerstick, evaluation for safety of contrast use, and brief physician exam. If a CVA is likely, call a Code Stroke. The patient will go directly to CT/CTA on EMS stretcher if no contraindications to contrast exist and then be brought back to a room from there.
- From 7A-7P, neurology will see patient in CH ED. After 7P, via telestroke monitor.
- If Medics are bringing in a patient with a firm LKN in the window and a high LAMS score, the CN will activate code stroke IR from the field to get the team in.

## Code Stroke IR Activated From the Field:

1. EMS calls with report of a stroke patient with LKN <4.5 hours and give a LAMS score.
2. **You can also call a code stroke IR with LAMS 4-5 up to 24 hours after onset of symptoms**

**Los Angeles Motor Scale (LAMs Scale)**

| | |
|---|---|
| **Facial Droop** | |
| Absent | **0** |
| Present | **1** |
| **Arm Drift** | |
| Absent | **0** |
| Drifts Down | **1** |
| Falls Rapidly | **2** |
| **Grip Strength** | |
| Normal | **0** |
| Weak Grip | **1** |
| No Grip | **2** |
| **Total Score (0-5)** | |

3. **LAMS Score 4-5 CSIR will be activated from field by CN**
4. **Evaluate patient upon arrival in ambulance bay. Confirm LKN, LAMS score, and contrast allergy, EGFR**
5. **If CS/CSIR is not cancelled, place neuro orders from quicklist (see below) immediately.**
6. **IR team has 45 minutes to arrive at the hospital from first call.**

**Place EPIC orders immediately after calling Code Stroke/Code Stroke IR!**

Use **orders from neuro quicklist** on main orders page in new EPIC. You will also have to put in the stroke nursing orders (**David Selander or Dave Peters can show you how to steal those from our preference lists).**

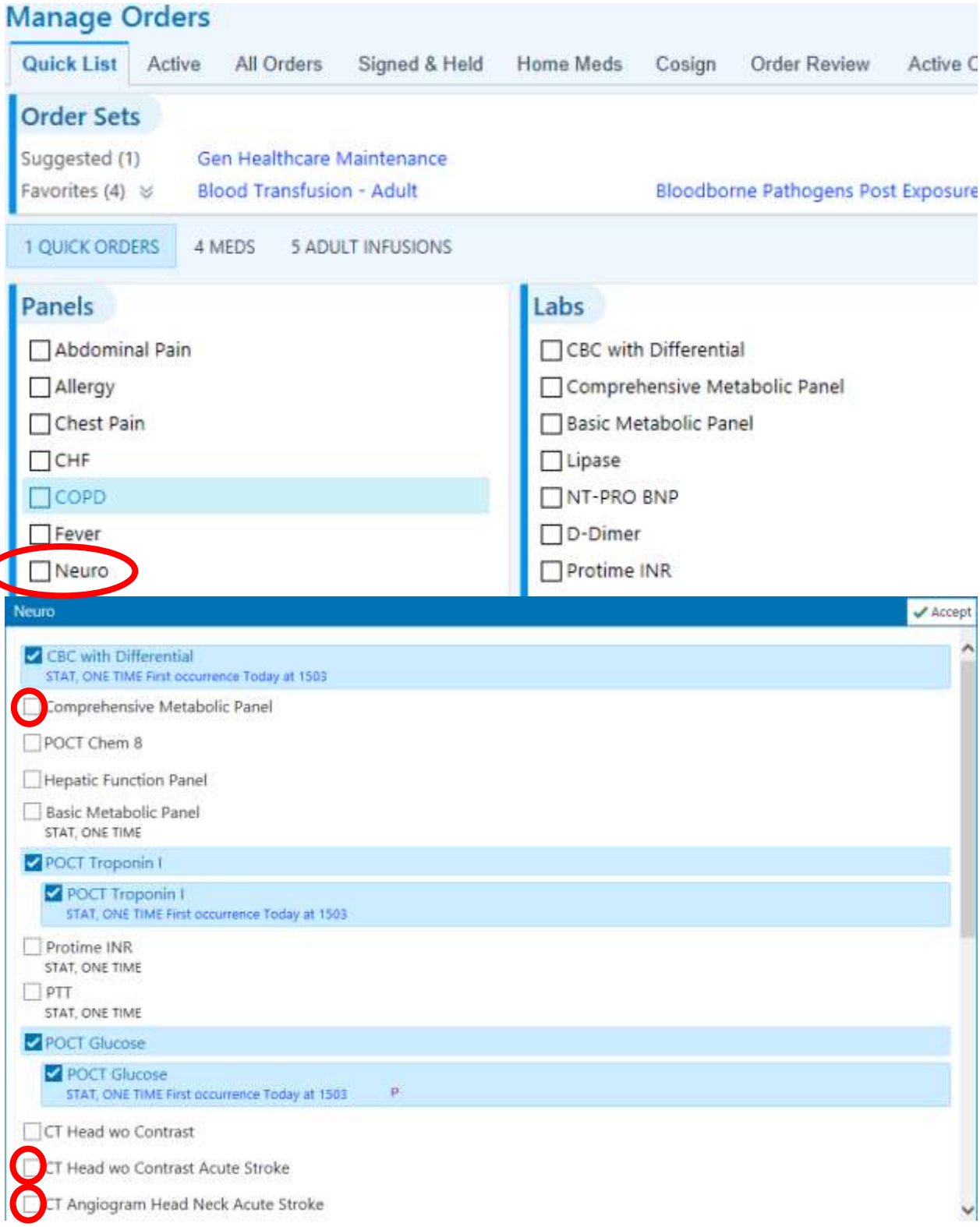
- You must select both acute stroke CT options as well as a CMP , none of which are pre-selected

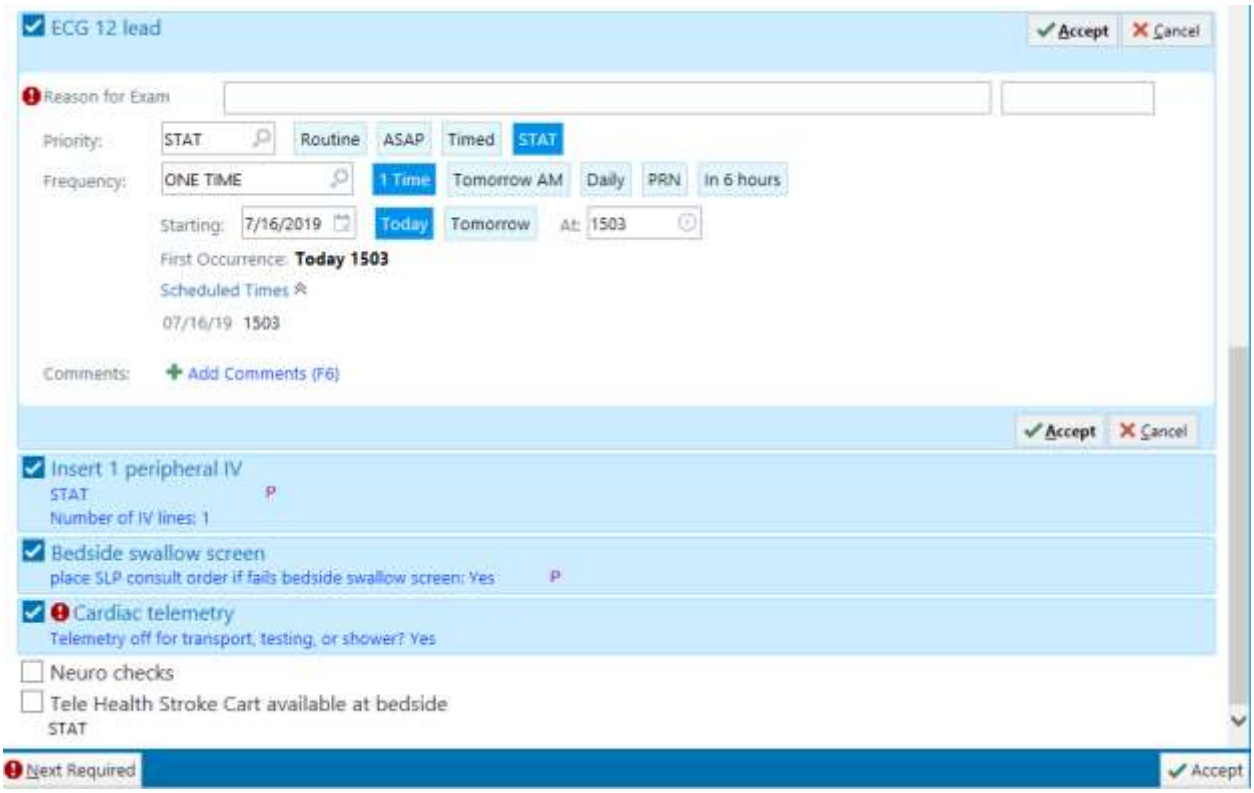
## Strokes Presenting to FH:

+FAST and LAMS 0-5 and LKN (last known normal) <4.5 hours --> CODE STROKE ACTIVATED --> To CT/CTA

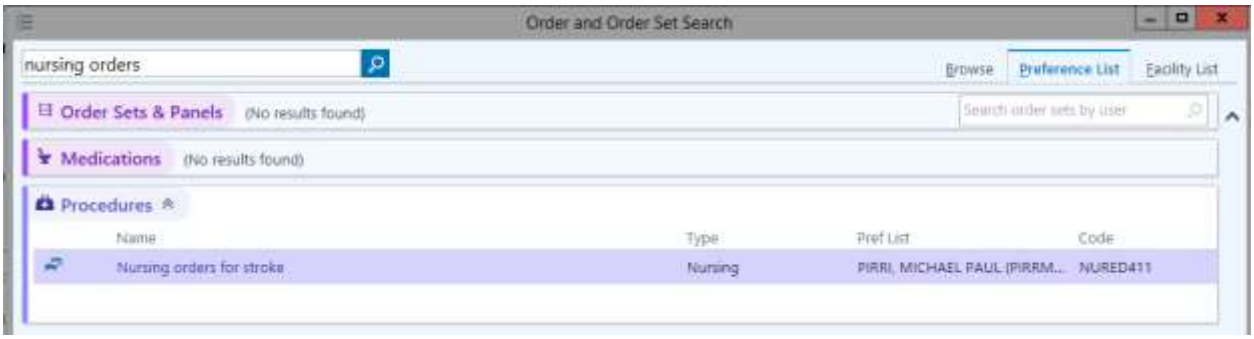
+FAST and LAMS 0-3 and LKN >4.5 hours --> Subacute CVA work-up (and Code Stroke NOT activated)

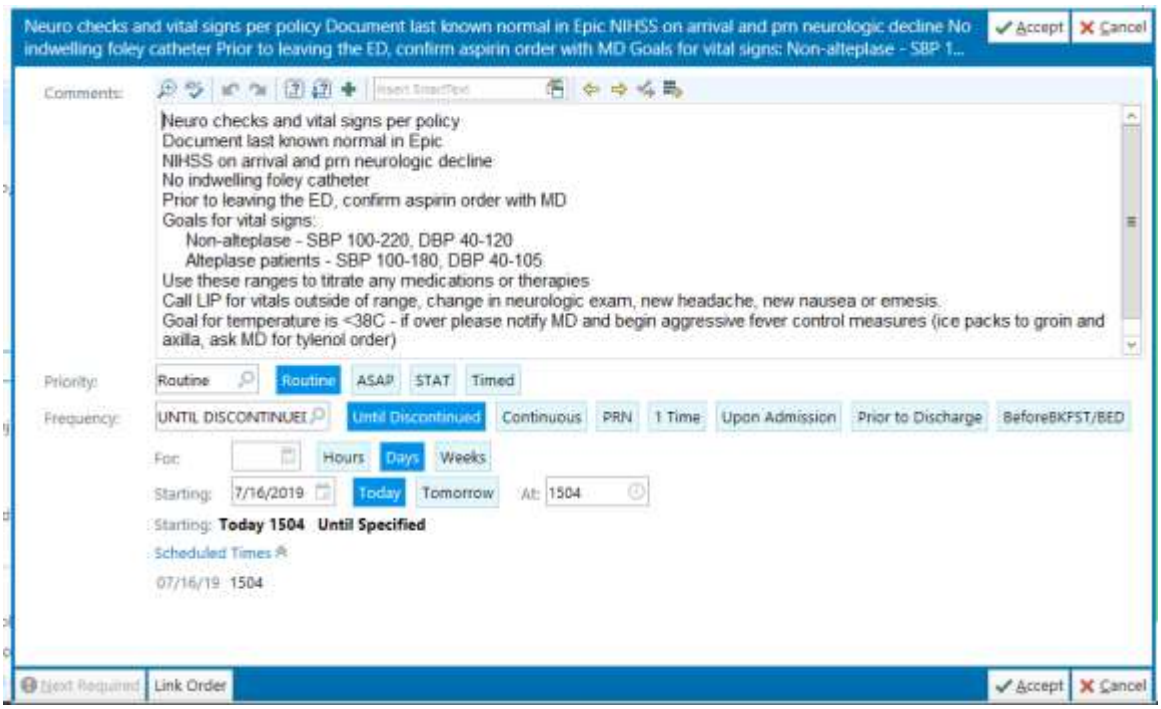
+FAST and LAMS 4-5 and LKN 4.5-24 hours --> CODE STROKE ACTIVATED (Call off pharmacy) --> To CT/CTA→ If a Large Vessel Occlusion (LVO) is found at FH, the patient will need to be transferred to CH for a Code IR. Neurology will make this decision and arrange.


Manage Orders
Quick List
Active
All Orders
Signed & Held
Home Meds
Cosign
Order Review
Order Sets
Suggested (1)
Gen Healthcare Maintenance
Favorites (4)
Blood Transfusion - Adult
Bloodborne Pathogens Post Exposure
1 QUICK ORDERS
4 MEDS
5 ADULT INFUSIONS
Panels
Abdominal Pain
Allergy
Chest Pain
CHF
COPD
Fever
Neuro
Labs
CBC with Differential
Comprehensive Metabolic Panel
Basic Metabolic Panel
Lipase
NT-PRO BNP
D-Dimer
Protime INR
Neuro
Accept
CBC with Differential
STAT, ONE TIME First occurrence Today at 1503
Comprehensive Metabolic Panel
POCT Chem 8
Hepatic Function Panel
Basic Metabolic Panel
STAT, ONE TIME
POCT Troponin I
POCT Troponin I
STAT, ONE TIME First occurrence Today at 1503
Protime INR
STAT, ONE TIME
PTT
STAT, ONE TIME
POCT Glucose
POCT Glucose
STAT, ONE TIME First occurrence Today at 1503
CT Head wo Contrast
CT Head wo Contrast Acute Stroke
CT Angiogram Head Neck Acute Stroke


ECG 12 lead
Accept
Cancel
Reason for Exam
Priority:
STAT
Routine
ASAP
Timed
STAT
Frequency:
ONE TIME
1 Time
Tomorrow AM
Daily
PRN
In 6 hours
Starting:
7/16/2019
Today
Tomorrow
At:
1503
First Occurrence: Today 1503
Scheduled Times
07/16/19 1503
Comments:
Add Comments (F6)
Accept
Cancel
Insert 1 peripheral IV
STAT
Number of IV lines: 1
Bedside swallow screen
place SLP consult order if fails bedside swallow screen: Yes
Cardiac telemetry
Telemetry off for transport, testing, or shower? Yes
Neuro checks
Tele Health Stroke Cart available at bedside
STAT
Next Required
Accept

RN orders


Order and Order Set Search
nursing orders
Browse
Preference List
Facility List
Order Sets & Panels
(No results found)
Search order sets by user
Medications
(No results found)
Procedures
Name
Type
Pref List
Code
Nursing orders for stroke
Nursing
PIRRI, MICHAEL PAUL (PIRRM...
NURED411




**You or the NHT physician must call pharmacy at x22181 to tell them to mix the tPA. If the ED pharmacist is in the ED at select times, speak to them directly.** Be liberal with mixing it if it is likely to be given so as not to delay the door to needle time. If the code stroke is cancelled, the patient is not charged for tPA being mixed.

- ❖ See ED Code Stroke Safety Pause Attached
- ❖ See Swedish Code Strokes Attached

**Code Stroke IR Transfer (tPA given at OSH) only at CH:**

1. ED HUC receives Code IR packet via fax (after initial page) and delivers it to the Charge Nurse. The HUC will initiate page #2 by dialing 3000 with ETA listed on Code IR packet.
2. Charge Nurse receives incoming AMR call with Code IR patient and initiates page #3 by dialing 3000 to inform the response team with updated ETA.
3. **When Patient arrives to ED:**
   - A. HUC initiates page #4 by dialing 3000
   - B. Registration arrives the patient on the ED Tracker (just like STEMI) and prints two sets of labels to be delivered to Charge Nurse or assigned RN.
   - C. ED physician, Charge Nurse or assigned RN completes safety pause, requests
     vital signs and carries out ED physician/NHT orders as directed.
   - D. ED physician will need to document a safety pause note in epic.
   - E. Charge Nurse or assigned RN will escort the patient and AMR to either CT

or MRI depending on final decision by NHT. RN will be met in CT/MRI by NICU RN with inpatient stretcher and will turn over care to the NICU RN.

F. Charge Nurse or assigned RN will need to chart a safety pause note, document the vital signs upon arrival and move the patient to "Admit" on the tracker.

G. On night shift, if IR has not yet arrived after completion of the CT/MRI, the NICU RN will bring the patient back to the ED and wait until the IR team arrives to perform procedure.

For Code Stroke IR safety pause documented under “ED Provider” note in EPIC
**.edcodeirsafety** (steal from Mike Pirri)

## Neurosurgery:

Patients are generally admitted at CH. Fellows often see patients in the CH ED at all hours. There is a separate call list for cerebrovascular/general vs spine. The expectation is that a fellow will see all sick patients in the FH ED if a bed is not available at CH and that a fellow, NP, or PA will see all other patients in the FH ED awaiting a bed at CH within 3-4 hours. Use your discretion as to if you need to push them to come in in the middle of the night.

For any ICH on anticoagulants, we have an acute life-threatening bleed anticoagulation reversal order set that advises on which product you should order depending on which anti-coagulant the patient is on. This is useful for any hemorrhaging patient, but most often used with head bleeds.

EPIC order set
**ANTITHROMBOTIC THERAPY REVERSAL FOR LIFE-THREATENING BLEEDING**


## OB:

OB is managed at FH. If fetal monitoring is indicated in a CH patient, call OB triage to arrange transfer to them after medical workup is complete. If you have a delivery at CH, they will need to be transferred. There is NICU transport available who will come from FH to CH if necessary. Patients in active labor are much better managed at FH, where we have L+D services. OB requests we do a quick bedside US to indicate head position and a quick manual exam for cervix

vs no cervix evaluation. If the patient is crowning, the cervix is fully dilated (no rim at all) on manual exam, or their history indicates likely precipitous delivery, the baby must be delivered at CH. If imminent delivery is unlikely, call the laborist at FH to arrange transfer to L+D.

All ectopic pregnancies requiring admission to OB should be transferred to FH. Methotrexate for ectopic pregnancy can be given in either ED only after consultation with OB on call and a consult note is placed in the chart. Patients are often discharged home after methotrexate.

OB will not admit patients less than 20 weeks. These must be admitted to maternal-fetal medicine. SHM WILL NOT ADMIT any patients with a positive pregnancy test regardless of gestational age. Please remember this. Even if they forget and accept one, your medical director invariably hears about it. RT, GT, PC will. Pregnant SHM patients < 20 weeks must be admitted to maternal-fetal medicine.

## Oncology:

Oncologists would like to be contacted regarding management of their own patients who present to the ED. In some cases, a patient's primary Oncologist will admit his or her own patients, but more often, you will be asked to admit a patient to the one of the Hospitalist or Family Medicine teams after discussing management with Oncology. There is a Hematology Oncology call schedule for consults. GynOnc prefers to be consulted on all of their admissions as well.

- Neutropenic Fever:
  - Neutropenic fever patients should be seen immediately, placed in an iso room as soon as possible, and antibiotics should be ordered and started within an hour of presentation. The patients will often present with a card indicated they have febrile neutropenia which they are supposed to give to registration, triage, and us (rare it gets to us). The oncologists will often call in as well. If we know the patients are neutropenic, DO NOT WAIT FOR THE ED LABS TO START ANTIBIOTICS! If they were neutropenic yesterday or at clinic, assume they're neutropenic and start antibiotics. Getting them back, accessing their port, drawing blood culture(s), and getting antibiotics ordered and started in 1 hour is a challenge, so take these patients seriously and move quickly.
  - Use the Febrile Neutropenia Order Set (#2560)
  - **If at all in doubt about which antibiotics, just order 2 Gm Cefepime (in the pyxis) without delay!**

- CAR-T Therapy:
  - CAR (Chimeric Antigen Receptor) T cell therapy is a type of Immunotherapy. Swedish began using this therapy (brand name YESCARTA) in August of 2019. Chimeric antigen receptor T cells are T cells that have been genetically engineered to produce an artificial T-cell receptor for use in immunotherapy. Chimeric antigen receptors are receptor proteins that have been engineered to give T cells the new ability to target a specific

protein. Currently the type of cancers being treated with CAR-T cell therapy include Non-Hodgkin's Lymphoma and Acute lymphoblastic Leukemia. Potential life threatening side effects can include Cytokine Release Syndrome and Neurotoxicities, along with hypersensitivity reactions, serious infections, seizures, and prolonged cytopenias. The acute recovery period is typically 30 days after the CAR T-cell infusion. These patients must be monitored closely. The adverse reactions are very serious and very foreign to us so please see attached cheat sheets on how to recognize and treat these adverse reactions.

- ❖ See YESCARTA Adverse Reactions Management Guide Attached
- ❖ See YESCARTA Cheat Sheet Attached

## Ophthalmology:

Usually you can get same day appointments for patients by calling the ophthalmologist on call and they will fit them into their clinic schedule. Alternatively, Ophthalmologists will come to the ED, though they prefer their offices for stable patients because of the extremely limited equipment in the EDs. You would treat these patients as a transfer (consent and EMTALA form) but discharge them to go directly to the ophthalmologist's office from the ED if the ophthalmology evaluation is required to complete the evaluation of their emergency medical condition. Refer patients to Eye Associates NW for routine ophthalmology follow up.

## Pediatrics:

At FH, we currently have Pediatric ED MD coverage from noon to MN on weekends and 3 to MN on weekdays. We manage pediatric patients during all other hours at FH and always at CH. The PEM docs are very available for curbsides from CH on your peds patients when they are working. x62573 FH ED phone number. Pediatrics will be gone from FH as of October 2019 both in ED and inpatient. They should still be available for consult. ED will need to transfer admissions to Swedish Issaquah or Seattle Children's. We also will be responsible for Pediatric Code Blues for pediatric patients who are visitors in the hospital. There will be a limited number of admissions to FH of older/larger patients where codes would be managed by SHM and the intensivists, and not us.

**Pediatrics Website:**

There is a very helpful Pediatric Emergency Department webpage on the Swedish intranet with links to various protocols and guidelines.

- ❖ See Pediatrics ED Webpage Aid Attached

**Pediatrics Emergency Drug Sheet:**
This link on the Swedish Intranet opens an excel file which gives doses of pediatric code meds based on a weight you input. This is VERY helpful and should be printed out on pediatric patients, especially sick ones.

