

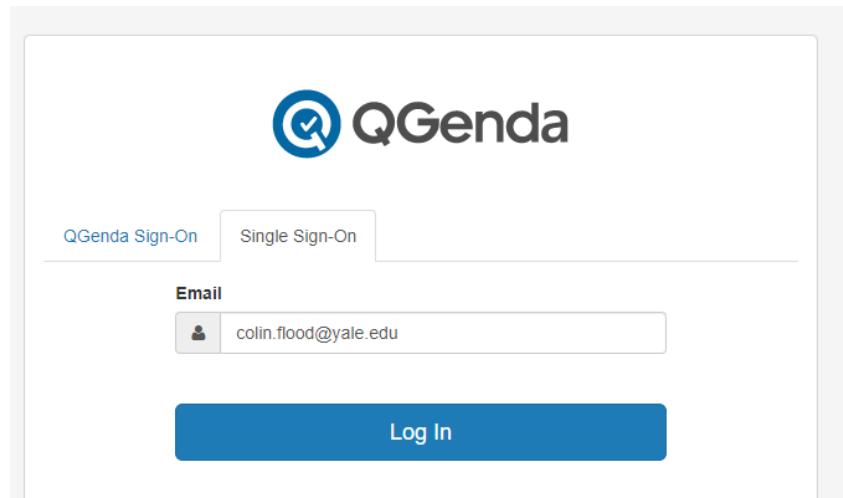
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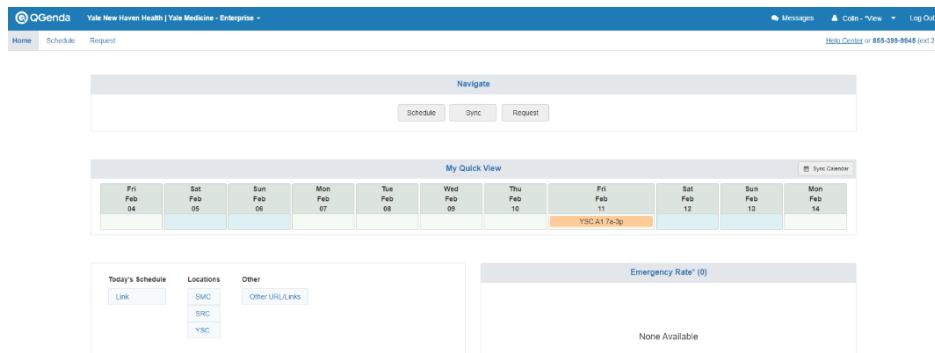
SHIFTS/SIGN-OUT TIME

QGenda Tip Sheet for Yale EM

Logging into QGenda
Go to <https://app.qgenda.com/Account/Login>



Click Single Sign-On and enter your yale.edu email address. Click Log In. You will be directed to the YNHH SSO portal. Login using your YNHH “Epic” credentials. When you log in successfully you will be taken to your QGenda home page like this:



Seeing Your Schedule

To see the whole schedule click Schedule.

There are a lot of different view options, etc. that will be covered in other QGenda training (for a video see <https://support.qgenda.com/help/video-the-view-tab>). Try a few different options and see what you like.

Couple tips:

You can highlight yourself by clicking the lightbulb icon next to your name in the Staff list.

You can use the Print My Schedule button to get a PDF of all your shifts (make sure to set the start date and duration you want on the Schedule screen first).

Calendar Integration – two OK options right now, better on the way.

Option one: You can subscribe to a feed of your calendar by clicking the Sync Calendar button on your home page. You can use that link in any of your calendar applications such as Outlook or Gmail.

Option two: You can also have QGenda place appointments directly on a Google calendar. If you want to do this, see this page: Direct Calendar Connection: Google Calendar | QGenda Help

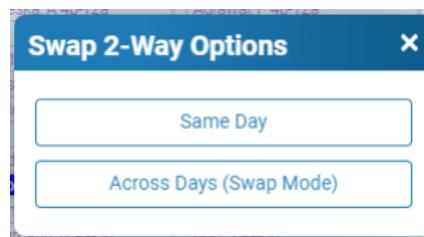
We are currently working to have a Direct Calendar Connection of QGenda to your Yale.edu calendar. We hope this will be available very soon. In the meantime, if you share the Sync link with your admin, they can help you get your calendar updated. (We will make some special instructions for them soon.)

Swapping Shifts

Pretty easy. From the schedule tab, find the shift you want to trade. Click the three dots next to your name and the swap options will appear. Lots more learning on this elsewhere (How to Swap Video | QGenda Help) but here's an easy two-way swap.

0800	Safdar, B 7a-7a	0800	Safdar, B 7a-7a
0800	Flood, C 7a-3p	0800	Kovar, J 7a-3p
0800	Barnicle, R 6a-2p	0800	→ Swap 1-Way
0800	Neumann, N 9a-5p	0800	↔ Swap 2-Way
0800	Waltman, A 11:30a-7:30p	0800	+ Vining, D 3p-11p
0800	Vining, D 3p-11p	0800	Kovar, J 7a-3p
0800	Newton, M 2p-10p	0800	Vergheese, V 5p-1a

If you chose a two-way swap (most common), you will get options for Same Day and Across Days.



If you choose the Same Day option, you get to pick out another shift on the same day. If you choose Across Days (Swap Mode), you see a view with red/yellow/green colors next to the shifts. Green shifts mean you are able to swap. Yellow shifts mean there is less than 8 hours between the shifts and the Admin/Medical Director will have to approve. Green means no conflicts.

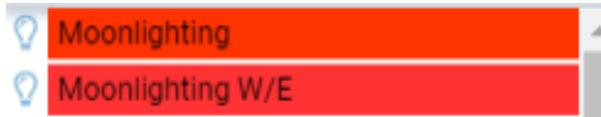
TUE FEB 1	WED FEB 2	THU FEB 3	FRI FEB 4	SAT FEB 5
Sather, J 7a-3p	Taranak, A 7a-3p	Belsky, J 7a-3p	Belsky, J 7a-3p	Mowaffaq, H 7a-3p
Gettel, C 3p-11p	Agrawal, P 3p-11p	Menick, E 3p-11p	Tsyurik, A 3p-11p	Coughlin, R 3p-11p
Taylor, R 5p-1a	Rambus, C 9a-5p	Wilk, C 9a-5p	Tuffus, K 9a-5p	Tuffus, K 9a-5p
Taylor, R 5p-1a	Movaffaq, H 5p-1a	Movaffaq, H 5p-1a	Buck, S 5p-1a	Cossela, A 5p-1a
Agrawal, P 7a-3p	Suwondo, D 7a-3p	Boatwright, D 7a-3p	Boatwright, D 7a-3p	Roline, M 7a-3p
Wong, A 3p-11p	Chandler, I 3p-11p	Rytka, C 3p-11p	Cossela, A 3p-11p	Tsyurik, A 3p-11p
Roline, M 11p-7a	Roline, M 11p-7a	Chandler, I 11p-7a	Janke, A 11p-7a	Sather, J 11p-7a
Ulrich, A 8a-4p	Chehilian, S 8a-4p	Rambus, C 8a-4p	Gettel, C 8a-4p	
Venkatesan, A 12p-8p	Tuffus, C 12p-8p	Balboesco, C 12p-8p	Balboesco, C 12p-8p	Boatwright, D 10a-6p
Coughlin, R 4p-12a	Cossela, A 4p-12a	Agrawal, P 4p-12a	Parwani, V 4p-12a	
Rest, E 7a-3p	Rest, E 7a-3p	Bucks, S 7a-3p	Goodfellow, K 7a-3p	Parwani, V 5p-1a
Moscovitz, H 3p-11p	Moscovitz, H 3p-11p	Moscovitz, H 3p-11p	Ryon, C 3p-11p	Menick, E 3p-11p
Belsky, J 11p-7a	Taylor, R 11p-7a	Janke, A 11p-7a	Sather, B 11p-7a	Joseph, M 11p-7a
Goodfellow, K 7a-7a	Sather, B 7a-7a	Sather, B 7a-7a	Wilk, C 7a-7a	Wilk, C 7a-7a
Vining, D 7a-3p	Flood, C 7a-3p	Kovar, J 7a-3p	Bod, J 7a-3p	Lyon, M 7a-3p
Pichers, Andrew 6a-2p	Barnicle, R 6a-2p	Couture, K 6a-2p	Waltman, A 6a-2p	Kotiles, J 6a-2p
Neumann, N 9a-5p	Waltman, A 11:30a-7:30p	Bod, J 9a-5p	Lyon, M 9a-5p	Couture, K 9a-5p
Couture, K 11:30a-7:30p	Waltman, A 11:30a-7:30p	Kovar, J 11:30a-7:30p	Kovar, J 11:30a-7:30p	Waltman, A 11:30a-7:30p
Bod, J 3p-11p	Vining, D 3p-11p	Vining, D 3p-11p	Vining, D 3p-11p	Shapiro, D 3p-11p
Kovar, J 2p-10p	Movaffaq, H 2p-10p	Movaffaq, H 2p-10p	Movaffaq, H 2p-10p	Barnicle, R 2p-10p
Vining, D 3p-11p	Iscoff, M 5p-1a	Iscoff, M 5p-1a	Iscoff, M 5p-1a	Barnicle, R 3p-11p
Dashenovsky, M 10p-7a	Hijona, R 11p-7a	Hijona, R 11p-7a	Hijona, R 11p-7a	Joseph, M 5p-1a
Dashenovsky, M 10p-6a	Dashenovsky, M 10p-6a	Dashenovsky, M 10p-6a	Bayer, R 10p-6a	Bayer, R 11p-7a
Lyon, M 7a-7a	Bayer, R 7a-7a	Flood, C 7a-7a	Coughlin, R 7a-7a	Chandler, I 7a-7a

Once you click on another shift, it will be added to your Swap Basket. Make sure you click Submit Swaps to send the swap on its way. Once the person you are swapping with approves it, the schedule will update automatically.

Moonlighting

Available moonlighting shifts will show up in the schedule in red and you will get emails from the admin team from time to time. Moonlighting shifts are assigned to two placeholder staff members based on the type of pay the shift is offering.

Regular pay is under the Moonlighting user, Weekend/Evening pay is under the Moonlighting W/E user.



Picking up a moonlighting shift is just as easy as swapping. Just click the shift you are interested in picking up, and choose Swap 1-Way, then 1 Assignment. Choose yourself from the list that is displayed and click submit.

Make absolutely sure you want to take the shift before clicking submit! The Moonlighting staff placeholders will auto-approve your swap proposal (unless there are less than 8 hours between the moonlighting shift and your last shift) and the shift will be yours immediately.

Posting Shifts for Swaps

QGenda has this feature available to allow for one way or two-way swaps. Click on the three dots next to the desired shift to trade and proceed to trade/swap with the other person by clicking on their desired shift.

Requests

You can request days off by clicking on the request tab.

QGenda Mobile App

QGenda has a nifty app that is available from the App Store that you can use to see your shifts, propose and approve swaps, and pick up moonlighting shifts on the go. See these links for more information: [Getting Started on the Mobile App](#) | [QGenda Help](#) and [Mobile App Training Video](#) | [QGenda Help](#).

Getting Help/Questions

If you have any questions about the system QGenda has a great help library you can access from at: <https://support.qgenda.com/help>.

QGenda also has a help line staffed during most hours of the day. Call (855) 399-9945, option 2. If you call after hours and get a voicemail, be sure to leave a message and someone will call you back. They monitor the voicemail for more hours than they have a live person answering the phone.

Bereavement Policy

You are entitled to up to three days off without loss of pay in the event of death in the immediate family. Immediate family is defined as parent, parent-in-law, brother, sister, spouse, child, grandparent, domestic partner, grandchild, or person in an equivalent relationship. Any additional shifts requested would be covered by trades.

Supervision & Responsibilities

Residents

All residents need to be supervised at all times by an attending physician. A brief description of the role and responsibilities of each resident is provided below.

EM PGY-1 and non-EM residents

- The clinical responsibilities of the PGY-1 residents include the primary evaluation and treatment of non- critical emergency department patients.
- He/she is expected to manage the patients that he/she sees and as such is responsible for all facets of clinical management.
- He/she documents the patient's history, physical examination, results of studies, and emergency department course.
- The PGY-1 resident will review each case with the senior emergency medicine resident and the emergency medicine attending.
- After discussion with supervising staff, the PGY-1 resident performs all indicated procedures, institutes therapy, and orders appropriate diagnostic studies.
- The supervisors are expected to guide PGY-1 residents in learning patient care in the ED.
- Multitasking and activity prioritization are introduced as learning goals over the course of the first year of training while maintaining an emphasis on the evaluation and treatment of the undifferentiated ill patient.

EM PGY-2

- Clinically, the PGY-2 residents continue to provide primary care to all types of patients, with an emphasis on evaluating and managing higher acuity and critically ill patients.
- The PGY-2 resident manages his/her patients, including documenting the patient's history, physical examination, results of studies, and emergency department course.
- The PGY-2 resident will initiate the work up of their patients and then discuss the patient's presentation and care plan with the senior emergency medicine resident and the emergency medicine attending.
- Each PGY-2 is expected to present an expanded differential diagnosis reflective of their clinical experience and level of training. They are also expected to care for more patients concurrently and show appropriate task prioritization.
- The PGY-2 resident will perform all procedures, including critical ones, and advanced technical skills as needed in the care of their patients under the supervision of the attending physician.
- The PGY-2 residents provide coverage for the hallway teams and for critical care.
- PGY-2 EM residents evaluate modified (lower acuity) trauma patients with supervision from the senior EM resident and attending physician.

EM PGY-3

- Clinically, the PGY-3 resident is expected to function at a high level in the management of patients of all acuties that present to the ED.
- They will be expected to see more patients than the PGY 1 and PGY 2 residents, including patients who are critically ill.
- When in the supervisory role, the PGY-3 resident hears all patient case presentations from the junior house staff and senior medical students and provides direction for patient care in conjunction with the EM attending.
- PGY-3 residents will review the documentation on each patient whose care he/she is supervising. Additions/corrections to the chart will be made by the PGY-3 resident. Additionally, the PGY-3 resident is expected to write an assessment and plan for each patient.
- If a patient has been primarily seen by a medical student, in addition to the above documentation requirements, the PGY-3 resident is expected to document a brief history and a directed physical examination.
- PGY-3 resident will sign the chart of all patients whose care they have supervised
- The PGY-3 resident on the A Green team will manage the airway of all full (high acuity) trauma patients who present to the ED between 0700 and 1900.
- The goal of the PGY-3 year is to transition the resident from being a primary clinical provider for a limited number of patients to becoming a supervisor who oversees the management of all the patients in his/her section of the emergency department and additionally provides primary EM care as needed.

EM PGY-4

- During the PGY-4 year, the residents will function primarily in a supervisory role, while continuing to see patients primarily.
- The PGY-4 resident is expected to oversee the clinical course of all patients in the area of the emergency department to which they are assigned.
- Junior residents and senior medical students will present all cases to the PGY-4 resident as well as the attending physician.
- The PGY-4 resident is expected to help direct the patient's care while providing teaching about the given clinical condition.
- Each senior resident is expected to be not only a clinician but also a supervisor and teacher of the junior residents and senior medical students.
- The PGY-4 resident is primarily responsible for the evaluation and resuscitation of all full (highest acuity) traumas that present to the Yale New Haven Hospital ED from 0700-1900.
- The PGY-4 resident is responsible for managing the airway of all trauma patients who present to the Yale New Haven Hospital emergency department from 1900-0700.
- PGY-4 residents will review the documentation on each patient whose care he/she is supervising. Additions/corrections to the chart will be made by the PGY-4 resident. Additionally, the PGY-4 resident is expected to write an assessment and plan for each patient in their section of the ED.
- If a patient has been primarily seen by a medical student, in addition to the above documentation requirements, the PGY-4 resident is expected to document a brief history and a directed physical examination.
- PGY-4 resident will sign the chart of all patients whose care they have supervised.
- The residents are directly and closely supervised by an attending emergency physician at all times.
- The PGY-4 resident supervises all house staff assigned to the area of the emergency department in which they are working.

Medical Students

All medical students need to be supervised at all times by an attending physician. Both third year and fourth year medical students rotate in the Yale ED. All 100 third year medical students do a two-week mandatory rotation in the Emergency Department. This is a unique opportunity that we have, to work with third year students before they make their career choice; fewer than 20% of medical schools have a required third year rotation. The fourth-year rotation is an optional elective/sub-internship experience. There is also an Ultrasound Elective run by Chris Moore, MD for fourth year students. Documentation by medical students is not part of the official chart and should not be used as a substitute for physician documentation.

Third Year Students

- Clinical experience focuses on improving history and physical examination skills.
- They are not to be responsible for the primary care of any patient though they should be encouraged to do the initial history and physical examination for selected patients who are not critically ill. They should then present the patient to the attending and/or resident, with emphasis on developing a broad "worst first" differential diagnosis. When possible, attendings should be physically present and observe a student doing at least one history and physical per shift.
- Students cannot enter orders and should not be writing in the medical record, but they will have view access to Epic.
- Third year students carry a portfolio card so that they can record the chief complaints of their patients.
- All patients seen by a third-year medical student will also be seen and cared for by a resident.
- Procedurally, these students are to focus on IV starts and ABGs. They also want to learn ultrasound techniques and should be encouraged to observe and then participate in FAST exams and other basic ED ultrasound exams. Medical students are not to perform invasive procedures on patients known to be HIV positive or HCV positive during their first six months of clerkships.

Sub-Internship Students

- Clinical experience focuses on primary patient management in the ED. Their shifts coincide with attending shifts.
- They are expected to manage the patients that they see and as such are responsible for all facets of clinical management.
- For billing purposes, they are able to document only the ROS, PMH, Social History and Family History. The ED attending or senior resident must document a full history and physical for billing purposes.
- The student reviews each case with the emergency medicine attending and the senior emergency medicine resident.
- After discussion with supervising staff, the fourth-year student institutes therapy and selects appropriate diagnostic studies. They may protocol studies by making calls to DI. They should also call PMDs, consultants and do dictations of patients admitted to the medicine service.
- Procedures will be performed by the fourth-year student at the discretion of the attending physician. All procedures are done under direct observation by the attending physician or senior EM resident.
- When possible, fourth year students should be integrated into the care of patients requiring resuscitation.

Physicians Associates/ APRN

The role and supervision of the PA/APRN is the same as that of a PGY-2 resident. Although PA's and APRN's are independent clinicians, whenever possible, every patient seen by them should be documented on by am attending.

According to state guidelines every PA requires a supervising physician. It is the responsibility of the supervising physician to provide oversight and control and direct the services provided by the advanced practice providers (APPs). The APP staff is directly supervised in all sections of the department where they work directly with attending staff. The QI/QA committee periodically reviews charts to ensure a process of supervision and feedback that is compliant with state regulations. The attending staff on shift must provide continuous availability for direct communication and supervision for all patient care. The APP will ask the on-shift attending for assistance in formulating a plan or directly treating and examining a patient. Supervision at Shoreline is outlined separately.

Documentation

Documentation by the attending physician is required for all patients seen with the APP staff. See section for documentation requirements.

Physician Associate Students

The role and supervision of the PA students is augmented by midlevels with whom they are assigned. The attending physician is ultimately responsible for the supervision of these students.

PA/NP Residency

There are four PA/NP residents who will participate in an 18-month training program. They are to be supervised completely and function as trainees only. All patients will need to be seen with them and all procedures will need to be closely supervised as we do with MD residents. Any problems with their performance should be reported immediately to Dr. Chekijian. The attestation given on the charts should be the. edmidatttest format.

Nursing and Physician Communication in the ED

- Frequent communication between members of an ED team (i.e. purple, green, etc.) is strongly encouraged.
- The goal is to review the care plan for each patient on the team to ensure that all necessary interventions have happened and to expedite the patient's care.
- This is referred to as "rounding" or having a "huddle."

Care Coordinators

RNs with case management training are in the ED daily from 9a-11p. They should be informed about any patient who may require assistance at home (VNA, etc.) or an upgrade from their current living situation to assisted living, full care at an ECF or if indicated inpatient hospice. Their job is to prevent "social admissions" and improve patients' safety at home.

DOCUMENTATION/BILLING

The Emergency Department Epic Patient chart is to be completed by the Resident/PA/APRN to the highest level of care that was provided. The Emergency Department Attending Physician is to complete the “Provider Note” to the highest level of care rendered.

Evaluation and Management services must include a medically appropriate history and/or physical examination. The extent of the history and/or PE are determined by the treating physician or other qualified health care professional reporting the service. The care team may collect information supplied directly by the patient or caregiver, additionally prior electronic health records may be reviewed and documented. The extent of this portion of the note is not used as an element for determining the level of the service but is a required component of all evaluation & management services.

Medical Decision Making

Medical Decision Making (MDM) is calculated using three components:

1. Number of Complexity of Problems Addressed at the Encounter
2. Amount and/or Complexity of Data to be Reviewed and Analyzed
3. Risk of Complications and/or Morbidity of Mortality of Patient Management

Indicate any of the following:

- Administration of IV fluids or narcotics
- Risk of significant complications
- Morbidity and mortality
- Long-term medications (i.e. Coumadin, Insulin, etc.)
- Social Determinants of health
- Radiological interpretation performed by the attending
- Discussion regarding further testing, treatment, or hospitalization

EKGs: Please sign all EKG's in cardioserver

Clinical Impression:

Clinical Impression(s) must be documented in the record and in the Provider Note. Rule Out, MVA, fall and Status Post should never be used as clinical impressions. Clinical Impressions must be as specific as possible. You may also list symptoms such as vomiting, dyspnea and chest pain NOS (not otherwise specified).

Disposition:

The appropriate disposition must be documented in the note.

Medical Student Attestation:

Medical students can share notes in ASAP. The entirety of the exam must be done by an attending. Use this dot phrase .studentsmdattest

*“I was present when the medical student completed E/M related services with the patient and have personally performed or re-performed the exam and plan. I have verified and/or revised the medical student documentation for accuracy. Of note ***”*

Resident Attestation

When supervising a resident, the following attestation must always be used: .edresattest

“I saw and examined the patient. I agree with the findings and the plan of care as documented in the resident’s note. Of note (the attending physician needs to add their participation in the care of the patient and MDM)”

Midlevel Attestation

When having a face-to-face visit with a patient along with a PA/APRN (shared visit), the attending physician must use the following attestation indicating that they were involved in the care of the patient: .edmidattest

"I provided a substantive portion of the care of this patient. I personally performed the (MDM, Exam or History)"

Attending providers will need to pick at least ONE portion of the visit (MDM, Exam or History) for which they have had the most substantive / meaningful contribution to care. While the chart documentation remains shared, as always, our documentation should be reflective of the care we provided.

.edannnex

ED Attestation: PA/APRN

Face to face evaluation was performed by me in collaboration with the Advanced Practice Provider to assess for significant health threats. I personally performed substantive history, exam, and/or MDM

*On evaluation: ****

For continuity of care, Patient is being transitioned to the emergency annex.

The note needs to be signed prior to patient being placed in annex queue

Procedures

A separate procedure note, specific to the service performed, must be documented:

- Lacerations must include length, location, repair type, repair method, etc.
- Fracture care must include location, if anesthesia was used, manipulation, splinting, type of splint used, follow-up care, post-procedure assessment, etc.
- If the procedure was performed by a resident, the attending physician must complete the teaching physician attestation, edprocattest, and choose one of the following statements:
 1. *I was present and supervised the entire procedure*
 2. *I was present and supervised the key portions of the procedure. Key portions include: (indicate the key portions you were present for)*

Electronic Signature

Once documentation is complete, an electronic signature with the date and timestamp is required

Critical Care

- Critical care services are defined as a physician's direct delivery of medical care for a critically ill or critically injured patient. A critical illness or injury acutely impairs one or more vital organ systems such that there is a high probability of imminent or life-threatening deterioration in the patient's condition.
- Critical care must be documented in the **procedure tab** in Epic.
- Critical care is a timed based code. The attending physician must spend at least 30 minutes providing critical care to the patient in order to be billed as critical care. Critical care time of less than 30 minutes will be billed with the appropriate E&M code (99281-99285). Time spent alone by the resident cannot be counted towards total critical care time. Only time spent performing critical care activities by the resident and the attending physician together or the attending physician alone can be counted toward critical care time.
- Physician time for critical care services encompasses time spent engaged in work directly related to the individual patient's care whether that time was spent at the immediate bedside or elsewhere on the floor. For example, time spent can be at bedside, reviewing test results or imaging studies, discussing the critically ill patient's care with other medical staff, or documenting critical care services in the medical record would be reported as critical care, even though it does not occur at the bedside. Also, when the patient is unable or lacks capacity to participate in discussions, time spent on the floor with family members or surrogate decision makers obtaining a medical history, reviewing the patient's condition or prognosis, or discussing treatment or limitation(s) of treatment, may be reported as critical care, provided that the conversation bears directly on the management of the patient.

The following procedures are separately reportable and not bundled into the critical care time. Time spent performing these procedures should not be included in the calculation of total critical care time, in addition, they should have their own separate procedure note.

Endotracheal Intubation	Thoracentesis
Tracheostomy	Pericardiocentesis
Bronchoscopy	Temporary transvenous pacing
Cardiopulmonary resuscitation	Needle placement for intraosseous infusing

Boarding ICU/SDU patients can get a second critical care note

Critical care must have the following documented:

- Organ system(s) at imminent risk of failure
- Support given to those system(s)
- Total critical care time spent by the attending physician on the patient in minutes (i.e. 40 minutes, not a time span such as 30-74 minutes)

For further information, please refer to critical care fact sheet

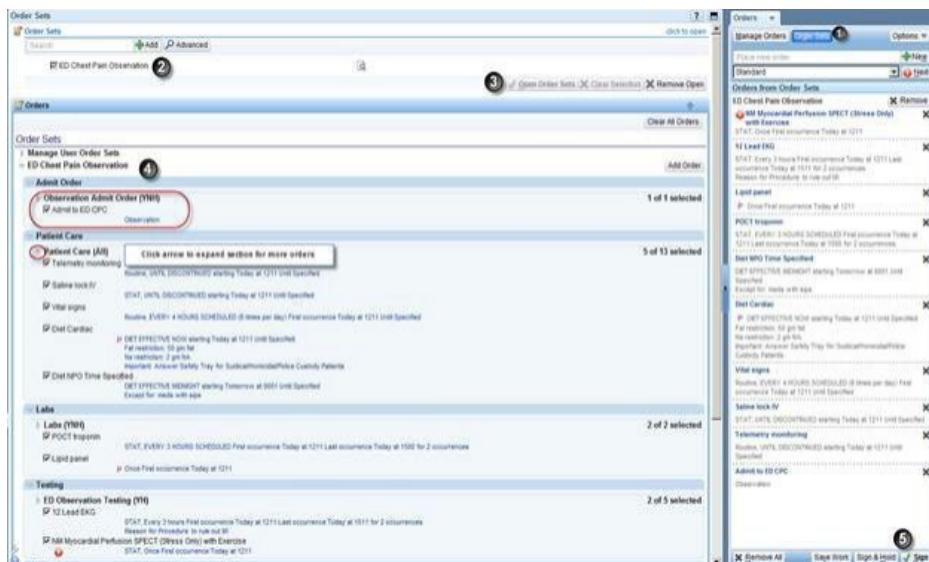
<https://medicine.yale.edu/ymadmin/medicalbilling/tools/>

Chest Pain Center Documentation

- Admission and CPC apples: Choose 'ED observation' in the order set. This includes pre-checked admission order, trops, lipid and stress test (has a hard stop to specify reason).
- Home Medications: click on the tab for 'home medications' under manage orders; reorder the medications that you want to continue in the CPC.
- CPC form: Once you have finished your note, enter '.edobsadmit'. This will bring up the first part of the old form and you can go through it using F2. Call the PMD and cardiologist (if any).
- Sign out: sign out to the nurse and midlevel as before.

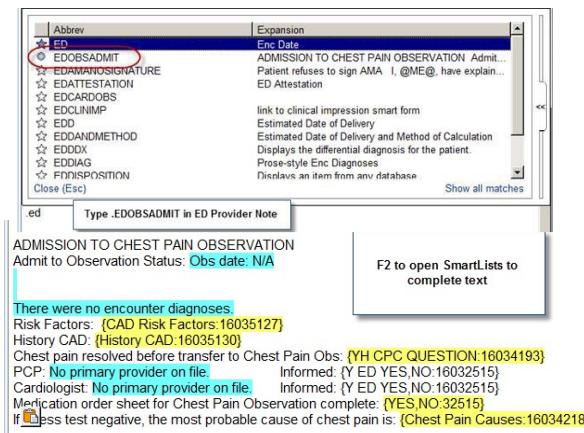
For Attendings:

- The B side attending is responsible for discharging patients and issues related to the CPC patients including documenting serial ECGs.
- ECGs: can be entered using 'procedure' tab in 'my note'. Complete and sign.
- Discharge: The CPC midlevels will help you with the discharge planning, however our billing requires an ED attending to see patients at discharge (and to use the. edobsattest statement).

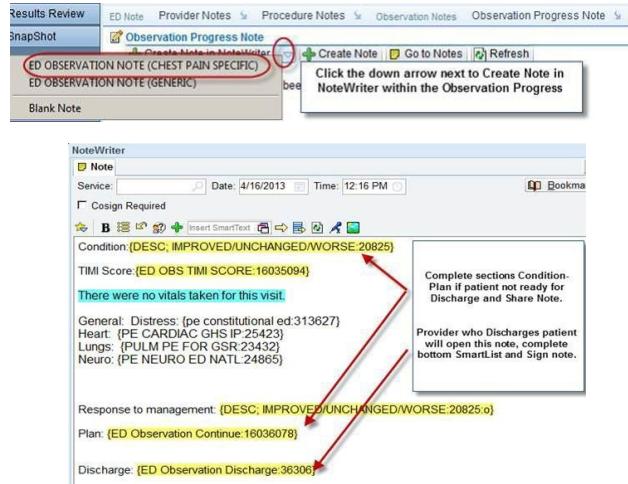


Once the decision is made to place the patient in observation, the first step should be to enter the orders from the order set. This will help autofill some of the admission note documentation such as Observation admit time.

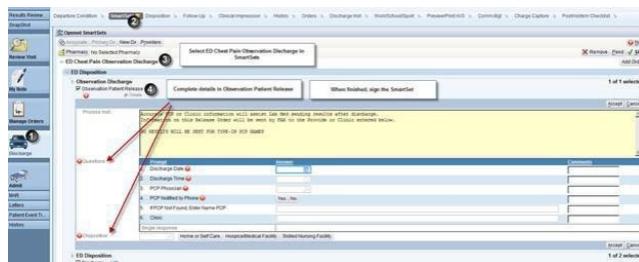
Then return to the ED Provider note to add the admit phrase below:



The next step is for the provider working in the CPC to document their portion of the care. This note should be marked for cosign by the CPC provider and assigned to the attending who will be associated with the discharge.



Next, from the discharge navigator select the ED Chest Pain Observation discharge; this will place your discharge order and switch your disposition. This step is often done for you by the CPC provider.



The physician who is marked as the cosigner should use the below phrase when cosigning the note:



Core Performance Criteria

Yale Medicine standard for chart completion states the following, keeping in mind the collaborative use of patient's electronic health record:

In order to keep each patient's care team appropriately informed across the health system, providers should strive to complete ambulatory encounters within 24 hours. Because patients are typically cared for by collaborating providers across specialties and locations, failure to complete and close ambulatory encounters within three business days of the encounter exposes patients to risk of delays in care, or suboptimal care resulting from incomplete information. As such, ambulatory encounters are expected to be closed **within three (3) business days of the encounter**. Please refer to our Yale Medicine InBasket Management practice standard, <https://medicine.yale.edu/ymadmin/practicestandards/>

Attending physicians are ultimately responsible for completing charts and should be diligent in completing all charts as soon as possible following their shifts. This includes verifying that the resident note is complete, all procedures have been documented, and the attending note is complete. The Department requires that **charts must be completed within 7 days**. A weekly incomplete chart count is performed on Friday mornings and sent to all physicians including the Chair and Vice-Chair.

The attending physician must be the last Provider to sign the note and must hit the **“Chart Complete” button AFTER “refreshing” the note** making sure the Clinical Impression(s) and Disposition are recorded.

All charts are reviewed by the billing team upon completion to confirm they are compliant prior to being forwarded to our coding team. Non-compliant charts are put on hold from being billed and subsequently returned to the appropriate attending physician via Epic InBasket. Attending physicians should check their **ED PB Coding Inquiry and Hospital Chart Completion folders** in their inbasket on a regular basis for any documentation inquiries. Once the necessary updates have been made to a chart, please click “All Documentation Complete” within your inbasket so that an automated message will inform the billing staff that the chart is complete and can be taken off hold. Attending physicians with repetitive deficiencies and/or errors will be contacted by the billing supervisor for review.

Admitting Procedure

Admission orders are placed through Epic. Bed management can be reached at 688-5050.

Please be sure to carefully read admission order special considerations. In general, medicine admission will be booked to the hospitalist team. Bed management then may assign patients to teaching teams at their discretion.

Tips For Success:

1. **The key to success is attending to attending communication.**
2. Observation versus Inpatient. There are Utilization RN's covering ED 24/7, they help with this decision. As a rule of thumb, undifferentiated syncope, chest pain, abdominal pain, and CHF should be admitted to observation status. Negative workups should be observation. Positive findings are often inpatient. Remember to use the "CM/UR" column on your track board to facilitate an earlier evaluation.
3. There is an ED Consult/Admitting policy approved by YNHH and YMG that is a good resource and has a diagnosis-based appendix to help determine admitting service. Go to tools tab on epic and click "Admissions Document".
4. ED/MICU Co-Management. If a patient is admitted to the MICU but no bed is available four hours after placing the ED admit order (and it is not likely to be available soon), then the ED Attending should follow the "ED-MICU Co-Management" Policy (See Policy manual). To initiate this process, the ED attending should contact the Intensivist attending as noted in policy. Also, both YSC and SRC have two beds capable of tele-ICU which can be initiated for evening and overnight hours. (See tele-ICU policy)

Surgical Admissions

In order to improve the care and experience for our patients, we have collaborated with the General Surgeons to identify patients for whom we can enhance the admission process. Our goal is to decrease the time these patients stay in the emergency department when there is an available floor bed. (Not Step down or ICU).

As per current department practice, the ED staff will 1) ask the patient if they have a surgeon or surgeon preference, and if not, then 2) ask the primary care doctor if they have a surgeon preference as well as to screen for previous interaction with a general surgeon. As usual, good communication is the key to success.

Process:

1. Patient with confirmed diagnosis (Appendicitis, Cholecystitis, SBO without Ascites, Diverticulitis)
2. ED attending contacts Surgical attending on call. (Contact info available on AMION or calling the community surgeon's service)
3. ED attending to Surgical attending conversation discussing admission and treatment recommendations.
4. Patient goes upstairs as soon as bed is available.

The surgery consult may see the patient in the ED, but is not necessary prior to leaving the department, and should not delay transfer. Patients in need of ICU or Step-down level of care are excluded.

Again, the key to success is attending to attending communication.

TRANSFERS (Y-Access) + PCP Call Ins

Inbound transfers

In general, the YNHH philosophy is to accept requests from other emergency departments to transfer patients who require specialty care. The Y Access Line is a single-source phone center exclusively for physicians. With one call, referring physicians can speak directly with a live clinician who will expedite their requests for patient transfer to Yale New Haven Hospital.

Services include:

- Identify an appropriate specialist
- Ensure connection with a receiving attending physician
- Facilitate arrangements for a patient transfer
- Obtain patient evaluations and progress reports

If an in-patient bed cannot be found, or if the patient requires further ED evaluation, then the clinician from the Y Access Line will contact an ED attending and will connect you with the sending physician to receive report. All phone calls are recorded. If you receive a call directly from an outlying ED that you feel could be a direct transfer to an in-patient bed, refer them to call the Y Access Line directly at 888-964-4233.

The ED attending is authorized to accept inbound transfers, but depending on the circumstances, you may wish to either discuss the case with the specialty service in question, or have the caller speak directly to the attending on the specialty service. Y Access Line can expedite this for you.

Whenever possible we accept specialty transfer. It is also generally not acceptable to accept an inpatient from another hospital as a transfer to our ED. There is a misconception that any inpatient transfer to the ED is an EMTALA violation; this is a myth, but these patients typically should be directly admitted to inpatient floors via the Y Access Line. (Remember that the West Haven Veterans Administration hospital is not encumbered by EMTALA, since they are not a Medicare-participating hospital, and you may get transfer requests from them that sound like EMTALA violations.) In general, the best approach is to take any such patient if other arrangements cannot be made, since the referring physician is signaling that he/she cannot manage the patient, and we very likely can.

May 2023 Update:

SBAR: Adult ED Y Access Transfers

- **Situation:** To address surges in AED capacity constraint, we have designed a structured plan to better manage interfacility transfers to the AED via Y Access at times of extreme census.
- **Background:** As a tertiary care academic medical center, YNHH receives transfers of the most critically ill and seriously injured patients in the region. Approximately one third of these patients are referred to the Emergency Department to be stabilized and to expedite evaluation as well as diagnostics. YNHH is committed to providing advanced care to our community but must acknowledge resource and capacity constraints which raise patient safety concerns.
- **Assessment:** As the only local comprehensive stroke center and level 1 trauma center, YNHH will always accept transfers needing access to time-sensitive specialized care. Acknowledging that many other critically ill patients and those needing specialized services in our region also rely on YNHH, Y Access and the Department of Emergency Medicine have partnered to develop a tiered approach as the census of boarding patients in the ED increases. This plan reflects an initial approach to balance access to hospital services at YNHH as an anchor institution in our community with concurrent need to ensure safe care of our patients at times of capacity limitation.
- **Recommendation:** Adoption of the following guidelines for AED transfers:



Red: restrict transfers to trauma, stroke, PE, acute aortic emergencies

ED Boarding

>70

ED capacity

>200%

Yellow: AED & accepting MDs review transfer

51-70

>150%

Green: per discretion of accepting MD if no inpatient bed available

<50

<150%

Outbound transfers

The only patients transferred out of the YNHH ED with any frequency are major burn patients who often go to either the burn center at Bridgeport Hospital (part of the Yale New Haven Health System, and the only burn center in the state), or the Shriners burn center in Boston (for severe pediatric burns). Infrequently you may need to transfer to Westchester Hospital or the Jacobi Hyperbaric Center at the Jacobi Medical Center.

NOTE: State law requires that all burns meeting the criteria listed below be reported to the fire marshal in the town where the injury occurred:

1. Second or third degree, ≥5% TBSA
2. Any burn of the upper respiratory tract
3. Laryngeal edema due to the inhalation of superheated air
4. Any burn injury which may result in death

Sec. 19a-510a. Reporting of treatment for burn injuries or injuries resulting from use of fireworks. (a) The attending physician, the director of a health care institution, his designee, or any health care provider shall report the provision of treatment for (1) a second or third degree burn to five per cent or more of the body, (2) any burn to the upper respiratory tract, (3) laryngeal edema due to the inhalation of superheated air, (4) each case of a burn injury which is likely to or may result in death, and (5) any injury resulting from the use of fireworks, immediately, by telephone, to the local fire marshal of the jurisdiction where the incident which caused the burn occurred, and within forty-eight hours, in writing, to the State Fire Marshal's Office on forms provided by that office. The report shall be sent to the Bureau of State Fire Marshal and Safety Services which shall compile the information and publish a statistical abstract to be submitted annually to local fire marshals and the General Assembly.

Rarely, a patient will be transferred to another local hospital when his/her physician is there, or all of his/her care has been received there, and the patient requests transfer.

All outbound transfers must be fully compliant with EMTALA:

1. An emergency medical condition must have been eliminated (in the case of a non-emergency transfer, such as a veteran with pneumonia going to the VA hospital) or stabilized to the best abilities of our facility (in the case of an emergency transfer, such as a critical burn patient going to Bridgeport).
2. The accepting facility must have agreed to take the patient. While attending-to-attending communication is usually optimal, there is no EMTALA requirement that this happens, contrary to popular belief. For example, the charge nurse at the Connecticut Burn Center at Bridgeport Hospital is authorized to accept patients, and while he or she will likely have you speak to one of the burn surgeons, you may initiate the transfer once he or she accepts the patient.
3. The patient must provide informed consent.
4. If the patient is unstable (e.g. the critical burn patient), the ED physician must document that the medical benefits to the patient from the transfer outweigh the risks of the transfer.
5. All records (including imaging and lab tests) must accompany the patient. If the patient is ready to depart before certain lab tests or imaging are available, and it is felt that delaying the transfer to await the results would be detrimental, these must be transmitted to the receiving hospital as soon as they become available.
6. The transfer must be carried out with appropriate equipment and qualified personnel. As the transferring physician, you are legally (EMTALA again) responsible for this – it is up to you, not the receiving physician, to determine what “level” of providers (EMT, paramedic, respiratory therapy, RN, physician) must accompany the patient to affect a safe transfer. (Note that when you are on the receiving end of the transfer, it is up to the transferring physician, not you, to make these decisions – though you can certainly suggest what you feel is best.)

Primary Care Physician Call-Ins

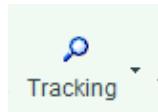
On YSC and SRC ED, clinicians field all call-ins from primary care physicians. In most circumstances it is a midlevel provider. PCP's calling the ED are first routed to an Information Associate (IA). The IA asks the PCP for identifying information to locate a patient in Epic. The call-in process then has one of two scenarios.

The patient is able to be arrived / identified in Epic (98+% of patients):



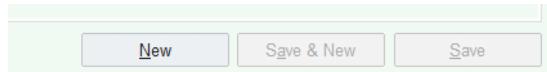
The patient is not able to be identified in Epic (this is rare and not intuitive):

Click on “Tracking Icon”:

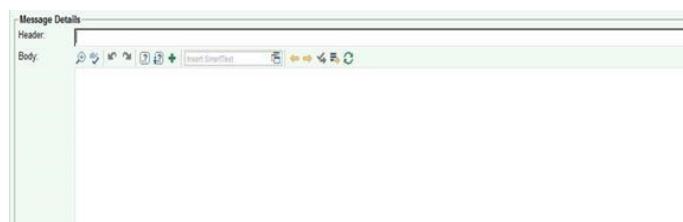


Click on “Message Log”

On Bottom Right hand of screen click “New”:



Enter Patients last name, first initial into “Header Section” Enter Call In Information in “Body Section”.



Patient's last name, first name will appear at top of all ASAP screens until pt arrives and is cleared. For example, pt names Angel Ulrich (see “Ulrich, A” below). Click on to open call in information



Clinical Guidelines

Clinical Guidelines

ED Policies and Clinical Guidelines can be found on through EPIC at the top of the toolbar labeled “ED Clinical Resources.” Then click on “ED Policies” or “Provider Resources”

Some essentials include:

1. **Acute MI:** Our reperfusion strategy for ST elevation MI in the ED is primary percutaneous intervention in the catheterization lab. Our goal is door to balloon inflation in less than 90 minutes.
 - a. EKG - All patients with symptoms possibly caused by ACS get a cardiogram by our techs or nurses within 10 minutes of arrival and the EKG must be presented to the attending. The attending reads the EKG and signs EKG within cardioserver. The tech will document that EKG was shown to attending.
 - b. If the EKG shows STE, anterior ST depression indicating posterior MI or LBBB the attending immediately evaluates the patient to decide if there is an acute MI. If acute MI seems likely, then the attending examines the patient, checks for contraindications to angiography (allergy, renal failure) and obtains general verbal consent for primary PCI.
 - c. The attending calls in cath lab tech, nurses and the cardiology fellow by instructing the unit secretary to “activate the cath lab”.
 - d. The attending or resident enters the “STEMI Order Set” in Epic. This order set must be used to indicate the time of cath lab activation, time attending cardiologist returned phone call, time patient left the ED, any contraindications to cauterization, as well as all medication and ancillary orders for the patient.
 - e. If there is no respiratory arrest or hemodynamic instability that needs immediate attention, the patient must leave the ED 25 minutes after lab activation (step 3) accompanied by a nurse and physician. By protocol that physician is the cardiology fellow but may be an ED senior, attending or attending cardiologist if the fellow is not available.
2. **Pulmonary Embolism:** We have a formal process of risk stratification, selective use of D-dimer for low-risk patients and imaging primarily with CT-PA for high-risk patients and those with positive D-dimer results. The protocol is updated this year and is comprehensive including use for patients who are pregnant. VQ scan is used only for patients with creatinine > 1.6, allergy to contrast (not shellfish) or lack of adequate IV for CTPA (20g or greater no central lines).
 - a. Please refer to PERT activation protocol
3. **Sepsis:** A protocol has been established to facilitate the early recognition and treatment of patients with severe sepsis or septic shock. The ED Attending is the team-lead for these resuscitations and should work with nursing staff and resident physicians to ensure early, aggressive fluid resuscitation, serum lactate testing, antibiotic administration and reassessment. Placement of central venous catheters should follow hospital-wide policy for safe placement that includes adequate simulation training, ultrasound guidance and infection control checklist.
4. **MICU / SDU admission:** We have developed a formal MICU/SDU admission protocol that outlines clinical parameters that warrant admission to either the MICU or SDU as well as a communication process designed to ensure ED attending communication with the MICU or SDU attending for each admission.

General Guidelines for MICU/SDU Admission Process

1. The ED Attending determines the appropriate service and level of care (using the MICU/SDU guidelines 1 and the Admission Service Guidelines 2 for assistance)
2. Bed Management is contacted (688-4520) to determine bed availability in the chosen unit. If no beds are immediately available in the selected unit, bed management will make arrangements to find or create an open bed. Level of care downgrading (SDU to floor; MICU to SDU/floor) in the setting of resource limitation is strongly discouraged unless clinically indicated by physiologic improvement. If a bed in the SDU is not imminently available (within 60 minutes), the patient should be admitted to the MICU.
3. MICU/ S/SDU Daytime Process (7AM-7PM): EM Resident/LIP will call MICU/SDU staff via contact information on ONeCall. At the termination of the telephone contact, a MICU/SDU team is assigned and contact information for the respective attendings will be exchanged (MICU/SDU Attending – ED Attending telephone number). The ED Attending will then contact the MICU/SDU Attending to notify them of the admission.
4. MICU/SDU Nighttime Process (7PM-7AM): The ED attending will notify the MICU/SDU attending of an admission (MICU x5017, SDU x5929).
5. ED Provider will enter an admission order (bed request) in EPIC and include the admitting/accepting attending's name.
6. ED nursing verbally signs out3 to the receiving unit.
7. Bed Management will assign a bed when ED places bed request in EPIC4. Bed management will alert the ED information assistant (IA) and nursing when the bed becomes available.
8. The ED staff transports the patient to the unit per current guidelines (ED MD may accompany patient in cases of instability such recent code or escalating care requirements).