- ❖ See Pediatric Emergency Drug Sheet Aid Attached

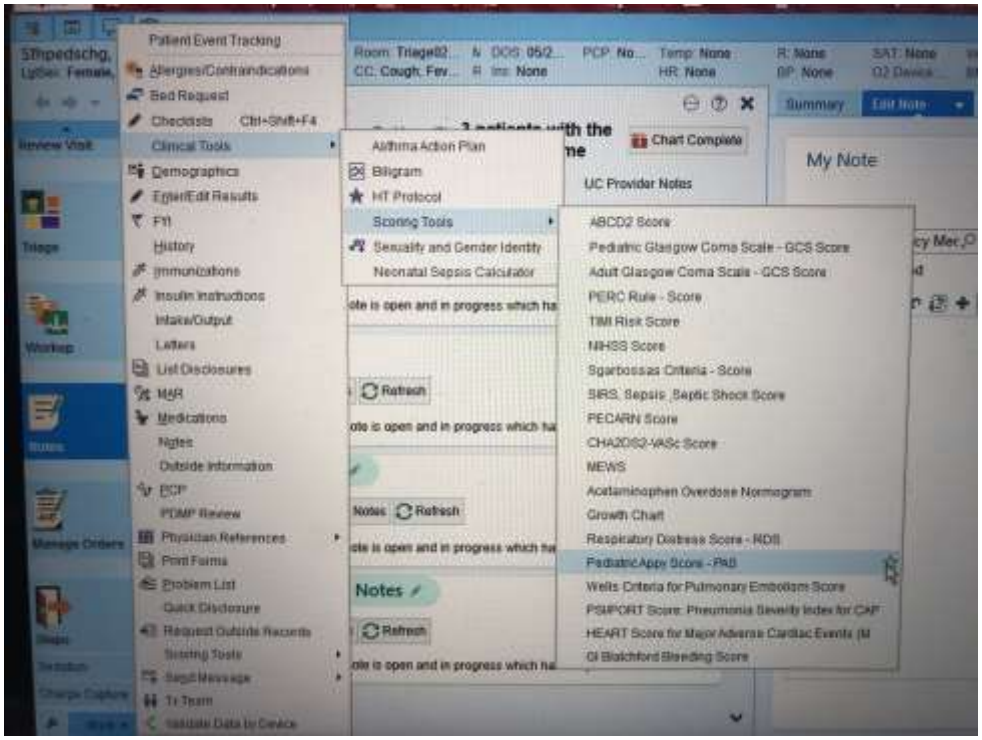
**Critically Ill Pediatric Patients:**
In the FH ED, call a pediatric code blue if at all concerned and definitely on all coding pediatric patients. (Peds will no longer be at FH as of October 2019 but anesthesia can still come help). Consider calling a code blue in the CH ED for coding pediatric patients as well.

The Pediatric Hospitalist is also an excellent resource outside of the times that the PEM doc is working. They are usually happy to help with recommendations and at FH will come down and see a patient if you feel uncomfortable. All Pediatric admissions will get transferred to FH until October of 2019.

- Pediatric admissions – usually go to the Pediatric Hospitalist. If a patient is a Red or Green team patient (usually a community health center patient), admit to the resident team. Polyclinic pediatrics are admitted to the Pediatric Hospitalist. Sick patients will go to the PICU and you should call the Pediatric Intensivist for all of them (even Red/Green team patients). We generally do not admit new DKA patients at FH because Seattle Childrens Hospital endocrinologists will not see outpatient referrals. These patients are typically transferred to SCH for admission. If in doubt, talk with our Pediatric Hospitalist or Intensivist and they will help decide.

- Most Pediatric subspecialties are available at Swedish, including Ortho, Cardiology, and Pediatric Surgery

- Pediatric appendicitis: Under Clinical Tools → Scoring Tools → Pediatric Appy Score, calculate the score. Import this into EPIC with **.PEDSAPPYSCORE**




- High flow nasal cannula oxygen is available at both campuses – call respiratory to set up

- At FH, nitrous oxide is available for procedural sedation if someone credentialed is available to deliver this (almost always during day, sometimes at night).

    - ❖ Pediatric Asthma Respiratory Score Attached

## Podiatry:

Podiatry residents available 24/7 for foot/ankle problems. They admit to FH but will come in to either campus for procedures such as ankle fracture reductions or even splinting. They are helpful for performing local blocks prior to ankle relocation. Excellent for helping arrange timely follow-up as well.

## Thoracic Surgery:

Admits go to FH. Chest tubes are usually placed by us at CH then transferred for admission, and often placed by thoracic surgery or general surgery residents at FH.

## Cherry Hill Specific Information

**Cherry Hill Shifts:**
AC 7 AM - 3 PM
BC 9 AM - 5 PM
DC 2 PM - 10 PM
EC 4 PM - 12 AM (can flex to 2 AM)
HC 10 PM - 7 AM

**Airway Resources:**
Airway pager gets FH back up anesthesiologist 24/7. Call as soon as you think you need help as there will be some delay for anesthesiologist to come to Cherry Hill campus

**OB/Pediatric Resources:**

- Room 2 in ED has baby warmer and delivery supplies.
- Pediatric crash cart, airway supplies in hallway outside Room 2
- ED Physician responds to and runs ALL PEDIATRIC CODE BLUE in hospital
- ED Physician is first call if inpatient goes into labor. Call OB L&D team immediately and they will come to Cherry Hill to assist. We would know if a pregnant patient near delivery is in the hospital.
- Pediatric ICU team available 24/7 to come to Cherry Hill to assist and transport baby
- No nitrous oxide currently available at Cherry Hill

**Code Blue Intubations at Cherry Hill:**
We are back-up for Code Blue intubations on the floor, Cath lab, Radiology at CH. This occurs rarely anymore, and typically only at night. A Code Blue will be called. The HUC will call the nursing supervisor or the floor and ask if an ED doc is needed to intubate. If so, you go to the code with the RSI drug kit (an RN will get it from pyxis for you) and the Glidescope or McGrath. If the code is cancelled or an Intensivist or Anesthesiologist is at the bedside and you are not needed, return to the ED. A tech or RN can usually accompany you.

If you do intubate or perform procedures on the floor, contact Leah Drum at R1 (our billing company) so the procedure is billed. ldrum@r1rcm.com. Provide name, MRN, date of procedure. Put "#secure#" in the subject line to encrypt the email since PPI will be sent outside of Swedish.

## Zones at Cherry Hill:

There are two zones at CH. The CNs are instructed to alternate zones when rooming patients if possible based on conditions in the ED. The Blue or Front Zone includes rooms 1-7. The Rear or Gold Zone includes rooms 8-14. The RMA/Triage room alternates between the doctors.

Beds 15-17 are used as during day from 9a-9p as RMA if appropriate patients exist. RMA has specific criteria, and will alternate attending assignment separate from main beds. When the ED is extremely busy, these will instead be overflow beds when all other beds are full, or used to board, or used to transfer patients in restraints from the EMS stretcher to an ED stretcher. The doc responsible for these beds will vary. We are losing beds 15-17 in late 2019 for a suite of seclusion rooms for our psych patients. There will be a triage/RMA room remodel as well and new workflows will be made.

## First Hill Specific Information:

**Airway Resources:**
Two anesthesiologists available in-house 24/7

**OB/Pediatric Resources:**

- OB hospitalists (laborists) are on call→24/7 for unassigned patients, contact patient's primary OB physician first unless unstable, MFM back-up
- Pediatric Intensivist available 24/7 until October 2019
- Pediatric Hospitalist available 24/7 until October 2019
- Pediatric Emergency Physicians in ED from 1500-0000 on the weekdays and 1200-0000 on weekends and holidays until October 2019
- Call Pediatric Hospitalists early if you are concerned and/or have high acuity patient load and need them to come assess patient for treatment and/or admission
- Pediatric RT and Pediatric pharmacist available during the day
- Pediatric RRT (Code team)→ RT, PICU RN, and pediatric attending respond
- Pediatric flex nurse can also assist with pediatric IV starts, pediatric catheterization, procedural sedation, nitrous oxide administration etc.

**Policies:**

- Policy for transferring the OB patient out of the ED is currently being revised but generally >20 weeks goes up to OB triage unless a non OB issue such as respiratory distress, or chest pain; < 20 weeks will stay in the ED for work-up
- If OB patient remains in the ED, request CN or HUC to call for OB RN to perform fetal monitoring in ED for patients 24 wks and greater (20-23 6/7 wks FHR by Doppler is sufficient)
- Refer to weight-based emergency medication list for Pediatrics (available on Swedish Intranet, ask RN to get it for you) during emergency instead of Broselow tape (specifically for Succinylcholine)
- Nitrous Oxide is used frequently for pediatric procedures, order in Epic, pediatric flex nurse can bring down to ED and set-up. Two of our Swedish RNs are certified to perform as well.

## Zones at First Hill:

To be updated. Currently:

- 6a-2p, 1p-9p doc has front – rooms 1-7, 18-22 except if South is taken by Peds patients when PEM doc is there, and rooms 21 and 22 belong to RMA when it is open which is 10am-1AM. When the 12p-8p shift is present, Front team has beds 1,3-9 and corresponding hall beds.
- 12p-8p has South (18-22 and corresponding hall beds minus peds) plus Flex (31-33)
- 8a-4p, 3p-11p doc has East – rooms 8, 9, 10-17. When 12p-8p shift is present, East team has 10-17 and corresponding East hall beds.
- Overnight docs generally do not use zones and alternate taking patients starting at 10pm.
- RMA provider covers the 4 RMA rooms and 21, 22 (or 2 patients in South if 21 or 22 taken)
- There is a 12P-8p shift (C2 shift) Monday-Friday if staffing allows. This doctor takes South (18-22) and flex (31-33) rooms. Front Zone takes 1,3,4,5, 6/8, 7, 9. The RMA doc will lose 21/22 and take room 2. East Zone takes 10-17.
- We will likely board more patients in the ED as we get busier. We may try to geographically group boarding patients in East and the Flex Room. Be flexible if this happens
- If 12p-8p shift is not present, Flex beds should be fairly divided among providers based on volume in zones/per provider.

  **Flexibility is key as we try to manage the volume crunch. Ask your colleagues if they need help. When an APC is on the 12p-8p shift, the front doc and the APC should split patients based on what the APC can see (generally no ESI 1s and can start ESI2s if the doc is busy).**

**First Hill Shifts:**

A 6 AM - 2 PM
B 8 AM - 4 PM
C 9 AM - 7 PM (PAs)/10 AM - 6 PM (docs)
C2 12PM-8PM
D 1 PM - 9 PM
E 3 PM - 11 PM
F 4 PM - 1 AM (PAs)/5 PM - 1 AM (docs can flex to 2 AM)
G 8 PM - 4 AM (flex to 6 AM)
H 10 PM - 7 AM

**PA Shift Culture Results:**

We are occasionally scheduled on the "PA shift" (10A-5P RMA shift) at FH. During this shift, we are responsible for culture result follow up including a very brief note, calling patients/PCPs to prescribe antibiotics, and reporting reportable conditions via fax. To do this you will need to have access to the shared in-basket to obtain culture results. Please see Job Aid below.

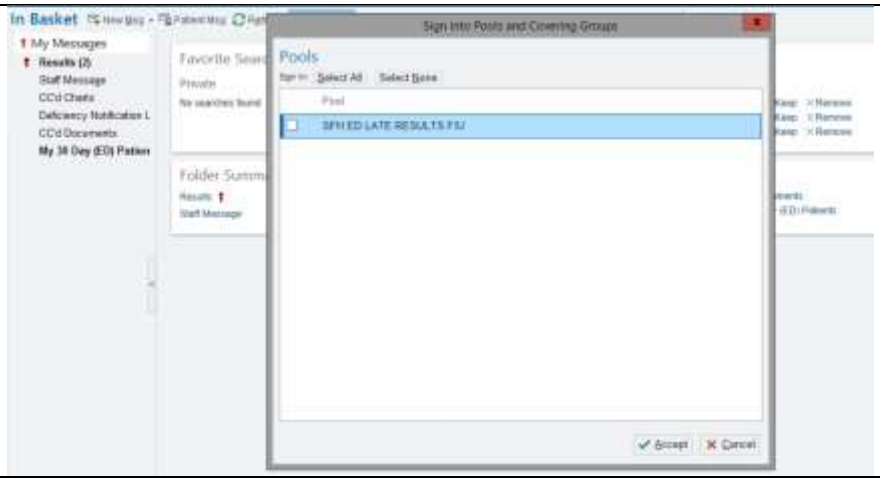
**Reportable Conditions:**
Certain conditions are reportable. The attached document has the list that is current at the time of this handbook. This changes so please go to the website below for the most up-to-date information for King County.

http://www.kingcounty.gov/healthservices/health/communicable/providers/reporting.aspx

- See Health Care Provider and Notifiable Conditions Reporting FAQ Attached

**Job Aid to add classes/pools to your in-basket:**

The shared in-basket is called **"SFH ED Late Results F/U".**

| | |
|---|---|
| 1. Open **In Basket and select "Edit Pools"** |  |
| 2. Toggle on SFH ED Late Results F/U<br><br>3. Click **Accept** |  |

**Follow same instructions to turn this in-basket off and on so you only get the results when on the PA shift. Please check to see that you are on this list on your first few shifts. If not, the medical director may have to add you.**

# Medical Education in the Emergency Departments

**Medical Students:**
We are currently a designated rotation site for the EM Clerkship for the University of Washington, Division of Emergency Medicine. Currently we host around 6 fourth year medical students per year at the Cherry Hill ED. We have made a commitment to do bedside teaching. The students do not chart in EPIC, but they see patients initially, present to you and participate in the work-up and disposition of the patient. You are responsible for writing the note for all patients seen by the medical student. If you are interested in being official UW adjunct teaching faculty, reach out to Mike Pirri (contact below).

**Residents:**
We have residents rotate in the ED from both the Swedish First Hill (Green team) and Swedish Cherry Hill (Red team) Family Medicine programs. Currently interns from the Green team rotate at the FH ED, and third years from the Green team rotate at CH ED. Also, second year residents from the Red team rotate at the CH ED. We are all responsible for precepting these residents during their rotation. They see patients primarily, present to you, and participate in the work-up and disposition of their patients. They write their own notes that need a co-sign by you, and you are responsible for a brief summary note of 2-3 sentences at the end of their note, which must include one piece of history and physical.

Mike Pirri is currently in charge of students and residents in the ED. Feel free to email Michael.pirri@swedish.org with any questions or if you would like to get more or less involved with teaching.

# Attachments

# Red Team Physicians

**ICHS Clinics**

Holly Park
Abrams, Jenny
Guh, Jessica
Henneman, Jessica
Huynh, Quyen
Pham, Uyveny
Sato, Scott
Wang, Grace
Weitensteiner, Beth

ID Clinic
Au, Grandy
Chu, Linda
Chun, Alan
Duong, Honghue
Hirayama, Kimo
Hsie, Sing
Liu, Brandon
Ng, Bao
Roach, Chinda
Snapp, Nancy
Song, Jean
Tran, Tracy
Yee, Christopher

**Seattle Indian Health Board**

Alger, Mikaela
Alto, William
Bell, Brett
Do, Thuy
Graf, Matthew
Holland, Wendy
Knaster, Harry
Love, Socia
Maddox, Greg
Robinson, Nell
Rustamier, James
Sferra, Lisa
Steele, Christie (ARNP)
Talbot, Peter
Turner,Madeline
Wilson, Hailey

**SeaMar Clinics**

White Center
Abraham, Senait
Armstrong, Jacob (Wesley)
Perez,Julina
Rivera, Marta

South Park
Burnell, Joshua
Calderon, Analisa
Cleveland,Patricia
Currier,Corrine
Fabian, Polly
Gemperline,Pat
Goli, Lauren
Harper,Hannah
Jimenez, Julio
Jimenez, Miguel
Jimenez, Ricardo
Lanagan,Sarah
Martinez,Patty
Portillo,Jessica
Reilly, Phil
Salazar,Francisca
Sterling, Robie
Wollner,Katherine

Burien
Disney,Cecilia
Hodel,Lara
Melendez,Teresa
Randall,Brianne
Ribas,Mario
Rivas,Daniel
Williams,Ocean

**Carolyn Downs/Country Doctor**

Carolyn Downs:
Anderson,Kristin
Cahill,Ronan
Cooley,Erin
Davis,Maisha
Dickinson,Cordelia
Fleming,Sarah
Flynn,Emily
Gardner,Joseph
Gross,Abigail
King,Jane
Liebeskind,Emily
Martin,Glenna
McCluney,Colin
Obimba,Chinyere
O'Brien,Leah
Petralia,Eileen
Warner,Jeffrey

Country Doctor:
Curiel,Mary
Hensel,Jamie
Hester,Kaite
Hill,Caitlin
Hufbauer,Sarah
Johnson,Karen
Kovar,Richard
Logalbo,Matthew
Mayer,Katherine
Morgan,Laura
Olson,Sonja
Shereen,Tina
Stanley,Katherine

**Cherry Hill Family Medicine**

Ashbaugh, Emily
Bachhuber-Beam,Andrea
Baruch, Leah
Bates,Elizabeth
Bernhardt,Jeremia
Bulleit,Erin
Flament,Jen
Gaubatz,Jayne
Gianutsos, Paul
Hennelly,Marie
Ireland,Laura
Khattar,Anuj
Kittle,Nate
Kummerling,Marissa
Lawler,Lauren
Lee,Teresa
Loft,Libby
Mynar,Beth
Oldham,Brent
Price,Jessica
Puttnam-Kostecka,Mary
Saver,Barry
Scavone,Summer
Sethi,Tanmeet
Shamseldin,Joe
Sonderegger,Lauren
Taraday,Julie
Waterman,Shannon
Wong,Hetty (Hei Wah)
Wong,Jackie
Yam,Amy

# Green Team Clinics and Providers

*Residents/fellows in italics*

**SFM-Ballard**
Mark Johnson
Carol Cordy
Miranda Lu
Belinda Fu
John Stevens
Lisa Tran

**SFM-First Hill**
Carla Ainsworth
Sarah Babineau
Jorge Garcia
Elizabeth Hutchinson
Kim Vanderzee
Chris Vincent
Michael Tuggy
Kevin Wang
Carrie Rubenstein

**Downtown Fam Med**
R Joseph Breuner
Maureen Brown
Caitlin Enright

**Neighborcare Clinics**
Alison Fitzgerald
John Olson, Jr
Kristen Kelly
T Putter Scott
Matt Perez
Jonathan Wells
Megan Wilson
Michael Lippman
Catherine McHugh (ARNP)
Meghan Mosbo (PA)
Katherine Avery (ARNP)
Fantahun Tedla (PA)
Mona Wiggins (ARNP)
Katie Vierrere (ARNP)

**Prov Elderplace**
Sarah Babineau
Pamela Gill
Frederick Heineman
Assad Kazemi
Laura Myre
Olivia Nirmasalari
Janine Clymin

**SMG Central Seattle**
Alyssa Barto
Philip Capp
Christopher Chan
Rebecca Duke
Rachael Dyer
Cassandra Geidt
Monica Mayhill
Jim McHugh
Jessica McHugh
Mary Weiss
Gretchen Weitkamp
Steve Dresang
Kate Estlin

# CONSULT SERVICES FOR GROUP HEALTH PATIENTS (1/19/16)

**GH Services - Refer to GH AMION Call Schedule** **Swedish Services - Refer to Swedish Call Schedule**

**Group Health Paging Operator 206-326-3342 (AMION alternative)**

MEDICAL

| Service | | Coverage | |
|---|---|---|---|
| ANESTH | Inpatient- 24 hrs | 24/7 | Swedish (PAS) |
| | Phone advice | 6a-6p | GH |
| ANESTH | Inpatient - Pain | TBA | TBA |
| Pain | Phone advice | 6a-6p | GH |
| BEHAV HEALTH | Inpatient | 24/7 | Swedish |
| | Phone Advice | 24/7 | GH |
| CARDIO-LOGY | Inpatient | 24/7 | GH |
| | Phone Advice | 24/7 | GH |
| | STEMI | 24/7 | Swedish |
| DERMATOLOGY | | 24/7 | GH |
| ENDOCRINOLOGY | | 24/7 | GH |

| | | | Mon - Thur | Fri - Sun |
|---|---|---|---|---|
| GI | Inpatient | 8a-6p | Swedish | Swedish |
| | | 6p-8a | GH | Multiple ( GH AMION) |
| | Phone Advice | 8a-6p | GH | Multiple (GH AMION) |
| | | 6p-8a | GH | Multiple (GH AMION) |

| | | | |
|---|---|---|---|
| HEME/ONC | | 24/7 | GH |
| HOSPITAL-IST | First Hill - 24 hrs | 24/7 | GH |
| | Cherry Hill | 7a-7p | GH |
| | | 7p-7a | Swedish |
| Infectious Disease | | 24/7 | GH |
| NEPHRO | INPT @ First Hill | 24/7 | GH |
| | INPT @ Cherry Hill | 24/7 | Swedish |
| | Phone Advice | 24/7 | GH |
| NEURO | Inpatient | 24/7 | Swedish |
| | Phone Advice | 24/7 | GH |
| | CVA - no intervent | 24/7 | Hospitalists admits; INT informed |
| | CVA - hemmorhagic | 24/7 | Swedish Protocol |
| | CVA - thrombolytics | 24/7 | Swedish Protocol |
| PULMONARY - Consults, Phone Advice | | 24/7 | GH |
| PULMONARY - ICU | | 24/7 | Swedish |

# CONSULT SERVICE GUIDE FOR GROUP HEALTH PATIENTS - Draft

| | | | MONDAY | TUESDAY | WEDNESDAY | THURDAY | FRIDAY | SATURDAY | SUNDAY |
|---|---|---|---|---|---|---|---|---|---|
| MEDICAL | ANESTH | General - 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | | Acute Pain Service | ? | ? | ? | ? | ? | ? | ? |
| | BEHAV HEALTH | Inpatient - 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | | Phone Advice | GH | GH | GH | GH | GH | GH | GH |
| | CARD | Inpatient - 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | | Phone Advice - 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | | STEMI - 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | DERM - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | ENDO - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | GI | INPATIENT | 8a-6p Swedish | 8a-6p Swedish | 8a-6p Swedish | 8a-6p Swedish | 8a-6p Swedish | 8a-6p Swedish | 8a-6p Swedish |
| | | | 6p-8a GH | 6p-8a GH | 6p-9a GH | 6p-9a GH | 6p-9a AMION (multiple) | 6p-9a AMION (multiple) | 6p-9a AMION (multiple) |
| | | Phone Advice | 8a-6p GH | 8a-6p GH | 8a-6p GH | 8a-6p GH | 8a-6p AMION (multiple) | 8a-6p AMION (multiple) | 8a-6p AMION (multiple) |
| | | | 6p-8a GH | 6p-8a GH | 6p-8a GH | 6p-8a GH | 6p-8a AMION (multiple) | 6p-8a AMION (multiple) | 6p-8a AMION (multiple) |
| | HEME/ONC | 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | HOSPITAL-IST | First Hill - 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | | Cherry Hill 8a-6p | GH | GH | GH | GH | GH | GH | GH |
| | | Cherry Hill 6p-8a | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | ID | 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | NEPHRO | INPT FH - 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | | INPT CH - 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | | Phone Advice - 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | NEURO | Inpatient - 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | | Phone Advice | GH | GH | GH | GH | GH | GH | GH |
| | | CVA - no intervent | GH; INT informed | GH; INT informed | GH; INT informed | GH; INT informed | GH; INT informed | GH; INT informed | GH; INT informed |
| | | CVA - hemmorhagic | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol |
| | | CVA - thrombolytics | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol | Swedish Protocol |
| | PULM | 24 hrs | GH | GH | GH | GH | GH | GH | GH |
| | ICU | 24 hrs | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| SURGICAL | CT SURG - 24 hrs | | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | ENT - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | GEN SURG - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | IR - 24 hrs | | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | NEUROSURG - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | OBGYN / GYN ONC - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | OPHTHALM - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | ORTHO - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | PLASTIC SURG | | TBD | TBD | TBD | TBD | TBD | TBD | TBD |
| | THORACIC SURG - 24 hrs | | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish | Swedish |
| | UROLOGY - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |
| | VASCULAR - 24 hrs | | GH | GH | GH | GH | GH | GH | GH |

# Group Health Hospitalists / Surgical Specialties Admission

Hospitalist will admit patients to selected services at times indicated below. All other times, the on-call provider for that service will admit.

| | **Hospitalist Admit** |
|---|---|
| CT Surgery | no |
| ENT | 6p-7a |
| General Surgery | no |
| Neurosurgery | No |
| OBGYN/GYN ONC | no |
| Orthopedics | 6p-7a |
| Plastic Surgery | no |
| Thoracic Surgery | no |
| Urology | 6p-6a |
| Vascular Surgery | no |

**Note: Medical Specialties - all admits done by hospitalist**

## Situation

To reliably delivery quality care in Swedish emergency departments, it is necessary to have accepting providers assume active management of admitted patients by four hours, two for Intensive Care Unit patients ("the 4/2 rule), after the admission order is signed, regardless of geographic location.

## Background

Emergency Department boarding, defined as a patient not being physically admitted to the intended inpatient unit within 4/2 hours of the admission order being place, is one of the most dangerous times in a patient's hospitalization. Delays in care or deviations from standard-of-care monitoring have adverse consequences.