MICU attending ED coverage

If a patient has spent a prolonged period of time in the ED awaiting an MICU bed, the ED attending is encouraged to contact the MICU attending to assist in management. This assistance can potentially include clinical care at the bedside as needed. The ICU leadership has agreed that the ICU resident and attending staff can play an active role in the management of ICU patients boarding in the ED. Once contacted for assistance the MICU attending may also be able to expedite the availability of a bed.

4. Stroke: YNHH is a primary stroke center seeing over 500 patients per year. A stroke alert is called by EMS or the ED when a patient is a potential candidate for revascularization procedures (i.e. IV TPA, IA TPA, or mechanical clot extraction) within 12 hours of symptom onset. Neurology comes immediately to the ED and the CT scanner is held for rapid imaging. Per national guidelines, intravenous TPA may only be administered within a 4.5-hour time window, intra-arterial TPA may be administered within a 6-hour time window, and clot extraction (i.e. MERCI, Penumbra) may be performed within 8 hours but requires intubation in the neuro-cath lab. Typically, these patients will be intubated in the angio-suite by anesthesia. There are some heroic circumstances when procedures may be performed within a 24-hour window (i.e. basilar artery thrombosis). The stroke team has 24 hour attending physician coverage (including both neurologists and emergency physicians) who take calls for the service. For potential revascularization patients they will arrive to evaluate the patient within 30 minutes of being called by the neurology chief resident. They are also required to come into the hospital with similar response times at the request of the ED attending or neurology chief resident. The Stroke attending call schedule is posted on AMION. The YNHH stroke program also provides telemedicine services for several regional hospitals and accepts transfers from many other regional hospitals. Potential revascularization patients will likely come to the ED first to expedite care. In this circumstance, the stroke attending will call the ED attending and report to him/her about the patient transfer. Upon arrival, a stroke alert will be called where immediate evaluation of the patient will be performed by the stroke team ED resident. A copy of YNHH stroke protocols is in the acute stroke packets located in the ED Critical Care areas.

- a. **Spontaneous Cerebral Hemorrhage:** Patients with non-traumatic ICH currently have YNHH ED treatment protocols being established. Typically, these patients will be first seen and evaluated by Neurosurgery. However, if the patient is not a surgical candidate, the neurology/stroke service will also evaluate these patients and frequently admit these patients to their service in the Neuroscience ICU. Blood pressure control and rapid reversal of coagulopathies are of utmost importance and should be performed in collaboration with specialists. The contact information for attendings in Neurosurgery and Neurology are posted on AMION.
- b. **Induced Hypothermia for Cardiac Arrest Survivors:** A “Chill Alert” is activated by the ED attending for cardiac arrest survivors. General Inclusion criteria are: age >18, unconscious after return of spontaneous circulation (ROSC) with no purposeful movements, any non-perfusing rhythm (VF, VT, PEA, asystole, etc.), able to maintain MAP>60mmHg (even with vasopressors), admission temperature > 32 degrees Celsius, ability to initiate induced hypothermia within 6 hours of ROSC, time from arrest to ROSC<60 minutes (but if uncertain of time activation may be performed). Traumatic injuries, ICH, systemic infection or a pre-existing DNR order are exclusion criteria. Activation may be performed on pregnant patients, those with existing coagulopathies, age <18, comatose state prior to arrest, or even in spite of persistent hypoxemia. A “chill alert” is activated when the ED attending has the unit secretary perform the activation. Afterwards, the stroke resident, CICU fellow, MICU fellow, or Swat nurse call the ED attending’s phone and are notified of the location of the chill alert. A more formal report is then given when they arrive at the bedside. The ED attending reviews the initial ECG, and, if there are ST elevations, a cath lab activation is performed (identical to the STEMI activation protocol. Do not activate the cath lab immediately for a new LBBB in the setting of ROSC). Upon activation, the stroke resident and CICU fellow will immediately come to the ED to evaluate the patient, while the MICU fellow may not see the patient until transfer to an ICU. The stroke resident will perform a baseline neurological exam so, if possible, withhold sedative medications until this is performed. The CICU fellow will make a determination about whether non-STEMI patients need to go to the cath lab. Cooling will be initiated by using chilled saline and the arctic sun device in the ED. It is recommended to place an arterial line and central line in all these patients because re-arrest rates in the ED approach 30%. Upon transfer to the CICU or MICU the patient should have a head CT performed to rule out ICH as a cause of the arrest. The comprehensive Clinical Practice Manual for “chill alerts” is in the bubble, and there is a list (name, pager, cell phone numbers) of critical care resource attendings available for disposition or management questions when managing these patients.

HIV post exposure prophylaxis

Six Short Steps

1. Risk Assessment
2. Counseling Occupational Health Services
3. Baseline Testing Monday-Friday 7:30-4:15 688-2462
4. Post-Exposure Prophylaxis
5. PEP Side Effects
6. Follow up

- . Triage: set EPIC chief complaint as “Occupational Exposure”
- . Patient to come back immediately; do not send to Urgent Care
- . Do not send labs until it is known if PEP will be given or not.
 - If PEP will be given: serologies and CBC/chems per protocol, use EPIC order “Needlestick panel with HIV testing”
 - If PEP will not be given: serologies only

1. Risk Assessment : see www.med.yale.edu/ynhh/infection/guidelines/PEPYNHH.pdf for further details

a. Determine whether source patient

- i. is documented to be infected with HIV, HBV, or HCV
- ii. if he/she has risk factors for those infections:
 - 1. Clinical syndromes
 - 2. Recent (3 months) risky behaviors
 - 3. Known infections, elevated LFTs
 - 4. Get a rapid HIV test on the source patient ASAP
 - a. Virology phone number 83322
 - b. Chemistry does test off-hours

b. If source patient is known to be infected with HIV

- i. Check Logician for information on Nathan Smith patients.
- ii. if taking antivirals, contact ID fellow for advice (possible drug resistance)

c. Risk of percutaneous exposure (see Table 1, Exposure Type, below)

i. Increased risk with:

- 1. Deep injury, hollow bore sharp
- 2. Visible blood on device
- 3. Device placed in source patient's vein or artery
- 4. High viral load

ii. None of above risk factors: 0.04%

iii. 3-4 risk factors: 5%

iv. Average risk of HIV infection after percutaneous exposure to HIV-infected blood is 0.3%

v. Risk of mucous membrane exposure 0.1%

vi. Risk of skin exposure <0.1%

vii. Other potentially infectious material (OPIM)

- 1. Cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid

viii. Not considered infectious (unless visibly bloody): feces, nasal secretions, saliva, sputum, sweat, tears, urine, and vomitus

2. Counsel the exposed worker: As soon as decision to treat has been made, give HIV PEP. PEP for HIV should be given ASAP; ideally within one to two hours of exposure. Testing of exposed patient for HIV, Hepatitis B and C should not delay initiation of PEP.

a. Risk of seroconversion (see above)

b. Viral syndrome, symptoms of disease

i. May occur with acute exposure to HIV

ii. Contact OHS if symptoms develop (most commonly due to other causes)

c. Precautions to prevent secondary transmission of HIV, HBV, and HCV

i. Until known not infectious:

- 1. Ensure condom use; no open mouth kissing
- 2. Do not donate blood, organs or tissue
- 3. Do not share shaving instruments; breastfeeding or pregnancy should be avoided.

ii. Ask when LMP. If unsure, must check via UHCG.

d. Possible side effects of: refer to patient information sheets in UptoDate or MicroMedx

3. Testing of exposed and source patients

a. Exposed patients (Yale and non-Yale)

i. For all exposed patients:

1. if PEP medications are given:

a. Send serologies (below) in red topped tubes.

b. Send CBC, electrolytes, glucose, BUN, Cr, and LFTs

2. if PEP medications are not given:

a. Send serologies (below) in red topped tubes.

ii. Yale (YNHH employees and Yale University staff working within the hospital, such as MDs, and medical/PA students; also, EMS staff or students within hosp): Use Needlestick panel order set in EPIC

iii. Non-Yale: Use Needlestick panel order set in EPIC

iv. Pre-hospital personnel (EMS, fire, police); non-Yale occupational injuries

1. Pre-arranged Occupational Health Service (usually HSR or Yale Univ)

2. Pt to notify their OHS that labs are pending at YNHH

v. Other exposed patients

Exposure type	Infection status of source			
	HIV positive, class 1* Recomended 2-drug PEP	HIV positive, class 2* Recommended 3-drug PEP	Source of unknown HIV status† Generally, no PEP warranted; however, consider basic 2-drug PEP if source with HIV risk factors‡	Unknown source§ Generally, no PEP warranted; however, consider basic 2-drug PEP if source with HIV risk factors‡
More severe§§	Recommend expanded 3-drug PEP	Recommend expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP if source with HIV risk factors‡	No PEP warranted

* HIV positive, class 1—symptomless HIV infection or recent low-level HIV (e.g., < 500 copies/mL). * HIV positive, class 2—symptomless HIV infection, acquired immunodeficiency syndrome, acute seroconversion, or a known high viral load. † If drug resistance is a concern, obtain a detailed history and consider consulting resource should be available to provide immediate evaluation and follow-up care for all exposures.

‡ For example, deceased source person or no samples available for HIV testing.

§§ For example, solid needle or superficial injury.

¶ For example, a decision to administer PEP is optional; a decision to initiate PEP should be based on a discussion between the exposed person and the treating clinician regarding the risks versus benefits of PEP.

|| If PEP is initiated and administered and the source is later determined to be HIV negative, PEP should be discontinued.

¶¶ For example, legal-use hollow needles, deep puncture, visible blood on device, or needle used in patient artery or vein.

1. Nathan Smith Clinic
 - a. ED staff to leave voice message at 688-5303 whether PEP given /not given, and pt name / MRN
 - b. Fax record to 688-3216
2. Encourage PMD follow-up
3. Sexual assault patients: private gynecologist or Women's Center (send expect note if possible)

Discharge Instructions

1. If applicable, choose appropriate d/c instructions for emergency contraception, STD prophylaxis, etc. Look under MEDICATIONS.
2. Discuss whether PEP given or not, document assessment of HIV risk.
3. Type in relevant follow-up phone numbers for OHS (most often YNHH vs. YHP vs. HSR), Nathan Smith Clinic, and Women's Center if necessary.

Other resources:

1. ID fellow. Now have access to an ID attending with specific expertise in HIV.
2. PEP Hotline (888-HIV-4911) available 24/7
3. Warm-line (800-933-3413) 8a-8p EST, M-F
 - a. Perinatal Hotline(888-HIV-8765) 24/7
 - b. www.med.yale.edu/ynhh/infection/guidelines/PEPYNHH.pdf
 - c. www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm_1 CDC2

1. Panlilio AL, Cardo DM, Grohskopf LA, Heneine W, Ross CS. Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. MMWR Recomm Rep. Sep 30 2005;54(RR-9):1-17.

2. CDC. Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. MMWR Recommendations and Reports. June 29 2001; 50(RR11):1-42.

Sickle Cell Pain Crisis Management

We quickly and aggressively treat vaso-occlusive pain crisis in our ED. Most every Sickle Cell patient has a Care Plan which can be located in the FYI tab located on the patients' Epic banner. The hematology fellow on call (Phone # available through intranet Amion) should be consulted as needed. A routine call does not need to be made to heme fellow for admissions. The section of hematology is actively engaged in the care of their patients. In addition to management suggestions the fellow will be able to assist with assuring timely outpatient follow up. Please review established care plans found in Epic on many of our Sickle Cell patients.

Patient Safety and Quality

1. Organizational Structure:

- a. A new leadership structure for the Adult Emergency Department (AED) was implemented in 2014. The new structure exists as an AED Executive Leadership Committee with three subcommittees:
 - i. 1) Operations, 2) Patient Experience, 3) Patient Safety and Quality, and 4) Population Health.
- b. Reporting is an essential component to a robust patient safety program, as has been demonstrated in many high reliability organizations outside of medicine such as aviation. So, we strongly encourage the use of "SAFER", the hospital wide event reporting system, for patient safety concerns including near misses. This system and can be accessed through the Clinical Workstation under the "E" tab on any hospital-based computer. The click on "Event Reporting". This system is best used for reporting system level concerns. While you are welcome to report events anonymously, we prefer if you would identify yourself (system is confidential) so we can follow up if further information is required during an investigation. We also would appreciate if reports provide objective information and refrain from making conclusions or subjective comments.
- c. All cases related to diagnostic or clinical management concerns should be referred to CQI through Dr. John Sather (John.Sather@yale.edu) not through SAFER since it can be discoverable. Please email with subject line "CQI Peer Review" the MR # and date of service for the patient encounter and you will receive a phone call to review your concerns and provide a case narrative. Cases should be reviewed at CQI before a final response is made to faculty or outside departments.

1. Morbidity and Mortality Conference

- a. This conference is held monthly as part of the Wednesday resident conference schedule. If you were the provider for a case to be discussed at M&M you will be contacted at least a week in advance by a member of the CQI team. The purpose of this conversation is to review details of the cases, help better understand the rationale for decision making at the time of the case and to determine learning objectives for the conference. There is an expectation that the attending involved in an M&M case will be present at the conference.

2. Meetings

- a. We have developed a robust database and dashboard to guide a systematic quality improvement process in which the following categories are reviewed:
 - i. STEMI cases, Sepsis, Stroke
 - ii. 72-hour returns. Any 72-hour returns deemed preventable by CQI will be communicated to providers involved in the care of the patient
 - iii. Care escalations
 - iv. Mortality

3. Peer Review Committee

- a. The DEM has established a peer review committee comprised of the senior leadership within the administration section.
- b. Cases are reviewed during the biweekly QI meetings.

4. The CQI committee is responsible for selecting and preparing cases to be presented at monthly Morbidity and Mortality Conference

Psychiatric Patients

If a patient does not need to be admitted for medical reasons but needs to see psychiatry, enter an ED Med Clearance/Req for Psych Consult order in Epic once that is appropriate (look in Manage Orders, Quick List tab at the bottom all the way on the righthand side). It is still critical to note the reason for consultation in the patient record. Place appropriate sitter/observation order if patient does not have capacity to leave.

For patients requiring psychiatry consultation who may need admission: clarify the need for medical admission first (good example is alcohol withdrawal). If the patient is admitted to a medical or surgical service, the in-house psychiatry team will see them. When doing the actual admission via Epic, a notation of "med-psych bed" in the comments section alerts nursing management the patient has psych issues. There is no "psych ward" or locked ward in the main YNHH pavilions at 20 York Street. Please place IP psych consultation order. If patient boards for a prolonged time in the ED, IP consult service may start care in ED.

If there are family members in the waiting room, or others who may be valuable resources when trying to decide if the patient is safe to go home, you may want to ask them to stay to at least speak with the psychiatry resident/APRN before they go. If they cannot wait, ask for a contact number. Collateral information is often critical to a patient's evaluation.

Patients coming to the CIU are presumed to be in reasonably good medical condition. CIU patient should not need IV medications, not need vital signs checked more often than q 4 hours, and preferably no oxygen (oxygen tanks are potential weapons).

Urine toxicology screens and alcohol levels are very helpful—order them if there is any change, as drugs or alcohol may play a factor in the patient's mental status. There is no need to wait for the results, which probably will not change the medical evaluation (although an alcohol level >400 did cause reconsideration of an alert patient who denied any alcohol intake in over a week). The reason to order drug & alcohol tests early is that the results can facilitate referral / transfer to treatment a shift or two later when it is too late to collect a specimen. The results may also support a decision to release a patient who recants suicidal comments when "sober" and helps to document that they were "intoxicated" initially. Do not wait for the results to request a psychiatric consultation or transfer.

CIU:

Epic: As noted above, once your medical evaluation is complete, enter an "ED Med Clearance/Req for Psych Consult" order. This order will place patient on list to be transferred to CIU.

Medical Consultation on CIU patients:

CIU clinicians (APRNs, residents, attendings) will try to handle medical issues without moving psychiatric patients out of the CIU. A "curbside" consult is often all that's required. There are a smaller number of "what's this lesion" or "is this lesion serious" questions that arise: probably simpler for everyone if an attending or senior resident can step back into the CIU to check firsthand.

Occasionally, a psychiatric patient, who eventually will have to go into a psychiatric hospital, proves to have a problem that no local psychiatric facility will accept such as failure/refusal to take fluids, serum glucose >400, or respiratory problems requiring a ventilator. These patients often have to be admitted to a medical service prior to consideration of transfer to a psychiatric facility. CIU clinicians will review the situation with an EM Attending first and try to plan a course of action.

Infrequently, a psychiatric patient proves to have been hiding a real medical or surgical problem. The most exciting have been hidden overdoses (patient never told Triage, or only admitted to a few extra Percocet). A patient running into traffic to escape demons proved to have a splenic tear (hit by car) which only became evident on repeat HGB in the CIU. There have also been a few cases of patients who didn't mention their crushing chest pain until after they'd had a long talk about issues they felt were more important. Feel free to cut consultation short and simply ask to have the patients brought out into the appropriate part of A, B or C side.

Restraints--Behavioral; non-behavioral

For regulatory compliance, we categorize reasons for restraint into two types:

1. Behavioral aka psych—
 - a. patient is trying to hurt themselves or someone else,
 - b. dangerously agitated (about to hurt someone, if only inadvertently)
 - c. trying to leave and a risk outside
2. Non-behavior aka medical—
 - a. patient is thrashing around

b. pulling at needed lines or equipment

Both (1) & (2) require a physician's order and brief documentation of problem, e.g. patient yelling and threatening staff

Police or "Custodial" restraints have been ordered in the past, but there has been a change of policy. If police want someone "restrained," they've got to 'cuff' and watch them themselves.

Suicidal Patients

Patients who truly seem to be intent on suicide, or starting to consider it, should be seen by psychiatry. Most cases are obvious. The challenge is not to waste everyone's time with intoxicated patients who make a suicidal comment while intoxicated but deny any intent once sober. Some of these are fairly obvious. Key points to document:

1. alcohol level or urine tox screen results

a. there's been a sad experience with someone thought to be drunk, but who in retrospect was acting oddly because of his psychiatric problem.

2. absence of prior psychiatric illness (look at past visits in our EHR)

a. presence of frequent visits for intoxication suggests substances are the primary problem and, there's nothing like calling a collateral source of information, a friend, or family member designated by the patient to back their story. Occasionally the contact will offer to pick up the patient.

Substance Use Disorders/Intoxication

Connecticut Law

Public Intoxication

Connecticut Statutes require that a person who appears intoxicated in a public place be brought to a health care facility for assessment and possible treatment. Public intoxication is not considered a criminal offense. This means that people who are intoxicated are often transported to the nearest ED.

Clinical Sobriety

Patients can be “cleared” to leave the ED when they are clinically sober. There is no “magic” alcohol level at which someone is considered to be sober, as individual tolerances for alcohol are dependent upon drinking history and liver function. A clinical exam will allow an assessment of sobriety and should be done prior to discharging the patient who presented with acute alcohol intoxication. Often this includes ability to walk without difficulty, and to pick something off the floor without losing balance. This MUST be clearly documented in your notes.

Project ASSERT/BNI

Project ASSERT is a unique program that provides screening, intervention and referral to treatment for ED patients with substance use disorders. Three HPAs (Health Promotion Advocates) are part of the ED staff and work in the York Street ED weekdays (7:00 a.m. – 11:00 p.m.) and weekends (Sat 8:00 a.m. – 8:00 p.m. and Sun. 8:00 a.m. – 4:00 p.m.) and take referrals from ED staff. Outside of these hours, Social Work is able to evaluate patients and provide referrals to treatment. One HPA works at the Chapel Street Campus. You may call an HPA from the York Street Campus for a consult from either the SMC or Chapel Street Campus if needed. The HPAs also perform screening of patients who have non-critical illnesses to determine whether patients have a substance use disorder that might benefit from a psychosocial intervention, namely the Brief Negotiation Interview. The goal of this intervention is to motivate the patient to either reduce mild/moderate substance use or to accept a formal referral if more advanced or severe substance use disorder is present. Project Assert will follow through with documentation of an intervention and referral. Please do NOT ask the patient if they want to see an HPA. The HPA will see them and perhaps motivate them to accept a referral.

Patients who should be referred to the HPAs include patients who meet any of the following criteria:

- Acute alcohol or other drug intoxication, with or without other illness or injury
- Opioid overdose
- All alcohol and other drug overdoses or withdrawal states
- Patient presents to the ED requesting detox for alcohol or another drug addiction
- Injured patients who have any elevated alcohol level
- Anyone you are concerned about who has a substance use disorder identified during their ED visit

The HPAs perform the following:

- Screening
- Brief interventions
- Referral to specialized treatment services and assistance with referrals
- Arrangement for transport to specialized treatment services The HPAs can be paged by the unit IA.

When the HPAs are not available, patients needing referral to alcohol or drug treatment should be referred to social work. Social Services has a social worker available to the ED 24/7.

Recently, Medicaid has decided not to reimburse for hospital alcohol detoxification. We are trying very hard to have all patients who are withdrawing from alcohol referred to one of our specialized treatment centers, and the HPA can assist you with this process.

Referrals and Resources

The HPAs work with other ED staff to ensure that patients are referred. This is often a lengthy process, due to requirements of the receiving facilities. The HPAs have established relationships with treatment facilities and are able to ascertain treatment slot availability, insurance requirements, etc.

Many ED physicians have completed the DATA 2000 Training (X-waiver) for the purpose of prescribing a short buprenorphine (Suboxone) to ED patients with moderate or severe opioid use disorder (OUD) to facilitate linkage to outpatient treatment. This training is NO LONGER required to prescribe buprenorphine, as anyone with a valid DEA license can prescribe buprenorphine for the treatment of opioid use disorder. In the EPIC Tools section, select “Opiate Resources” from the dropdown menu to access the referral form, clinical opioid withdrawal scale (COWS) and the DSM criteria for opioid use disorder.

Students

Especially on weekends, there may be an influx of local college students who are acutely intoxicated. Students generally come from Quinnipiac University in Hamden, University of Connecticut – Southern Campus in New Haven, or Yale University. The only one of these that has an in-patient facility is Yale University. (University of New Haven Student Health Service may be able to help with outpatient follow-up if the patient agrees to have them contacted: 203-932-7079.)

It is important to make sure that students have a safe way to get back to campus when they are ready to leave the ED.

Yale students

The physician on-call for Yale University Health Services (Yale Health Plan, “YHP”) should be notified of any Yale students who come to the ED as they can arrange for follow-up and referrals.

EMS: Disaster Planning/Hazmat Room

Disaster planning is playing an increasingly prominent role in emergency medicine (EM), healthcare, and hospital systems nationwide. The Yale New Haven Emergency Department Disaster plan is an operational guideline that will continue to evolve as needs, systems, and standards progress. It is designed to function as both a department-specific guide for an 'internal disaster' or high-volume patient scenario, and as the guide for ED sector operations in the setting of a hospital-wide declared disaster (also known as a 'Plan D'). A copy of the Emergency Operations Plan (EOP) resides in the ED management offices. The following is meant to outline parts of disaster management for the EM attending working clinically. Since preparedness is a work in progress and continually updated based on evolving needs and practices, the information in this brief is subject to change without notice. Please contact your administrator(s) on-call if an emergency arises and your need further direction.

EOP: Emergency Operations Plan

The hospital emergency operations plan can be located on the YNHH clinical workstation.

The EOP is currently divided into three sections:

1. An overview of the command structure and introduction to the Hospital Incident Command System (HICS)
2. Documentation needed for all emergencies including job action sheets, event log sheets, and situation status reports
3. Instructions for staff specifically tailored to the initial response to different types of potential emergencies (e.g. fire, loss of electricity, inclement weather, hazmat spills, radiation, biological accident). This serves as a supplement to general HICS job action sheets.

HICS: Hospital Incident Command System

HICS is a flexible, organized system of command, control, and coordination which can be used in any potential hospital disaster. The YNHHS-Office of Emergency Preparedness offers training on the basics of the Incident Command System (EM 103); those with management roles should complete EM 140; those designated as potential Medical Specialists may complete EM 141 - The Role of the Medical/Technical Specialist in Incident Command - upon invitation. Further information about HICS-related courses is available through the YNHHS Center for Emergency Preparedness and Disaster Response at 203-688-3224. Additional information may be available from Jordan Swenson, YNHH Manager of Disaster Preparedness and Response at Jordan.Swenson@ynhh.org.

EOC: Emergency Operations Center

In a hospital-wide disaster, the Emergency Operations Center (EOC) should be activated, with hospital administrators filling the roles as detailed in the HICS table of organization. In a department-wide disaster response, the ED administrator on-call will be activated based on the Amion schedule and this individual will direct further operations. The Incident Commander (IC) will be the most senior administrator in the hospital at the time of plan activation.

EM Attending Role

On shift EM attendings will play a clinical role in the event of a disaster. You may be asked to serve in the role of Medical Specialist (consultant) to the Incident Command System. You may also play a leadership role as a treatment unit supervisor or as one of the treatment unit leaders. You may or may not be provided with 'Job Action Sheets' as a guide. Other attending physicians, if present at the time, should assist with these roles if available to do so. Review the YNHH HICS table of organization (located in the 1st section of EOP), and the job action sheets under the treatment located in the second section of the EOP. They will guide you to complete required actions early in the emergency.

Chem, Bio, Rad incidents, Personal Protective Equipment and Decontamination

N.B. A toxicologist is usually on call and contact information is located in One Call under 'Emergency Medicine, Toxicology' to assist in chemical and radiological incidents. Backup and additional information and contacts are available through the Connecticut Poison Center at 1-800-222-1222. YNHHS may also have a health/radiation physicist on-call. Joseph Albanese, Ph.D. at the YNHH Center for Emergency Preparedness and Disaster Response is a recognized expert in radiation incidents and dosimetry and may be available to assist.

The ED is equipped with indoor and portable outdoor decontamination facilities. The newly designed decon room is capable of high capacity two-lane decon operations and may be setup for sex segregation. Ask the charge RN for a tour (it's the space next to the nursing break room) and take the opportunity to attend a decon drill to familiarize yourself with the room and its operation. In addition, YNHH has two decon tents and external water and power outside the decon room designed to augment capacity in the event of a mass casualty incident. The tents may also be used to augment triage space in the event of a mass casualty disaster or pandemic.

15 + Level C PPE suits are available in the HAZMAT supply room. In general, if an incident is expected to have less than 20 patients, they will be decontaminated in the HAZMAT room. 20-100 patients may be decontaminated in the decon room and the two decontamination tents. Greater than 100 patients will involve the aforementioned resources and may require the activation of the New Haven Special Hazards (NASH) Team. NASH possesses trailers that can process 50- 80 patients an hour. Activation of the NASH Team should occur via CMED from the Incident Commander (either a hospital or ED administrator). As an ED attending, if you think that level of activation is required, notify the Incident Commander or designee as soon as possible. Be aware that the NASH team, Fire, and EMS may not be readily available in the event of a mass

casualty incident if they are required elsewhere.

The HAZMAT room is designed for decontamination and BLS skills only. It is not equipped to perform Advanced Life Support skills, such as airway management or medication administration. However, suction and oxygen are available in the “middle lane” for any patient that declines precipitously and who requires emergency stabilization. In general, life saving measures take precedence over decon. Our ED technicians and nurses are trained to decontaminate patients so they may be moved to the treatment area cleanly, safely, and as quickly as possible. Avoid the temptation to assist in ALS skills without being fully dressed in appropriate PPE. As a physician, your skills will be needed in treatment areas (as opposed to the decon room) though you may be asked for some direction.

CHEMPACK: Additional information at : <https://aspr.hhs.gov/SNS/Pages/CHEMPACK.aspx> and <https://chemm.hhs.gov/chempack.htm>

CHEMPACKs are large scale containers of nerve (cholinergic) agent antidotes. The program was part of CDC's Strategic National Stockpile, now administered by ASPR. CHEMPACKs have been placed in secure locations in local jurisdictions around the country to allow rapid response to a cholinergic poisoning incident. These medications treat the symptoms of nerve agent exposure and may be used for severe cholinergic symptoms even when the actual agent is unknown. The agents available may include atropine, pralidoxime (2-PAM) and a benzodiazepine. In the event of such an emergency, ED stores of medications may be used initially and resupplied from the CHEMPACK. Prehospital care providers may also request deployment of part or all of a CHEMPACK to the field. Plans for access and deployment of the CHEMPACKs are in flux at this writing. The ED Charge Nurse and Pharmacy (ideally through an ED pharmacist) are the points of contact in the event that these antidotes are needed in quantity. Medical Toxicology and/or the Connecticut Poison Center should also be notified of the incident and their advice should be sought. This action/consult should not delay deployment of the CHEMPACK.

Resources

Familiarize yourself with available online resources (begin with the YNHHS Guidelines for Chemical, Biological and Radiological emergencies (historically available on the YNHHS intranet)).

Additional information may be available at the CDC website and from the National Library of Medicine. Be aware that toxicologists within the department are a solid source of information for HazMat incidents (listed in OneCall under "Emergency Medicine"), and the Connecticut Poison Control Center at 1-800-222-1222 may also be useful.

If you have any questions regarding the HAZMAT room or the EOP protocols, contact Chris Chmura via ED nursing management. Drs. Anthony Tomassoni or Ryan Coughlin may also assist you in learning about the decon facility and procedures.

Both tabletop and physical drills (mannequins or actors) are held to familiarize staff with decon facilities and procedures. Please watch your email for announcement of these drills. Consider becoming involved, or at least observing.

The Section of Emergency Medicine shares a relationship with the YNHHS Yale-New Haven Center for Emergency Preparedness and Disaster Response (CEPDR). CEPDR (formerly OEP) is the entity within Yale New Haven Health Systems (YNHHS) charged with assisting all three delivery networks with emergency preparedness planning and related compliance issues. As a result of the September 11, 2001, terrorist attacks, YNHHS Past President and CEO Joseph A. Zaccagnino requested that emergency and terrorism preparedness activities be evaluated at each of the system's member hospitals (Bridgeport, Greenwich, and Yale New Haven). This action led to the creation of the YNHHS Office of Emergency Preparedness in June 2002. In that same time period, YNHHS was designated by the Commissioner of the Connecticut Department of Public Health as a Center of Excellence for healthcare emergency preparedness and response in the state. Since then, YNHHS, through its Center for Emergency Preparedness and Disaster Response, has developed and delivered numerous creative, practical programs and services for YNHHS and to facilities across the state and around the nation. The Center is also a CDC-designated Center for Public Health Preparedness and has been selected as a World Health Organization/Pan American Health Organization Collaborating Center for Emergency Preparedness at Yale- New Haven Health System.

EMS: Medical Oversight

The Yale New Haven Hospital Center for EMS (CEMS) provides medical oversight for approximately 27 EMS services in the area surrounding Yale New Haven Hospital. EMS clinicians in the system follow state of Connecticut and local YNNH Sponsor Hospital Policies and Procedures (see linked references below; hard copy available on A-side near red phone):

Red Phone/Direct Medical Oversight (DMO):

As an Attending EM physician at YNHH York St Campus (YSC) you are expected to provide direct medical oversight (DMO) for EMS clinicians in extenuating circumstances not covered by their protocols, or for situations outlined within the protocols that require DMO. If EMS Clinicians call to speak to a physician over the radio, there will be an overhead page for a physician to the red phone. Familiarity with the protocols (see references) ensures that the EM physicians understand the capabilities and limitations of the EMS crew.

Please answer the red phone promptly. Any attending (or EM resident who has an EM attending present on the phone) may answer the phone or radio and provide orders.

When answering a call:

1. Pick up the red phone and select "barge"
2. Please introduce yourself (Name and title)
3. Paramedic should provide you with his/her name, radio designation of the unit and then begin with the reason for the call, vital signs, and description of the clinical scenario.
4. Document each call by using RedCap, accessible by scanning the QR code posted next to the red phone. Please note that all calls are also recorded.
5. If there are any questions you feel you cannot answer, please ask MEDCOM to add in one of the EMS Physicians or call them directly.

Common reasons why EMS may call:

1. Medication Requests: While paramedics are allowed to provide morphine or fentanyl for chest pain, midazolam for seizures, and albuterol or duonebs for asthma/COPD on standing orders, they may be required to call for orders for repeated doses. Please be aware of medications available in the EMS formulary. If you recommend that a medication be administered, please be specific about dose and route/frequency of administration.
2. Death Pronouncement: Paramedics may discontinue resuscitative efforts in the field (for both medical and traumatic cardiac arrests) but may be required to discuss the case with a physician. In almost all cases it is appropriate for efforts to be terminated, but occasionally you may feel the patient should be transported for further efforts in the ED. Recognize that the literature shows that almost universally, patients who do not respond to field efforts do not respond to further ED efforts after lights-and-sirens transport, which can be hazardous to the EMS personnel and the public. Also, be aware that you, as the physician who allows the medic to terminate efforts, are not responsible for signing a death certificate.
3. Refusals: Patients may refuse evaluation and transportation. It is helpful to speak to the patient yourself and assess if they have capacity to refuse care (e.g. severe intoxication, suicidality, head trauma etc.). Local police departments may be uncomfortable placing patients on involuntary hold for if they refuse care. It may be helpful for you to speak to the police officer to ask him/her to 'paper' the patient if you feel this is needed. In extreme circumstances, it may be appropriate for ED physicians to complete a "PEC" (Physician Emergency Certificate) and fax to EMS/Police.
4. Destination decisions: Crews may also call for help determining an appropriate destination for the patient. All calls for DMO from EMS crews operating in the region will come to the YNHH York St Campus (YSC) ED, regardless of their ultimate destination facility. The crews will request DMO from either Yale Adult or Yale Pediatric, depending on the age of the patient.
 - Shoreline ED in Guilford: should NOT receive STEMI, stroke alert, trauma, and psychiatric emergency patients.
 - Burn patients: Stable burn patients may be transferred directly to Bridgeport Hospital which is the closest Burn Center.
 - Pregnant patients: 16+ gestational age, with any complaint should be transported to YSC.
 - STEMI Alert: Paramedics can activate the cardiac cath labs at both YSC and SRC from the field for patients with appropriate clinical presentations and 12-lead EKG diagnostic of STEMI. Provided the cath lab is open and staffed prior to arrival of the patient in the ED, that patient will be taken directly to the lab by the EMS crew; ED medical staff will not be involved in care of these patients unless the cath lab is not ready, or the patient requires intubation or resuscitation.
 - Stroke Alert: Paramedics can activate a stroke alert for patients with acute deficits. Paramedics will attempt to obtain IV access, and glucose. Stable stroke alert patients should be evaluated by the ED and neuro team enroute to the CT scanner.

SHARP Team: The Sponsor Hospital Area Response Physician (SHARP) Team provides EMS physician field response to support emergency responders throughout the area. It is the only licensed physician response team in the state. The team holds a state certificate of operation as an ALS agency and operates two licensed response vehicles. The team is staffed by EMS physicians who co-respond with a paramedic. If you receive a call from a field unit requesting a physician or a surgeon for a complex extrication, industrial accident, etc., ask the caller to go through MedCom to activate the SHARP Team. You

may also get a patch from a SHARP Team member who is at a scene.

EMS TRANSFERS: Between ED campuses:

To arrange options, include: (1) Call Y-Access, (2) Direct Call from nursing or (3) Business Associate (BA)/Clerk to call a private ambulance company.

For all high acuity transfers requiring specialty care, please call through Y Access so that you may speak to the accepting specialty attending physician.

If you are transporting for a time-sensitive emergency (eg: unstable ruptured ectopic, cath lab activation, hemodynamically unstable ICH), please request a "STAT/EMERGENT Transfer" through Y Access as this compels the service to provide an ambulance within 20 minutes. Please only request a STAT/EMERGENT Transfer when necessary for patient safety. Be aware of what medications are running, airway adjuncts and patient code status. These should be clearly conveyed to Y-access because this will determine the type of EMS transport needed. Especially for high-risk patients, please provide a handoff to EMS about treatment plan enroute. There are several levels of EMS transport possible:

- Basic Life Support (BLS/EMT level): appropriate for stable patients not requiring medications or interventions
- Advanced Life Support (ALS/Paramedic level)
- Specialty Care Transport (SCT): Paramedic Level with additional training for stable ventilator settings, chest tubes, limited formulary of drip medications and blood transfusions
- Critical Care Transport (CCT): Advanced trained paramedics/RNs who can actively manage multiple drips, ECMO etc.

If you have any questions regarding EMS protocols, EM attending responsibilities for DMO or about a specific call please do not hesitate to contact Dr. Couturier, any other physician in the EMS section, or the EMS coordinator.

REFERENCES:

Contact information:

- Kate Couturier, MD MPH (CEMS Medical Director) - Cell: 202-538-0149
- Jonathan DePino (YNHH EMS Coordinator) – Cell: 475-301-4795
- MedCom: 203-499-5607 (recorded line)

Connecticut State protocols: <https://portal.ct.gov/DPH/Emergency-Medical-Services/EMS/Statewide-EMS-Protocols>. A hard copy in the workspace outside of R3 in Section A, next to the red two-headed MedCom phone.

YNNH Sponsor Hospital Policies and Procedures: <https://www.ynhh.org/medical-professionals/EMS/field-operations/resources>

Radio codes:

All area radio and telephone "patch" traffic is controlled by two regional communications centers: MedCom in the New Haven area, and Valley Shore to the east. Each EMS unit has a unique radio identifier, and knowing the codes involved can be helpful. All transporting basic life support units start with "2", paramedic units start with "5", and physician units start with "10". (There are also non-transport BLS first-responder units, e.g., fire engines and rescues that start with "1" but it is very rare for them to patch.)

Following the clinician certification level, the unit identifier used over the MedCom or Valley Shore radio indicates the service of the unit, and then the number assigned to that unit by the service. The radio designations of the EMS services in the region use the NATO phonetic alphabet. The units you will hear from most often include:

Alpha (New Haven Fire Department)
Charlie (American Medical Response)
Delta (Hamden Fire Department)
Echo (West Haven Fire Department)
Hotel (Branford Fire Department)
India (North Branford Fire Department)
Mike (North Haven Fire Department)
Quebec (East Haven Fire Department)
Romeo (SHARP Team)
X-ray (Madison EMS)
Yankee (Guilford Fire Department)

Other local radio codes that you may hear:

Signal 12 = DOA
Signal 16 = EtOH
Signal 17 = psychiatric emergency
Code 100 = medical cardiac arrest
Code 200 = traumatic cardiac arrest
(Every now and then you will hear a "Signal 33", which is just a Signal 16 + 17!)

Chest Pain Center

Introduction:

Yale New Haven Chest Pain Center is a 6-bed unit in the Emergency Department. The purpose of the Chest Pain Center (CPC) is to allow effective triage of patients with acute chest pain or angina equivalent symptoms. It allows expeditious care of patients presenting to the Emergency Department (ED) who are at moderate likelihood of having acute coronary syndrome (i.e. patients who do not have ischemic ECG changes or high-sensitivity troponins indicative of ischemia but remain moderate risk based on risk stratification).

Patients admitted to the CPC will undergo an expedited protocol in a monitored setting before undergoing a stress test. Patients with acute myocardial infarction, acute heart failure, or uncontrolled arrhythmias are not candidates for the CPC. The following serves as an outline delineating the protocol employed in the CPC:

Admission Eligibility Criteria

- Patients with chest pain considered moderate risk for acute ischemia with:
 - non-ischemic ECGs
 - high-sensitivity troponin (Hs-troponin) values and deltas in clinical scenarios that do not suggest acute myocardial injury or infarction
 - please follow / refer to Chest Pain Evaluation, Adult ED Care Signature pathway
- Patients with known coronary artery disease are eligible.
- Patients with ongoing non-ischemic chest pain (without ECG changes and without abnormal high-sensitivity troponin deltas) are also eligible.
- Patient vital signs need to be stable

Exclusion Criteria for Chest Pain Center

- Patients with high probability of having acute coronary syndrome:
 - New ischemic ECG changes
 - Rising Hs-troponin: new elevation ≥ 52 , on 0-hour/baseline value
 - If initial troponin is greater than or equal to 52, perform 1 and 3 hour testing as directed in the "Chest Pain Evaluation, Adult ED" Care Signature Pathway and make a clinical decision based on other chronic conditions that may be associated with an elevated Hs-Troponin which may not indicate acute MI (such as CKD, LVH, Acute heart failure, atrial fibrillation, etc.)
 - Hemodynamic instability (extreme tachycardia, hypotension, severe uncontrolled hypertension, decompensated heart failure)
- Patients who are unable to transfer independently on the imaging table. Patients need to be able to walk 4-5 steps.
- Patients on IV heparin, IV nitroglycerin, IV IIb/IIIa inhibitors.
- Patients with active asthma exacerbation or active COPD exacerbation.
- Patients with fever/febrile illness.
- Patients who are COVID + and have not yet completed the recommended isolation period. Patients must be 10-days out from the positive test and at least 24 hours without symptoms in order to complete a stress test.
- Uncontrolled cardiac arrhythmias (atrial or ventricular).
- Patients > 350 lbs. and PET stress testing is unavailable.
- Patients with known active C. difficile.

Special Considerations

- Patients who are oxygen dependent.
- Patients with the use of theophylline.
- Patients with uncontrolled COPD/asthma exacerbation.
 - These patients may be admitted to the Chest Pain Center, however a dobutamine stress test may be warranted.
 - Dobutamine stress tests are only available on weekdays and will need to be coordinated with staff in the nuclear or echo lab.

Responsibilities of the Primary Team Prior to Transfer to the CPC

- ECG will be interpreted and documented by the ED attending.
- Appropriateness for admission will be determined by the ED attending per the inclusion and exclusion criteria.
- Patients should have a chest x-ray, bedside ED point of care echocardiogram, and at least one cardiac enzyme completed prior to being transferred to the CPC.
- Complete the following in EPIC:
 - Order Set: Choose "ED Chest Pain Observation" in the order set.
 - This includes pre-checked admission order, diet order, troponins, lipid panel, hemoglobin A1c, ECG, and stress test order.

- Home Medications: Review with patients their medications, dosages, and when their medications are taken. Then re-order the medications that should be administered in the CPC.
 - Please make sure that home blood pressure medications and diabetes/insulin (with sliding scale) are continued in the CPC.
 - Beta-blockers: Patients on beta-blockers should continue them while they are in the CPC. Starting new beta-blockers should be avoided as it may affect the interpretation of the stress test.
- CPC ED Note phrase: Once the ED note is finished and the admission order to CPC has been placed, enter “.EDOBSADMITCP” into the ED note. Complete this dot phrase using F2.
- If a patient has a cardiologist, they should be contacted to discuss plan for admission to the CPC.
 - Calling a patient’s cardiologist is helpful as this can help with stress test selection or change their management.
- Sign out:
 - Sign out must occur from ED nurse to CPC nurse.
 - Sign out must occur from the ED provider to the CPC APP.
 - ED provider to sign out to the CPC APP between the hours of 8a-8p.
 - The CPC APP can be reached via Mobile Heartbeat or in the CPC directly at (203)-688-6160 or (203)-688-4522.
 - If admitted overnight and transferred from SMC or SRC, the ED provider should give a brief sign out to the B-side attending.

Evaluation Protocol in CPC:

- Upon admission, the nurse or tech should give the CPC brochure to patients as they enter the CPC.
- The CPC nurse or tech should place patients on telemetry monitor and obtain a repeat set of vitals.
- The CPC provider should evaluate the patient, review the evaluation process with the patient, and answer any relevant questions related to the stress test.
- The CPC provider or nurse should discuss dietary restrictions.
- The CPC staff should check and complete admission orders placed by the primary team.
- The CPC ED tech should obtain height (estimated) and weight (actual) of patients upon their arrival to CPC.
- Continuous cardiac telemetry monitoring and observation will occur in CPC.
- Vital signs:
 - Need to be obtained every three hours.
 - ED attending should be notified when a change in clinical status occurs (such as abnormal vitals, abnormal rhythms, recurrent chest pain, or new symptoms).
 - If there is a change in clinical status, a repeat ECG should be performed and made available for comparison.
- Serial biomarkers to assess for cardiac injury:
 - Follow the “Chest Pain Evaluation, Adult ED” Care Signature Pathway and apply the HEART Score to determine if a 1-hour and a 3-hour high-sensitivity troponin are warranted.
 - Interpretation of serial high sensitivity troponin assay:
 - Elevated Hs-troponin: equal or greater than 52, on 0-hour/baseline value
- If initial troponin is greater than or equal to 52, perform 1 and 3 hour testing as directed in the “Chest Pain Evaluation, Adult ED” Care Signature Pathway and make a clinical decision based on other chronic conditions that may be associated with an elevated Hs-Troponin which may not indicate acute MI (such as CKD, LVH, Acute heart failure, atrial fibrillation, etc.)
 - Patients with elevated Hs-troponins that are stable and without a significant delta may be acceptable for admission to CPC in the appropriate clinical scenarios. Consider detailed discussion with CPC cardiology fellow
- Serial ECGs:
 - 12-lead ECGs are to be completed at time 0, 1-hour, and 3-hours for all patients and additionally if there are any changes in symptoms.
 - Interpretation and documentation by ED attending is required.
- Diabetic patients:
 - POC glucose should be checked and recorded every 8 hours.
- PRN orders:
 - Patients may receive Acetaminophen 650 mg every 6 hours PRN for non-cardiac chest pain (if no known contraindications – such as known allergy).
- The CPC APP will complete a modified HEART score for every patient.
- The APP will notify the CPC nurse and the ED attending of all changes in patient condition, status, or issues.
- The APP will round with the cardiology fellow covering the CPC in the morning (around 9:00 am). This can be done either by telephone or in person. The APP will continue to touch base with the fellow throughout the day/as needed to discuss patients and stress testing.
- After 5:00 pm, if there is a new CPC patient, the CPC APP should complete CPC introduction, review the evaluation process with patient, review medications, discuss diet / ensure patient orders dinner, and discuss options for stress testing. Consent for stress testing should be obtained at that time, with the caveat that the final plan will be finalized by the team in the morning.
- Patients may order dinner. The kitchen closes at 7:00 pm.
- Patient who stay overnight should be NPO from midnight – 6:00 am.
 - They can be offered a light breakfast from 6:00 am – 7:00 am consisting of either a muffin, cereal, and / or juice.
 - Patients may have sips of water during this time as well.
- All caffeinated products should be strictly avoided until after stress testing is completed.
- Fasting lipid profiles should be drawn in the morning (ideally before 6:00 am).

Re-evaluations:

If a patient's condition changes and requires alternative evaluations, then the provider should discuss the case with the ED attending.

Stress Testing:

Stress testing is to be performed anytime between 8:00 am –6:00 pm, seven days a week. The choice of the stress test will be determined after discussing with the cardiology fellow covering the CPC.

Preparation for stress testing:

- No caffeine-containing products or beverages for 12 hours prior.
- No new beta-blockers.
- Light breakfast with juice is acceptable (preferably 3 hours prior to stress testing).
- During a patient's stay in CPC, the APP who first evaluates the patient in CPC will start an observation note which will be continued by the APP who completes the stress test. Only one note is required.

To expedite stress tests:

- Follow protocol for serial ECGs and protocol for interpreting high-sensitivity troponins. Utilize the "Chest Pain Evaluation, Adult ED" Care Signature Pathway.
- Start morning stress tests by 9:30 am
 - This will require the evening APP to evaluate patients, discuss testing options, order test, and obtain consent the night prior when doable.