To increase the safety of care of the admitted patient, Swedish Health Services, with Medical Staff and broad-based collaboration is creating these boarding guidelines with a focus on the 2018 flu season for use in all Emergency Departments.

## Assessment/Recommendation

Time zero is when the ED Provider places the admit/transfer order, which should happen only after the accepting provider at the destination campus has been paged.

If boarding orders have not been placed by 4/2 hours, ED HUC pages accepting provider at destination campus to inform them that boarding orders are due.

- If accepting provider is available on campus, they will come evaluate the patient in the ED, place a plan of care in the chart, and place truncated* orders by 4/2 hours.
- If accepting provider is unavailable on campus, SHM will cover the boarding period until transfer *only for patients being admitted to all medicine/family medicine teams and for INT/cardiology patients bound for Cherry Hill*. Once orders are requested by the ED HUC, the primary team admitting provider will page the FH SHM Triage doctor who will assign an SHM provider to see the patient in the ED, place a plan of care, and place truncated* orders.
- If accepting provider is unavailable on campus for patients in whom the clinical condition is beyond the scope of practice of SHM, (pediatrics and management of some surgical conditions for example) then the ED provider will place absolutely essential orders as advised by the admitting team.

Accepting provider must assign themselves as the attending in EPIC and contact the ED RN to inform them they have assumed care of the patient. ED provider will no longer manage the patient unless emergently in cases of clinical deterioration.

Orders will be released by ED RN if a bed is unlikely to be assigned within an hour of them being placed.

*Truncated orders are those that are essential to safely progress care for the next 4-12 hours

# Inclusion & Exclusion Criteria

# Patients being admitted to Issaquah and Ballard from First Hill or Cherry Hill Emergency Departments

6/9/16

## Issaquah Campus

### Special Conditions Inclusion Criteria

Will accept the following but only if an accepting specialist is available to co-manage at Issaquah (*See call schedule on the intranet*)

- Podiatry cases
- Urology cases
- Gyn-oncology cases (new pelvic tumor) — highly recommend placing these on the well supported gyn-onc service @ FH.
- Oncology cases
- Orthopedic cases
- GI
- Renal including regular dialysis
- Hand surgery
- Cardiology including heart block in need of pacemaker. Do not do ablations or other complex EP
- Neurosurgical simple spine(herniated disc)-John Hsiang is primary provider on weekdays
- Psychiatry
- Neurology(stroke/TIA, neuromuscular, etc)
- ICU(vented, DKA, GI bleed, septic without AKI, post TPA). The on call critical care physician(eICU at night) can help with triage

### Exclusion Criteria

- Vascular patients (this may change)
- Thoracic patients. Do not always have Pulmonary on site, so even pneumothorax should best be managed downtown unless you have talked to Pulmonary at IQ.
- Cardiac surgery
- Intracranial hemorrhage, complex spine (epidural abscess, etc)
- Recent transplants.
- Severe septic shock with AKI that may need CRRT. We do not have that capacity.
- Trauma
- Pregnant high risk medical patients—we do not have neonatology

# Ballard Campus

## Inclusion Criteria

Will accept the following but only if an accepting specialist is available to co-manage at Ballard (*See call schedule on the intranet*)

- Oncology cases – (reminder, no interventional radiology or radiation oncology)
- Orthopedic cases (including hand and podiatry covered by ortho at Ballard)
- GI with low GIB scores and no need for ERCP, EUS, or HIDA, limited availability on weekends, limited capacity for urgent consults (GI MD covering clinic during day)
- Psychiatry
- ENT – limited availability on a case by case basis
- ophthalmology - limited availability on a case by case basis
- colorectal surgery limited to specific days of the week corresponding with Dr Katz's clinic days at Ballard
- Urology limited to specific days of the week corresponding with Dr Kuan's clinic days at Ballard
- Infectious Disease
- General surgery on a nonemergent basis, covered by First Hill surgeons, limited availability on weekends

## Exclusion Criteria (these consultants not available)

Consultants not available at Ballard

- Cardiology
- Pulmonary
- Rheumatology
- Nephrology
- Neurology
- Nuclear medicine (no HIDA SCAN, tagged red blood cell scan, etc)
- Interventional radiology
- Vascular surgery
- Thoracic surgery
- Neurosurgery

Specific conditions not appropriate for Ballard

- atrial fibrillation requiring IV medication dose titration
- dialysis patients
- liver failure requiring hepatology consult
- Trauma
- Recent renal or liver transplant patients
- spinal surgery patients

# Group Health ED/UC TRAUMA GUIDELINES
# Disposition of Group Health patients with Traumatic Injury

The following is a guideline for determining disposition for GH patients presenting in the Swedish ED with traumatic injury. These criteria refer to admission to the GH Hospitalists Service. Patients excluded by criteria below may be admitted to appropriate GH specialty service at Swedish or transferred to Trauma Center at Harborview.

These are guidelines only and may not cover all situations. These guidelines are not meant to replace collegial conversation between physicians who share the common purpose of providing the best care for the patient.

Head Trauma

- Will not admit: Intracranial bleed. (admit isolated ICB's to Neurosurgery per guideline)
- EXCEPTION: if patient is on "comfort care" only

Spine Trauma

- Will not admit: Multi-level spine injury
- EXCEPTION: single level spine injury following appropriate workup to exclude other injury.

Chest Trauma

- Will not admit: Hemothorax / pneumothorax, cardiac or pulmonary contusion
- Will not admit: Sternal fractures
- EXCEPTION: may admit rib fractures up to two ribs

Abdomen Trauma with organ injury

- Transfer to Harborview

Orthopedic Trauma

- Will not admit: Multiple complex fractures.
- EXCEPTION: may admit hip fracture or fractures of 1 or 2 body parts for next-day operative care.

Miscellaneous

- Will not admit: Significant Burns, Ophthalmic Injury
- Special consideration: High Risk Injuries, blood thinners, advanced age

Resource for Trauma Consultation: Harborview Trauma Fellow 206-731-4791

# Swedish Trauma EMS Redirect Criteria

**General:**

1. Abnormal vital signs:
   - RR by age:
     <30 or >60 in infants < 1 year
     <20 or >40 in children 1-10 years
     <10 or >29 in adolescents and adults
   - SBP by age:
     <70 + (2 x age in years) up to age 10
     <90 in adolescents and adults
     <110 in adults older than 65
2. GCS <13 (using age appropriate scale)
3. Intubated patients, patients with failed intubation attempt, or with rescue airway device
4. Consider triage to trauma center for age <2 or >65, pregnancy > 20 weeks or anticoagulated
5. Capillary refill >2 sec in pediatrics

**MVC:**

1. Car intrusion >12 inches or >18 inches non-occupant site
2. Rollover MVC, fatality within vehicle, steering wheel deformity
3. Ejection (partial or complete) from vehicle.
4. Unrestrained occupant in MVC >20mph
5. Pedestrian struck by car >20mph, or run over or thrown >10ft
6. Bicyclist struck by car >20mph, or run over or thrown >10ft
7. Motorcycle/ATV crash > 20mph or separation of rider from bike
8. Vehicle telemetry data consistent with a high risk injury

**Injuries:**

1. Head:
   - Open or depressed skull fractures
2. Chest/Abdomen:
   - Suspected flail chest
   - Suspected pneumothorax or hemothorax
   - Subcutaneous emphysema
   - Evisceration
3. Ortho:
   - Pelvic instability
   - Two or more proximal long bone fractures
   - Amputation (except single finger or toe)
   - Crushed, degloved, mangled, or pulseless extremity

**Mechanism:**

1. All penetrating trauma (except distal to knee or elbow): GSW, stabbing, impaling
2. High energy blunt trauma to head, abdomen, chest, head/neck
3. Falls > 20 feet in adults
4. Falls > 10 feet/2X height in peds patients
5. Electrical injury involving high voltage or lightening
6. Drowning
7. Severe facial or ocular trauma
8. Strangulation or hanging

**Burns:**

1. Burns >10% total body surface
2. Inhalation burns
3. Significant facial burns
4. Significant Hand/Foot burns
5. Genital burns
6. Circumferential burns

**Neurosurgical Injuries:**

1. GCS <13 (using age appropriate scale)
2. Suspected spinal cord injury or paralysis

**Vascular Injuries:**

1. Significant active arterial bleeding
2. Rapidly expanding hematoma
3. Pulse deficit in an extremity

Reviewed by: EDSL May 2019

# Transfer Form: Quick Guide

**TRANSFER CONSENT/PROVIDER CERTIFICATION**

**RECEIVING HOSPITAL ACCEPTANCE:**

Name of Facility _____ Accepting LIP _____

Address _____ Facility Phone # _____

RN Report Called To (name of receiving nurse) _____ Date _____ Time _____

RN Report Called By (name of reporting nurse) _____

*Send completed Transfer Form and Provider Certification;
*Send hard copy of medical records related to the emergency condition if transferring to a non-Swedish facility

☒ **The receiving facility has the available space, qualified personnel, and has agreed to accept the patient.**

**MODE OF TRANSPORT**

☐ ALS ☐ BLS ☐ Private Vehicle (section 3 on back) ☐ Air Transport ☐ Other _____

**REASON FOR TRANSFER**

☐ Specialized treatment or services available at receiving facility ☐ Condition is likely to deteriorate without transfer

☐ Patient/Legal Representative request (section 1 on back) ☐ Other _____

| **Risk(s) of Transfer:** _____ | **Benefit(s) of Transfer:** _____ |
|---|---|
| ☒ All transfers have inherent risks of delays or accidents in transit, pain/discomfort with movement and limited medical capacity of transport. | |

**PATIENT CONSENT FOR TRANSFER**

I have been fully informed of and understand the risks and benefits of transfer that have been explained to me. I have had all my questions answered, and I have given my consent to the transfer. I hereby release the attending provider and the hospital from all responsibility for any ill effects which may result from the transfer.

Signature of Patient/Legal Representative | Printed Name/Relation of Legal Representative | Date | Time

Witness #1 (if verbal or telephone consent) Date Time Witness #2 (if verbal or telephone consent) Date Time

☐ Yes, Interpreter was used as part of this process

**DISCHARGE VITAL SIGNS** - *(COMPLETE AT TIME OF TRANSFER)*

| Time: _____ | B/P: ____/____ | HR: _____ | Resp. Rate: _____ | Sp $O_2$: _____ | Temp: _____ |
|---|---|---|---|---|---|

**PHYSICIAN CERTIFICATION OF TRANSFER** *(COMPLETE AT TIME OF TRANSFER)*

The patient has undergone a medical screening exam and is transferring to a hospital that provides the necessary treatment.

☐ **STABLE – The patient has been stabilized within reasonable medical probability no material deterioration of the patient's condition is likely to result from transfer.**

*OR*

☐ **UNSTABLE – The patient is unstable but expected medical benefits of transfer outweigh potential risks associated with transfer.**

Based on this examination and the information available to me at the time of transfer, I certify that the benefits of transfer are outweighed by the risks reasonably anticipated at the receiving facility.

Signature of Physician | Printed Name | Date | Time

PATIENT LABEL

SWEDISH
SEATTLE, WASHINGTON



CC706 Risk Management and Compliance, 4/2017, version 7

- Complete all data points specific to the hospital the patient is transferring to
- Document the name of the nurse calling report and the name of the nurse receiving report
- Mark the mode of transportation in the patient will be traveling

- The LIP authorizing the transfer will indicate the reason, care has been completed at the sending facility and that the transfer is appropriate
- The LIP will write in any additional risks associated with the transfer, along with the specific patient benefits of transfer

- A witness signature is only required if verbal /phone consent obtained. Two witnesses required.

- Indicate if interpreter services were used while obtaining consent.

- Discharge vitals are obtained at the time of transfer and reviewed with the LIP
- The LIP makes the final determination to certify transfer at the time of departure

ALL SECTIONS MUST BE COMPLETE PRIOR TO DEPARTURE FROM SENDING FACILITY

**Section 1** PATIENT REQUEST FOR TRANSFER

This is to certify that I, _____ have been examined at Swedish Medical Center, and that I have requested a transfer from this hospital to another facility. I acknowledge that I have been fully informed of and understand the risks involved in the transfer, and that I have given my consent to the transfer. I hereby release the attending provider and the hospital from all responsibility for any ill effects which may result from the transfer.

Signature of Patient/Legal Representative _____ Printed Name/Relation of Legal Representative _____ Date _____ Time _____

Witness #1 (if verbal or telephone consent) _____ Date _____ Time _____ Witness #2 (if verbal or telephone consent) _____ Date _____ Time _____

**Section 2** TRANSFER BY PRIVATE VEHICLE

This is to certify that I, _____, am aware of options to transfer me, but have chosen to be transferred by private vehicle. I acknowledge that the provider has informed me of the risks involved with such transfer and I accept those risks. I also acknowledge and agree that I will go directly to the receiving facility for continuing care.

**IV's, medical tubes, lines, ports or devices** in place at the time of transfer (if none, write NONE or N/A): _____

I agree that these devices shall not be utilized or tampered with by myself or anyone else other than providers at the receiving facility. I hereby release the attending provider and the hospital from all responsibility for any ill effects which may result from the transfer.

Signature of Patient/Legal Representative _____ Printed Name/Relation of Legal Representative _____ Date _____ Time _____

Witness #1 (if verbal or telephone consent) _____ Date _____ Time _____ Witness #2 (if verbal or telephone consent) _____ Date _____ Time _____

**Section 3** RELEASE FROM RESPONSIBILITY FOR REFUSAL TO CONSENT TO TRANSFER

This is to certify that I, _____, have been examined at _____ and that I have refused to transfer to another facility against the advice of my attending provider and the hospital administration. I acknowledge that I have been informed of and understand the risks involved in my refusal to transfer and hereby release the attending provider and hospital from any ill effects resulting from the Refusal to Consent to Transfer.

Signature of Patient/Legal Representative _____ Printed Name/Relation of Legal Representative _____ Date _____ Time _____

Witness #1 (if verbal or telephone consent) _____ Date _____ Time _____ Witness #2 (if verbal or telephone consent) _____ Date _____ Time _____

PATIENT LABEL

SWEDISH
SEATTLE, WASHINGTON





- Patients may request a transfer to a hospital of their preference
- The LIP authorizing the transfer will discuss the risks/benefit transfer and obtain informed consent
- A nurse may assist to obtain signature
- A witness signature is only required if the patient is unable to sign or verbal consent is obtained from the legal representative

- The nurse should specifically indicate any IV access or medical devices that the patient will have during POV transfer

- The LIP authorizing the transfer will discuss the risks/benefit for POV transfer and obtain informed consent
- A nurse may assist to obtain signature
- A witness signature is only required if the patient is unable to sign or verbal consent is obtained from the legal representative

- The LIP will discuss the risks of transfer refusal with the patient
- A nurse may assist to obtain signature
- A witness signature is only required if the patient is unable to sign or verbal consent is obtained from the legal representative

SWEDISH

# Behavioral Patients in the ED: Levels of Observation

**Least Restrictive** ⟶ **Most Restrictive**

| Behavioral Health Patient/No Behavioral Health Hold | Suicide/Elopement Precautions & Behavioral Health Hold | Seclusion | Restraint | Seclusion & Restraint |
|---|---|---|---|---|
| • Assignment of a PSA is at the discretion of the ED care team<br>• Patient may leave care space to attend to ADLs and to receive medical treatment (i.e. x-ray)<br>• A Code Gray will not be called in the event that the patient chooses to leave prior to treatment complete | • Implement standard suicide & elopement precautions<br>• Care team can provide verbal prompts for safety and escort patient to areas necessary to complete ADLs (ie. restroom)<br>• Pt informed of need to call Code Gray for attempted harmful behavior | • Patient actively a risk of harm to self or other<br>• Seclusion order REQUIRED<br>• Standard suicide & elopement precautions<br>• Directed to remain ALONE in a defined space – unsafe to have visitors to remain with patient/all ADLs occur in the define space<br>• Told or perceives he/she will be physically prevented from leaving the defined space<br>• Code Gray called for attempted harmful behavior | • Restraint order REQUIRED<br>• Standard suicide & elopement precautions<br>• Not able to redirect with frequent encouragement<br>• Patient requires restraints for safety of self or others<br>• Care plan focus to alleviate symptoms requiring the use restraints/early release<br>• Code Gray called for restraint application | • RARE to need both interventions<br>• Restraint and seclusion order required<br>• Implement standard suicide & elopement precautions<br>• Reassess frequently for opportunities to discontinue seclusion/restraints |

# Least Restrictive Interventions: Behavioral Health Patients

**Standard Suicide/Elopement Precautions:**

- Purple gown for patient
- Assign PSA to observe patient
- Collect belongings, inventory and store away from the patient
- Create a behavior patient safe environment
  - Remove cables, trash cans, medical equipment
  - Provide psychiatric safe meal trays
  - Regularly assess room for safety risks

**Seclusion:**

- Caregiver order entered within 15 minutes of application
- Initiate/Continue Standard Suicide/Elopement Precaution
- Utilize the Epic *Restraint Flowsheet* for ongoing documentation
- Follow *Restraint or Seclusion Management* Standard documentation

**Behavioral Restraints:**

- Code Gray called for restraint application
- Caregiver order entered within 15 minutes of application
- Initiate/Continue Standard Suicide/Elopement Precautions
- Utilize the Epic *Restraint Flowsheet* for ongoing documentation
- Follow *Restraint or Seclusion Management* Standard documentation

# Common Infections: Empiric Antibiotic Regimens for ED and Inpatients for Adults

**Severe Beta-lactam allergy** is defined by difficulty breathing, throat/tongue swelling, immediate onset of hives, shock or loss of consciousness.

In persons with a non-severe Beta-lactam allergy, use of another Beta-Lactam (cephalosporin or penicillin class drug) can be considered.

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Pneumonia – Community Acquired (CAP) | Azithromycin (**preferred**) 500mg po qday x 3 days<br><br>**Alternative**: Doxycycline 100mg po BID x 5-7 days<br><br>**Presence of comorbidities**: Amoxicillin/Clavulanate 875mg-125mg po BID + Azithromycin 500mg po x 5-7 days<br><br>**Severe Beta lactam allergy:** Levofloxacin 500-750mg qday x 5-7 days | Ceftriaxone + Azithromycin<br><br>**Suspected aspiration:** Consider adding metronidazole<br><br>**Severe PCN Allergy:** Levofloxacin | **USE ORDER SET 261 Pneumonia Admission Orders**<br><br>*Consider adding metronidazole only if suspected gross aspiration, airway obstruction, or suspected lung abscess<br><br>Anaerobic coverage NOT INDICATED for most cases of suspected micro-aspiration |
| Pneumonia – Hospital Acquired (HAP) | For most cases of moderate to severe HAP, IV abx and admission will be required.<br><br>Monotherapy with Levofloxacin 750mg could be considered on a case by case basis for patients who are mildly ill and will not require admission | Cefepime<br><br>**Respiratory failure/Severe Pneumonia:** Cefepime + Vancomycin<br><br>**Severe PCN allergy:** Levofloxacin + Vancomycin | **USE ORDER SET 261 Pneumonia Admission Orders**<br><br>*For severe HAP with respiratory failure, consider adding Levofloxacin to Cefepime<br><br>*for suspected gross aspiration, airway obstruction, or suspected lung abscess, consider adding metronidazole. Anaerobic coverage not indicated for most cases of suspected micro-aspiration |
| Streptococcal Pharyngitis | Penicillin G Benzathine 1.2 million units IM x1<br><br>Amoxicillin 500mg po BID x 10 days<br><br>**Severe Beta-lactam allergy:** Azithromycin zpak or 500mg po daily x3 days | IV antibiotics generally not necessary | Use Centor criteria to identify likelihood of bacterial infection.<br><br>Order Strep A Rapid Test POCT |
| Peritonsillar Cellulitis/ Peritonsillar Abscess (PTA) | Consider oral therapy if patient is afebrile<br><br>Amoxicillin/Clavulanate 875-125mg po BID x 14 days<br><br>**Severe Beta lactam allergy:** Clindamycin 600mg po TID x 14 days | Ampicillin-Sulbactam 3g IV<br><br>**Severe Beta lactam allergy:** Clindamycin 600mg IV | If admission likely, consider vancomycin if patient is severely ill |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Retropharyngeal Abscess (RPA) | Generally, IV abx and admission will be required for treatment of RPA | Ampicillin-Sulbactam 3g IV<br><br>**Severe Beta lactam allergy:**<br>Clindamycin 900mg IV<br><br>Consider vancomycin if patient is at risk for MRSA | |
| Epiglottitis | Generally, IV abx will be required for epiglottitis | Ceftriaxone + Clindamycin 900mg IV q8h<br><br>Consider vancomycin (in place of clindamycin ) if patient is at risk for MRSA | |
| C.diff Diarrhea (CDI) | Vancomycin 125mg po QID x 10 days **(Preferred)**<br><br>**In settings where access to vancomycin is limited, for initial episode of non-severe CDI with no medical comorbidities could consider:**<br>(treatment failure rate may be higher)<br>Metronidazole 500mg po TID x 10 days | Vancomycin 125mg po QID x 10 days | For severe C difficile with possible megacolon or poor GI motility, consider increasing Vancomycin to 500mg po QID and adding Metronidazole IV short term<br><br>Follow-up on lab results<br><br>For outpatient Rx, order for Vancomycin oral liquid with comments to pharmacy that order can be substituted with oral capsules if more cost effective for patient. |
| Infectious Diarrhea | If antibiotic therapy is utilized*<br><br>Azithromycin 500mg po daily x 3 days<br>or<br>Levofloxacin 500mg po daily x 3 days<br><br>Revisit options based upon suscept. | IV antibiotics are generally not indicated | *If bacterial enteritis suspected, then:<br><br>Consider antibiotic therapy for acute diarrhea if the patient meets the following:<br>Severe disease<br>Bloody or mucoid stools in the setting of fever<br>Age >70 or immunocompromised |
| Non-purulent Cellulitis (no severe illness, no MRSA history/risk factors, and non-purulent) | Cephalexin 500mg po QID x 10 days<br><br>**Severe Beta-lactam Allergy:**<br>Clindamycin 300mg po TID | Cefazolin<br><br>**Severe Beta-lactam Allergy:**<br>Clindamycin 900mg IV q8h | **USE ORDER SET 268 Skin and Soft Tissue Infection Admission Orders** |
| Abscess (if successfully drained, no cellulitis, and not in critical location) | **Generally, antibiotics not indicated** | | |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Abscess (not well drained or associated concerning features such as significant cellulitis, facial region, etc.) | Cephalexin 500mg QID<br>+ TMP/SMX 1 DS tab BID x 10 days<br><br>**Severe Beta-lactam allergy**<br>Clindamycin 600mg po q8h | Cefazolin + Vancomycin<br><br>**Severe Beta-lactam Allergy:**<br>Levofloxacin + Vancomycin IV | **USE ORDER SET 268 Skin and Soft Tissue Infection Admission Orders** |
| **Orbital & Periorbital Cellulitis** | Orbital (admit patient)<br><br>Cephalexin 500mg QID<br>+ TMP/SMX 1 DS tab BID x 10 days<br><br>**Severe Beta-lactam allergy**<br>Clindamycin 600mg po q8h | **Orbital/Periorbital:** Vancomycin + Ampicillin-Sulbactam 3g IV q6h | |
| Suspected Osteomyelitis, Discitis, Vertebral abscess | For cases of suspected osteomyelitis/discitis/vertebral abscess, IV abx and hospital admission will be required | Discuss with ID promptly before starting antibiotic therapy | **Do not delay antibiotic therapy for suspected cord compression** |
| Suspected Necrotizing Fasciitis | For cases of suspected necrotizing fasciitis, IV abx and hospital admission will be required | **Order set:**<br>Piperacillin-tazobactam + Clindamycin + Vancomycin | **USE ORDER SET 268 Skin and Soft Tissue Infection Admission Orders** |
| Bite wound/infection or prophylaxis | Amoxicillin/Clavulanate 875-125mg po BID x 7-10 days<br><br>**Severe Beta-lactam allergy:**<br>Levofloxacin 500-750mg po qday + Metronidazole 500mg po q8h x7-10 days | Ampicillin-sulbactam 3g IV q6h<br><br>**Severe Beta-lactam allergy:**<br>Levofloxacin + Clindamycin | **USE ORDER SET 268 Skin and Soft Tissue Infection Admission Orders** |
| Diabetic Foot Infection | **Mild, new episode**<br>Amoxicillin-Clavulanate 875-125mg + Doxycycline 100mg BID x 7-14 days<br>**PCN Allergy:**<br>Levofloxacin + Clindamycin<br><br>**Consider admission if known history of MRSA** | Vancomycin + Cefepime + Metronidazole<br><br>**Severe Beta-lactam Allergy:**<br>Levofloxacin + Vancomycin + Metronidazole | **USE ORDER SET 268 Skin and Soft Tissue Infection Admission Orders**<br><br>If history of MRSA and significant new infection, consider admission<br><br>Take pictures of wound and place into chart<br><br>For patients that are discharged, recommend follow up in 2 days |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| UTI | **Acute, uncomplicated cystitis – Women**<br>Nitrofurantoin 100mg po BID x5 days, or<br>Sulfamethoxazole-TMP 800-160mg po BID x3 days, or<br>Cephalexin 500mg po q6h x5 days, or<br>Fosfomycin 3g po x1 (reserve for patients with antibiotic allergies)<br><br>**Acute cystitis – Men**<br>Sulfamethoxazole-TMP 800-160mg po BID x7 days, or<br>Levofloxacin 500mg po q24h x7 days, or<br>Cephalexin 500mg po q6h x10 days (reserve for patients with allergies to sulfas/levofloxacin, history of resistance)<br><br>**Acute complicated cystitis / Pyelonephritis**<br>Ceftriaxone 1g IV x1, then Cephalexin 500mg po q6h x10 days<br>**PCN Allergy:**<br>Levofloxacin 500mg po q24h x 7 days, or<br>Sulfamethoxazole-TMP 800-160mg po BID x10 days | Ceftriaxone<br><br>Beta-lactam allergy:<br>Levofloxacin<br><br>If severe sepsis, refer to Sepsis Complete Order Set | |
| Meningitis | Start IV therapy per inpatient guidelines Urgently | **Regimen based on clinical history and order set:**<br>Community*: Vancomycin + Ceftriaxone<br><br>Neurosurgical*: Vancomycin + Cefepime<br><br>*if >50 yo or immunocompromised: add Ampicillin<br><br>Possible viral encephalitis: Consider adding acyclovir IV 10 mg/kg q8h | **USE ORDER SET 3445 Adult Cerebrospinal Fluid (CSF)** to order correct CSF test results by syndrome<br><br>Give beta-lactam/cephalosporin first, then vancomycin. |
| Severe Sepsis/Septic Shock of Unknown Origin | **N/A** | Vancomycin + Cefepime + Metronidazole<br><br>**Combination product available: Vancomycin 1g + Cefepime 2g in 1L NS** | **USE ORDER SET 2989 Sepsis Complete** |
| Neutropenic Fever | **N/A** | Cefepime +/- Vancomycin*<br><br>*Vancomycin only indicated for severe sepsis, history of MRSA, suspected line related infection, positive blood cultures for GPC, or severe pneumonia<br><br>**Severe Beta-Lactam Allergy:**<br>Consider Aztreonam + Vancomycin | **USE ORDER SET 3210** for Febrile Neutropenia to select appropriate labs and antibiotics<br><br>**For Neutropenic Fevers with severe sepsis consider:**<br>Meropenem + Vancomycin + Micafungin, and discuss with ID on call |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Diverticulitis | Levofloxacin 500-750mg po daily + Metronidazole 500mg po TID x 10 days<br><br>**Alternative if mild disease and not able to take quinolones:** Amoxicillin/Clavulanate 875-125mg po BID x 10 days | **Mild to moderate:** Ceftriaxone + metronidazole<br><br>**Severe illness:** Piperacillin/tazobactam<br><br>**Severe Beta lactam Allergy:** Levofloxacin + Metronidazole | |
| Cholecystitis | | **Mild to moderate:** Ceftriaxone + metronidazole<br><br>**Severe illness:** Piperacillin/tazobactam<br><br>**Severe Beta-lactam Allergy:** Levofloxacin + Metronidazole | |
| Intra-abdominal infection (other) | **N/A** | **Mild to moderate:** Ceftriaxone + metronidazole<br><br>**Severe illness:** Piperacillin/tazobactam<br><br>**Severe Beta lactam Allergy:** Levofloxacin + Metronidazole | |
| COPD exacerbation without sputum purulence or significant illness | Generally, antibiotics not indicated | | |
| COPD exacerbation with increased sputum purulence | Doxycycline 100mg po BID x 7-14 days<br>**Or**<br>Amoxicillin/Clavulanate 875/125mg po BID | | |
| Sinusitis | **Abx indicated if sx are persistent >9 days, severe or worsening (rule out viral)** Amoxicillin/Clavulanate 875/125mg po BID x 5-7 days<br><br>**PCN Allergy:** Levofloxacin 500mg po daily x 5-7 days | | |
| Clinical Urethritis or cervicitis | Ceftriaxone 250mg IM x 1 + Azithromycin 1g po x 1 | | |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Endometritis (post-partum) | Consider po abx if patient was discharged after delivery and symptoms are mild<br><br>Amoxicillin/Clavulanate 875-125mg po BID x 7 days | Clindamycin 900mg IV +<br>Gentamicin 5mg/kg | |
| Gonococcal Infections | Ceftriaxone 250mg IM x 1 + Azithromycin 1g po x 1 | | |
| Syphilis or exposure to syphilis | Penicillin G Benzathine 2.4 million units IM x 1<br><br>**Severe Beta-lactam Allergy:**<br>Doxycycline 100 mg po BID x 10 days | | For late secondary and tertiary, or neurological symptoms consider LP and discussion with ID |
| Chlamydia | Azithromycin 1g po x 1<br>Or<br>Doxycycline 100mg po BID x 7 days | | |
| Genital Herpes | **Treatment of first occurrence:**<br>Valacyclovir 1g po BID x 7-10 days | | Episodic therapy for recurrence:<br>Acyclovir 800mg po BID x 5 days<br>Or<br>Valacyclovir 1g po daily x 5 days |
| Bacterial Vaginosis | Metronidazole gel 0.75% one applicator full (5g) intravaginally qday x 5 days<br>OR<br>Metronidazole 500mg po BID x 7 days | | |
| Otitis Media – Adults | **No abx in last 30 days:**<br>Amoxicillin 500-875mg q12h x 5-7 days<br><br>Severe Beta Lactam allergy:<br>Azithromycin<br>TMP/SMX if pneumococcal resistance is no a concern<br><br>**Recent abx use, purulent conjunctivitis, recurrence, severe illness:**<br>Amoxicillin/Clavulanate 875-125mg BID x 10 days<br>Cefuroxime or Cefdinir<br><br>Non-Severe Beta lactam allergy<br>Ceftriaxone 2g IM/IV x1 | | |