Stress testing:

- The following options are available in the CPC:
 - Exercise ECG treadmill test
 - Exercise radionuclide myocardial perfusion imaging
 - Vasodilator radionuclide myocardial perfusion imaging
 - Either using SPECT in the CPC or RB-82 PET
 - PET unavailable on weekend
 - Dobutamine SPECT unavailable on weekends
 - Coronary CTA: Limited availability on weekends
 - Stress echocardiogram – with exercise
 - Stress echocardiogram – with dobutamine
 - Limited availability on weekends
- Type of stress test is to be determined by the Cardiology Fellow covering CPC with the CPC APP.
- The latest time radioisotope injection should occur for stress testing is 6:30 pm.
- Stress testing should be completed and resulted before 8:00 pm.
- The CPC APP should discuss with the ED attending responsible for the CPC every patients' results and then discuss dispositions.

Rest imaging:

- Some patients only require stress nuclear imaging.
- Some patients may require a second session of nuclear imaging, as resting imaging.
- In markedly obese patients, resting imaging can only be done after 24 hours. These patients may stay in the CPC overnight if this is indicated.
- Patients may not be discharged from the ED for outpatient resting imaging.

Acute resting imaging:

- Acute resting imaging should be considered in select patients with ongoing chest pain. This decision should be made in conjunction with the cardiology fellow covering CPC.
- Imaging is available until 7:00 pm every day.
- Stress tests are interpreted in the YNHH Nuclear Cardiology Laboratory by board-certified nuclear cardiologists.
- Results will generally be communicated to the CPC APP.
- The stress test results should be discussed with the ED attending covering CPC. The ED attending may contact the nuclear cardiology fellow or attending any time to discuss the stress testing.

Cocaine use:

- Patients with recent cocaine use can be admitted to the CPC. Those with active sympathomimetic manifestations (tachycardia, hypertensive) need to be medically managed first and cannot be stressed due to concern for coronary spasm.
- For the rest, the current recommendation is to treat patients with an observation period and stress test based on the risk profile. The rate of CAD in these patients is similar to that of the CPC population. A pharmacologic stress test may be completed in these patients after the proper observation period is completed and after myocardial infarction is ruled out.
 - Urine test not required.
 - Recommend more than 24 hours since cocaine use before regadenoson and more than 48 hours for exercise.

COPD patients:

- Patients with moderate-severe COPD can be admitted to the CPC.
- If patient is unable to exercise, dobutamine stress testing can be considered.
- Patients with active wheezing need to be managed from a pulmonary standpoint prior to completing any stress testing.

CPC Overnight:

- There can be 6-patients in the CPC overnight with an additional 2 over-flow patients in the ED.
- Any over-flow patient will be under the care of the area nurse but the CPC nurse can review CPC brochure and evaluation process with the patients.

Weekend Stress Testing – inpatients

- On weekends, 2-3 discharge dependent inpatient stress tests can be completed in the Chest Pain Center each day.
- The nuclear tech and ED tech covering CPC will work with the cardiology fellow covering the CPC to complete the inpatient stress tests.
- On weekends, the number of stress tests should not exceed a total of six (this includes both CPC and inpatient tests).
- The inpatients will only be stressed after all the eligible CPC patients have been stressed.
- The inpatients will remain under the care of the inpatient team and will be treated in the same fashion as the Main Stress Lab.
- The CPC APP and ED staff will not be responsible for taking care of the inpatients except in code situations.
- The inpatients will be transported from the floor generally 15 minutes before starting their stress test.
- When CPC patients are held over in the main ED, they take priority over the inpatient weekend patients.
- If the inpatient requires emergent treatment (i.e. code, acute dyspnea), then the ED team will take care of this patient. The documentation will then be entered as a separate note in EPIC.

Disposition Options in CPC

- Hospitalization:
 - Patients with abnormal high-sensitivity troponin that are consistent with acute injury or ischemia.
 - The ED Chest Pain Clinical Pathway should be followed.
 - Patients with abnormal resting imaging.
 - Patients with ECG changes, change in clinical status during observation.
 - Patients with markedly abnormal stress test (at the discretion of the ED attending and consulting cardiology attending). These patients will undergo timely evaluations with the consulting cardiology team and possibly undergo further testing per discretion of the treating cardiologist. The patient will also receive cardio-protective medications and cardiac risk factor modifications.
- Patients with abnormal stress tests and moderate- or high-risk features should receive a cardiology consult at the discretion of the ED CPC attending. The ED attending can reach out to the imaging attending on call directly to discuss stress results to determine high-risk versus low-risk features.
- High risk features that will benefit from formal consult include:
 - New reversible perfusion defects consistent with ischemia
 - High risk exercise treadmill ischemic ECG change
 - Moderate or greater stenosis noted on Coronary CTA
 - New cardiomyopathy
 - New or significant arrhythmias.
- If a patient has an abnormal stress test and follow up cannot be ensured, patients can be admitted for further work up.
- The CPC APP (during daytime between 8:00 am – 8:00 pm) is responsible for booking patients and calling either the primary provider or cardiologist when warranted.
- Discharge Home:
 - Patients with normal stress test
 - Patients with abnormal stress test, but low risk features such as:
 - Hypertensive blood pressure response that resolves
 - Coronary calcifications without stenosis on CTA or ischemia on stress imaging.
 - Consider initiation of statin.
 - Low risk perfusion defects
 - Patients with abnormal stress test and low risk features should follow up with their outpatient cardiologist.
 - It is appropriate to curb side the nuclear cardiology attending to discuss the abnormal findings and discuss the significance of these findings for further guidance.
 - Consider placing a formal referral to cardiology for follow up or placing a referral to the Cardiology Preventative Clinic for patients that do not have a cardiologist.
 - Note: Not all patients with an abnormal stress test require a cardiology consultation but should have a documented treatment plan.

Transfer back to the ED: After discussion with the ED attending, if a patient is thought to have an alternative / non-cardiac diagnosis OR is thought to have a life threatening arrhythmia, pulmonary embolism, aortic dissection, pericarditis, pneumothorax, fever, etc., patient can be transferred back to the ED.

Discharged from CPC:

- Cardiology team will inform the CPC APP of the stress test results.
- The discharging provider should:
 - Discuss the results and diagnoses with the patient.
 - Counsel the patient on their risk factors and discuss risk factor management.
 - Discuss with patients the results of their lipid profile and hemoglobin A1c if completed.
 - Document the stress test result in the CPC Observation Note.
 - The ED attending should also evaluate patient at the time of discharge and add the attestation to the CPC Observation Note started by the CPC APP by entering "EDOBSATTEST".
 - Notify the patient's primary care provider (PCP) of any pertinent results and any results that may require follow up.
- The CPC APP may notify a patient's PCP by direct message via EPIC, when available to do so.
- If the APP is unable to communicate with the primary care provider, a follow-up request may be placed.
- Discharge paperwork for CPC patients:
 - The CPC APP will place a discharge order.
 - The APP will complete the discharge paper work by doing the following:
- Attach and fill out the appropriate discharge paper work using one of following documents in attachments in Epic:
 - "CPC ADENSPECT": for patients who completed Adenosine SPECT stress test.
 - "CPC CTA COR": for patients who completed a CTA Coronary.
 - "CPC ETT": for patients who completed an Exercise Tolerance Test.
 - "CPC EXSPECT": for patients who completed an Exercise SPECT stress test.
 - "CPC PET": for patients who completed a PET stress test.
 - "CPC REGASPECT": for patients who completed a Regadenoson SPECT stress test.
 - "CPC STRESSECHO": for patients who completed a Stress Echocardiogram.

CPC CQ1 Process: The CPC database is queried on a weekly basis to monitor the efficiency of the Chest Pain Center. In addition, any concerning cases, as well as inappropriate admissions, are reviewed by the CPC Medical Director and the CPC Lead APP. Faculty may receive feedback on their patients as cases come up.

Research Studies in the CPC: Research studies may be occurring in the Chest Pain Center. Please assess patient's eligibility in any of the ongoing studies. You can page the study coordinator or Dr. Basmah Safdar (basmah.safdar@yale.edu) if you have any questions.

Role of the CPC Providers:**Role of the APP**

- An APP covering CPC will be scheduled to work 8:00 am – 8:00 pm seven days a week.
- They will work closely with the nuclear cardiology team and the ED attending to determine management of plans for the CPC patients.
- The APP will have an active ACLS certification.
- The roles of the APP include the following:
 - Assume care of patients in the CPC at 8:00 am.
 - Discuss patients with CPC RN and CPC ED tech.
 - Review charts of CPC patients (including vitals, lab / imaging results, ECGs, history, previous cardiac testing, patient histories, allergies, and medications).
 - Round on patients for assessments/re-assessments and risk stratification. Review plans discussed from the APP the day before and proceed as indicated.
 - Round with the cardiology fellow covering for CPC and discuss plans and type of testing for each patient.
 - Conduct the stress tests in the CPC.
 - Admit and discharge patients per designated protocol.
 - Complete the observation note including a Modified HEART Score.
 - Notify the ED attending of any change in condition or any need for alternative diagnostic work-up.
 - Notify the ED attending before discharging a patient.
 - Be proactive in the afternoon/evening hours, by evaluating patients in the CPC who will be stressed the following day. Review the plan with patient and obtain written consent for stress testing when able to do so.
- Notify the nuclear cardiology attending and the ED attending in case of an adverse event during the stress test.
- Goal to facilitate morning discharges:
 - Stress testing can be started after reviewing cases with the cardiology fellow and once the nuclear technician is available to begin as well. Ideal goal is start to start stress testing around 9:00 – 9:30 am.
 - Try to order / schedule stress echocardiograms early as there are limited slots.
 - Stress tests will be read as they are performed.

Role of the ED Techs:

- The CPC ED technicians will be scheduled to work with 24-hour coverage seven days a week. They will continue their previous role that should include (but is not limited to) assistance with preparing patients for the stress tests, monitoring hemodynamics during stress tests, drawing labs, and performing electrocardiograms.
- The ED techs will have an active BLS certification.

Role of the ED Nurses:

- The CPC ED nurse will be scheduled to work 24 hours a day seven days a week. They will work closely with the ED and CPC staff as well as the nuclear cardiology staff in taking care of patients who are admitted as observation patients. In addition to clinical care, the nurse will be responsible for maintaining continuity of care for the patients. Upon admission, the patient should be given a brief overview of the expected protocol. The nurse should provide the CPC brochure to the patient. This can be done by either the CPC APP or the CPC nurse.
- Patients will have orders placed for continuation of their home medications as well as for regular monitoring and tests. The nurse should follow these protocols and discuss any changes in patient conditions or vitals with either the CPC APP or the ED attending.
- The nurse should ensure a patient's diet order is placed (Cardiac Diet) and ensure patients are provided a breakfast after completing morning stress tests and ensure patients order lunch and dinner when appropriate to do so. The nurse should also ensure a patient is NPO after midnight when staying overnight.
- The nurse should ensure a patient does not consume any caffeine until after completing stress testing.
- The nurse will bring any changes in patient status (hemodynamics, recurrent chest pain) to the attention of the CPC APP or ED attending and obtain ECGs and lab testing when indicated.
- ACLS protocol will be followed for any acute decompensation or change in clinical status. The nurse will have an active ACLS certification.
- For overflow patients, the overnight ED nurse will evaluate any patients held over in the main ED and will then call the CPC nurse to notify them and ensure they are aware of the patient.

Role of Nuclear Cardiology:

- The nuclear cardiology service will consist of a fellow and an attending. Their schedule will be posted on One Call / Qgenda and will also be printed and posted in the CPC monthly.
- The nuclear cardiology team will be available to discuss testing options and to help determine the optimal study for individual patients.
- In addition, they will be responsible for supervising the stress tests and any adverse events encountered during the stress tests.
- The nuclear cardiology fellow will typically be available until 5:00 pm on weekdays. The nuclear cardiology attending will be available in the evenings on weekdays and on weekends to discuss matters further if needed.
- The role of the nuclear cardiology fellow covering CPC is NOT a cardiology consult. The cardiology fellow is only involved to help determine the most appropriate stress test. If the fellow decides additional tests are needed for a patient (i.e. d-dimer, formal echocardiogram, or a CT) or decides not to proceed with a stress test, then they will write a formal consult note or obtain a formal consult that will then be staffed with the cardiology attending.

Role of the ED Attending Physicians:

- The ED attending will be responsible for the CPC.
- The ED attending will oversee the patients 24 hours a day seven days a week. The ED attending will sign out to the B-side attending throughout each shift.
- They will participate in formal sign outs in the morning, afternoon, and evenings. They will also supervise any changes in management plans. The ED attending is responsible for documenting serial ECGs, as well as start and end observation status.
- The ECGs can be electronically signed or entered using the "procedure tab" in ED notes.
- If the attending feels the need to obtain a formal cardiology consult, it should ideally be completed prior to sending the patient to the CPC.
- If a patient has an abnormal stress test, the ED attending should discuss the patient and the results with the CPC APP and then determine the need for further consultation with cardiology and also final disposition.

Satellite Emergency Department

The Department of Emergency Services operates a satellite ED in Guilford, Connecticut. The Yale New Haven Hospital Shoreline Medical Center functions as a stand-alone ED located in an outpatient facility. Patients arrive by ambulance and by private means and are transferred when necessary to local hospitals including Yale New Haven Hospital (York Street, SRC, Children's), Middlesex Hospital Griffin Hospital and the West Haven VAMC.

- Location: The Satellite ED is located 14 miles North of New Haven just 150 meters from I-95 exit 59 at 111 Goose Lane.
- Staffing
 - Four shifts of Emergency Physicians daily – a member of the Section of Emergency Medicine Faculty. One physician should care for patients in the rooms 1-8 while the other cares for patients in rooms 9-15 with flexibility to meet patient needs. It is preferable to have one attending located at a computer in the front and one in the back to streamline communication. This is a clinical site and attending physicians are expected to carry a large patient load (typically 4-5 patients independently while also supervising PAs and APRNs appropriately).
 - One to three midlevel providers (PA or APRN). Midlevels work alongside physicians and see the lower acuity patients. Supervision of midlevels is according to policy P-14 below. The attending physicians must see patients whom they are requested to see by the midlevel provider in a timely manner.
 - One PGY-4 resident infrequently present on elective rotation or called in as a moonlighter to help with a volume surge
 - Techs and Secretaries mostly cross-trained to perform both functions.
- Assignment of Cases
 - Cases are assigned primarily by triage level which appears on the facility board next to the patient's name. Attendings must pick up all level 1 and 2 patients in addition to any level 3, 4 or 5 patients they can.
 - All resident cases will require attending supervision. Patient flow is enhanced if residents focus on sicker patients who the attending would see if carried by a midlevel.
- Supervision of Midlevel Providers
 - Rapid patient turn-over has been the key element in our success in the SMC ED. Physicians should supervise all higher acuity cases as described below but are not required to supervise all midlevel cases. Midlevel Physician Associates (PAs) and Nurse Practitioners (APRNs) should consult the physician and/or request the physician's direct involvement in any of the following situations:
 - the patient is determined to be critically ill or unstable;
 - the midlevel's differential diagnosis includes life threatening illness;
 - the midlevel is uncertain of his/her assessment or interpretation of results of tests;
 - the midlevel needs assistance with a procedure;
 - the midlevel needs assistance with formulating and/or carrying out a care plan;
 - the patient requests or requires admission or transfer to Yale New Haven Hospital or another facility;
 - the patient's primary care provider requests attending physician involvement;
 - The patient requests physician involvement.
 - The physician has free time to check on midlevel cases to enhance their experience.
 - The degree of physician supervision of PAs and APRNs will be generally guided by triage class as follows:
 - Triage levels 4 and 5 (Fast Track): PAs and APRNs may care for these patients independently and consult the physician according to above guidelines (see #1).
 - Triage Level 3: Midlevels may care for these patients primarily and are required to discuss all cases with the physician. The attending will personally examine level 3 patients whenever possible, taking into account competing priorities, including the need to rapidly care for all waiting patients.
 - Triage levels 1 and 2: PA's may care for these patients primarily only with direct physician involvement.
 - PA's and APRNs will document discussions with the attending. Level 3 cases that are completed without an attending face-to-face assessment do not require any documentation by the physician. Any patient who is examined by the physician supervising a PA or APRN and all patients admitted or transferred, must have a supervisory note attestation using the dot phrase: edmidattest
- Radiology
 - X-ray, ultrasound, CT scanning, and emergent MRI are available on site.
 - CT is available in house 24/7. Ultrasound is available until 11 PM. In general, US exams should be ordered before 10 PM to be completed by the tech. MRIs are performed on site between 8AM and 8PM on weekdays and should provide emergency slots for true emergency patients. It is possible to obtain an MRI by discussion with the tech. Patients needing MRI who cannot be accommodated should be transferred to YNHH.
 - Images are all viewable through EPIC. Patients with significant findings who are discharged or transferred can be provided a CD of their images. Images are all viewable at clinical workstations at the main campus. This is useful when consulting orthopedics on the telephone.
 - Radiologists are on site on some weekdays 8AM – 4 PM. This radiologist reads plain films and may or may not read CT or ultrasound. The telephone numbers for the DI areas and the reading room are posted near the telephones. Use AMION "Diagnostic Radiology" to determine who is reading your films – most commonly the SRC ED radiologist at 203-789-3929. Alternatively ask the tech who performed the study for the telephone number of the radiologist who will read the images

- Laboratory
 - The lab accessed from the dumb waiter in the ED, processes most basic tests in a timely manner and can be made even faster by a call to 453-7271 to request a superstat result.
 - The lab does not do type and Rh, body fluid examination, urine tox screening, drug levels, endocrine tests, micro or virology (except for rapid PCR). Other tests are sent by courier to York Street. When anticipating the need to emergently send tests, inform the lab tech ASAP (such as before an LP is performed)
- Care of Critically Ill Patients
 - Patients bound for the ICU, or the OR emergently, should be transferred to the main ED once appropriate stabilizing measures have been taken. Spending over an hour with one critically ill patient at the SMC creates an unsafe situation for that patient and the others in the facility. Co-management with the ICU requires that they have access to the patient in most cases. Patients anticipated to require blood or plasma should be transported to a hospital as a crossmatch cannot be sent by courier. Anticipate the need to transport early. While there is no surge or back-up attending for the SMC, a list of faculty who live near the facility is kept on top of the BA's file box. In extraordinary situations ask the desk tech to use that list to call for assistance, starting with the SMC Medical Director Dr. Moscovitz (203-376-9534) followed by the Emergency On-call administrator. When the ED is staffed with a single attending physician and high patient acuity creates a safety concern, it is appropriate to ask for a temporary ambulance diversion to one of the New Haven Campuses.
- Blood Products
 - 2 Units of O pos blood and 2 units of O neg blood (for women of child-bearing age) are kept for emergency transfusions. This is sufficient to initiate stabilization prior to immediate transfer of hemorrhaging patients.
 - There is no FFP to reverse Coumadin at the SMC. The lab keeps Factor VII and PCC in their refrigerator and will supply these meds if emergent reversal of Coumadin or a DOAC is indicated. Preparing and administering these agents takes about 20 minutes and should be weighed against the benefit of immediate transfusion and transfer with consideration of the time required to crossmatch and thaw FFP in New Haven (about 60 minutes). Help in dosing these agents is available from the ED pharmacist
- Consultation
 - Specialty consultation is rarely available on site though a few surgeons (general and plastic) and gastroenterologists who live nearby have seen patients there.
 - The choice of a specialist for consultation should be made by the patient and their primary provider. When a patient has no preference for a consultant then it is appropriate to give them the option of seeing a Yale School of Medicine faculty physician regardless of insurance status. Consult the on-call specialty service for help in arranging timely follow-up with a faculty practice. Some pathways include ambulatory referral links.
 - When consultation is needed emergently, patients are usually transferred to YNHH by ambulance (or private vehicle if refusing EMS and very stable). If patients appear stable but have a serious diagnosis remaining in the differential, always use an ambulance.
 - In order to determine the need for transfer, consulting residents will often discuss cases on the telephone or view images and advise. If a consultant (eye, derm) wants to see a patient in their clinic, then discharge the patient and give them directions to the clinic.
 - Triage of patients to YNHH for consultation should be directed to the pediatric ED for all patients under 18 years of age. Between 18 and 21 years of age, patient preference determines whether the pediatric or Adult ED should be used. The Adult ED is used for all trauma patients over the age of 16.

Telestroke consultation with the Stroke neurologist on-call is available for true stroke alerts only. Call the stroke attending using Y ACCESS only.
- Admission to the Saint Raphael Campus, Middlesex, WHVAMC or YNHH-Children's Hospital
 - Patients have the right to choose to which hospital they are admitted.
 - Saint Raphael Campus
 - Assignment to one hospital or the other will happen automatically as directed by admitting. If a patient feels strongly about a specific location, you may enter it as a request/comment in the admitting order. A call to bed assignment also helps 203-688-5050.
 - Middlesex
 - Almost all admissions to PCPs, specialists or the hospitalist require a transfer to the Middlesex ED. Middlesex ED attendings are helpful in facilitating transfers. Call the ED attending first who will frequently put you in touch with a hospitalist.
 - Yale Children's Hospital
 - The patient should be booked in the computer and the pediatric admitting resident should be paged. Expect to be redirected to a second resident. The pediatric ED is helpful in sorting out the logistics and will frequently accept a transfer to process the admission. These admissions should not go through Y ACCESS which is for outside facilities.
 - West Haven VA – call the ED
 - Bridgeport Hospital Burn Unit – call unit directly and you will be put in touch with the attending there.
- Transfer
 - Follow the steps below when transferring a patient to a hospital for admission or consultation:
 - Discuss the case with an accepting physician and obtain their name.
 - Inform unit secretary and nurse
 - The BA will have you and the patient sign a consent 4. Complete W-10 for all facilities except for YNHH/SRC.
 - AMR stations an ambulance in the parking lot most of the time and is therefore the preferred choice for transfers. Guilford Ambulance (911) is licensed to bill for emergent transports only and should be used for only for ED to ED, ED to ICU or ED to cath lab or OR. Make appropriate use of all services especially when more than one

patient is in need of transfer at a given time. A new contract between the Hospital and Nelson Ambulance allows some transfers to use this service.

Transfer of critically ill pediatric patients is preferably done using the Pediatric Critical Care Transport Team. The transport should be available to be dispatched from the Pediatric ED with an ETA of 30 minutes or less. If the transport team is not immediately available, the attending physician may choose to use a different transport modality. Use Y ACCESS to activate the pediatric transport team.

- Patients should always be offered EMS transport when being transferred for consultation. If a patient refuses transport and you believe it is safe to do so, then patients may transfer in their private vehicles (generally with another driver). These patients will typically be going ED to ED to see a specialist such as the orthopedist, plastic surgeon or ophthalmologist. When patients are transferred by private vehicle document that EMS transfer was offered and refused in the medical record. Admitted patients should transfer via EMS. When a pediatric patient is transferred by private vehicle, a follow-up call should be placed to determine whether the patient arrived at the Children's Hospital ED. Note that transfers are not billed to the patient (this is helpful in convincing reluctant patients to accept the service).
- Holding admitted patients
 - Admitted patients held while waiting for inpatient beds at YNHH create serious treatment space problems during busy shifts and cannot be evaluated by their admitting teams.
 - Critically ill or injured patients bound for the ICU or OR, should not remain in the SMC ED more than one hour. Transfer these patients to the ED, ICU or OR, as soon as possible to allow further management and consultation. It is necessary to manage the airway, insert needed central lines and chest tubes and initiate essential therapy before transfer. Obtaining a CT scan while awaiting transfer may provide significant efficiencies as studies may be completed faster in the SMC. Stroke Code patients should have their initial CT in Guilford simultaneous with arranging transfer.
 - Other surgery admissions should not wait in the SMC ED more than two hours if they are potentially going to the OR the same day to allow surgical evaluation (if a consult was done at the SMC ED, then waiting longer may be appropriate if, for example the OR time is scheduled for four hours later). Surgical admissions to the EGS SERVICE should always include an attending-to-attending call during which the amount of time a patient can wait before transfer should be discussed.
 - Other admissions should never be held at SMC more than 24 hours before being transferred to allow admitting teams to begin their work-up and enter admitting orders. The Charge RN will begin discussions with the Navigator at the 16-hour mark.
 - Exceptions to all these guidelines are permissible at the SMC ED attending's discretion. Severe over- crowding in the main ED may prompt longer holds when the SMC ED is not busy on over-night shifts for selected patients who do not need evaluation by their admitting teams.
- ED Observation Patients should be held in the SMC ED if there is a very high probability of their going home within 24 hours, they do not need specialty consultation and the SMC ED has the capacity to care for them
- Referral of Patients for Follow-up Care
 - All patients discharged from the ED should be assisted in determining the appropriate follow- up physician. In cases in which the on-call specialty service is consulted, it is always appropriate for the patient to follow-up with them. Whenever timely, follow-up can be arranged with the patient's physician, a Yale physician or a physician of the patient's choosing. “
e. Patients may request that their primary provider choose a specialist. Referral to physicians selected by primary providers can be arranged by the patient directly or through a discussion between the emergency physician and the primary provider.
 - Make use of the follow-up coordinators by sending an inbox message (Debbie Schwartz, SRC) or by using the section in the patient discharge flow "Patient Follow-up Referral" (currently appears at the bottom of the discharge flow with the heading "Patient" but may be better defined soon)
- Diversion of Ambulances
 - As a general principle we accept all patients appropriately directed to the SMC by EMS. Traumas meeting modified or full criteria are notable exceptions because the facility is not a trauma center. Guidelines as to other patients who might be better served at a hospital have been provided to EMS. These include patients in labor, psychiatric emergencies and acute stroke and STEMI diagnosed in the field. These guidelines are not rules or protocols and can be countermanded according to the judgment of the paramedic.
 - Ambulances can be diverted temporarily during times when the volume of critically ill patients creates an unsafe situation by calling CMED. A high volume of low acuity patients is not a valid reason for diversion.
 - Problematic transports should be referred through the EMS QI process and dealt with later. Refer EMS quality issues to Kevin Burns PA-C in the department offices 785-6159.
 - It is never acceptable to divert a patient in an arriving ambulance without a screening evaluation and documenting this. This means that these patients will generally need to be unloaded, examined, and registered before re-transporting them. If the ED is overwhelmed and cannot take the next ambulance patient, then proper diversion should be initiated before an ambulance arrives.

- Patient Satisfaction and Flow
 - The SMC ED is a nonteaching facility 100% focused on excellent patient care. We are proud of the facility's high ranking in patient satisfaction since its opening. These high scores are a reflection of our rapid throughput.
 - Our goal is that patients should be seen within 5-15 minutes of arrival in a room. The typical patient spends 2-3 hours in the ED from triage to discharge. When two providers are present, we comfortably see four patients/hour and when three are present we see six patients/hour. This means that on an average shift, the attending should independently discharge 9- 16 patients.
 - Residents at the PGY-4 level may occasionally do electives at the SMC. When managed appropriately these residents greatly enhance patient care in the ED. Their approach at the SMC should further the goals of patient care and throughput. Attending supervision of these residents should not reduce the clinical effort of the attending physician. When working with a resident, the attending and the resident should combine to do more clinical work than an attending alone. These electives are designed to prepare residents for work in busy EDs not to provide one-on-one tutorials at the expense of the clinical operation.
 - Attending shifts are 8 hours long. The attending should continue to pick up new cases until 30 minutes prior to the arrival of the next attending as well as any acute patient until the arrival of the new attending. Attendings are expected to stay approximately 9 hours each shift using the last hour for sign-out and wrapping up cases and documentation.
 - Nursing supports patient flow through the following practices:
 - When rooms are not occupied, patients move directly from the waiting room to ED rooms with triage functions and registration performed in ED beds.
 - No patients wait in the waiting room when ED rooms are open.
 - Nurses expect to discharge their patient and will give instructions and prescriptions prepared by the provider.
 - Techs support patient flow by cleansing wounds, setting up equipment, and splinting and adjusting crutches and dressing wounds

Stroke

Acute Stroke Care (York Street Campus and St Raphael's Campus)

YNHH has been certified as a stroke center by the Joint Commission since 2005, with the York Street Campus certified as an Advanced Comprehensive Stroke Center and St Raphael's Campus is certified as an Advanced Primary Stroke Center. A stroke alert is called by EMS or in the ED when a patient is a potential candidate for revascularization procedures (i.e. IV tPA, IA tPA, or large vessel occlusion clot extraction – a.k.a mechanical endovascular reperfusion or thrombectomy) within 24 hours of symptom onset or last known normal time. At the York Street Campus, the Acute Stroke Team (Neurology resident, and stroke fellow (APP and stroke navigator – weekdays) respond to the stroke code; stroke attending will respond and come to the bedside for reperfusion patients or diagnostically complex cases) At the St Raphael's campus, a telestroke platform is utilized with the stroke team attending and fellow serving as the telestroke provider experts; **the stroke nurse navigators respond M-F, 8a-4p.**

Acute Ischemic Stroke:

For patients with a suspected acute ischemic stroke, tPA (tenecteplase) is administered in accordance with national guidelines (i.e.- typically within a 4.5-hour time window) and mechanical thrombectomy may be performed in the extended time window (24 hours) for select patients with large vessel occlusions. The stroke team has 24 hour attending physician coverage (including both neurologists and emergency physicians) who take call for the service. The Stroke Team call schedule is posted on **OneCall**. The YNHH stroke program also provides telestroke services for hospitals within the YNHHS as well as for several regional hospitals and accepts transfers from many other regional centers. Potential revascularization patients typically come to the ED as a Tier 2 activation to expedite care.

All EM faculty should be knowledgeable with the campus-specific protocols. All sites can perform CT angiography. **The York Street and St. Raphael's campuses both have CT perfusion.** For patients requiring a more complex level of care, the York Street Campus supports Neuro-Interventional services (thrombectomy) and Neuro-surgical Services.

This section includes an acute stroke code protocol, a protocol for mechanical thrombectomy (Tier 2 protocol), a Hyperacute MRI protocol (to acquire a rapid MRI), and a protocol that addresses the care of multiple simultaneous complex stroke patients. Also included is the stroke service's expedited TIA protocol (currently used on the York Street Campus).

All ED faculty and practitioners are typically trained (via a 1 hr training video) or certified (via a 3 hr training video) in the NIHSS. Staff can access one of several sites for training:

CERTIFICATION (2-3 hrs)

1. <https://webdcu.musc.edu/campus/>
2. YNHH intranet – INFOR learning management system:

APEX Innovations: NIH Stroke Scale Training and Certification (free course) Or
TRAINING (1hr)

NIH Stroke Scale (NIHSS) Assessment for Yale New Haven Health – now on the University's work-day.

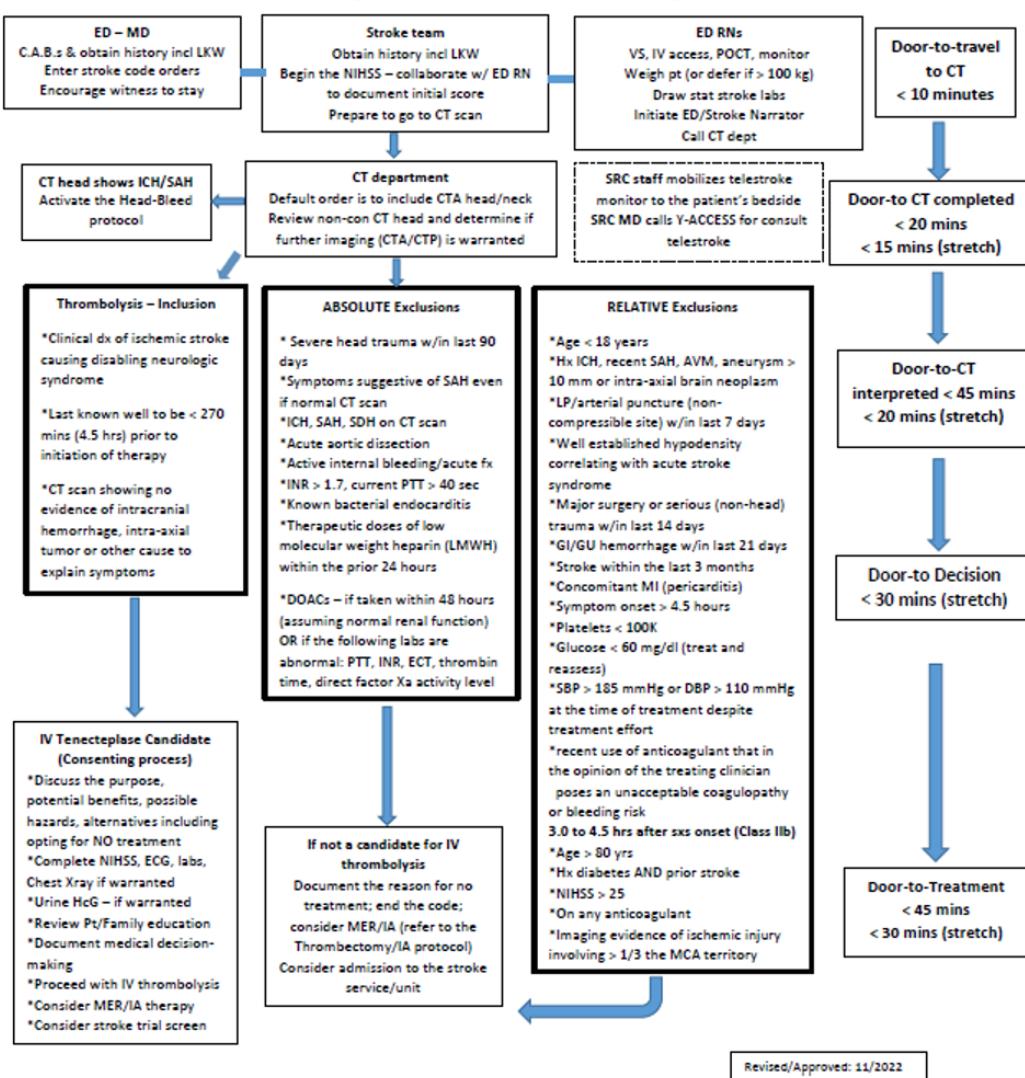
For any further questions, please reach out to the campus stroke coordinator

Hemorrhagic Stroke:

Patients with non-traumatic ICH or sub-arachnoid hemorrhage have an "ICH Alert" or "SAH Alert" activated in the ED upon identification of finding on CT. A simultaneous page is put out to neurosurgery and neurology, who immediately come to the ED and evaluate the patient. **Any patients at the St. Raphael's campus who have a non-traumatic ICH or SAH should be considered for transfer to YSC. Discuss the case with neurosurgery/neurology/neuro-ICU.** Blood pressure control and rapid reversal of coagulopathies are of utmost importance and should be performed in collaboration with specialists. There is a bleed panel option in the ED panels which can be used to direct nursing care and blood pressure guidelines. The contact information for attendings in Neurosurgery and Neuro-ICU are posted on **OneCall**. In the case of out of hospital transfers, typically the Neuro-ICU attending will call and discuss the transfer with ED faculty.

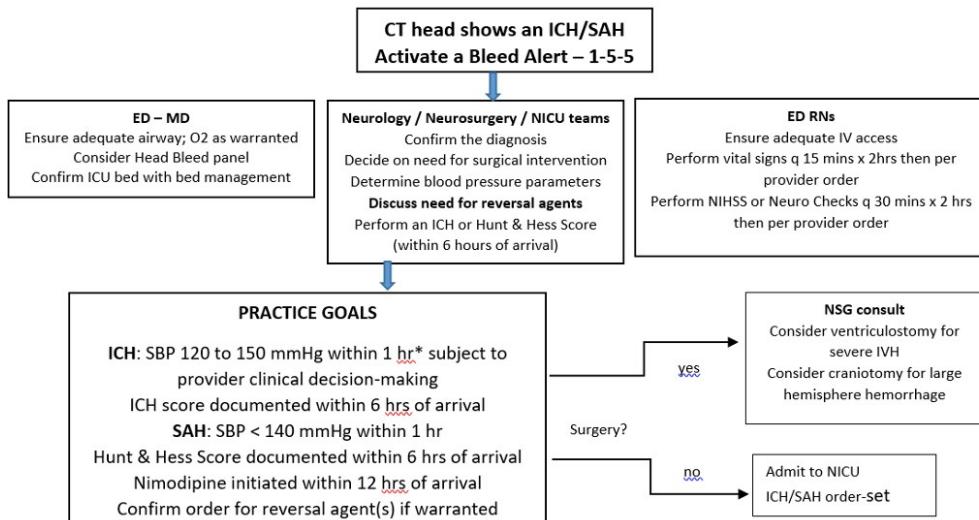
ED STROKE CODE ALGORITHM – YNHH

This algorithm serves as a guideline for targeting benchmark times and recommendations outlined by the most current evidence-based publications endorsed by the AHA/ASA; the decision to evaluate and treat selected patients during a stroke code will be at the discretion of the attending stroke physician in collaboration with the treating provider.



YNHH ED HEMORRHAGE (Bleed Alert) ALGORITHM

This algorithm targets practice and benchmark times and recommendations outlined by evidence-based publications endorsed by the AHA/ASA; the decision to evaluate and treat selected patients is at the discretion of the attending stroke physician in collaboration with the treating provider.



Hyperacute MRI protocol for Acute Stroke Evaluation

Selected acute stroke patients may undergo a Hyperacute MRI to further assess for cerebral ischemia and for possible candidacy for thrombolysis or neuro-intervention. Indications include:

Patients with a suspected stroke syndrome

Patients who present with an uncertain time of symptom onset Patients with an uncertain diagnosis

Pediatric patients

Patients being considered for CTA but with a known contrast dye allergy

Patients suspected to be pregnant

The acute stroke team, ED or Inpatient provider will enter MRI Brain w/o contrast -> "Life Threatening".

It will be the responsibility of the ordering provider to ensure that the online MRI safety sheet is completed. Assistance may be provided by radiology to determine the presence of cochlear implants, orbital metal or pacemakers etc. from previous imaging.

The ordering provider will then contact the neuroradiology physician (at the numbers listed below) to alert him/her of the acute stroke patient and MRI order.

The neuroradiology physician will protocol the case and alert the MRI tech supervisor. The MRI tech supervisor will check for the completed MRI safety sheet and schedule the case.

YSC: Once the completed MRI safety sheet is reviewed, the MRI tech supervisor will contact the acute stroke team to direct the patient to the MRI prep hold area - North Pavilion, Smilow Room 2-226.

SRC: Once the completed MRI safety sheet is reviewed, the MRI tech supervisor will call the ED or Inpatient floor to notify the assigned nurse and to direct the patient to the MRI prep hold area. This option is available when a navigator is present to accompany the patient to the scanner.

One or more members of the stroke team and RN will travel with the patient on telemetry and will remain with the patient at MRI. The only exceptions to this would be if the patient is not found to have an acute stroke, and there are no hemodynamic or respiratory concerns, in which case the patient could be transported back to the ED/floor by standard transport

Protocol includes

Axial DWI/ADC (1:39 mins) Axial

FLAIR (5:44 mins) Axial SWI (4:09 mins) .

Axial Perfusion – EPI (1:36 mins) – requires GAD

YSC			
Monday - Friday	8:00am to 5:00pm		Coverage
	Call: 203-200-3181		Neuro-rad fellow in Smilow
Weeknights	5:00pm to 8:00am	Weekends	
	Call: 203-200-3181	Call: 203-200-3181	Neuro-rad fellow in Smilow until 10:00pm Attending in Smilow until 8:00am

SRC			
Monday - Friday	8:00am to 5:00pm		Coverage
	Call: 203-789-4126		Neuro-rad fellow/attending in the SRC Neuro reading room
Weeknights	5:00pm to 8:00am	Weekends	
Call: 203-200-3181	Call: 203-200-3181		Neuro-rad fellow or Attending in Smilow

THE EXPEDITED NEUROLOGY WORK-UP FOR A TRANSIENT NEUROLOGICAL EVENT

<p><u>INCLUSION</u> Criteria for Expedited TIA Work-Up</p> <ul style="list-style-type: none"> • CT head without evidence of acute hemorrhage or ischemic changes – or previous embolic changes • CTA head and neck with < 50% stenosis in a major extra- or intra-cerebral vessel • ABCD2 score < 4 • Complaint of transient neurological symptoms • Blood sugar: 80 – 350 • Not anticipated to benefit from inpatient admission 	<p><u>Expedited TIA Intervention Checklist</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> MRI Brain (TIA-modifier): place order <u>AND</u> call 203-200-3181 <input type="checkbox"/> Cerebral/cervical vessel imaging <ul style="list-style-type: none"> ◦ usually completed w/ CTA head <input type="checkbox"/> Dysphagia Screening: IV fluids PRN <input type="checkbox"/> Diet Order (pending dysphagia screen) <input type="checkbox"/> Anti-platelet/AC, if indicated <input type="checkbox"/> Telemetry Monitoring <input type="checkbox"/> Vital Signs, Admission NIHSS and Focused Stroke Exam q2 hrs <input type="checkbox"/> Neurology Consult: performed in the ED <input type="checkbox"/> Imaging Recommendations e.g. echo <input type="checkbox"/> Labs: Lipid panel, A1C, coags, further labs as appropriate <input type="checkbox"/> Secondary Stroke Prevention Education <ul style="list-style-type: none"> ◦ and document this was provided
<p><u>Exclusion</u> Criteria for Expedited TIA Work-Up</p> <ul style="list-style-type: none"> • Suspected Acute Stroke * Blood sugar < 80 or > 350 • ABCD2 score >= 4 * Clinically significant ECG changes • Acute etOH intoxication • Hemodynamic instability (DBP >120; SBP < 90 or > 180) • Inability to complete ADLs • Persistent new neurological deficits • Significant lab abnormalities (e.g. Na < 125 or > 150) • Psych or social work needs (restraints, sitter, psych consult, social work/disposition needs, etc.) • Indication for admission (to any service) 	

PATIENT DISPOSITION FOR THE EXPEDITED TIA WORK-UP

<p>Criteria for Hospital Admission</p> <ul style="list-style-type: none"> • Clinical Deterioration • Stroke Diagnosis • Neurological Exam Change • Other Concerning Features 	<p>Home / Discharge Criteria</p> <ul style="list-style-type: none"> • Is stable or return of baseline neurologic status • Has completed appropriate work-up • Has determined follow-up provider (neurologist vs PCP) and timing: Consider “next day” APRN clinic
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Did you contact the Stroke Nurse Navigator?

7 days a week (8:00 am to 4:30 pm): contact the stroke nurse navigator (via MHB)
After-hours: send staff message to the navigators via EPIC using “Stroke Nurse Navigator” Pool

If the plan is for patient to be discharged, remember to inform the Stroke Nurse Navigator for assistance with extended cardiac monitoring, scheduling a follow-up appointment, scheduling outpatient TTE, provide Stroke Education, etc. **The resident must place these orders.**

GOAL: The clinic appointment must be scheduled within 3 days of discharge and the TTE should be scheduled ideally within that time frame but can be done after the clinic appointment

Reviewed: 12/2020

Yale New Haven Hospital (YNHH) – York Street Campus

Protocol for Caring for Multiple Simultaneous

Complex Stroke Patients Section 1. Emergency

Department (ED)

The YNHH Stroke Center is committed to providing safe, efficient, patient-centered and equitable care to all patients that present to YNHH with a suspected stroke / TIA. YNHH is committed to providing the same level of care to multiple complex stroke patients that may present at the same time to the hospital through the ED (either by ambulance or by "walk-in").

The Stroke Program Medical Director (or his designee(s)) in collaboration with the ED attending physician are responsible for overseeing the decision-making process for prioritizing and expediting a rapid primary survey, evaluation, stabilization, management, and treatment for suspected acute stroke/TIA patients (those patients that present within a 24 hour window of time last known normal) when more than one patient arrives at the same time and fulfills the above criteria.

Location: YNHH is designated as a Level 1 Trauma Center. The York Street campus ED has 4 bays designated as Resuscitation Rooms (R rooms). These rooms are reserved for trauma and stroke patients. Patients that have been identified by EMS in the "field" as stroke codes may be directed to one of the R rooms.

- Patients who arrive to the "walk-in" entrance and identified as having a suspected stroke may be directed to one of four R rooms if the triage RN determines that the patient meets the criteria for activating a stroke code.
- The ED also has additional sections (Section A [19 telemetry beds], Section B [16 telemetry beds], and Section C [19 telemetry beds]) which have the capability to urgently evaluate suspected stroke /TIA patients.

Staffing: The York Street ED staff consists of attending physicians, fellows, residents, Advanced Practice Providers (PAs and NPs), nursing and patient care technicians.

- For the R rooms and Section A. rooms, there are 5 8-hour attending MD shifts: 7a-3p; 9a-5p; 3p-11p; 5p-1a; 11p-7a. Resident and APP schedules are available on AMION.

Nursing flex cover the 4 R rooms to coincide with volume as follows: 7am-11am: one RN for 4 R rooms; 11am to 7am two RNs. At all times, there are 2 RNs (assigned to rooms 10, 11 and 15, 16) who provide back-up coverage for the 4 R rooms. All ED RNs are trained to recognize stroke symptoms and call a stroke code. All ED RNs are knowledgeable in the rapid work-up of a patient suspected to be having a stroke as outlined in the orientation for neurologic emergencies as well as ongoing stroke education.

- For ED stroke codes, the hospital supports a 24/7 Acute Stroke Team. During the weekdays, the response team is led by the Team 2 stroke attending, stroke fellow, a neurology resident, stroke APRN and stroke nurse navigator. The on-call stroke physician and fellow cover after hours (5 pm to 8 am). On the weekends there is a Team 2 attending and fellow along with a neurology resident. A designated neurology resident covers the ED on days; and a consult neurology resident covers the ED at night. The consult neurology resident (on days) provides back-up resident coverage for stroke codes in the ED during the day. There is also a "swing" resident that provides ED support from 12 noon to 10 pm during the day. The night-float neurology resident provides back-up resident coverage for stroke codes at night. Pharmacy personnel are employed at YNHH York street campus on a 24/7 basis. Tenecteplase is stored in the ED Pyxis. It is mixed and administered by nursing. There is a pharmacist dedicated to the ED on a 24/7 basis and supported by his/her colleagues in central pharmacy should there be a need for additional services.

Imaging: The York Street ED has the capability of performing simultaneous CT scans (to include CT/CTA/CTP) and hyperacute MRIs on a 24/7 basis. CT perfusion is available on selected machines (1 in the ED, 1 on the second floor, 1 in the Smilow building)

- In the ED, there are two CT scanners that are fully operational 24/7 and can provide emergent non-contrast brain CT scans during the acute stroke code process. One of the scanners supports RAPID

software for perfusion imaging. The CT images are formally read by an ED radiologist who is on site for interpretation/documentation on a 24/7 basis. CTA studies are interpreted by the neuroradiology staff.