| Infection Site | Outpatient Regimen | Admission Likely | Comments |
|---|---|---|---|
| Epididymorchitis | Ceftriaxone 250mg IM x 1 + Azithromycin 1g po x 1<br><br>And<br><br>Levofloxacin 500mg po daily x14 days | | Test for chlamydia /gonorrhea<br>Urine culture |
| Prostatitis | Levofloxacin 500mg qday<br><br>**Alternative:** TMP/SMX 1 DS tab q12h | | Duration may vary, please have patient f/u with PCP. |

**Blood Product Indications**

SWEDISH

# Blood Management: Indications for Transfusion – Adult

**EACH PATIENT SHOULD BE ASSESSED FOR TRANSFUSION INDICATION BASED ON CLINICAL CONDITION AND LABORATORY TEST RESULTS**

**RED BLOOD CELLS** - One unit of red cells is expected to increase Hct by 3% and Hgb by 1 g/dL.

***Indication:***

- Hct less than 21%
- Hct less than 24% with coronary artery disease, unstable angina, myocardial infarction or cardiogenic shock
- Hct less than 24% with inadequate cardiac output or oxygenation
- Hct less than 24% with mixed venous hemoglobin O2 saturation less than 65%
- Hct less than 24% with tachycardia and/or hypotension not corrected
- Hct less than 24% with oncology disorder with bone marrow suppression
- Patient is actively bleeding with greater than 20% blood volume loss

**PLATELETS** - A single dose is expected to increase platelet count by 25 – 35,000/uL in an average sized adult.

***Indication:***

- Platelet count less than 10,000/uL
- Platelet count less 20,000/uL and minor invasive procedure
- Platelet count less than 50,000/uL with active bleeding or major invasive procedure
- Platelet count less than 50,000/uL with bone marrow suppression and other risk of bleeding
- Platelet count less than 50,000/uL with platelet dysfunction
- Platelet count less than 100,000/uL with retinal or CNS bleeding
- Platelet dysfunction and active bleeding

**PLASMA -** A dose of 10 to 20 mL/kg of plasma is expected to correct a coagulopathy when INR>1.8.

***Indication:***

- INR greater than 1.8 or PT greater than 19
- Coagulopathy and active bleeding
- Coagulopathy and invasive procedure
- Urgent reversal of warfarin and PCC not otherwise indicated
- Thrombotic thrombocytopenic purpura (TTP)

**CRYOPRECIPITATE** - A dose of 1 pool is expected to increase fibrinogen 45 to 90mg/dL in an average size adult.

***Indication:***

- Fibrinogen less than 100 mg/dL
- Coagulopathy (DIC) and active bleeding
- Von Willebrand disease (Consider Factor VIII - Von Willebrand factor concentrate from Pharmacy)

**Please contact Transfusion Service Lab or page Transfusion Service Medical Staff for consultation as needed.**

# Transfusion Reactions

SWEDISH MEDICAL CENTER

NOTE: The electronic version of this document or form is the latest and only acceptable version. You are responsible to ensure any printing of this document is identical to the e-version.

## BLOOD MANAGEMENT: SUSPECTED TRANSFUSION REACTION GUIDE

| SYMPTOMS | IMMEDIATE ACTIONS | ADDITIONAL ACUTE CARE | REACTION TYPE |
|---|---|---|---|
| Hives (urticaria)<br>Itching (pruritus)<br>Redness, flushing (erythema) | ❑ Stop transfusion; do not discard unit or infusion set<br>❑ Maintain IV access<br>❑ Notify patient's LIP immediately<br>OPTIONAL: Report to Transfusion Service Lab (TSL)- using process below | • LIP to consider antihistamine medication<br>• If reaction resolves AND there is no evidence of severe allergy or anaphylaxis, LIP may opt to continue transfusion<br>• Observe at least every 15 minutes for duration of transfusion<br>• LIP to consider future pre-transfusion antihistamine medication | Mild allergic |
| Temp rise more than 1 degree C or 2 degrees F<br>Chills<br>Rigors<br>Severe back pain (new or worsened)<br>Red or brown urine (new onset)<br>Generalized bleeding (new onset)<br>Anxiety, feeling of impending doom | ❑ Stop transfusion; do not discard unit or infusion set<br>❑ Maintain IV access<br>❑ Notify patient's LIP immediately<br>❑ Monitor vital signs and patient condition frequently<br>❑ Perform clerical check- patient ID band, Transfusion Report, blood bag label and electronic medical record (EMR) should all match<br>❑ Contact Transfusion Service Lab (TSL) to report reaction<br>❑ Ballard- Ext. 16360 (206-781-6360)<br>❑ Cherry Hill- Ext.24500 (206-320-4500)<br>❑ Edmonds- 425-640-4130<br>❑ First Hill- Ext.62212 (206-386-2212)<br>❑ Issaquah- Ext.32380 (425-313-2380)<br>❑ Do NOT re-start transfusion<br>❑ Complete order for "Suspected Transfusion Reaction" and collect appropriate lab specimen<br>❑ Send blood bag, IV fluids and tubing with Transfusion Report, post-transfusion specimen and order to TSL<br>❑ Observe patient closely<br>❑ Provide supportive care as indicated | • Observe patient closely<br>• Fever alone may be the first manifestation of a life-threatening reaction<br>Consider:<br>• Anti-pyretic medication and/or medication for chills, rigors<br>• Urinalysis<br>• Direct antiglobulin test (DAT, Direct Coombs test)<br>• Blood cultures, antibiotics<br>• Chest X-ray | Febrile non-hemolytic, Acute hemolytic, Septic, Transfusion related acute lung injury (TRALI) |
| Stridor, wheezing or sensation of throat tightening | | • Treat for severe allergy or anaphylaxis<br>Consider:<br>• Testing for IgA deficiency, anti-IgA | Severe allergic, anaphylactic |
| Hypotension<br>Shock | | Treat for hypotension<br>If anaphylactic pattern, treat for anaphylaxis | Anaphylactic, Hypotensive |
| Chest pain or tightness<br>Hypertension | | • Monitor oxygen saturation<br>Consider:<br>• Diuresis<br>• Evaluation of cardiac enzymes<br>• Evaluation of BNP<br>• EKG<br>• Chest X –ray<br>• ABG | Transfusion associated circulatory overload (TACO) |
| Dyspnea, shortness of breath<br>Respiratory distress or new need for mechanical ventilation<br>Oxygen desaturation | | | TACO, Transfusion related acute lung injury (TRALI), Transfusion associated dyspnea (TAD), Anaphylactic |
| Tachycardia<br>Nausea and/or vomiting | | • Monitor patient's condition | All<br>Non-specific |

SWEDISH
Extraordinary care. Extraordinary caring.℠

Providence St. Joseph Health

# Sepsis Clinical Pathway

## SEPSIS Early Detection and Treatment

**SURVIVING SEPSIS CAMPAIGN TREATMENT BUNDLES**

**COMPLETED WITHIN 3 HRS**
1. Measure lactate level
2. Obtain blood cultures prior to administration of antibiotics
3. Administer broad spectrum antibiotics
4. Administer 30 mL/kg for hypotension or lactate ≥ 4.0

**COMPLETED WITHIN 6 HRS**
1. If hypotensive after fluids, apply vasopressors to maintain MAP ≥ 65
2. Re-asses volume status and tissue perfusion
3. Re-measure lactate if initial lactate was elevated

**ALERT to patient with 2 SIRS or 2 qSOFA criteria**

**SIRS**
- Temp >38˚C or <36˚C
- HR >90
- RR >20
- WBC >12K or <4K or >10% Bands

**qSOFA**
- Altered mental status
- RR ≥ 22
- SBP ≤ 100

YES → **Does the patient have a potential/ suspected source of infection?**

NO → **Do not initiate Sepsis Pathway**

YES → **A SEPSIS**

- ☑ Lactate
- ☑ Blood Cultures
- ☑ CBC w/manual diff
- ☑ CMP
- ☑ PT/INR/aPTT
- ☑ UA, C&S if indicated
- ☑ CXR
- ❑ Procalcitonin
- ❑ Broad-spectrum abx if source evident

**Is there evidence of sepsis-related organ dysfunction?**

- Lactate > 2.0
- SBP < 90 or MAP < 65
- Acute respiratory failure requiring intubation or new need for CPAP or BiPAP
- Creatinine >2.0 or urine output <0.5mL/kg/hr for 2 hrs
- Total Bilirubin > 2
- Plt<100K , INR >1.5, or aPTT >60
- Altered mental status

NO → **A SEPSIS** Document **Sepsis** and source if identified

YES → **B SEVERE SEPSIS**

- ☑ Give 30 mL/kg bolus*
- ☑ Repeat lactate
- ☑ Broad-spectrum abx

*If giving < 30 mL/kg uncheck fluid order and document reason

**Is there evidence of shock?**

- Hypotensive after initial 30 mL/kg bolus
- Initial lactate ≥ 4.0

NO → **B SEVERE SEPSIS W/O SHOCK** Document **Severe Sepsis** and associated organ dysfunction

YES → **C SEVERE SEPSIS WITH SHOCK**

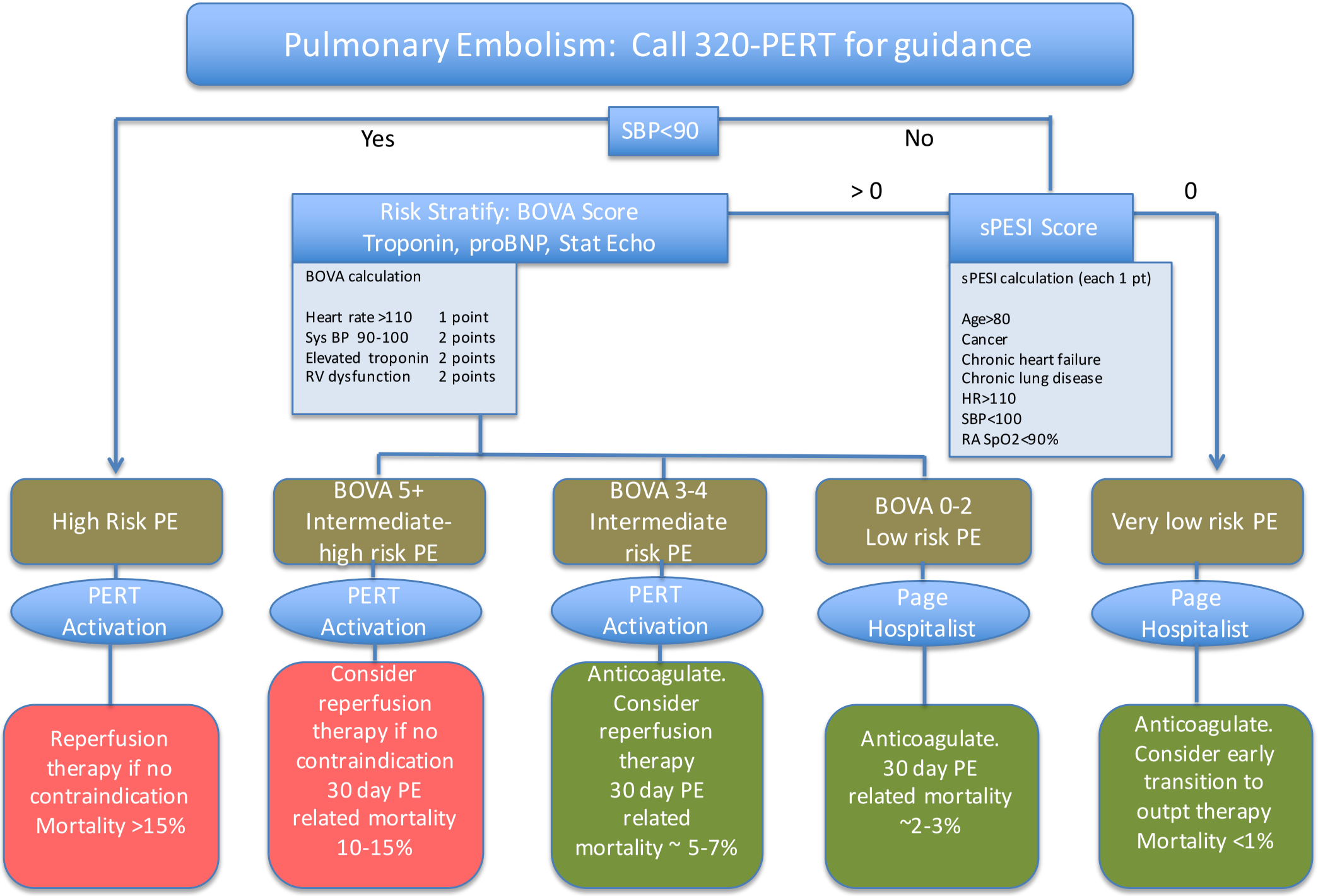
- ☑ Start vasopressors if still hypotensive
- ☑ Reassess fluid status and tissue perfusion (with dynamic tests if available)

~~A~~ ~~B~~ ~~C~~
**Patient does NOT meet criteria**
**Patient does NOT have Sepsis**

**A**
**Patient meets criteria A**
**Patient has SEPSIS**
*Consider Med-Surg bed vs. Discharge*

**A + B**
**Patient meets criteria A & B**
**Patient has SEVERE SEPSIS**
*Consider non-Critical Care bed. Discuss with Intensivist if needed.*

**A + B + C**
**Patient meets criteria A, B & C**
**Patient has SEVERE SEPSIS WITH SEPTIC SHOCK**
*Critical Care bed.*
*If elevated lactate only, discuss with Intensivist and consider step-down or sub-ICU bed, if locally available*




Suggested criteria for RV dysfunction: CT or echo RV/LV >1, moderate to severe RV dysfunction (not mild)

**Table 7 Original and simplified PESI**

| Parameter | Original version[214] | Simplified version[218] |
|---|---|---|
| Age | Age in years | 1 point (if age >80 years) |
| Male sex | +10 points | – |
| Cancer | +30 points | 1 point |
| Chronic heart failure | +10 points | 1 point |
| Chronic pulmonary disease | +10 points | |
| Pulse rate ≥110 b.p.m. | +20 points | 1 point |
| Systolic blood pressure <100 mm Hg | +30 points | 1 point |
| Respiratory rate >30 breaths per minute | +20 points | – |
| Temperature <36 °C | +20 points | – |
| Altered mental status | +60 points | – |
| Arterial oxyhaemoglobin saturation <90% | +20 points | 1 point |
| | Risk strata[a] | |
| | **Class I:≤65 points**<br>very low 30-day mortality risk (0–1.6%)<br>**Class II: 66–85 points**<br>low mortality risk (1.7–3.5%)<br><br>**Class III: 86–105 points**<br>moderate mortality risk (3.2–7.1%)<br>**Class IV: 106–125 points**<br>high mortality risk (4.0–11.4%)<br>**Class V: >125 points**<br>very high mortality risk (10.0–24.5%) | **0 points**= 30-day mortality risk 1.0%<br>(95% CI 0.0%–2.1%)<br><br>**≥1 point(s)**= 30-day mortality risk 10.9%<br>(95% CI 8.5%–13.2%) |

b.p.m. = beats per minute; PESI = Pulmonary embolism severity index.
[a]based on the sum of points.

SWEDISH MEDICAL CENTER

# EMERGENT CARDIAC TEAM ACTIVATION (STEMI)

| Clinical Procedure | |
|---|---|
| **Approved:** March 2012 | **Next Review:** March 2015 |
| **Clinical Area:** All clinical areas | |
| **Population Covered:** All emergent identified STEMI cardiac patients | |

***Go directly to***:



## Purpose

To describe the steps necessary to initiate and activate an emergency response and triage of cardiac patients from the Emergency Department, or between Swedish campuses, or from pre-arrival notification by Emergency Medical System (EMS), specific to the ST elevation myocardial infarcts (STEMI) as determined by the electrocardiogram.

## Policy Statement

None.

## LIP Order Requirement

None.

## Responsible Persons

Licensed independent practitioner (LIP), Emergency Department (ED) staff, Cardiac Cath Lab staff, Rapid Response Team (RRT).

## Prerequisite Information

None.

| PROCEDURE | |
|---|---|
| **Responsible Person** | **Steps** |
| LIP, ED Staff, Cath Lab Staff, RRT | **PRE-ARRIVAL NOTIFICATION FROM EMS TO SWEDISH CHERRY HILL, EDMONDS, ISSAQUAH**<br><br>1. The EMS team determines the need and/or indications for emergent STEMI transport.<br>2. EMS sends the Cherry Hill/Issaquah/Edmonds Emergency Department the ECG for verification *when available.*<br>3. The Emergency Department notifies the on-call interventional STEMI physician of the day to accept the patient.<br>4. The Emergency Department staff activates the following Code STEMI:<br><br>A Code STEMI is called to the hospital operator (3000).<br><br>a. The cath lab team is paged.<br>b. The Rapid Response Team (RRT), nursing supervisor is paged.<br>c. The Interventional STEMI physician of the day is paged<br>d. *Issaquah only*: Hospitalist physician.<br><br>5. Upon arrival of the patient to the Emergency Department, the operator is called to page overhead "Code STEMI – RRT to ED." Except at Issaquah, where the internal paging system is used and the Nursing Supervisor reports to the ED. A safety pause is initiated before the transport to the cath lab to ensure the stability of the patient and proper identification.<br>6. **The patient is transported to the cath lab**.<br><br>a. Accompanied by either the RRT, ED staff, Nursing Supervisor (Issaquah) or the cardiac cath team members, as needed.<br>b. In the event that the cath lab on-call team has not yet arrived to the cath lab, the RRT or ED staff transports the patient to the cath lab, remain with the patient and monitors the patient until the STEMI cardiologist and/or cath lab team releases them from attending to the patient.<br>c. The patient is prepped, safety pause is performed and the procedure begins. |
| | **PATIENT ARRIVES AT ANOTHER SWEDISH CAMPUS (FIRST HILL, BALLARD, FREE-STANDING EMERGENCY DEPARTMENT (FSED) AND A TRANSFER IS NEEDED**<br><br>1. The patient is triaged appropriately within standard Emergency Department guidelines.<br>2. An ECG is performed which identifies a STEMI condition.<br>3. The Emergency Department physician (from First Hill, Ballard or Free Standing Emergency Department) consults with the on-call STEMI cardiologist of the day.<br>4. The Emergency Department physician (from First Hill, Ballard, FSED) notifies the Cherry Hill, Edmonds, and Issaquah Emergency Department of the STEMI patient.<br>5. Cherry Hill, Issaquah, Edmonds Emergency Department staff triggers and activates the Code STEMI. |

6. The sending Emergency Department arranges for the patient transfer and notifies the receiving ED of the estimated time of arrival (ETA). This includes a communication report regarding the patient status from the originating Emergency Department physician to the receiving ED physician.
7. Upon arrival of the patient to the receiving Emergency Department, the operator is called to page overhead "Code STEMI – RRT to ED," except at Issaquah where the internal paging system is used. Then a safety pause is initiated before the transport to the cath lab to ensure the stability of the patient and proper identification.
8. The patient is transported to the cath lab accompanied by the RRT, ED staff, or cardiac cath team members.
9. In the event that the cath lab on-call team has not yet arrived to the cath lab, the RRT transports the patient to the cath lab and monitors the patient until the STEMI cardiologist and/or cath lab team releases them from attending to the patient.
10. The patient is prepped and the procedure begins.