- MRI is available and staffed on a 24/7 basis for selected patients that would benefit from a hyper-acute MRI.
- In the event there are simultaneous stroke codes and a pediatric or adult full trauma, the CT technologist(s) will prioritize the imaging studies as follows:
 - Pediatric – full trauma
 - Stroke Code – CT brain
 - without contrast Full Trauma
 - Stroke Code – CTA/CTP
- A discussion between the stroke team attending/fellow and the trauma team attending/fellow is encouraged to facilitate this process.

Multiple, simultaneous patients who meet the criteria for an acute stroke code evaluation have access to all of the above services on a 24/7 basis.

Care of a Traumatically Injured Patient

I. Please submit your **ATLS certification** to Ms. Yvonne Byrd-Griffin at yvonne.griffin@yale.edu

II. **TRAUMA ACTIVATIONS:**

- a. Trauma activation criteria
 - i. Full Trauma Response (**FTR**) – see **Figure 1**
 - ii. Modified Trauma Response (**MTR**) – see **Figure 1**
 - iii. Acute ED patient
 - 1. Do not activate the trauma system
 - 2. Do not meet FTR or MTR criteria (ex: ankle fracture)
- b. Triage and Trauma Response Activation
 - i. ED RN at triage
 - ii. Trauma Surgeon request for accepted patients from other facilities
 - iii. ED physician discretion
 - 1. Can down-grade FTR patients in conjunction with the Trauma team
 - 2. Can activate a Medical Response activation

III. **EM ATTENDING RESPONSIBILITIES:**

- a. **Modified Trauma Response (MTR):**
 - i. **ED Attending Role and Responsibilities:**
 - 1. Supervise the care of all MTR patients until completion of work-up
 - 2. Should remain in the Resuscitation Room for the initial assessment, and any emergent images or procedures
 - 3. Resident/APP supervision, see **Figure 2**
 - 4. Documentation, see below
 - ii. **Laboratory and Imaging Orders**
 - 1. Please use the **EPIC “Order Set” labeled “ED Trauma”**
 - a. Pre-checked items
 - b. All patients must be evaluated by Social Work (SW) within 24 hours
 - c. All patients activating the Trauma system must have the following labs sent:
 - i. Alcohol level
 - ii. Urine toxicology screen
 - iii. Type and crossmatch, or type and screen as needed
 - 2. *Please order the above labs for patient transferred from other facilities, including SRC and Shoreline campus*
 - iii. **Documentation**
 - 1. The Resident performing the Primary and Secondary survey will complete the note in EPIC
 - 2. The note should be reviewed and signed by the EM Attending
 - iv. **Billing**
 - 1. Critical care time, as appropriate (time \geq 30 minutes)
 - a. “Trauma” designation is not an indication for critical care billing
 - b. Identify the system at risk – ex: circulatory (hemorrhagic shock)
 - 2. Review and sign the EFAST exam in QPath
 - 3. Any procedures (ex: intubation, central lines, chest tubes, etc.)
 - a. Review and sign the procedure note in the EPIC chart
 - b. Document the procedure in your note via the “.edproc” dot phrase
- b. **Full Trauma Response (FTR):**
 - i. **ED Attending Role and Responsibilities:**
 - 1. Supervise the initial resuscitation until the arrival of the Trauma Surgery Attending (or Fellow)

Care of a Traumatically Injured Patient

2. If the Trauma Attending leaves the ED to return to the operating room or the SICU, there should be a brief discussion with the ED Attending in case of any clinical decompensation.
 3. In case of multiple trauma response activations, or when the Primary Surgeon is operating and unable to come to the ED for a resuscitation, the Back-Up Trauma Surgeon can be activated as per the schedule listed on QGENDA/Onecall in consultation with the Primary Trauma Surgeon.
 - a. The ED Attending should call into the OR to speak with the Trauma Attending if needed prior to activation of the back-up Surgeon.
- ii. **Resident Supervision**
1. See **Figure 2**
 2. The EM Senior Resident (Team Leader) is expected remain at the patient's bedside until at least completion of CT imaging and ruling out of critical injuries, or their disposition to the OR or SICU if life-threatening injuries are present.
- iii. **Airway Management**
1. EM Attending is responsible for airway management
 2. *Only PGY3 or PGY4* residents should be intubating patients with traumatic injuries.
 3. With difficult intubations, activate a *Threatened Adult Airway Response (TAART)* in conjunction with the Trauma Attending
 - a. Anesthesia Attending/Resident with fiberoptic intubation capabilities
 - b. ENT Resident
 - c. Trauma Surgery Attending (if not already present)
- iv. **Laboratory and Imaging Orders**
1. Same as above
- v. **Documentation**
1. Intubations MUST have a procedure note documented in EPIC.
 2. Attest and sign the procedure note in the EPIC chart
 - a. Document the procedure in your note via the “.edproc” dot phrase
- vi. **Billing**
1. All procedures performed by the ED, including intubations, should be documented and billed.
- IV. **EM RESIDENT RESPONSIBILITIES:**
- a. See **Figure 3**
 - b. **EM/Surgery PGY2:**
 - i. **Modified Trauma response (MTR)**
 1. Performs the Primary and Secondary Survey
 2. Performs E-FAST on all MTRs and completes the QPath form
 3. Ensures all diagnostic orders and therapies are ordered via the “Trauma Order Set,” and follows up the results
 4. Communicates with the Trauma Chief Resident regarding any admissions to the Trauma Service
 5. Consults Trauma Surgery for all MTR patients admitted to any service except Trauma Surgery (ex: Orthopedic Surgery)
 - a. Tertiary examination must be completed by Trauma Surgery within 24 hours
 - ii. **Full Trauma response (FTR)**
 1. Assists with procedures at the discretion of the Trauma Team Leader
 2. Remains in the Resuscitation Room until released by the EM/Trauma Team Leader
 - c. **EM PGY3**
 - i. MTR – serves as the Team Leader

Care of a Traumatically Injured Patient

- ii. FTR
 - 1. Airway Resident for FTR response from **7AM – 7PM**
 - 2. Supervises PGY2s and other junior EM Residents
 - 3. Supervises EFAST

- d. **EM PGY4**
 - i. MTR - serves as the Team Leader
 - ii. FTR
 - 1. Team Leader from **7AM – 7PM**
 - 2. Airway Resident for FTR response from **7PM – 7AM**
 - 3. Supervises PGY2s and other EM Residents
 - 4. Supervises EFAST

V. ADMISSIONS:

- a. **Admitted Trauma Patients**
 - i. **ALL** patients who trigger the Trauma Activation system (**MTR or FTR**) must have a tertiary examination performed by the Trauma Team within 24 hours of admission regardless of the admitting service.
 - ii. Unless admitting to the Trauma Surgery service, notify Trauma Surgery of the admission and document your conversation in your EPIC chart.
- b. **Non-Trauma Service Admission**
 - i. Admission to Medicine, Neurology, etc. with no traumatic injuries during ED evaluation as needed
 - ii. Isolated hip fractures (without significant medical comorbidities)
 - 1. Orthopedic Surgery consultation and the Internal Medicine service as needed
 - 2. Admission to the St. Raphael Campus (SRC)
- c. **Trauma Surgery Admissions**
 - i. The ED/Trauma Surgery resident will notify the Trauma Team of a possible admission
 - ii. The Trauma Team, including the Attending physician will evaluate the patient for triage prior to admission.
 - iii. Once sign out is given to the admitting Resident/APP on service, the patient will be flagged **orange** by the ED team on the ED admission board
 - 1. *Do not change the color until sign out is given to the covering Resident or APP team.*
 - 2. *Document the name of the provider receiving sign out and the time of the transition of care in your ED note.*
 - 3. *Add the Resident's or APP's name to the covering provider in EPIC, and remind them that the ED will be transitioning care to the admitting (Trauma or EGS) service.*
 - iv. The inpatient service will be responsible subsequently for updating their contact information in EPIC.
 - v. Changes in the admitting team or level of care should be conveyed to the ED providers while the patient remains in the ED treatment area.
 - vi. ED providers should respond to all emergencies while the patient boards in the ED, and contact the admitting team as soon as possible to update them about treatments given or changes in clinical status. This interaction should be documented in the ED note. All routine care orders will be placed by the Trauma or EGS service providers.
- d. **SICU admissions:**
 - i. Patient will be assigned a **Trauma/EGS Attending and the 7-1 SICU APP**
 - ii. Please sign out to the 7-1 SICU APP by calling 203-688-1132.
 - iii. Please specify whether the patient is a trauma patient or an EGS patient in the admission.
- e. **SDU and Floor admissions**
 - i. Patient will be assigned a **Trauma/EGS Attending and Trauma/EGS consult resident.**
 - ii. Please specify whether the patient is a trauma patient or an EGS patient in the admission

Care of a Traumatically Injured Patient

Trauma and Surgical Critical Care Guidelines

Clinical Management Guideline: Trauma Triage Criteria – Adult

- Effective: November 1, 2012
 - Original: September 30, 2006
 - Reviewed: June 2023
-

PURPOSE: Trauma Triage criteria have been developed to prevent the inappropriate triage of injured patients with a potential for significant injury. The appropriate use of criteria will result in some degree of over-triage. These criteria should be viewed as guidelines. Sound clinical judgment should be used when triaging an injured patient.

CRITERIA:

- A. Full Trauma Response:
 - Hemodynamic instability – systolic blood pressure < 90mm Hg
 - Respiratory distress, need for intubation, or field intubation prior to arrival.
 - Altered mental status (with mechanism attributed to trauma) – Glasgow Coma Scale ≤ 8
 - Paraplegia or quadriplegia
 - Penetrating injury to the head, neck, chest, or abdomen, including wounds to the buttocks.
 - Patients with open body cavity injuries or with evisceration of internal organs
 - Electrical or thermal burns $> 30\%$ BSA in adults
 - Amputation of limb proximal to wrist or ankle
 - Severe hypothermia in a trauma patient (core temperature $< 32^{\circ}\text{C}$)
 - Transfer with acute traumatic intracranial hemorrhage with GCS ≤ 12 .
 - Any 2 or more Modified Trauma Response Criteria
 - Transfer for Trauma Evaluation from another hospital on mechanical ventilation or with blood products infusing.
 - Mechanism of injury or circumstances of event warrant evaluation by Trauma Team
 - At the discretion of the Emergency Medicine or Trauma Surgery Attending Physician
- B. Modified Trauma Response:
 - Any question of spinal cord injury other than Paraplegia or quadriplegia
 - Injuries above & below diaphragm, e.g. clavicle fracture and femur fracture
 - Ejection from or by a moving vehicle- motorized
 - Falls from a height greater than 20 feet.
 - GCS > 8 but ≤ 13 (with mechanism attributed to trauma)
 - Transfer with acute traumatic intracranial hemorrhage with GCS 13-15.
 - Patients on anti-coagulation therapy with falls from other than standing position
 - More than one long bone fracture
 - Penetrating extremity trauma proximal to hand and feet
 - Mechanism of injury or circumstances of event warrant evaluation by Trauma Team
 - Transfer for Trauma Evaluation from another hospital; at the discretion of the Trauma Attending
 - At the discretion of the Emergency Medicine or Trauma Surgery Attending Physician

Once a trauma team response has been activated, ONLY an attending trauma surgeon or attending emergency medicine physician has the authority to cancel or downgrade the trauma response.

Care of a Traumatically Injured Patient

7AM – 7PM	7PM – 7AM
<p>FULL TRAUMA</p> <ul style="list-style-type: none">• Team Attending: Trauma• Airway Attending: EM• Resident Team Leader: EM PGY4• Airway Resident: EM PGY3• Trauma Survey: Trauma Resident (EM or Surgery rotator)• Additional Residents: at the discretion of the Trauma Leader• Documentation<ul style="list-style-type: none">◦ Provider Note: Trauma◦ Intubation/Procedure Note (as necessary): EM Resident/Attending <p>MODIFIED TRAUMA</p> <ul style="list-style-type: none">• Team Attending: EM• Resident Team Leader: EM PGY3 or PGY4• Airway Resident: EM PGY3• Trauma Survey: Trauma Resident EM PGY2 (M – F), EM Resident (S – Su)• Additional Residents: at the discretion of the Trauma Leader• Documentation:<ul style="list-style-type: none">◦ Provider Note: Trauma/EM Resident + EM Attending	<p>FULL TRAUMA</p> <ul style="list-style-type: none">• Team Attending: Trauma• Airway Attending: EM• Resident Team Leader: Trauma Chief Resident• Airway Resident: EM PGY3• Trauma Survey: Trauma Resident (EM or Surgery rotator)• Additional Residents: at the discretion of the Trauma Leader• Documentation<ul style="list-style-type: none">◦ Provider Note: Trauma◦ Intubation/Procedure Note (as necessary): EM Resident/Attending <p>MODIFIED TRAUMA</p> <ul style="list-style-type: none">• Team Attending: EM• Resident Team Leader: EM PGY3 or PGY4• Airway Resident: EM PGY3• Trauma Survey: EM PGY2• Additional Residents: at the discretion of the Trauma Leader• Documentation:<ul style="list-style-type: none">◦ Provider EM Resident + EM Attending

FIGURE 2: Resident Responsibilities

Airway

Emergency Department Airway Management

- An EM attending must be present during the entire intubation procedure. No paralytics may be given in the ED without an EM attending being at the bedside of the patient
- The most senior EM resident has the opportunity to choose to perform the intubation him/herself or supervise a more junior EM resident.
- All intubations in the ED are performed by EM residents or EM attendings only.
- EM interns may manage airways in the ED if they have either:
 - Completed an anesthesia rotation
 - Completed airway management training through the ED simulation course

Emergency Medicine Difficult Airway Management

- Advanced Airway carts are available for use in the ED. One will be located in each of the Resuscitation Rooms and in each of the three pods.
- A Glidescope (with #3 & #4 standard geometry and hyperangulated blades) is located in each Resuscitation Room. The black-handled stylet (rigid stylet) is NOT disposable and should be given to an MA or Tech to place in the dirty utility room.
- The airway cart includes:
 - Oral and nasopharyngeal airways
 - Variety of ETTs and flexible stylets
 - Direct Laryngoscopy blades (Brite Pro) in both Mac and Miller
 - Bougies
 - Fiberoptic scopes (Glidescope B Flex 5.0, 3.8, 2.8)
 - Trans tracheal jet ventilation needles
 - Percutaneous cricothyrotomy sets
- Rescue devices may be used in the ED if the EM attending has completed the Difficult Airway Management simulation curriculum.
- Rescue devices may be used by EM residents if both the EM attending and EM resident has completed the Difficult Airway Management simulation curriculum.

Trauma Airway Protocol

Emergency Medicine Attending and Resident Responsibilities

- The PGY3 EM resident and the EM attending will respond to all Full Trauma Responses as the airway management team from 7a-7p. The PGY4 EM resident and the EM attending will respond to all Full Trauma Responses as the airway management team from 7p-7a.
- If based on the patch from the field, either the EM or Trauma attending believe that the reported injury includes complex facial fractures or a potentially distorted airway, an attending anesthesiologist can be paged stat to the Emergency Department prior to the patient's arrival to manage the airway and intubate the trauma patient via the TAART protocol outlined below.

Both the EM resident and EM attending will gown according to the Trauma Protocol with full universal precaution attire including cap, mask, eye protection, gown, gloves, and shoe covers.

- The decision to intubate the patient will be made by the trauma team leader (General Surgery PGY-4 or EM PGY-4) under the collaborative supervision of the EM and Trauma Attendings. Once the decision to intubate is made, the EM resident and EM attending will stand at the head of the bed. The EM resident will immediately begin to assess the airway for potential difficulties in bag-and-mask ventilation/endotracheal intubation. The EM resident will immediately apply a non-rebreather oxygen mask and nasal cannula for apneic oxygenation to all trauma patients and assure placement of a pulse oximeter on the patient.
- The EM resident will report to the EM attending regarding any expected difficulties in bag-and-mask ventilation or endotracheal intubation.

- If prior to intubation, it is not possible to achieve oxygen saturation above 90%, bag-and-mask ventilation (BMV) will be performed prior to the first intubation attempt.
- An oral airway will be used during BMV on all trauma patients. A nasal airway should be considered as well if anatomy allows.
- Unless the patient is in extremis, RSI intubation will be performed. Induction agents and paralytic agents will be chosen by the airway management team and communicated to the Trauma attending. Only the airway management team will order the trauma nurse to administer induction/paralytic agents.
- Unless specific contraindications exist, RSI meds will include etomidate 0.3 mg/kg IV (20-30 mg) and succinylcholine at 1.5 mg/kg IV (100-125 mg). No premedication with lidocaine, fentanyl or vecuronium will be administered. If there is a contraindication to succinylcholine, rocuronium at a dose of 1.2mg/kg IV can be administered.
- C-spine immobilization will be performed on all Full Trauma patients during the entire intubation procedure.
- The EM resident will perform the intubation only if he/she is able to visualize the vocal cords. If the EM resident is unable to pass the ETT, he/she may choose another size tube to attempt to intubate the patient.
- Once the patient is intubated, confirmation of position will be obtained by listening for breath sounds and ET CO₂ measurements. Respiratory therapy will then enter the trauma box to assist with mechanical ventilation and secure the ETT in place.
- Post-intubation sedation and paralytic medications will then be ordered by the EM attending in consultation with the Trauma attending. The standard post-intubation medications are Propofol drip or Versed & fentanyl.
- If the EM resident is unable to intubate the patient after a reasonable number of attempts, the EM attending will then attempt to intubate the patient. If the EM attending is unable to intubate, the anesthesia attending will be paged stat to the Emergency Department to perform the intubation.
- If at any time, an alternate airway is deemed necessary, a surgical cricothyroidotomy will be performed under the direction of the Trauma attending and ED attending.

TAART

There is an emergency airway team called the Threatened Adult Airway Response Team (TAART) comprised of Anesthesia, Trauma Surgery, ENT Resident, and Swat Nurse and respiratory therapist. The multi-disciplinary team can be activated by calling 155 on any hospital phone. The team outlined above will present to the patient within 15 minutes of being called.

The team is for urgent management of complex airways or if an airway is progressing towards failure.

Intimate Partner Violence

Intimate Partner Violence (IPV)

Patients should be screened for IPV using a simple screening tool. They must be screened without a visitor present, and the patient should not be in the position of deciding if the visitor leaves. We should be doing UNIVERSAL private screening of all patients as it is not evidence-based to target certain demographics of patients. There is also a new program by which all patients will be given some information about how to access services if they or someone they know is experiencing IPV. This evidence-based program is known as CUES (confidentiality, Universal education and Empowerment, and Support). The main idea is that many patients may not be ready to disclose at the time of an ED visit, but will be given the information to access when they are ready. <https://ipvhealth.org/health-professionals/educate-providers/>

Patients who screen positive for IPV, are identified as possibly being in a violent relationship, or who report IPV, should be referred to social work for further assessment and intervention. In these cases, documentation of the patient's history and injuries is critical, and should be done carefully so that the record is complete. There is a way to hide notes in the EPIC EMR, and providers should be asking IPV survivors if they want the note hidden, as many perpetrators have access to survivors' electronic devices and passwords. Be sure to arrange for follow-up. There are a number of resources available to IPV survivors, including from the Umbrella Center for Domestic Violence. <https://www.bhcare.org/services/domestic-violence-victim-advocacy/umbrella-center-for-domestic-violence-services/>

You should also inquire about children in the home and make referrals to social work as needed. There are multiple programs for children living in the home in situations of intimate partner violence in order to screen and protect and provide additional resources for such children, regardless of age. Social work will be able to decide if a mandatory report is needed to Social Services or whether optional resources are indicated to benefit the child, including the Yale Child Study Center and the Yale DART (Detection, Assessment, Referral and Treatment) multi-disciplinary team that has offices at Long Wharf in New Haven.

There may be other situations in which there is a state mandate to report IPV to Social Services and these include if the survivor has a cognitive or intellectual disability or if the survivor is over the age of 60. (In Connecticut, 60 is the age that qualifies as "elder"). If you have any doubt, please consult social work and document this in the chart. In cases where we are mandated reporters, failure to report to the appropriate state Social Services agency, within the timelines established, is a big deal and can lead to individual reprimands that can include significant financial penalties, and time-intensive state-ordered "retraining courses".

As for mandatory reporting of IPV to police, this is not necessary unless a firearm has been discharged, in which case the crime is considered against the state, not the IPV survivor. In these cases, notify YNHH security, who will inform the proper police jurisdiction. In all other cases, social work

Sexual Assault

Patients who report that they have been sexually assaulted should have a complete exam with documentation of the exam and any relevant findings. If patients choose, sexual assault evidence kits are available in the YNHH ED and should be used to collect evidence to submit to the police who have jurisdiction over the case. While EM and gynecology

residents have been trained in evidence collection, most patients at YNHH can be evaluated by a SAFE (sexual assault forensic examiner) – mostly ED nurses who might be working that shift or can be called in from home. In most cases, this can take quite a bit of time, so make sure you inform the charge nurse as soon as possible if a patient is contemplating a kit collection and keep the patient updated about delays. Many survivors are quite willing to stay for as long as it takes, but certainly appreciate estimates and updates.

Social work should also be notified. There are community-based sexual assault survivor advocates who can be called to the hospital to sit with our patients; social work and the charge nurses know how to call these people if desired by the patient. Make sure to speak to any sexual assault survivor alone to find out if they want their (known) visitor and/or advocate in the room for the entire history and physical and give them agency to decide who they want in the room and for which parts of the ED visit. Many patients want their visitor or advocate in the room for most of the time that they are waiting, but a good number prefer to be given the choice to have the visitor leave while the history and physical (and evidence collection) is performed. This is very important, even for the history, because if there are discrepancies in the history later, this could significantly weaken the survivor's criminal case.

Patients who report sexual assault should be offered treatment to prevent pregnancy (if indicated) and to prevent/treat STIs, and should also be counseled about HIV testing, post-exposure prophylaxis and follow up requirements (please see PEP protocol where this is explained in detail). Social work should be contacted to assist with referrals and counseling.

If a patient is initially unsure if they want to press charges, an evidence collection kit can be completed and then given to the appropriate police department to hold until a decision is made.