**INPATIENT FROM SWEDISH BALLARD OR FIRST HILL CAMPUS**

1. The patient is identified with chest pain or other cardiac symptoms.
2. Rapid Response is paged
3. A STAT 12-lead ECG is ordered by the bedside nurse. If ST elevation is suspected, RRT transmits the ECG to the Cherry Hill Emergency Department. The ED physician notifies the on-call cardiologist and transfers to critical care or cath lab per cardiologist request.
4. Cherry Hill Emergency Department physician confirms the STEMI and initiates/calls the Code STEMI for Cherry Hill. At First Hill, or Ballard, the patient is prepared for transfer by sending unit/campus. Upon arrival of the patient to the Cherry Hill Emergency Department, a safety pause is initiated before the transport to the cath lab to ensure the stability of the patient and proper identification. A Code STEMI is paged overhead to alert the RRT and nursing supervisor of the patient's arrival.
5. In the event that the Cath lab on call team has not yet arrived to the cath lab, the RRT transports the patient to the Cath lab and monitors the patient until the STEMI cardiologist and/or Cath lab team releases them from attending to the patient.
6. The patient is prepped and the procedure begins.

**INPATIENT AT CHERRY HILL, EDMONDS OR ISSAQUAH**

1. The patient is identified with chest pain or other cardiac symptoms.
2. Rapid Response is paged.

    a. A STAT 12-lead ECG is ordered by the bedside nurse. If ST elevation is suspected, RRT transmits the ECG to the respective Emergency Department. The ED physician notifies the on-call cardiologist and transfers to critical care or cath lab per cardiologist request.
    b. The Emergency Department physician confirms the STEMI and initiates/calls the Code STEMI.

3. If the patient is an inpatient at Edmonds, the SHM (Swedish Hospital Medical) physician confirms the STEMI and initiates a Code STEMI.
4. If the patient in an inpatient at Issaquah:

    a. If ST elevation is suspected, The Rapid Response Team is paged.

b. RRT faxes the ECG to Issaquah Emergency Department The ED physician notifies the on-call cardiologist and transfers the patient to critical care or cath lab per cardiologist request.
c. Emergency Department physician confirms the STEMI and initiates/calls the Code STEMI for Issaquah.
d. RRT and administrative supervisor report to the patient's room. If transfer from Redmond, RRT and nursing supervisor report to Issaquah Emergency Department to await patient arrival.

If the patient is at Redmond Emergency Department, the patient is prepared for transfer to Issaquah. Upon arrival of the patient to the Issaquah Emergency Department, a safety pause is initiated before the transport to the cath lab to ensure the stability of the patient and proper identification.

5. The RRT transports the patient to the cath lab.
6. In the event that the Cath lab on call team has not yet arrived to the cath lab, the RRT transports the patient to the Cath lab and monitors the patient until the STEMI cardiologist and/or Cath lab team releases them from attending to the patient.
7. The patient is prepped and the procedure begins.

**UNSTABLE PATIENT AT SWEDISH FIRST HILL**

1. Transfer of a patient may not occur until the emergency medical condition is stabilized.
2. If the patient is too unstable to transfer to the Cherry Hill campus cath lab, the First Hill attending or ED physician, in consultation with the on-call interventional STEMI physician, may choose to attempt to stabilize the patient in the cardiac cath lab at First Hill.
3. If this determination is made, First Hill triggers and initiates a "CODE STEMI - First Hill."

   This activates the interventional STEMI physician of the day, First Hill Rapid Response Team, First Hill nursing supervisor, and the cardiac cath team to report to the First Hill Cardiac Cath Lab.

4. In the event that the cath lab on-call team has not yet arrived to the First Hill cath lab, the RRT transports the patient to the cath lab and monitors the patient until the STEMI cardiologist and/or cath lab team arrives and releases them from attending to the patient.
5. The patient is prepped and the procedure begins.

**CONTINGENCY PLAN IN THE EVENT OF LIMITED CATH LAB ROOMS OR PERSONNEL WITH AN ACUTE STEMI**

1. ***If a room will be open in the next 30 minutes*** (procedure completed but patient still on the table), start the STEMI protocol and proceed when the lab is open.
2. ***If staff is not available in the next 30 minutes and a room is available:***

   - Elective procedures may be interrupted/postponed so that staff can be diverted, as feasible, from procedures in progress to accommodate the STEMI.
   - The Rapid Response Team is utilized to assist in monitoring/moving the more stable patients until the STEMI patient has been treated and stabilized or until more cath lab personnel have been mobilized to provide care for all patients currently in the cath lab.

- This process is carried out to ensure that the STEMI patient receives optimal care and rapid revascularization without jeopardizing the safety and treatment of other patients currently undergoing catheterization procedures in the lab.
- Communication is established between the STEMI physician and the physician with a procedure in progress to determine the best patient care for both the STEMI patient and the patient with a procedure in progress.

3. ***If a lab and staff cannot be available in the next 30 minutes***, but there is a procedure about to start, or a diagnostic cath on the table but the intervention has not started, then the PCI (percutaneous coronary intervention) is aborted at this time (contingent upon the stability of the patient in whom the PCI procedure will be delayed) and the STEMI protocol activated and the patient brought to the lab.

4. ***If there is non-availability of a cath lab room or staff to accommodate a STEMI patient present on the Cherry Hill, Edmonds or Issaquah campus within 60 minutes***: Fibrinolytic therapy may be appropriate if the patient presents within three hours of the onset of chest pain and has no contraindications to fibrinolytic therapy (see fibrinolytic therapy recommendations). The patient will be taken to the cath lab as soon as a room and staff are available or transported to Cherry Hill or to an alternate Level 1 facility.

## Definitions

*Transfer*. The movement, including discharge, of an individual outside the hospital's facilities at the direction of any person employed by the hospital (or affiliated or associated with the hospital, directly or indirectly), excluding individuals leaving without permission or direction to do so.

*Emergency medical condition.* A medical condition presenting with acute symptoms of sufficient severity such that the absence of immediate medical attention could reasonably be expected to result in the following:

- Placing the individual in serious jeopardy,
- Serious impairment to bodily functions, *or*
- Serious dysfunction of any bodily organ.

*Stabilized*. Within reasonable medical probability, no material deterioration to the condition is likely to result from or occur during the transfer which would jeopardize the patient's medical condition or expected chances for recovery.

*PCI*. Percutaneous coronary intervention

## Forms

None.

## Supplemental Information

SMC provides emergency care through its dedicated emergency departments. In compliance with federal regulations, emergency care is provided by a qualified medical practitioner. Such services include medical screening, examinations, and evaluation. All services are based upon the capacity of SMC to treat. See *Emergency Medical Treatment and Active Labor: Assessment and Treatment of Patients in the Emergency Department*.

### Regulatory Requirement

The Joint Commission. PC.02.01.19 – "RRT."

### References

None.

## STAKEHOLDERS

### Author/Contact

Betty Jo Flett, Director, Invasive Cardiovascular Services

### Co-Authors

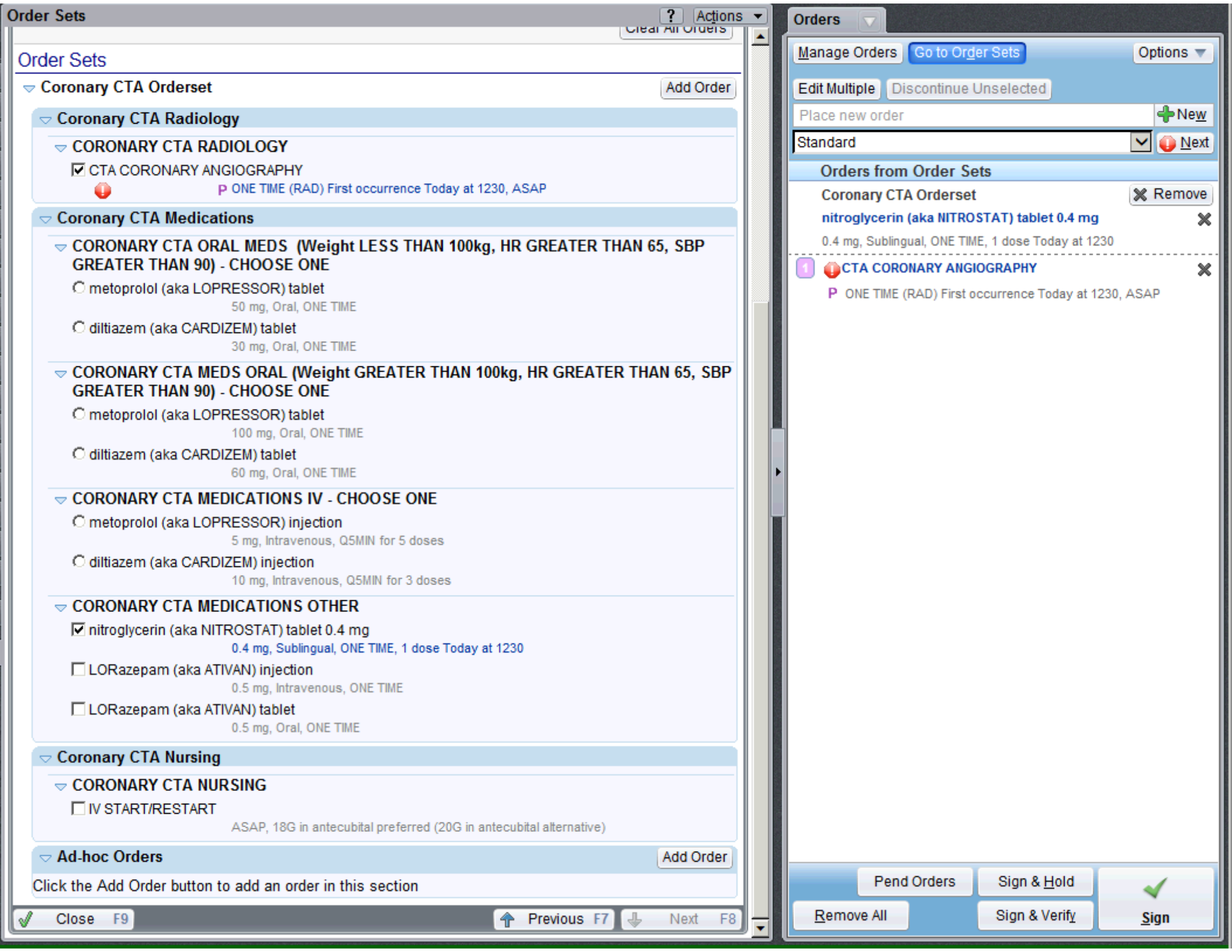
Marie Arnone, Professional Development Specialist Cardiovascular Services

### Expert Consultants

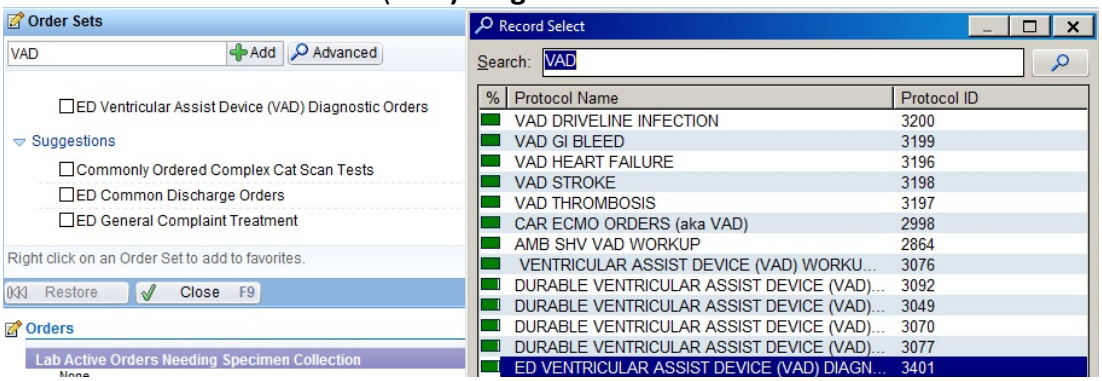
Chief Medical Officer
Medical Director, Cardiac Cath Lab

### Sponsor

Betty Jo Flett, Director, Invasive Cardiovascular Services


Order Sets
Actions
Clear All Orders
Order Sets
Coronary CTA Orderset
Add Order
Coronary CTA Radiology
CORONARY CTA RADIOLOGY
CTA CORONARY ANGIOGRAPHY
P ONE TIME (RAD) First occurrence Today at 1230, ASAP
Coronary CTA Medications
CORONARY CTA ORAL MEDS (Weight LESS THAN 100kg, HR GREATER THAN 65, SBP GREATER THAN 90) - CHOOSE ONE
metoprolol (aka LOPRESSOR) tablet
50 mg, Oral, ONE TIME
diltiazem (aka CARDIZEM) tablet
30 mg, Oral, ONE TIME
CORONARY CTA MEDS ORAL (Weight GREATER THAN 100kg, HR GREATER THAN 65, SBP GREATER THAN 90) - CHOOSE ONE
metoprolol (aka LOPRESSOR) tablet
100 mg, Oral, ONE TIME
diltiazem (aka CARDIZEM) tablet
60 mg, Oral, ONE TIME
CORONARY CTA MEDICATIONS IV - CHOOSE ONE
metoprolol (aka LOPRESSOR) injection
5 mg, Intravenous, Q5MIN for 5 doses
diltiazem (aka CARDIZEM) injection
10 mg, Intravenous, Q5MIN for 3 doses
CORONARY CTA MEDICATIONS OTHER
nitroglycerin (aka NITROSTAT) tablet 0.4 mg
0.4 mg, Sublingual, ONE TIME, 1 dose Today at 1230
LORazepam (aka ATIVAN) injection
0.5 mg, Intravenous, ONE TIME
LORazepam (aka ATIVAN) tablet
0.5 mg, Oral, ONE TIME
Coronary CTA Nursing
CORONARY CTA NURSING
IV START/RESTART
ASAP, 18G in antecubital preferred (20G in antecubital alternative)
Ad-hoc Orders
Add Order
Click the Add Order button to add an order in this section
Close F9
Previous F7
Next F8
Orders
Manage Orders
Go to Order Sets
Options
Edit Multiple
Discontinue Unselected
Place new order
New
Standard
Next
Orders from Order Sets
Coronary CTA Orderset
Remove
nitroglycerin (aka NITROSTAT) tablet 0.4 mg
0.4 mg, Sublingual, ONE TIME, 1 dose Today at 1230
1
CTA CORONARY ANGIOGRAPHY
P ONE TIME (RAD) First occurrence Today at 1230, ASAP
Pend Orders
Sign & Hold
Remove All
Sign & Verify
Sign

# ED Ventricular Assist Device (VAD) Diagnostic Order set




**ED Ventricular Assist Device (VAD) Diagnostic Orders** Manage My Version

Call 206-320-2982 and **ASK FOR THE ON-CALL PROVIDER** when a VAD patient arrives to the Emergency Department or upon hearing that a VAD patient is coming to the ED.

**VAD PATIENTS WILL ONLY BE ADMITTED TO CVICU or 4E.**

**General Orders**

**Nursing/Patient Care**

- ☑ Notify VAD team STAT of patient arrival to ED
  Call 206-320-2982 and ask for VAD On-Call Provider
- ☑ Vital Signs
  How often: PER PROTOCOL
- ☑ Communicate to Nurse
  SpO2 monitoring may be inaccurate and is unreliable
- ☑ Doppler manual blood pressures ONLY
  Goal MAP 65-85 mmHg
- ☑ Follow VAD Emergency Response Algorithm if patient codes
  Details
- ☑ IV Start / Restart
  ASAP
  Dept performing task: ED
  18 gauge
- ☐ NPO
  Starting 6/16/17

**Diagnostic Studies**

**Labs**

If hematocrit is low, obtain fecal occult. GI bleeding is common in this patient population.

- ☑ LD, SERUM
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☑ HEMOGLOBIN, PLASMA
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☑ CBC WITH DIFF (ABS-%)
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☑ TPN 2
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☑ HEPATIC FUNCTION PANEL
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☑ PROTIME (PT)
  P STAT, ONCE First occurrence Today at 1015, Unit Collect
- ☐ FECAL OCCULT BLOOD POCT
- ☐ TYPE AND SCREEN BLOOD BANK (ABO, RH, AND ANTIBODY SCREEN)
  STAT, ONCE, Unit Collect

**Microbiology**

- ☐ CULTURE AND SENSITIVITY WITH GRAM (ROUTINE)
  ASAP, ONCE, Starting 6/16/17, Driveline Exit Site. Please perform prior to first dose of antibiotics.
- ☐ BLOOD CULTURE X 2
- ☐ URINALYSIS WITH CULTURE IF INDICATED
  Routine, ONCE, Unit Collect

**Diagnostic Imaging**

If a patient presents with a stroke, contact VAD Provider on-call STAT. If Last Known Well is LESS than 6 hours, activate Code STROKE and use ED Acute Stroke Order Set [969].

**A VAD patient will only receive TPA if the VAD Provider approves it.** Note that the goal MAP for VAD patients should not exceed 85 mmHg (pump is afterload sensitive).

- ☐ EC ECHO M MODE +2 DIMENSIONAL W/ SPECTRAL OR COLOR FLOW DOPP

NOTE: The electronic version of this document or form is the latest and only acceptable version. If you have a paper version, you are responsible for ensuring it is identical to the e-version.

# ED Code Stroke Safety Pause

## Questions to ask

1) Last Known Well
2) Anticoagulation/blood thinners?
3) Review in the field vital signs and blood glucose. Assess safety of "straight to CT"
4) History of allergy to iodine contrast for CTs?
5) History of dialysis?

If iodine allergy is present or patient has h/o dialysis, order CT Head only and uncheck CTA

## Exam

1) FAST exam + visual fields and eye movements
2) Los Angeles Motor Scale (LAMs Scale)

| | |
|---|---|
| **Facial Droop** | |
| Absent | **0** |
| Present | **1** |
| **Arm Drift** | |
| Absent | **0** |
| Drifts Down | **1** |
| Falls Rapidly | **2** |
| **Grip Strength** | |
| Normal | **0** |
| Weak Grip | **1** |
| No Grip | **2** |
| **Total Score (0-5)** | |

## Code Activation and Epic Order Set

**Last known Well Under 4.5 hours: Place Neuro Orders from Quicklist and Stroke Nursing Orders.**

**LAMs Score 0-3: Place order set & Activate Code Stroke Cherry Hill**
**LAMs Score 4-5: Place order set & Active Code Stroke + Code IR Cherry Hill**

## Final Decision on CTA/Iodine Exposure

**AUTOMATIC CTA: If the patient's EGFR is 45 or above, if they are not on dialysis, and if they have no iodine allergy**

**CAUTION AND/OR NO CTA:**
**EGFR < 45**
**If they are on dialysis and make urine (especially peritoneal dialysis, they could end up on hemodialysis)**
**If they have iodine allergy, providers must weight risks/benefits of CTA.**
**If there is an anaphylactic allergy to iodine, anesthesia would have to be present during study and patient would have to be pre-medicated.**

# Swedish Code Strokes

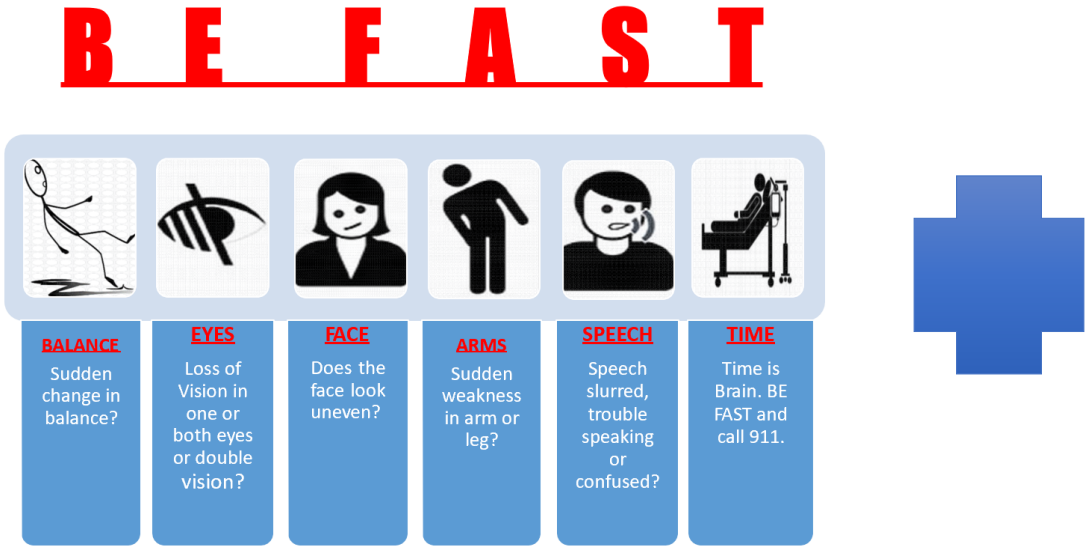
# Los Angeles Motor Scale (LAMS)

| Los Angeles Motor Scale | | |
|---|---|---|
| Face | 0 | No facial droop |
| | 1 | Facial droop present |
| Arm | 0 | No arm drift |
| | 1 | Arm drift present |
| | 2 | Arm falls rapidly |
| Grip | 0 | Normal grip strength |
| | 1 | Weak grip strength |
| | 2 | Grip absent, flaccid weakness |
| Total | 0-5 | |

LAMS 4-5
= greater chance of Large Vessel Occlusion (LVO)

Llanes, JN et al. Prehosp Emerg Care. 2004 Jan-Mar;8(1):46-50.

# ER Attending Assessment




| Los Angeles Motor Scale | | |
|---|---|---|
| Face | 0 | No facial droop |
| | 1 | Facial droop present |
| Arm | 0 | No arm drift |
| | 1 | Arm drift present |
| | 2 | Arm falls rapidly |
| Grip | 0 | Normal grip strength |
| | 1 | Weak grip strength |
| | 2 | Grip absent, flaccid weakness |
| Total | 0-5 | |

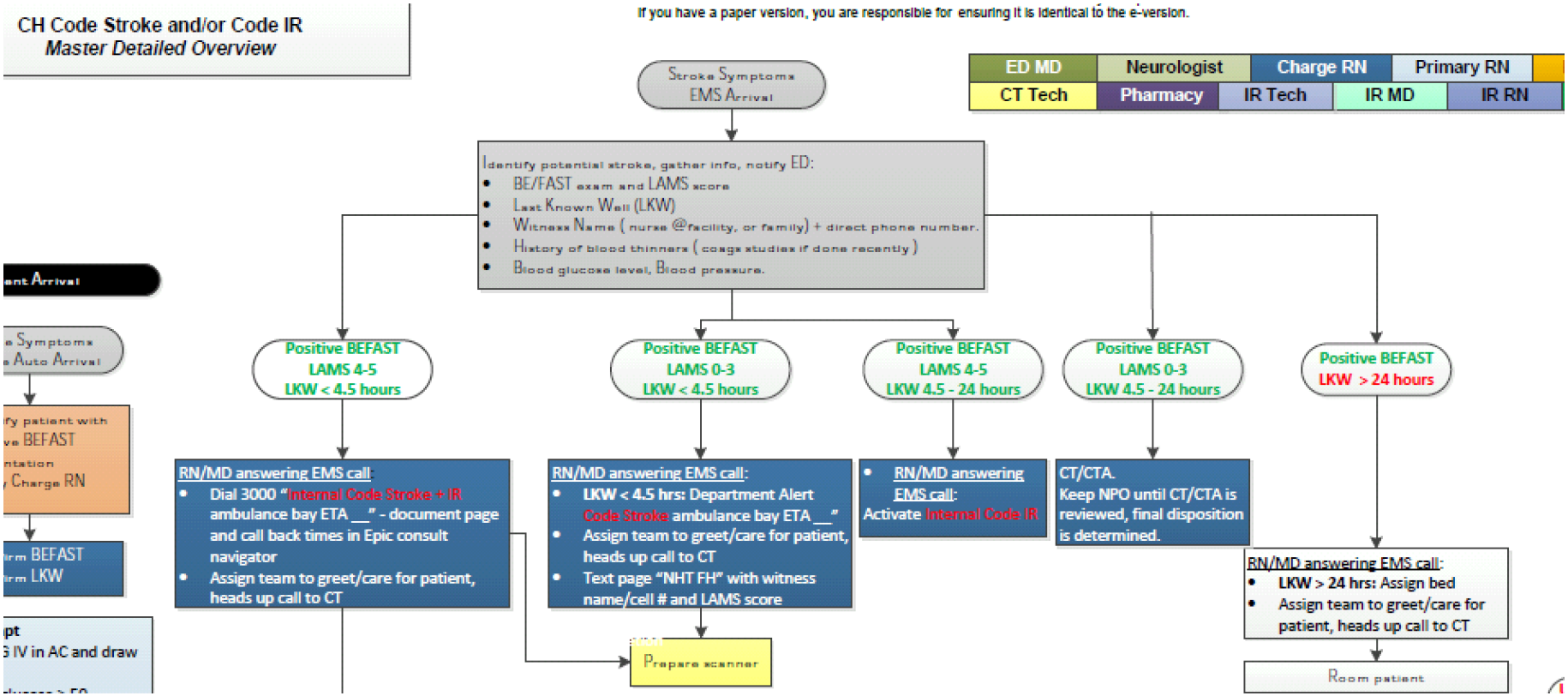
# Cherry Hill:  Comprehensive Stroke Center Code Stroke ED Algorithm

- ***If you do not work at Cherry Hill skip to slide 21***

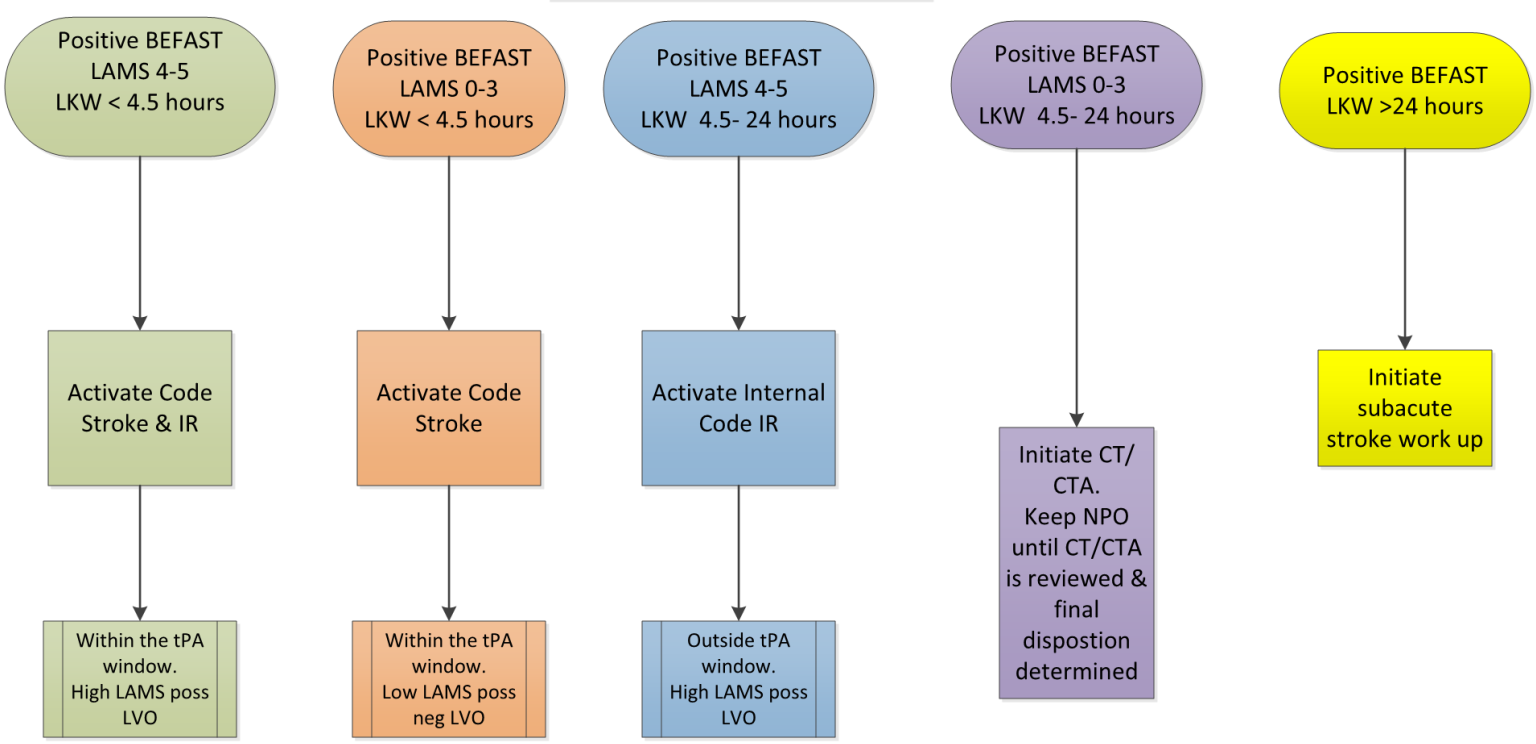
- FH and CH Algorithms have been updated on Standards website (go to Swedish intranet and click on standards, then departments, and then stroke)

- We need to update
  - Issaquah, Edmonds, Ballard, Millcreek, Redmond

# 2018 Code Stroke/IR Algorithm for Cherry Hill Campus Only



# Another way to think about it



# Still Unsure?
# Another Way to Think About it

Last Known Well


Always Activate Code Stroke, with Pharmacy Activation
Internal Code IR **only if** LAMs 4-5

Only activate Internal Code IR if the patient meets the threshold for a severe stroke (LAMs 4-5), No Pharmacy activation

No Code Stroke Activation

# Expectations

CH ER Attending

- Assess patient in ambulance bay
- Do BEFAST + LAMs
- Based on LKW and LAMs activate Code Stroke vs. Code Stroke plus Code IR if nursing has not done this yet & appropriate
- Place Code stroke order set
- Order CT head, CTA H&N (on order set). We have asked CT techs do always perform code Stroke CT/CTP/CTA on these patients

# One Point To Be Clear On…..

CH ER Attending

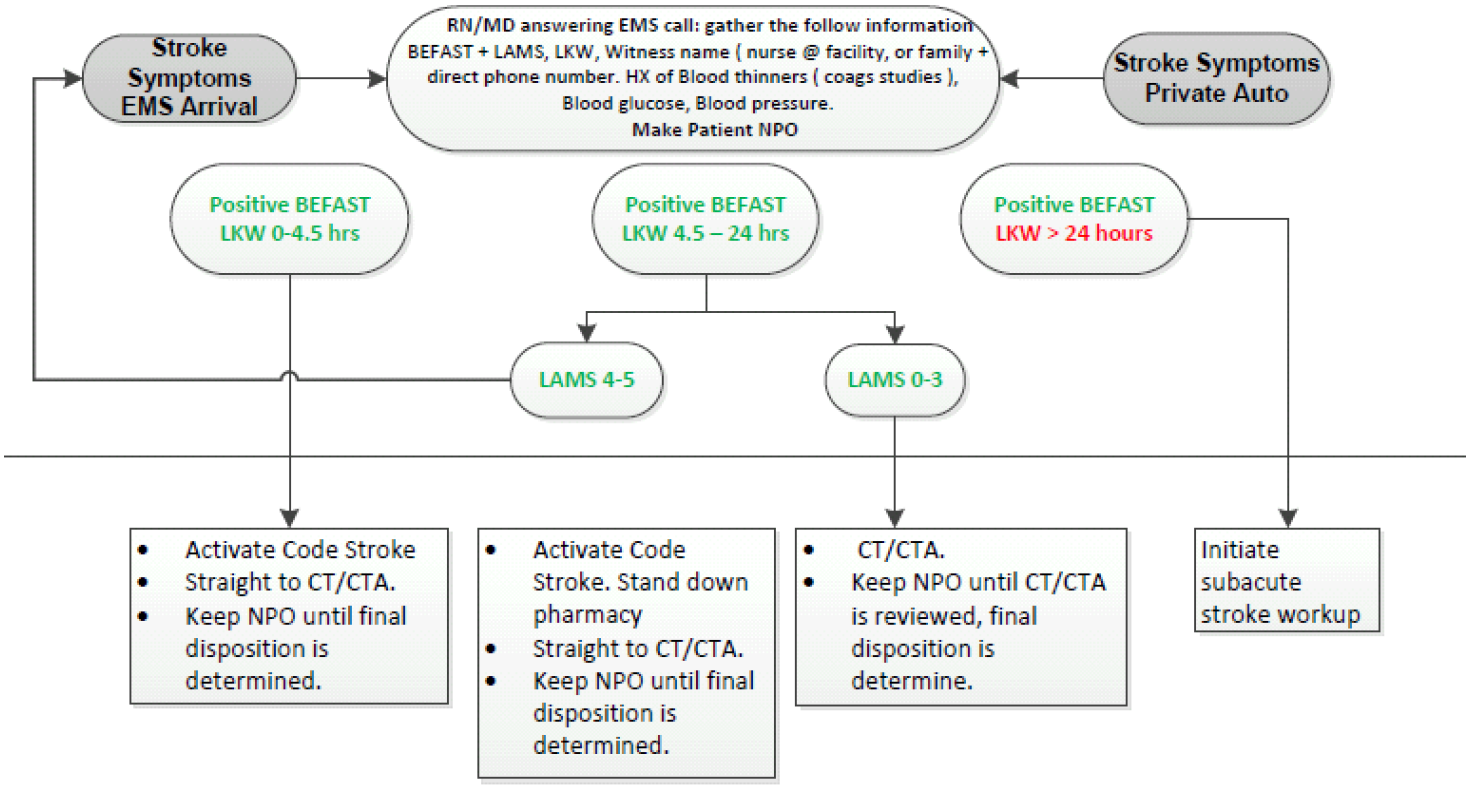
- What sets Cherry Hill apart from ALL other campuses is that Cherry Hill will active “Internal Code IR” if the LKW < 24 hours and the LAMs is 4-5

- No other campuses call the code operator, @ 3000, to activate “internal code IR”

# What happens at First Hill

# Non Cherry Hill Code Stroke Algorithm

(see FH Code stroke algorithm on Swedish standards page)



# Another Way to Think About it

Last Known Well


Code Stroke, with Pharmacy Activation

Only activate Code Stroke if the patient meets the threshold for a severe stroke (LAMs 4-5), pharmacy may stand down

No Code Stroke Activation

# All other Swedish Campuses, not Cherry Hill

ER Attending

- Assess patient in ambulance bay
- Do BEFAST + LAMs
- If LKW is 0-4.5 hours, activate code stroke with pharmacy
- If LKW is 4.5 hours AND LAMs is 4-5, activate code stroke but tell pharmacy to “stand down”
- Place code stroke order set, order CT head + CTA H&N

# Our new 2018 Code Stroke Algorithm

Please Remember our Goals

- Door to Needle Time: < 45 minutes
- Door to Puncture Time for Thrombectomy: < 75 minutes in at least 50% of the cases (this is a King County Goal)

# Few Friendly Reminders

- DNR – still activate code stroke, let neurology talk with patient/family
  - Reminder: Some healthy patients choose to be DNR
  - An exception to activating a code stroke would be a patient with advanced disease who has a POLST “limited interventions” or “comfort measures only”

- Advanced Age – doesn’t matter. Activate code stroke.
  - Baseline functional status is more important than age. Research has shown that even older patients may benefit from alteplase or endovascular treatment

YESCARTA® (axicabtagene ciloleucel) Suspension for IV infusion

# Adverse Reaction Management Guide

## Guidance on Managing Cytokine Release Syndrome (CRS)

Patients should be monitored for signs and symptoms of CRS. Diagnosis of CRS requires ruling out alternate causes of systemic inflammatory response, including concurrent infections. Treatment algorithms have been developed to ameliorate some of the CRS symptoms experienced by patients on YESCARTA®. This includes the use of tocilizumab or tocilizumab and corticosteroids for moderate, severe, or life-threatening CRS.

### CRS Grading and Management Guidance

| CRS Grade* | Tocilizumab | Corticosteroids |
|---|---|---|
| **Grade 1**<br>Symptoms require symptomatic treatment only (eg, fever, nausea, fatigue, headache, myalgia, malaise) | N/A | N/A |
| **Grade 2**<br>Symptoms require and respond to moderate intervention<br>Oxygen requirement less than 40% $FiO_2$ or hypotension responsive to fluids or low dose of one vasopressor or Grade 2 organ toxicity† | Administer tocilizumab‡ 8 mg/kg intravenous over 1 hour (not to exceed 800 mg)<br>Repeat tocilizumab every 8 hours as needed if not responsive to intravenous fluids or increasing supplemental oxygen<br>Limit to a maximum of 3 doses in a 24-hour period; maximum total of 4 doses | Manage per Grade 3 if no improvement within 24 hours after starting tocilizumab |
| **Grade 3**<br>Symptoms require and respond to aggressive intervention<br>Oxygen requirement greater than or equal to 40% $FiO_2$ or hypotension requiring high-dose or multiple vasopressors or Grade 3 organ toxicity or Grade 4 transaminitis | Per Grade 2 | Administer methylprednisolone 1 mg/kg intravenous twice daily or equivalent dexamethasone (eg,10 mg intravenous every 6 hours)<br>Continue corticosteroids use until the event is Grade 1 or less, then taper over 3 days |
| **Grade 4**<br>Life-threatening symptoms<br>Requirements for ventilator support, CVVHD, or Grade 4 organ toxicity (excluding transaminitis) | Per Grade 2 | Administer methylprednisolone 1000 mg intravenous per day for 3 days; if improves, then manage as above |

Abbreviation: CVVHD, continuous veno-venous hemodialysis.

*Lee DW, Gardner R, Porter DL, et al. Current concepts in the diagnosis and management of cytokine release syndrome. *Blood*. 2014;124(2):188-195.

†Refer to the table on the back for management of neurologic toxicity.

‡Refer to tocilizumab Prescribing Information for details.

# Guidance on Managing Neurologic Toxicity

Monitor patients for signs and symptoms of neurologic toxicities. Treatment algorithms have been developed to ameliorate the neurologic toxicities experienced by patients on YESCARTA®. This includes the use of corticosteroids or corticosteroids and tocilizumab for moderate, severe, or life-threatening neurologic toxicities.

## Neurologic Toxicity Grading and Management Guidance

| Neurologic Event (Grading Assessment CTCAE 4.03)* | Concurrent CRS | No Concurrent CRS |
|---|---|---|
| **Grade 1**<br>Examples include:<br>Somnolence—mild drowsiness or sleepiness<br>Confusion—mild disorientation<br>Encephalopathy—mild limiting of ADLs<br>Dysphasia—not impairing ability to communicate | Supportive care | Supportive care |
| **Grade 2**<br>Examples include:<br>Somnolence—moderate, limiting instrumental ADLs<br>Confusion—moderate disorientation<br>Encephalopathy—limiting instrumental ADLs<br>Dysphasia—moderate impairing ability to communicate spontaneously<br>Seizure(s) | Administer tocilizumab per the table on the other side for management of Grade 2 CRS<br>If no improvement within 24 hours after starting tocilizumab, administer dexamethasone 10 mg intravenous every 6 hours if not already taking other corticosteroids<br>Continue dexamethasone use until the event is Grade 1 or less, then taper over 3 days<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis | Administer dexamethasone 10 mg intravenous every 6 hours<br>Continue dexamethasone use until the event is Grade 1 or less, then taper over 3 days<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis |
| **Grade 3**<br>Examples include:<br>Somnolence—obtundation or stupor<br>Confusion—severe disorientation<br>Encephalopathy—limiting self-care ADLs<br>Dysphasia—severe receptive or expressive characteristics, impairing ability to read, write, or communicate intelligibly | Administer tocilizumab per the table on the other side for management of Grade 2 CRS<br>In addition, administer dexamethasone 10 mg intravenous with the first dose of tocilizumab and repeat dose every 6 hours. Continue dexamethasone use until the event is Grade 1 or less, then taper over 3 days<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis | Administer dexamethasone 10 mg intravenous every 6 hours<br>Continue dexamethasone use until the event is Grade 1 or less, then taper over 3 days<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis |
| **Grade 4**<br>Life-threatening consequences<br>Urgent intervention indicated<br>Requirement for mechanical ventilation<br>Consider cerebral edema | Administer tocilizumab per the table on the other side for management of Grade 2 CRS<br>Administer methylprednisolone 1000 mg intravenous per day with first dose of tocilizumab and continue methylprednisolone 1000 mg intravenous per day for 2 more days; if improves, then manage as above<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis | Administer methylprednisolone 1000 mg intravenous per day for 3 days; if improves, then manage as above<br>Consider nonsedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis |

Abbreviation: ADLs, activities of daily living.

*National Institutes of Health, National Cancer Institute. *Common Terminology Criteria for Adverse Events (CTCAE)*. Version 4.03. Bethesda, MD: National Institutes of Health; 2009. Revised June 2010. NIH publication 09-5410.



Kite
A GILEAD Company
Santa Monica, CA

# YESCARTA (Axicabtagene ciloleucel) Cheat Sheet

## DRUG/PRODUCT

*YESCARTA/COMMERCIAL CAR-T Therapy*

## CLINICAL INDICATION

**YESCARTA is a CD 19 directed genetically modified autologous T Cell immunotherapy indicated for adults** w/ relapsed or refractory large B cell lymphoma **after** 2 lines or more of systemic therapy.

## PROCESS OVERVIEW


## IF YOU SEE THIS CARD

Patient should be triaged right away. Potential life threatening side effects may include Cytokine Release Syndrome and Neuro toxicities.


**ALL PATIENTS MUST CARRY** the YESCARTA wallet card minimum of 30 days post reinfusion.

These patients are under the care of the Hematology Oncology Providers.

## WHO CAN CARE FOR PATIENT

*Only staff that have gone through the YESCARTA FDA mandated Risk Evaluation Mitigation Strategy (REMS) training should be providing care.*

## POTENTIAL SIFE EFFECTS

**Patients must seek immediate attention:** If they experience s/s of CRS and/or Neuro Toxicity's

Other potential side effects include:

- Fever (100.4°F/38°C or higher) ***Rule out infection***
- Low white blood cells (can occur with a fever)
- Low red blood cells
- Low blood pressure (dizziness or lightheadedness, headache, feeling tired, short of breath)
- Fast heartbeat
- Confusion
- Difficulty speaking or slurred speech
- Nausea
- Diarrhea

## PATIENT EDUCATION

- Remain within (1hr) of Swedish FH for 30 days post reinfusion
- Refrain from driving or operating any heavy machinery for at **least 8 weeks post reinfusion**

- Must have caregiver with them 24 hr./day for approx. 3 weeks (chemo- (+)30 days post reinfusion)
- Handwriting assessment while Inpt. and suggested through day +30 Outpt.

## TREATMENT FOR SEVERE SIDE EFFECTS INCLUDES:

**Tocilizumab**- *Severe Cytokine Release Syndrome*
**Steroids**- *Cytokine Release Syndrome/Neuro Tox*
**Non-sedating anti-seizure medication**- *Neuro Tox*

## GOOD TO KNOW

- **Major Side Effects: Cytokine Release Syndrome (CRS) and Neuro Tox.**
- Medium onset of CRS is 2 day (94% of pts in the trial had some grade of CRS)
- Medium onset of Neuro Tox. is 4 days (87% of patients in the trial had some grade of Neuro tox.)
- CAR-T (YESCARTA consent) counts as chemo and apheresis consent. **They do not sign a separate chemo or apheresis consent.**

## PROJECTED NUMBER OF PATEINTS/YEAR

*Approximately 24/year*

## WHICH FLOWSHEETS SHOULD I USE?

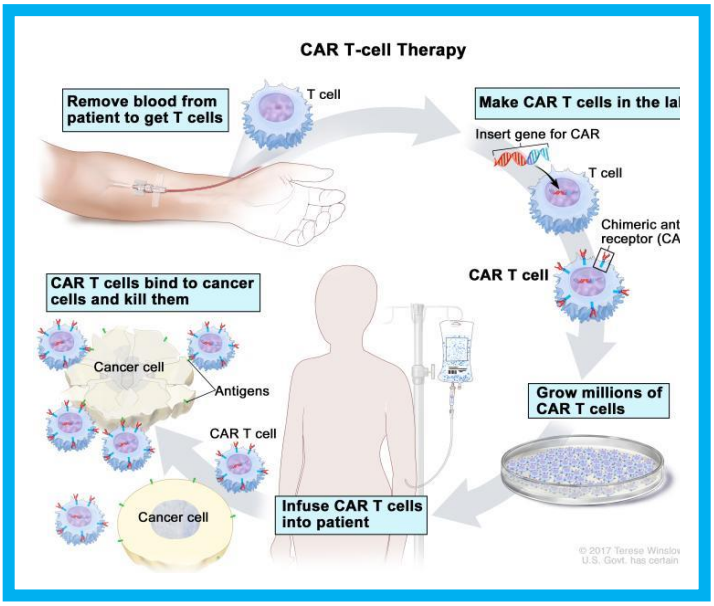
*CARTOXNEURO #11550001 (Neuro assessment)*

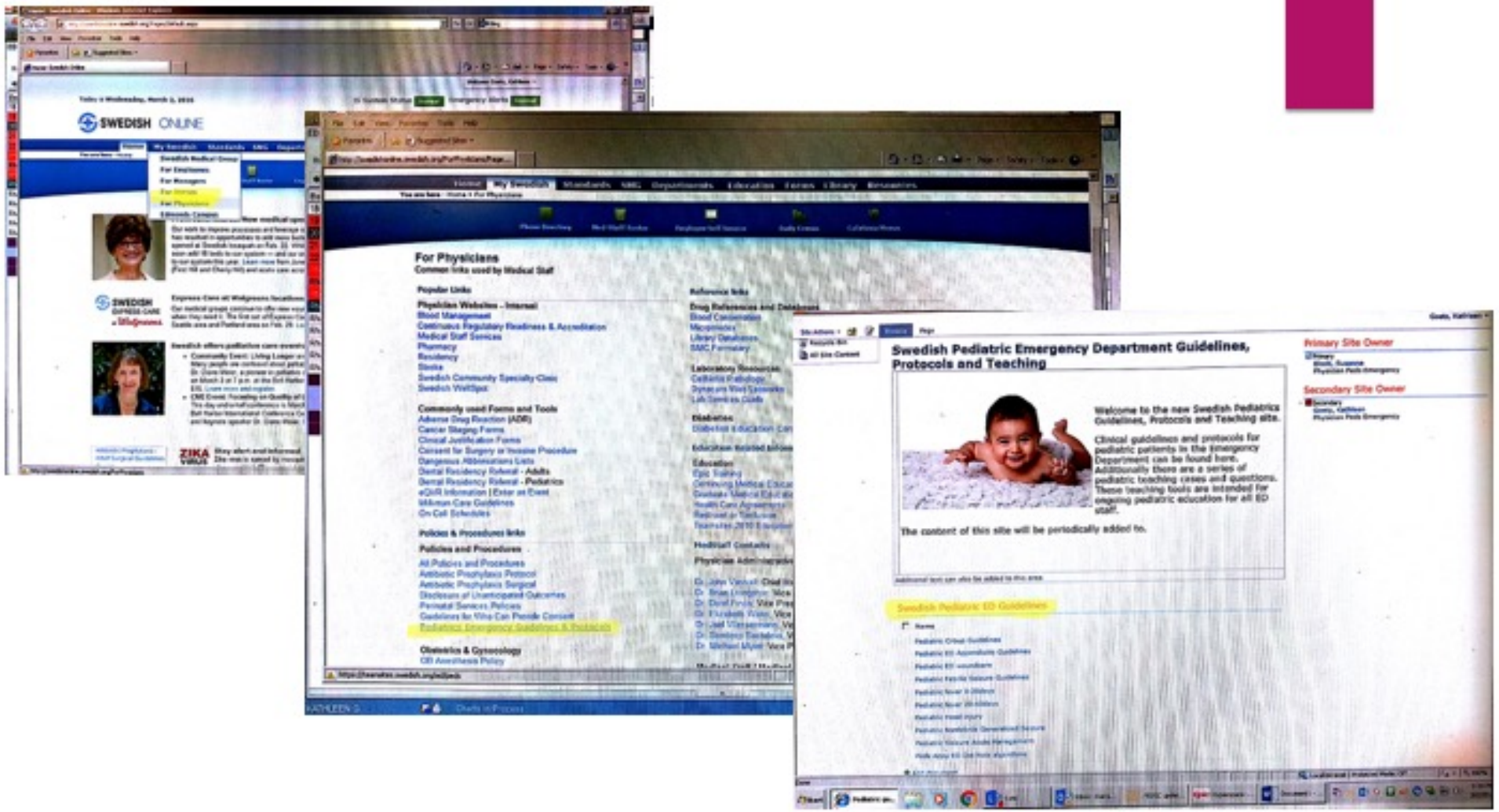
## TEATMENT/CELL REINFUSION

*Patients receive 3 days of Cytoxan and Fludarabine in the Treatment Center. Two days of rest. Day 0 is Reinfusion which is 30 minutes or less on 12 E. Pre-medicate with Tyl/Ben. Pt.s stay inpatient for a **minimum** of 7 days to monitor side effects.*

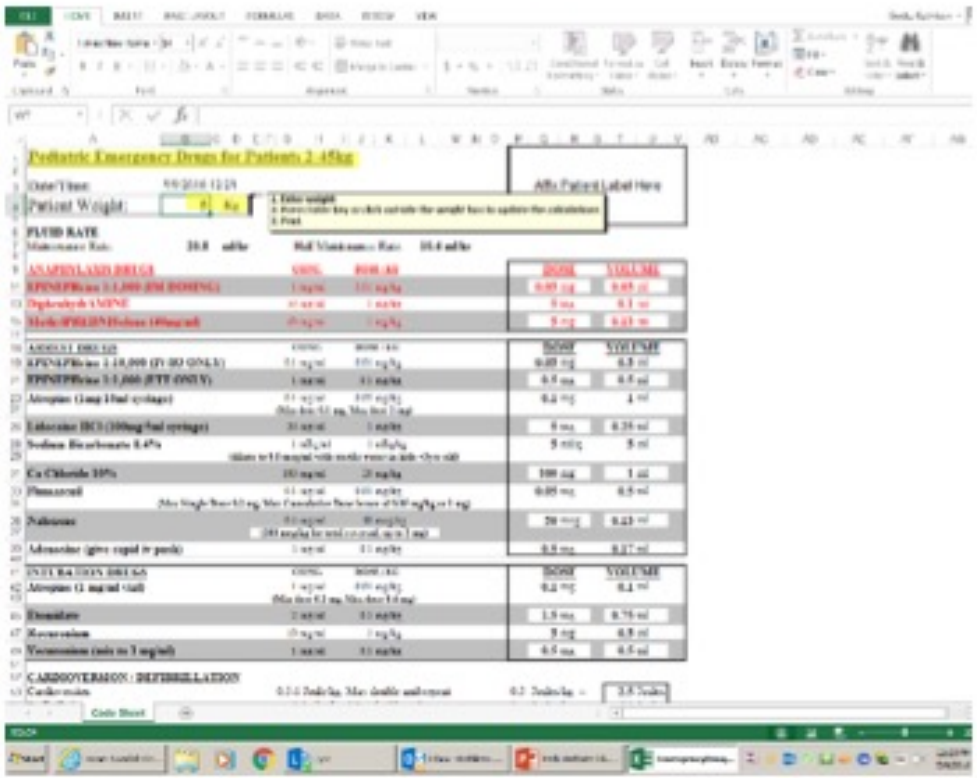
## LONG TERM FOLLOW UP

Long term follow up includes: Discharge charge to home after Day +30. Assessments typically weekly times 4 weeks, around day +80, +180, and yearly annually. Patients to be followed for 15 years.




SWEDISH ONLINE
For Physicians
Common links used by Medical Staff
Popular Links
Physician Websites - Internal
Blood Management
Continuous Regulatory Readiness & Accreditation
Medical Staff Services
Pharmacy
Residency
Stroke
Swedish Community Specialty Clinic
Swedish VisitSpot
Commonly used Forms and Tools
Adverse Drug Reaction (ADR)
Cancer Staging Forms
Clinical Justification Forms
Consent for Surgery or Invasive Procedure
Dangerous Abbreviations Lists
Dental Residency Referral - Adults
Dental Residency Referral - Pediatrics
eQuIP Information | Enter an Event
Minimum Care Guidelines
On Call Schedules
Policies & Procedures links
Policies and Procedures
All Policies and Procedures
Antibiotic Prophylaxis Protocol
Antibiotic Prophylaxis Surgical
Disclosure of Unanticipated Outcomes
Perinatal Services Policies
Guidelines for Who Can Provide Consent
Pediatrics Emergency Guidelines & Protocols
Obstetrics & Gynecology
OB Anesthesia Policy
Reference links
Education
Swedish Pediatric Emergency Department Guidelines, Protocols and Teaching
Welcome to the new Swedish Pediatrics Guidelines, Protocols and Teaching site.
Clinical guidelines and protocols for pediatric patients in the Emergency Department can be found here. Additionally there are a series of pediatric teaching cases and questions. These teaching tools are intended for ongoing pediatric education for all ED staff.
The content of this site will be periodically added to.
Primary Site Owner
Secondary Site Owner
Swedish Pediatric ED Guidelines


SWEDISH ONLINE
What's New:
ZIKA VIRUS


Pediatric Emergency Drugs for Patients 2-45kg
Affix Patient Label Here
Patient Weight:
FLUID RATE
CARDIOVERSION / DEFIBRILLATION

# Pediatric Asthma Respiratory Score (PARS)

| | 0 | 1 | 2 | SCORE |
|---|---|---|---|---|
| **Respiratory Rate** | Age 1 – 2 < 35<br>2 – 5 < 30<br>6 – 12 < 24<br>> 12 < 20 | 35 – 50<br>30 – 40<br>24 – 32<br>20 – 30 | > 50<br>> 40<br>> 32<br>> 30 | 0-2 |
| **O2 saturation** | Over 90% on RA | Requiring up to 40% fiO2 to maintain O2 sats over 90% | Requiring more than 40% fiO2 | 0-2 |
| **Aeration** | Normal/ minimal decrease | Decreased in more than one area | Markedly decreased or multiple areas decreased | 0-2 |
| **Accessory muscle use** | Minimal/none | Moderate subcostal and/or intercostal retractions | Severe retractions, head bobbing | 0-2 |
| **Wheezing** | None or end expiratory only | Throughout expiration | Inspiratory and expiratory | 0-2 |
| **TOTAL Score** | | | | 0-10 |

## Emergency Department use of PARS for pediatric asthma assessment and treatment

**Inclusion criteria:**
- Pediatric patients greater than 1 year of age with:
  - cough, wheezing, increased work of breathing, hypoxia and/or poor aeration
  - Consider this pathway for patients with respiratory symptoms and personal or family history atopy (asthma, allergies, eczema).

**Exclusion criteria:**
- Bronchiolitis, cystic fibrosis, neuromuscular disease, cardiac disease, trach dependent, sickle cell

Determine PARS score prior to any treatment
- Repeat score 20-30 minutes after each treatment
- Record PARS scores on PEDSRT flowsheet in EPIC

PARS Score **greater than 3**

**ALBUTEROL**
20mg continuous* nebulized administration over 60 minutes (start Duoneb(s) and continue until continuous treatment can be set up)
*HFNC most efficacious if available

**IPRATROPIUM BROMIDE**
- 1.5mg total dose added to albuterol given over first 60 minutes of treatment

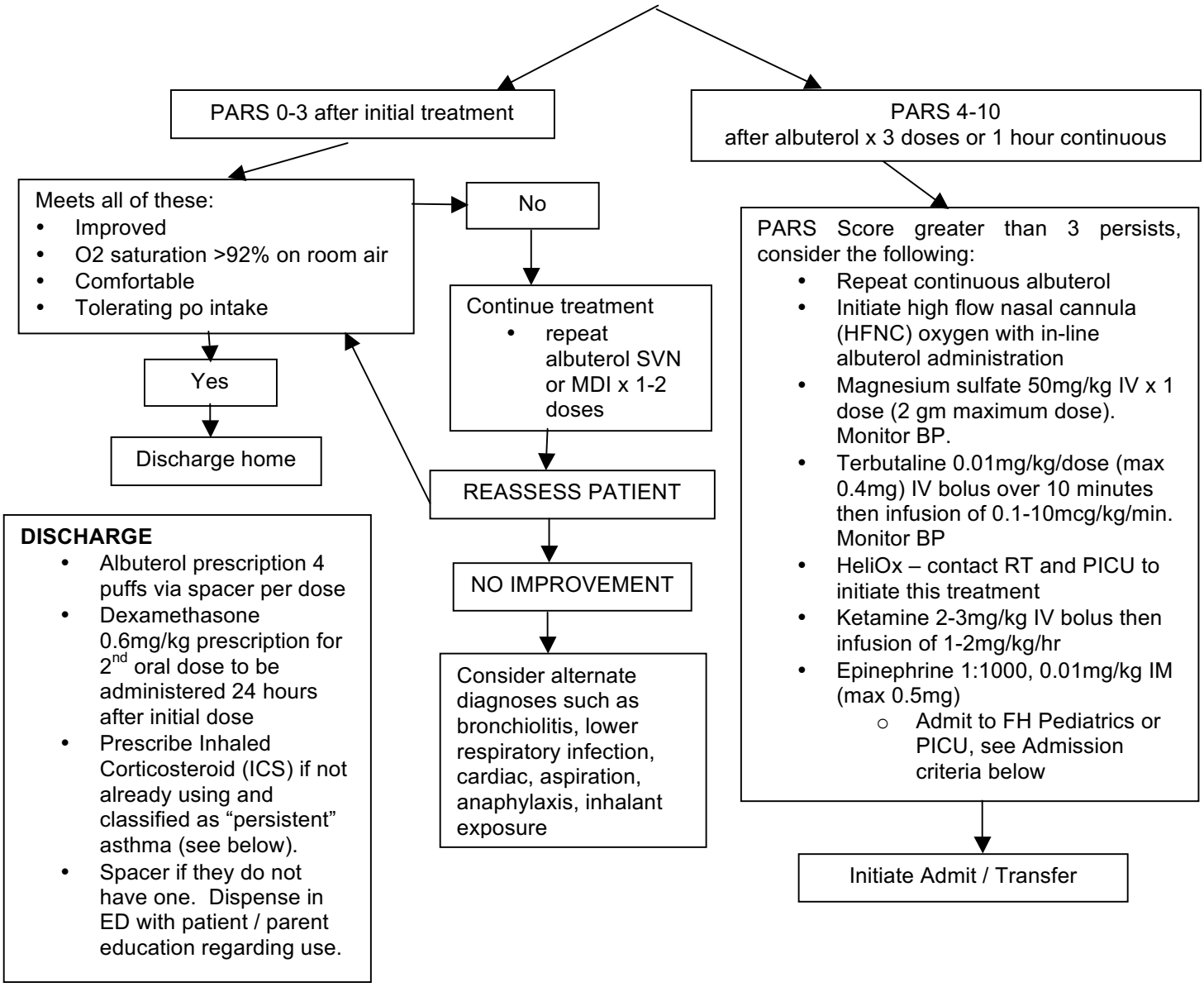
PARS Score **0-3**

**ALBUTEROL**
2.5mg-5mg svn (Duoneb okay)
OR
8 puffs MDI via spacer

**IPRATROPIUM BROMIDE**
- Not necessary for mild-moderate asthma exacerbation
- If giving svn, add 0.5mg per dose, max 3 doses

**CORTICOSTEROIDS**
- Dexamethasone 0.6mg/kg x 1 dose
  - Max dose 16mg
  - PO / IV / IM equally efficacious

REASSESS PATIENT
- PARS Score 0-3: repeat albuterol doses x 1-2, likely candidate for home treatment
- PARS score greater than 3 at any time or if symptoms persist after 3 or more inhaled treatments or after 1 hour of continuous albuterol, likely admission




**DISCHARGE**

- Albuterol prescription 4 puffs via spacer per dose
- Dexamethasone 0.6mg/kg prescription for 2nd oral dose to be administered 24 hours after initial dose
- Prescribe Inhaled Corticosteroid (ICS) if not already using and classified as "persistent" asthma (see below).
- Spacer if they do not have one. Dispense in ED with patient / parent education regarding use.

**ADMISSION CRITERIA:**

| | Pediatric Floor Unit | Pediatric ICU |
|---|---|---|
| HFNC by age | --- | --- |
| • 0-28 days | Up to 4LPM, up to 50% FIO2 | >4 LPM, >50% FIO2 |
| • 29 days – 12 months | Up to 6 LPM, up to 50% FIO2 | >6 LPM, >50% FIO2 |
| • 1-5 years | Up to 8 LPM, up to 50% FIO2 | >8 LPM, >50% FIO2 |
| • 5+ years | Up to 10 LPM, up to 50% FIO2 | >10 LPM, >50% FIO2 |
| Albuterol | Intermediate albuterol or <4 hours continuous albuterol (includes ER care) | >4 hours continuous albuterol (includes ER care) |
| HeliOx | No | Yes |
| Ketamine infusion | No | Yes |
| Magnesium bolus or infusion | No | Yes |
| Oxygen | NC up to 2LPM, mask up to 8LPM | Non-rebreathing mask, BiPAP, CPAP |
| Terbutaline infusion | No | Yes |

**ASTHMA CLASSIFICATION "**Persistent Asthma"

- exacerbations requiring steroid treatment 2 or more times per year

**OR any** of the following when patient is not acutely ill:

- Symptoms more than two days per week
- Nighttime awakenings due to respiratory symptoms
- Short acting beta agonist use more than two days per week
- Any interference with normal activity

**OTHER CONSIDERATIONS:**

- **OXYGEN**
  - All nebulized treatments should be administered with oxygen
  - Supplemental oxygen for all patients with O2 saturation less than 91%
  - Supplemental oxygen for all patients with increased work of breathing
- **IV FLUIDS**
  - Consider saline lock to facilitate medications administration if needed
  - Consider NS 20ml/kg bolus for severe asthma exacerbation to improve preload and pulmonary perfusion
- **PEAK FLOW ASSESSMENT**
  - PF pre and post albuterol dosing may be helpful for patients able to perform this evaluation

**NOT ROUTINELY RECOMMENDED**

- CXR – not needed for initial evaluation, consider for the following indications
  - fever with hypoxia not resolved with albuterol treatment
  - asymmetric breath sounds not normalizing with albuterol treatment
- Antibiotics not indicated for asthma diagnosis
- viral testing not useful except for influenza if clinically indicated
- blood work not useful for asthma diagnosis
- IV fluids – not needed if patient adequately hydrated and able to continue po intake. Useful to improve preload and pulmonary perfusion for patients with severe asthma exacerbation.

**Communicable Disease Epidemiology and Immunization Section**
401 Fifth Avenue South, Suite 900
Seattle, WA 98104-1818
**206-296-4774** Fax 206-296-4803
TTY Relay: 711
www.kingcounty.gov/health

Public Health
Seattle & King County

# Health Care Provider and Notifiable Conditions Reporting Frequently Asked Questions

**Why are some conditions notifiable?** As a health care provider, you are the eyes and ears of Public Health. Reporting notifiable conditions makes it possible for us to detect outbreaks, prevent secondary transmission, and conduct disease surveillance. For some diseases, timely reporting can help prevent illness and death.

**Does HIPAA (Health Insurance Portability and Accountability Act) allow reporting of protected health information (PHI) to Public Health?** Yes. HIPAA allows health care providers, health care facilities, and health plans to disclose protected health information to public health authorities for the purpose of preventing or controlling disease, injury, or disability [45 CFR § 164.512(b)]. Patient consent is not required. More information on HIPAA and notifiable conditions reporting is available from the Centers for Disease Control and Prevention (www.cdc.gov/mmwr/preview/mmwrhtml/su5201a1.htm).

**What conditions are health care providers required to report?** A list of notifiable conditions is on the back of this page and available on our website (see below).

**Are only specifically listed notifiable conditions reportable to Public Health?** No. Notifiable conditions also include "unexplained critical illness or death," "rare diseases of public health significance" (such as a case of *Cryptococcus gattii* infection) and disease clusters of suspected foodborne or waterborne origin (for example, a single sporadic case of gastroenteritis due to norovirus is not reportable, but a cluster of ill children with vomiting and diarrhea after returning from camp would be).

**Should I await laboratory confirmation before reporting to public health?** Not necessarily. Immediately notifiable conditions (for example, tuberculosis, measles, hepatitis A, pertussis, meningococcal disease, and suspected bioterrorism agents), should be reported as soon as they are clinically suspected, preferably while you are still with the patient. These are listed in **bold**. "If in Doubt, Report it Out."

**What information should I include about the patient when I report a case to Public Health?** Provide the patient's notifiable condition, demographic and contact information, your name and phone number, relevant clinical and laboratory data (such as liver transaminases for patients with hepatitis), risk factors/suspect exposure sources (e.g., a history of injection drug use for hepatitis B or C), travel history, information on ill family members or other contacts, and whether the patient is in a sensitive occupation (such as a restaurant worker or child care provider with *E. coli* O157:H7). Please indicate if the patient is aware of the diagnosis, as we prefer to do interviews after the patient is informed.

**How do I report a case?** Report cases of tuberculosis, sexually transmitted diseases, and HIV/AIDS to their respective programs in Public Health. For all other conditions, contact the Communicable Disease Epidemiology and Immunization Section at (206) 296-4774. See the "To Report a Notifiable Condition in King County" box on the other side of this page for contact information, or refer to our website or the notifiable condition pocket card.

**If a notifiable condition is reportable by the laboratory, do I still need to report a case?** Yes. Don't assume that a laboratory has reported a condition. Laboratories don't report suspected cases, clinically diagnosed cases, or clusters of illness that are not laboratory-confirmed.

**If I am not the patient's primary care provider, do I still need to report?** Yes. Unless you know that a case of a notifiable condition has already been reported, you are legally required to report it to Public Health.

**For more information, report forms, and contact information, please see:**
**www.kingcounty.gov/healthservices/health/communicable/providers/reporting**

**Health care providers may subscribe to the Communicable Disease Listserv (PHSKC INFO-X) at:**
**http://mailman2.u.washington.edu/mailman/listinfo/phskc-info-x**

# *Notifiable Conditions & the Health Care Provider*

Public Health
Seattle & King County

The following conditions are notifiable to Public Health – Seattle & King County in accordance with WAC 246-101. Timeframes for notification are footnoted. **Immediately notifiable conditions in bold** should be reported when suspected or confirmed.

Acquired immunodeficiency syndrome (AIDS) (including AIDS in persons previously reported with HIV infection) [3d]
**Animal bites (when human exposure to rabies is suspected)** [Imm]
**Anthrax** [Imm]
Arboviral disease (West Nile virus disease, dengue, Eastern & Western equine encephalitis, St Louis encephalitis, and Powassan) [3d]
**Botulism (foodborne, wound and infant)** [Imm]
Brucellosis (*Brucella* species) [24h]
***Burkholdier mallei* (Glanders) and *pseudomallei* (Melioidosis)** [Imm]
Campylobacteriosis [3d]
Chancroid [3d]
*Chlamydia trachomatis* infection [3d]
**Cholera** [Imm]
Cryptosporidiosis [3d]
Cyclosporiasis [3d]
**Diphtheria** [Imm]
**Disease of suspected bioterrorism origin** [Imm]
**Domoic acid poisoning** [Imm]
***E. coli* - Refer to "Shiga toxin producing *E. coli*** [Imm]
**Emerging condition with Outbreak potential** [Imm]
Giardiasis [3d]
Gonorrhea [3d]
Granuloma inguinale [3d]
***Haemophilus influenzae* (invasive disease, children < age 5)** [Imm]
Hantavirus pulmonary syndrome [24h]
Hepatitis A, acute infection [24h]
Hepatitis B, acute [24h]
Hepatitis B, chronic (initial diagnosis/previously unreported cases) [Mo]
Hepatitis B, surface antigen positive pregnant women [3d]
Hepatitis C, acute [3d] and chronic [Mo] (initial diagnosis only)
Hepatitis D (acute and chronic infections) [3d]
Hepatitis E (acute infection) [24h]
Herpes simplex, neonatal and genital (initial infection only) [3d]
HIV infection [3d]
Immunization reactions [3d] (severe, adverse)
**Influenza, novel or untypable strain** [Imm]
Influenza-associated death (lab confirmed) [3d]
Legionellosis [24h]
Leptospirosis [24h]
Listeriosis [24h]
Lyme disease [3d]
Lymphogranuloma venereum [3d]
Malaria [3d]
**Measles (rubeola) acute disease only** [Imm]
**Meningococcal disease (invasive)** [Imm]
**Monkeypox** [Imm]
Mumps (acute disease only) [24h]
**Outbreaks of suspected foodborne origin** [Imm]
**Outbreaks of suspected waterborne origin** [Imm]
**Paralytic shellfish poisoning** [Imm]
Pertussis [24h]
**Plague** [Imm]
**Poliomyelitis** [Imm]
Prion disease [3d]
Psittacosis [24h]
Q fever [24h]
**Rabies (confirmed human or animal)** [Imm]
**Rabies, suspected human exposure** [Imm]
**Relapsing fever (borreliosis)** [24h]
**Rubella (including congenital rubella syndrome) (acute disease only)** [Imm]
Salmonellosis [24h]
**SARS** [Imm]
**Shiga toxin-producing *E. coli* infections (including but not limited to *E. coli* 0157:H7)** [Imm]
Shigellosis [24h]
**Smallpox** [Imm]
Syphilis (including congenital) [3d]
Tetanus [3d]
Trichinosis [3d]
**Tuberculosis** [Imm]
**Tularemia** [Imm]
**Vaccinia transmission** [Imm]
Vancomycin-resistant *Staphylococcus aureus* (not to include vancomycin intermediate) [24h]
Varicella-associated death [3d]
Vibriosis [24h]
**Viral hemorrhagic fever** [Imm]
**Yellow fever** [Imm]
Yersiniosis [24h]
Other rare diseases of public health significance [24h]
Unexplained critical illness or death [24h]

[Imm]**Immediately** - report when suspected or confirmed [24]Within 24 hours [3d] Within 3 business days [Mo]Monthly

**Conditions Notifiable to the Washington State Department of Health:**

| | |
|---|---|
| Asthma, occupational (suspected or confirmed) [Mo] | 1-888-66-SHARP |
| Birth Defects [Mo] (autism spectrum disorder, cerebral palsy, and alcohol related birth defects) | 360-236-3533 |
| **Pesticide poisoning (hospitalized, fatal, or cluster)** [Imm] | 1-800-222-1222 |
| Pesticide Poisoning (all other) [3d] | 1-800-222-1222 |

| **TO REPORT A NOTIFIABLE CONDITION IN KING COUNTY** | | |
|---|---|---|
| | Phone | Fax |
| Sexually Transmitted Diseases (STDs) must be reported via fax or mail on a specific STD Confidential Case Report form | | (206) 744-5622 |
| Tuberculosis (*daytime and after hours*) | (206) 744-4579 | (206) 744-4350 |
| HIV/AIDS | (206) 263-2000 | |
| All other Notifiable Communicable Diseases (*daytime and after hours*) | (206) 296-4774 | (206) 296-4803 |
| Voice mail line for reporting ONLY non-immediately notifiable conditions (*24 hours a day*) | (206) 296-4782 | |

**For more information, report forms, and mailing addresses please see:**
www.kingcounty.gov/healthservices/health/communicable/providers/reporting.aspx

Rev. February 2011

# ARTHROCENTESIS SET-UP

SUPPLIES: Betadine Swabs Bupivicaine w/ & w/out Epi Plastic Needle

10cc syringe 27g X 1.5in needle Alcohol Swab

2 Sterile (*fenestrated*) drapes Band aid Sterile Gloves (ask what size)

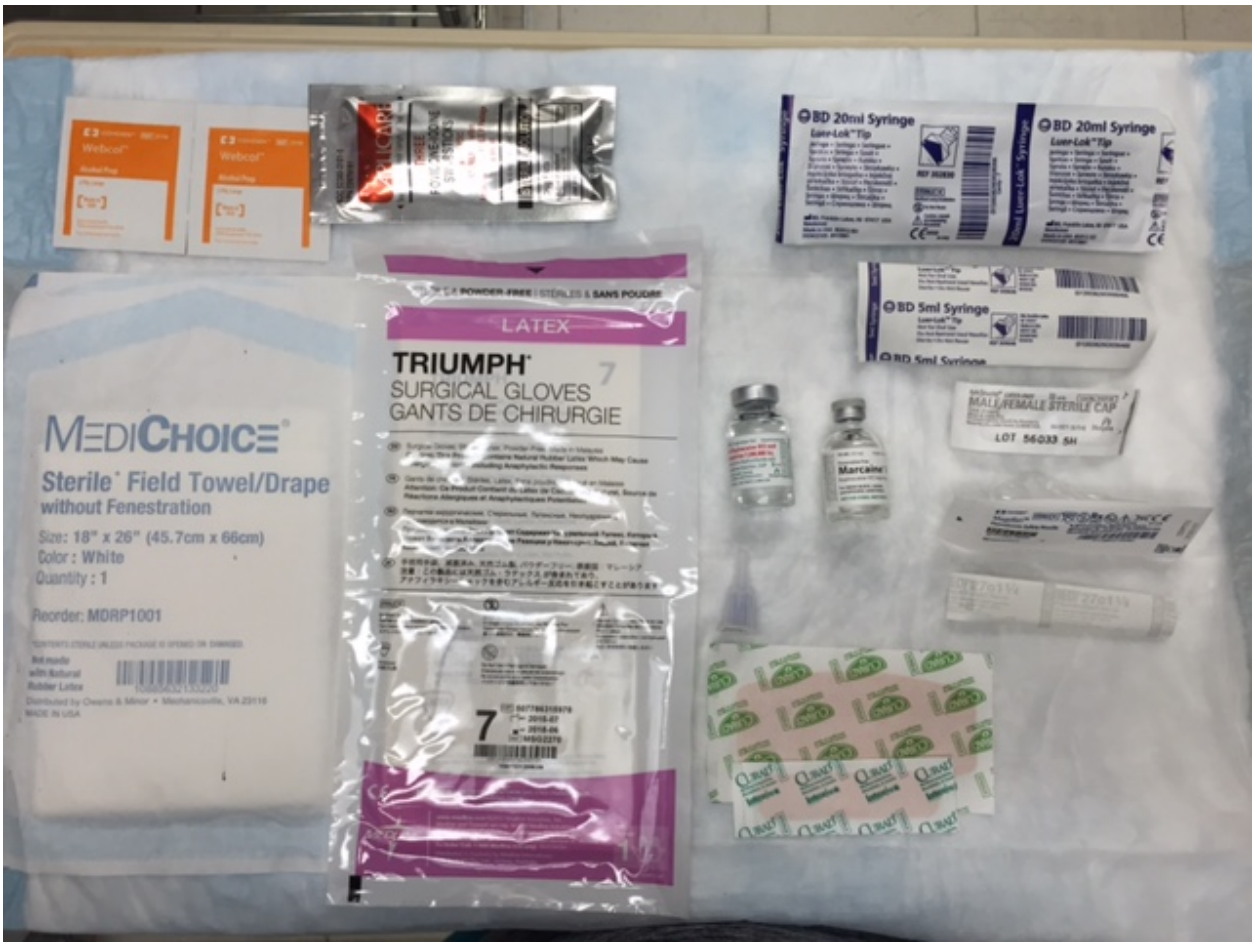
Specific to site: Knee – 18g needle and 20cc syringe(s)

Wrist – 20g needle and 20cc syringe

Elbow – 20g needle and 20cc syringe

Ankle – 20g needle and 20cc syringe

Toe – 25g needle and 5cc syringe




* DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed.

# EPITAXIS SET-UP

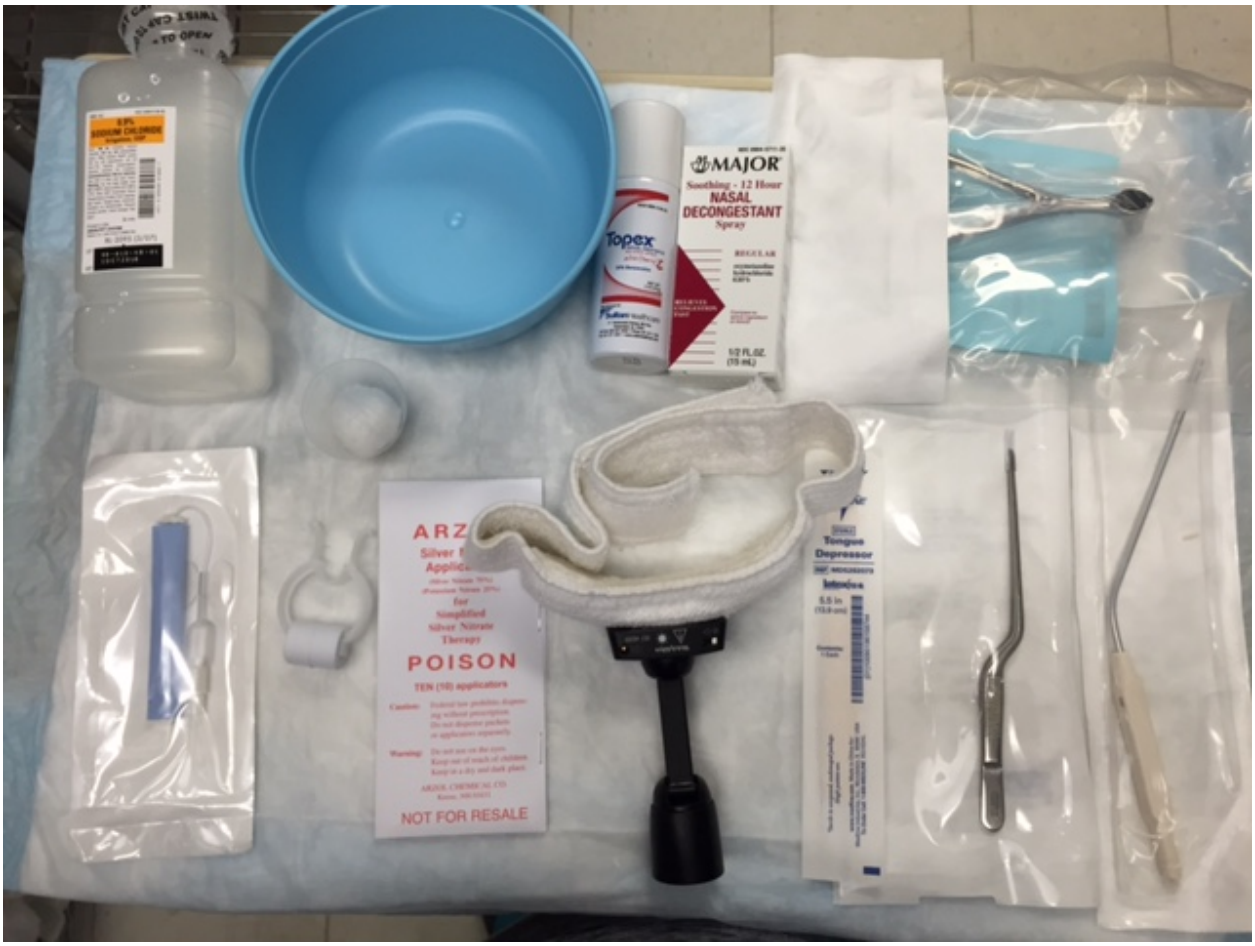
Supplies: Topical Anesthetic Spray Tongue Depressor Rhino-Rocket

Nasal Decongestant Spray (kept in med room) Head Lamp

Cotton Ball in Medication cup Nasal Speculum Nasal Forceps

Silver Nitrate Applicators Foam Nose Clip Basin with water

Nasal suction attachment wall suction setup 10cc syringe(not shown)

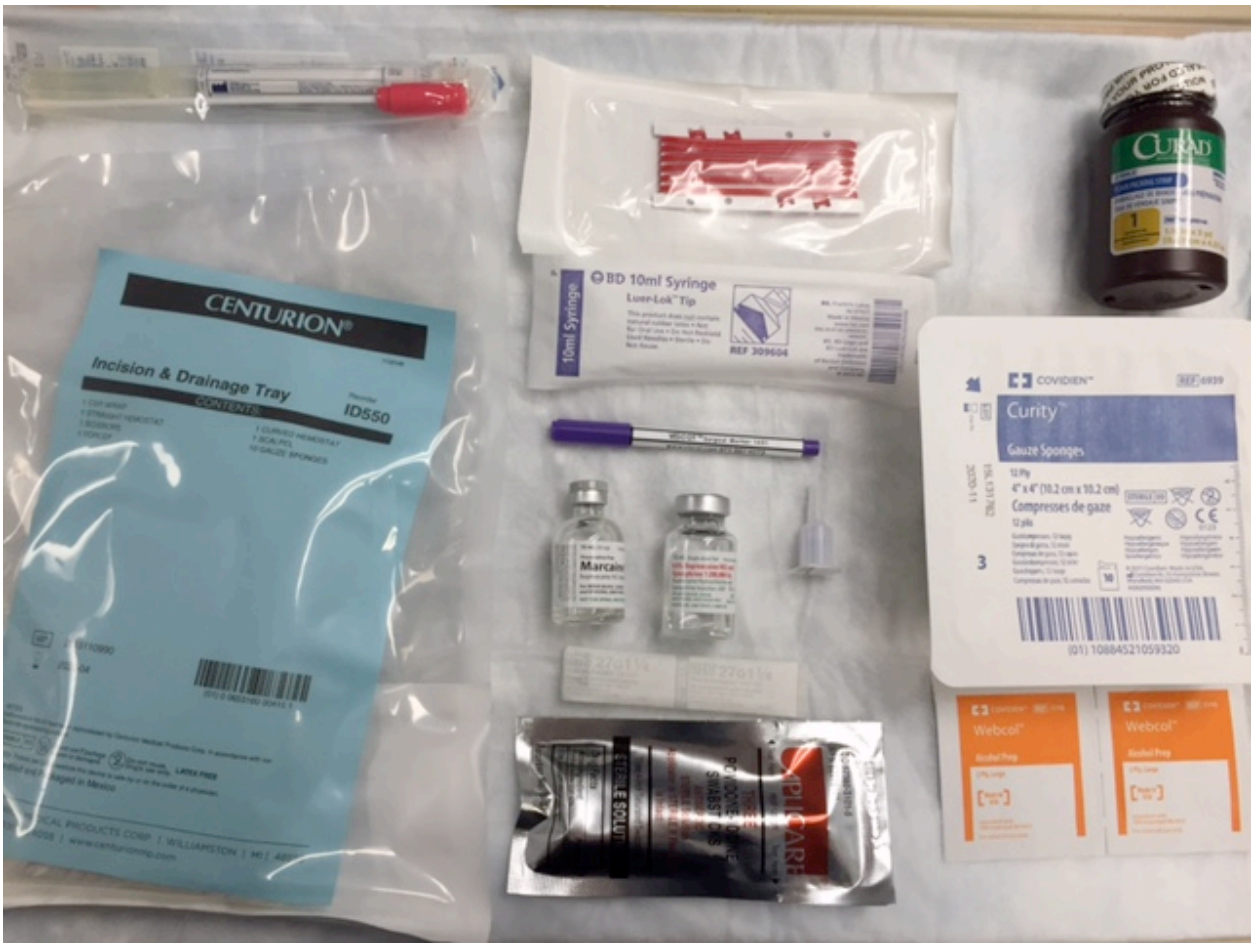



*An extra chucks should be placed on the table for placement on the patient. Kick bucket at bedside. DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed.

# I&D SET-UP

| | | | | |
|---|---|---|---|---|
| Supplies: | Red loops | Alcohol swab | 10 cc syringe | Skin Marker |
| | 4x4 gauze box | Culture swab | Plastic needle | Packing |
| | Bupivicaine w/ & w/o Epi | 27g X 1.5in needle | | I&D Kit |

Ask if wall suction is needed – have it set up and ready




* DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed.

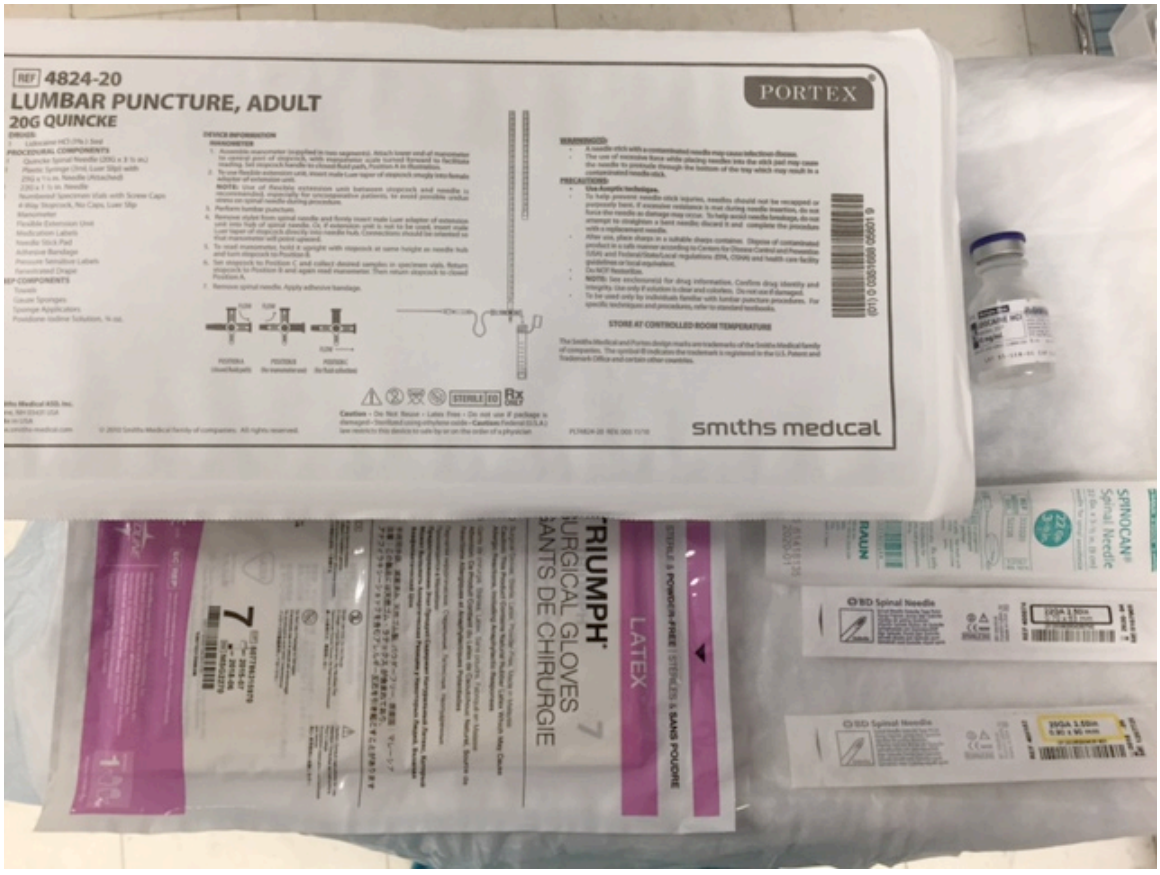
# LUMBAR PUNCTURE SET-UP

Supplies: LP Kit Sterile gloves (ask what size) 22g X 2.5in spinal needle

22g X 3.5in spinal needle 20g X 3.5in spinal needle

(all spinal needles kept in Medication Room)

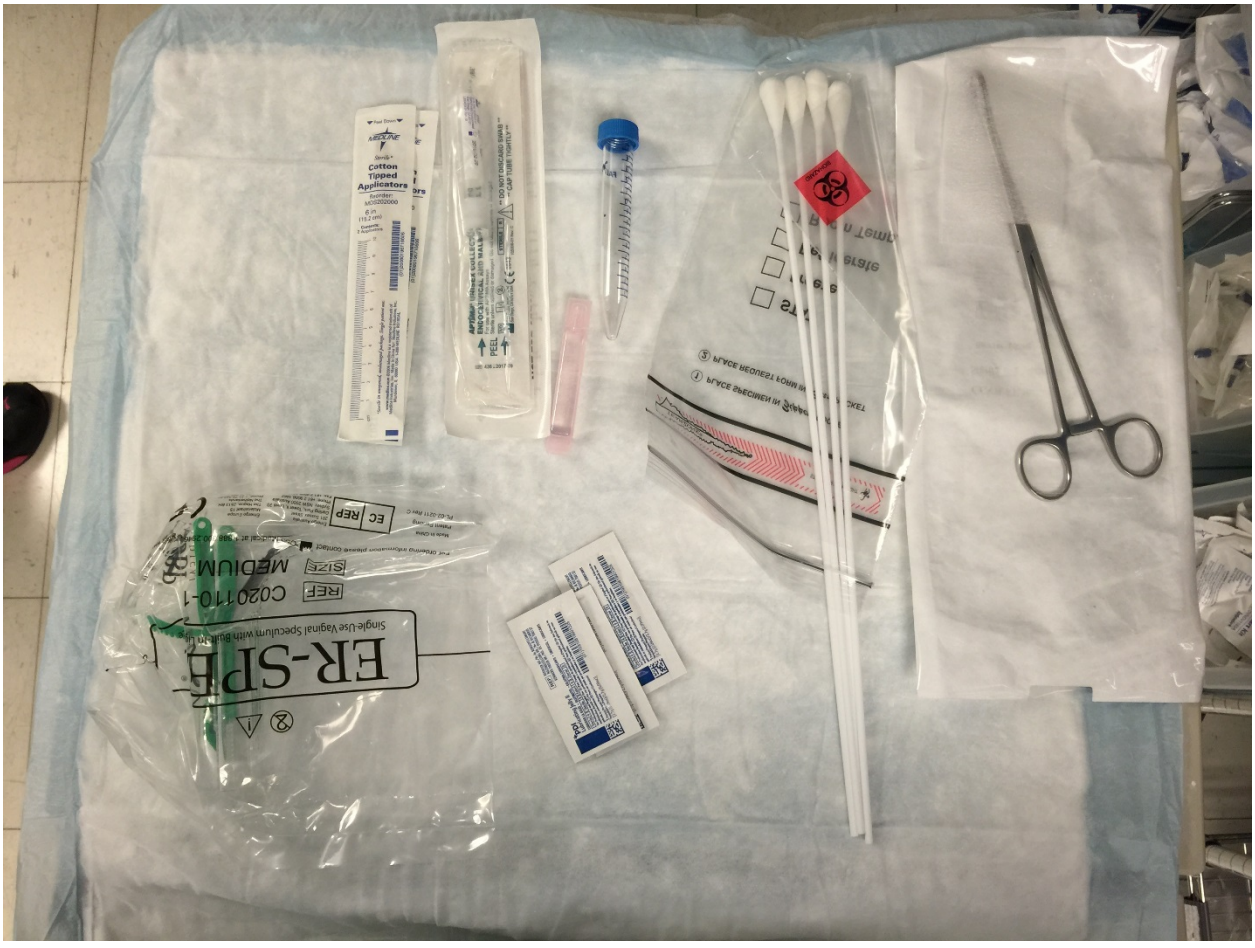
extra bottle of Lido (check with provider)




* DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed. Ask provider which size needles they want if what comes in the kit is not needed.

# PELVIC SET-UP

| | | | | |
|---|---|---|---|---|
| Supplies: | Texas Q-Tips | Speculum | Lubrication Gel | Cotton Swabs |
| | Blue-top Specimen container | | Saline Fish | Chlamydia Swab |
| | OB Forceps | | | |



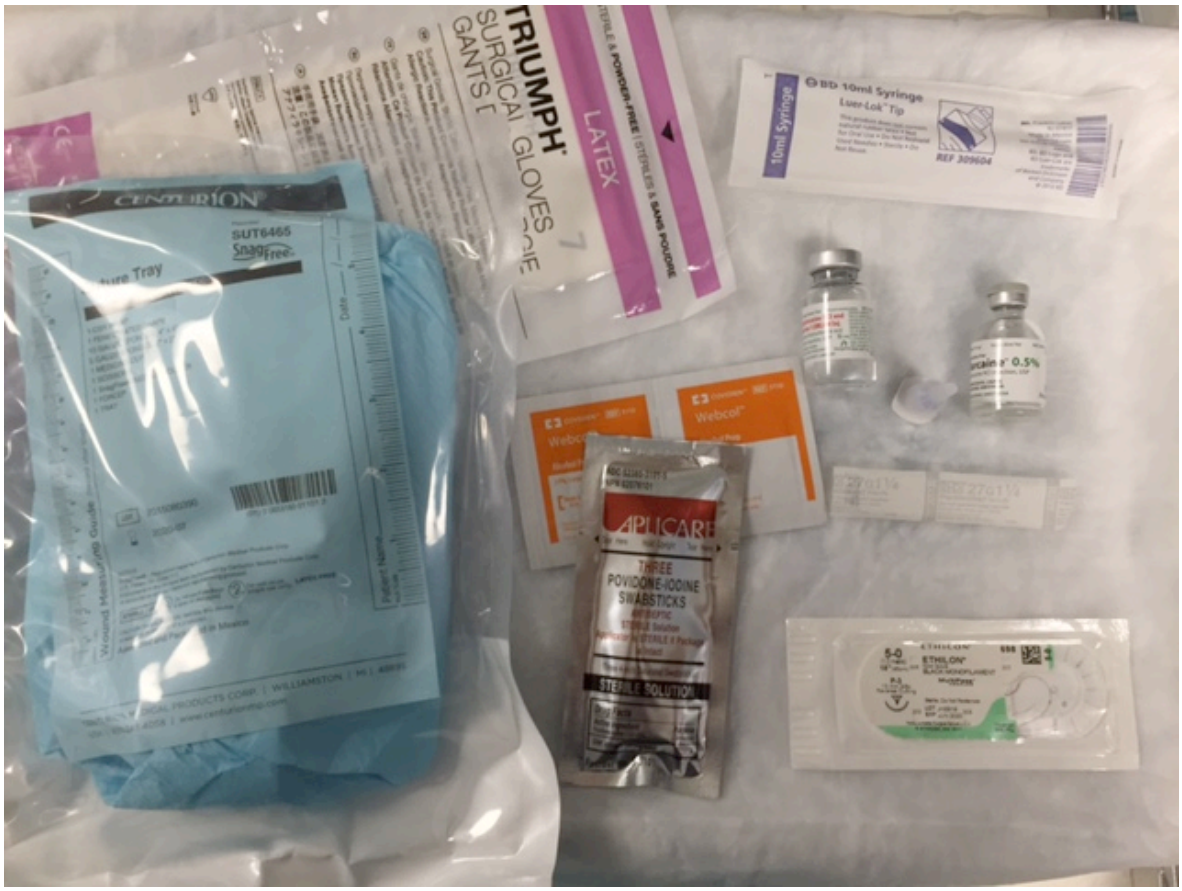

* DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed.

# SUTURE SET-UP

Supplies: Bupivicaine w/ & w/out Epi 10cc syringe Plastic needle

27g X 1.5in needle Suture kit Alcohol swabs

Sterile gloves (ask what size) sutures (what kind, size, how many)




* DO NOT bring anything into the room unless you intend to use it. Once it goes in the room, it must be used or tossed.