Yale University Students and Employees

If a Yale student or other Yale University community member presents with a history of IPV or possible sexual assault, contact the University Health Services at any time (24/7) to arrange for follow-up as well as counseling services. The staff in Urgent Care at DUHS will work to arrange this. There is also the SHARE (Sexual Harassment and Assault Response and Education) Center at Yale, available 24/7. Use of SHARE resources can be completely anonymous and confidential and is the only university resource for that is not bound by Title-9 mandatory reporting guidelines. <https://sharecenter.yale.edu>

Patient Safety and Quality

- Organizational Structure
 - The leadership structure exists as an AED Executive Leadership Committee with four sub-committees:
 - Operations,
 - Patient Experience
 - Patient Safety and Quality
 - Population Health
 - Reporting is an essential component to a robust patient safety program, as has been demonstrated in many high reliability organizations outside of medicine such as aviation. We strongly encourage the use of “RL Solutions”, the hospital wide event reporting system, for patient safety concerns including near misses. This system can be accessed through the Clinical Workstation under the “E” tab on any hospital-based computer. Click on “Event Reporting”. This system is best used for reporting system level concerns. While you are welcome to report events anonymously, we prefer if you would identify yourself (system is confidential) so we can follow up if further information is required during an investigation. We also would appreciate if reports provide objective information and refrain from making conclusions or subjective comments.
 - All cases related to diagnostic or clinical management concerns should be referred to the Quality Improvement Director, Dr. John Sather (john.sather@yale.edu) (not through RL Solutions since it can be discoverable). Please email with subject line “CQI Case Review, Confidential” and include the MRN and date of service for the patient encounter of concern. You will receive a phone call or follow up email to review your concerns and provide a case narrative. Cases will undergo a quality review process (see below) before a final response is made to faculty or outside departments.
- Quality Review Process
 - The Case Review Committee meets biweekly at 8AM on Thursdays in the AED administration offices conference room. We have developed a robust database, dashboard to guide a systematic quality improvement process and provide a comprehensive analysis of system and clinician performance. The following categories are reviewed:
 - STEMI cases, Sepsis, Stroke, Intubations
 - 72-hour returns
 - Care escalations
 - Mortality
 - Case Review Committee
 - Comprised of the senior leadership within the administration section.
 - Cases undergo review with a focus on both physician and system performance are scored and reported using the following taxonomy:

Quality	Safety	Contributing Factor Analysis - Provider	Contributing Factor Analysis - Process	Action
No Issues	No Safety Issue	Competency (Knowledge and Skills) Cognitive Communication	Policy & Protocol Technology Environment	Internal Email notification - no follow up action Email notification - follow up requested Meeting with Departmental Leadership Remediation Plan Referral to M&M Forward to Nursing Leadership
Diagnostic Missed Diagnosis Delay in Diagnosis	Near Miss Safety Event <i>Did not reach patient. Caught by detection barrier or chance</i>	Progression/Complexity of Disease Process		
Management Omission Commission Delay	Precursor Safety Event <i>Reached patient and resulted in minimal or no harm</i>	Comments:	Comments:	External Referral to PPEC Referral to legal/risk adjustment Disclosure RCA Referral to another department Process, policy, protocol, IT change Initiated
Procedural Complication				
Medication Error	Serious Safety Event <i>Reached patient and resulted in moderate to severe harm or death</i>			
Documentation				

- Faculty will be notified by email of any case with which they were involved that had a quality gap identified by the peer review process. Faculty will then have the opportunity to further discuss the case at a subsequent Peer Review meeting if warranted.
- Morbidity and Mortality (M & M) Conference
 - The Case Review Committee is responsible for selecting and preparing cases to be presented at the monthly M & M.
 - This conference is held monthly as part of the Wednesday resident conference schedule.
 - If you were the provider for a case to be discussed at M&M, you will be contacted at least a week in advance by a member of the Case Review team.
 - The primary purpose of this conversation is to review details of the cases, help better understand the rationale for decision making at the time of the case, and to determine learning objectives for the conference. There is an expectation that the attending involved in an M&M case will be present at the conference.

- ED Physician Performance Portfolio

We have developed this portfolio to provide a comprehensive analysis of clinician performance over a range of categories: productivity, resource utilization, patient experience, and quality of care. This portfolio is designed to be non-punitive and has a primary goal of supporting clinician development.

Safety and Quality Subcommittee is a multidisciplinary group which meets every other week at 10AM following the CQI meeting in the ED conference room. Its role is to determine yearly patient safety priorities and to lead subsequent process improvement initiatives. This year's safety and quality priorities will be discussed briefly in the section below.

- Quality Measures 2020-2021

CMS monitors selected aspects of ED care and sets targets for performance. It is our goal to exceed all these targets. The ED administration team tracks these metrics and provides formalized audit and feedback to help achieve these targets.

In addition to the metrics set forth by CMS, our Department has an active quality improvement infrastructure with several metrics used to improve the quality of emergency care across all YNHHS sites. Specific focuses of current quality initiatives include:

- Value and Affordability: we have embarked or will embark upon initiatives to reduce unnecessary use of coagulation studies, blood cultures and other locally selected targets.

- Clinical Care: we are embarking a new sepsis screening initiative and will measure the timeliness of IV fluids, antibiotics, and reassessment in patients with severe sepsis and shock. We are also developing several alternative pathways to hospital admission for chest pain and will provide individual ED attending-level feedback on chest pain admission rates and outcomes.

Safety: we have embarked upon a department-wide quality improvement initiative to reduce insertion-related catheter associated urinary tract infections (CAUTI) originating in the ED. All orders for foley catheters must be placed by an ED attending or senior resident and meet current CDC indications for appropriate catheter use.

Ultrasound in the ED

There is a separate policy regarding emergency ultrasound that needs to be read and signed by all ED residents and faculty who use bedside ultrasound in the ED. You can obtain this policy from the ultrasound section administrator. New faculty who completed residency training that included ultrasound will be privileged to perform any point-of-care ultrasound aside from deep venous thrombosis (DVT) and testicular ultrasound (these may be done with ultrasound fellowship training).

Bedside ultrasound examinations can be divided into three categories: **diagnostic**, **procedural**, and **educational**.

- **Diagnostic ultrasounds** are ultrasounds that are performed with the potential to impact treatment and must be documented in the medical record using QpathE. This process will be covered on the next page. It is up to the attending to ensure that he / she adequately supervises diagnostic ultrasounds and that the findings are appropriately documented in a timely manner. Diagnostic ultrasounds do not require comprehensive studies, although obtaining one is at the discretion of the attending.
- **Procedural ultrasounds** include use of ultrasound for any procedure under the supervision of an attending who has privileges to do the procedure without ultrasound (e.g. paracentesis, thoracentesis, central venous access). All attendings who have had at least an introductory ultrasound course may supervise the use of ultrasound for procedural guidance.
- **Educational ultrasounds** include ultrasounds performed under the supervision of a non-credentialed attending, ultrasound examinations which do not yet have departmental privileging, or ultrasounds that are performed purely for educational reasons where findings are already known.
 - All educational ultrasounds must have a comprehensive study performed. This includes ultrasound applications for which the attending is credentialed but chose to use that examination in an educational manner. The timing and type of comprehensive study is at the discretion of the attending. Results of educational ultrasounds should not guide management, should not be communicated as diagnostic with the patient, and should not be documented in the medical record. However, the fact than an educational ultrasound was performed should be documented in the medical record.

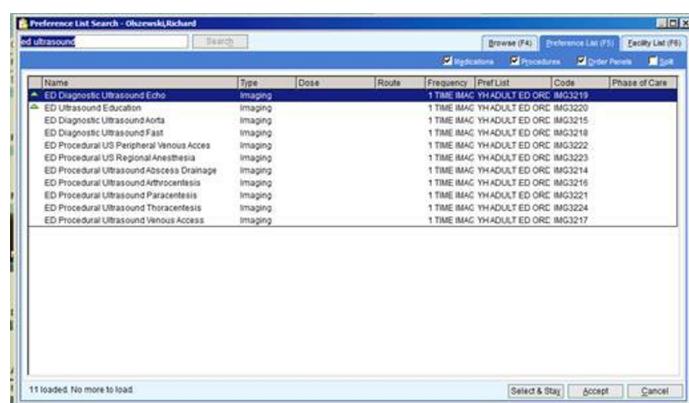
Bedside Ultrasound Ordering and Image Acquisition

The following processes should be followed:

- Except in time critical situations, all ultrasounds should be ordered through Epic, just as you would order a lab test, medication, or X-ray. It is usually easiest to type “ed” or “ed ultrasound” in the order field to choose which type of bedside ultrasound you require. Please fill in all fields. The name of the attending ordering the study must be selected from the drop down menu.



If you open the full facility order list, you see the below screen that will give you options. Typing “ED diagnostic” or “ED procedural” will generate this list:



- Once ordered, the ultrasound machine should show the patient's name on the worklist via a wireless connection. This is nearly immediate, but the worklist may need to be "refreshed."
- Choose the correct patient from the worklist. This will ensure that the correct name, DOB and MR# are associated with the patient. In an acute situation a patient may be entered manually or emergently if required (e.g. "code 100"), but information should be updated on Qpath as soon as possible.
- Acquire images that document your findings. The following are minimum image requirements based on the type of exam:
 - FAST: 6 views
 - Hepatorenal – Splenorenal – Suprapubic – Subxiphoid cardiac
 - Bilateral thoracic (pleural lines to evaluate pneumothorax)
 - Echo: 4/5 views
 - Parasternal long axis - Parasternal short axis - Apical 4 chamber
 - Subxiphoid - Inferior vena cava (evaluation of hydration status)
 - Aorta: at least 3 views
 - Dynamic clip(s) demonstrating a transverse plane running from proximal (celiac artery) to the iliac bifurcation
 - Longitudinal plane scanned from side to side
 - Measurement at the widest diameter from anterior outside wall to posterior outside wall of the aorta
 - Measurement at widest diameter of iliac arteries
 - Renal: 3-6views
 - One long axis and one short axis view per kidney, fanning entirely through both kidneys, with each side labeled
 - Transverse and longitudinal scans through the bladder +/- color flow to assess for urinary jets
 - Biliary: at least 2 views
 - Complete fan through gallbladder in both short and long axis
 - Include landmarks (portal vein and median lobar fissure)
 - Include measurement of the common bile duct at widest point from inner wall to inner wall. CBD should be verified using color flow Doppler to show that it is anterior to the portal vein and does not have flow
 - Pay particular attention to the neck of the gallbladder.
 - Pelvic: at least 2 views, pregnant patients: at least 4 views
 - Transverse and longitudinal scans through the uterus, to include landmarks (bladder and vaginal stripe –may not be seen on transvaginal scanning).
 - Scan through both adnexal areas to note any gross pathology.
 - Pregnant patients: document fetal age (< 12w crown-rump length; >12w biparietal diameter)
 - Fetal heart rate may be documented using m-mode.
 - DVT: at least 3 views
 - Transverse view starting in femoral region to identify saphenous vein, CFV, artery. Assess for compressibility
 - Transverse view following CFV to mid-thigh, assess for compressibility
 - Transverse view in popliteal fossa to view trifurcation, assess compressibility
 - Procedural ultrasound: Pre- and post- procedure, with real time needle entry when possible

Accessing Qpath, Documenting your Interpretation and the QA process

- Following image acquisition, the person(s) responsible for the patient and examination need to log in to QpathE to enter their interpretation of the exam. Ultimately, it is the responsibility of the patient's clinical attending to ensure proper documentation of the ultrasounds performed.
 - The resident or midlevel should complete the Qpath worksheets, as it is a training "procedure" required for successful completion of residency.
 - Attendings should facilitate expeditious completion of the Qpath worksheet and interpretation for timely documentation in the ED medical record. The attending is required to complete the Attending Attestation attached to each ultrasound examination performed under his/her supervision.
 - On hospital computers / clinical workstations, QpathE can be accessed at <http://qpath1vp.ynhh.org/> using a Chrome or Edge browser. By the time this manual is published there should be a link from within Epic.
 - You can remotely access Qpath using the Yale VPN.
 - Go to the YaleITS Software library and log in using your Yale ID/ password
 - Download the "VPN - Cisco AnyConnect Client (SSL)"
 - Once these are completed, connect to the Yale VPN. Then open your internet browser and open the following url: <http://qpath1vp.ynhh.org/login>
 - You will need to connect to the VPN and access this website every time you want to use Qpath off-site.
 - Your login and password are initially set to be the same as your Epic login / password.

Welcome to QpathE – Basic Essential Functions

Qpath E is accessible via the hospital clinical workstation (under QpathE rather than Qpath Classic, which is the older version) or the web URL: <http://qpath1vp.ynhh.org/Login>. Video tutorials are here: (coming soon)

Your initial login screen is this:

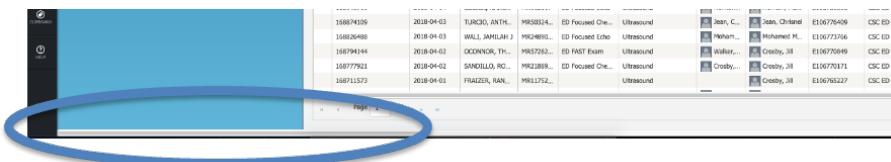


1) Log in using EPIC username and password

This should bring you to your home screen.



2) Clicking on the Exams icon will open up a worklist window to the right of the screen – QpathE opens new windows to the right of the active screen – so the horizontal scroll sliders on the bottom are important for navigation.



The worklist window shows all the studies performed in chronological order.

Column Headings should look like the following:



By clicking on the vertical ellipses at the end of the column header, you can sort the columns for date, name, etc. This can be useful to select only the studies you are listed as an attending, or operator if you perform a study yourself.

ME	EXAM TYPE	OPERATOR	ATTENDING	Indicat...	INSTITU.
OLORES	ED Focused Echo		Safdar, Basmah	↑ Sort Ascending	ED
CHARLOTTE			Wong, Kei		etric
TIFIEDM, TEN DEL...	ED FAST Exam	Agboola, Isaac	Gregg, Kristin	↓ Sort Descending	D

3) To filter only the patients listed under you as the attending:

- In the attending column, click the vertical ellipses
- Click once on Filter
- In the next box that opens, click once in the 2nd row & select “Me”
- Then in the bottom left of the boxes group, select Filter

ATTENDING	REVIE...	INSTITUTI...	REFERRING
Coughlin, Ryan	↑ Sort Ascending	H ED	Coughlin, Ryan
Riera, Antonio	↓ Sort Descending	Y NHH	Garcia, Angelica
Kassapidis, Elizabeth	Columns	D	Kassapidis, Elizabeth
Coughlin, Ryan	Filter	D	Coughlin, Ryan
Wareham, Haley		YNHH ED	Wareham, Haley
Walsh, Brooks		YNHH ED	
Silvestri, David			

ATTENDING	REVIE...	INSTITUTI...	REFERRING
Coughlin, Ryan	↑ Sort Ascending	H ED	Coughlin, Ryan
Riera, Antonio	↓ Sort Descending	Y NHH	Garcia, Angelica
Kassapidis, Elizabeth	Columns	D	Kassapidis, Elizabeth
Coughlin, Ryan	Filter	D	Coughlin, Ryan
Wareham, Haley		YNHH	Wareham, Haley
Walsh, Brooks		YNHH	
Silvestri, David		YNHH	
Coupet, Edward		YNHH	
Coupet, Edward		YNHH	
Coupet, Edward		YNHH	
Silvestri, David		BN E	
Walsh, Brooks		YNHH	
Beardside, Thomas		YNHH	

4) To open and complete a patient study:

- Double click on the name of the patient the study was done on.
- Complete all fields of the worksheet. You'll know when they're done because a green checkmark appears beside each required field. Incomplete fields still have a red asterisk.

Views Obtained ✓
Views (echo):
 PSLA PSSA Apical 4 chamber Sub-xiphoid IVC

Findings

Effusion (echo) *
 no significant effusion small effusion (<1cm)
 moderate to large effusion (>1cm) Indeterminate

Ejection (echo) ✓
 normal (50-65% EF) hyperdynamic (>65% EF)
 moderately depressed (30-50% EF) severely depressed (<30% EF)
 no significant myocardial activity Indeterminate

Equality (echo) ✓
 RV < LV RV > = LV Indeterminate

Exit (echo) *
 aortic root normal (<4.0cm) aortic root borderline (4.0-4.5cm)
 aortic root dilated (>4.5cm) Indeterminate

Other findings/ comments (echo)

- You must complete all fields with a red asterisk, or you will be unable to complete the worksheet. You know you are all complete when you see a green check at the top of the worksheet.

ED EFAST
Exam type

Attending involvement (EFAST) ✓
 Exam discussed with attending Attending performed

Exam type ✓
 Procedural Diagnostic Educational

Comments about discussion or exam type (EFAST)

Clinical
 Clinical (EFAST) - if not TRAUMA do not use FAST worksheet ✓
 FTR MTR Other trauma

Relevant history (EFAST)
 altered mental status

Indications
 Indications MANDATORY check all that apply (EFAST) ✓
 Chest Pain consolidation / empyema Hypotension
 Abdominal tenderness Penetrating trauma
 Blunt trauma to abdomen Tachycardia Altered mental status
 Pregnancy Blunt trauma to chest Abdominal bruising
 Chest bruising Shortness of Breath Chest tenderness other

Other (if no indications above)

d) After completing the worksheet, you should sign the attending attestation box. This should give the document a time stamp and automatically forward the report to the patient's EPIC chart.



If you find you cannot sign the sheet, you probably still have an incomplete field.

Example of a complete diagnostic worksheet:

1. WORKSHEET COMPLETED WITH GREEN CHECK AT TOP OF SHEET

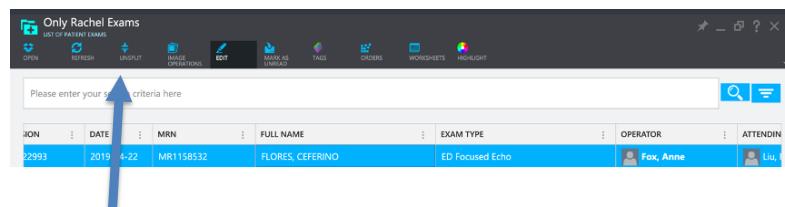
2. ATTENDING HAS SIGNED

Signing the worksheet automatically transfers a diagnostic or procedural worksheet into the Epic chart. You'll see these icons in the first column.

1. The doctor icon means the attending signed the worksheet.
2. The pancake icon means images have been transferred to PACS (happens automatically).
3. The stethoscope icon means that a diagnostic study was performed.
4. The graduation cap icon means an educational study was performed.
5. A Checkmark means that the attending still needs to sign a diagnostic study.
6. The clipboard means the worksheet report was transferred to Epic and will appear in the Imaging tab. Only diagnostic and procedural worksheets will have this clipboard. This is an indication that everything necessary has been completed.

To Edit the demographics of a study (e.g. there is no worksheet, operator or attending incorrect):

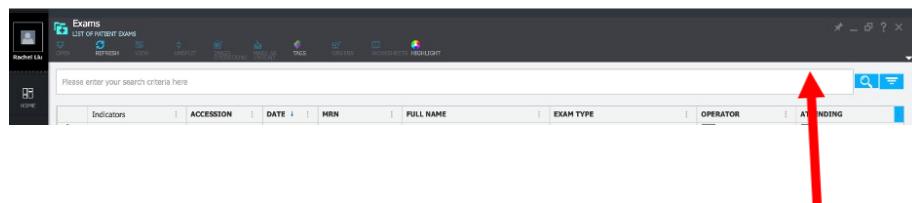
7. Highlight the exam in the worklist
8. In the top toolbar, click Edit
9. A demographics pane on the right opens
10. Assign Exam type by choosing the appropriate exam worksheet in the "exam type box"
11. Hit SAVE!
12. Scroll down and you will be able to add yourself as operator or attending



Qpath E – Helpful Customizations & Extras

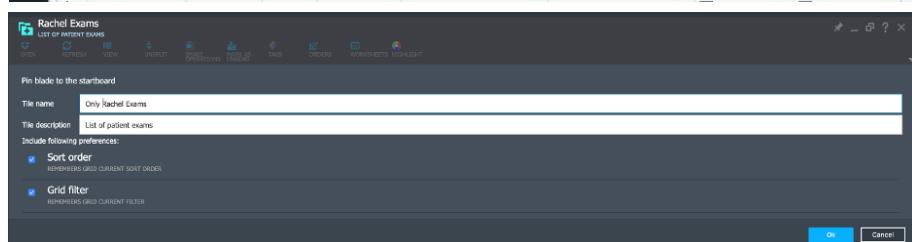
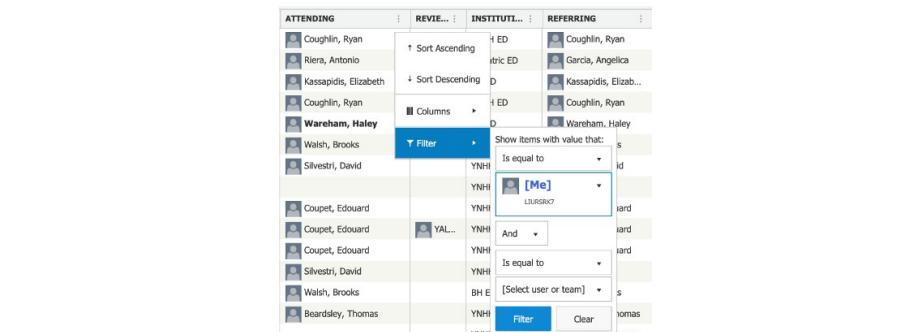
To customize your top bar (add refresh button, tags)

1. In the bottom right of the toolbar, click once on the triangle.
2. Press “customize”.
3. Choose your customizations (refresh button, tags button).
 - a. The tags button is useful to tag something for image review if you want us to look at it.
 - b. Press “Done Customizing” when you’ve chosen.



To see only your studies and not everyone's.

1. Filter only your studies by clicking on the vertical ellipses in the attending column.
2. Select Me in the 2nd box and then the Filter button so that your studies are the only studies in the worklist screen.
3. Select the pin in the top right of the top bar
4. Type something in the Tile name bar like “only my exams” and press OK
5. In your blue home screen, your Only My Exams tile will appear. This will now default to opening only your studies each time you log into QPath E.



Indicators	ACCESSION	DATE
	E108518221	2019-04-21
	E108518198	2019-04-21
	E108516636	2019-04-20
	E108516548	2019-04-20
	E108516360	2019-04-20
	E108516371	2019-04-20
	E108512287	2019-04-19
	E108512229	2019-04-19
	E108487923	2019-04-13
	E108487530	2019-04-13
	E108485697	2019-04-12
	E108485161	2019-04-12
	E108484128	2019-04-12
	E108483750	2019-04-12
	E108483478	2019-04-12
	E108474857	2019-04-10
	E108474704	2019-04-10

Specific situations/considerations:

- Fetal heart tones and fetal dating. Triage policy for later pregnancy is that complaints potentially related to the pregnancy in a woman with an EGA of 16w or greater should go to L&D. Ultrasound may be used to date the pregnancy for triage purposes.
- We have several machines available in the YNHH ED:
- Philips Sparqs 1 and 2 are used for diagnostic and educational US outside of the trauma bay, usually on the “South” side of the ED.
- Philips Sparq 3 is used primarily for extended FAST (e-FAST) in the trauma bay. Sparq 3 should “live” in the trauma bay – if there is an immediate need for a scanner, it may briefly be removed from the trauma bay and should be immediately returned.
- Philips Sparq 4 is used for diagnostic and educational US on the “North” side of the ED. It should “live” near Bed 5 on the North Green side.
- Philips Sparq 6 is available for use in Section C.
- Philips Sparq 5 is available for use at the Shoreline Medical Center.
- The Pedi ED has a sonosite and a zonare.
- Chapel Street Campus (HSR) will have Sparq machines.

The residents should know, but if there are any mechanical or image management problems, please contact one of the fellows, Chris Moore, or Rachel Liu immediately. If they are not available, please contact the section administrator, Hilmer Ayuso.

Regarding the use of handheld pocket devices (ie. Butterfly iq), you may not use or bring one into the ED without discussion and verification with Rachel Liu or Chris Moore. Interest in purchasing one should be discussed with them as well, as there are certain IT policies that must be adhered to.

While residents should be aware of our policies, they are ultimately working under your supervision. We have a four-week required rotation in ultrasound for the first-year residents (who arrive in the afternoons after their anesthesia rotations in the morning) as well as electives available for medical students through senior residents both within and outside Yale. The ultrasound rotator will be in the ED looking for examinations. They should approach you prior to performing an examination on your patient and you should initial the log so that you are aware of what they are doing and may participate if you can/want to. They may be available to perform ultrasound procedures but should not be asked to perform non-ultrasound-guided procedures.

We review images Tuesday afternoons, and you are always welcome to attend. Prior to each faculty meeting, there is an attending-only educational ultrasound session (case review and pass the pointer) starting at 10:30 am.

I am happy to set up individual instruction about performing or interpreting bedside ultrasounds and use of the machines. You may find our app helpful: go to the App store on an iOS device, or the Google Play store on an Android device, and search for “Bulldog Sonobites.” There are also several recorded lectures with video available at www.sonoguide.com, the SAEM narrated lectures, or the SUSME learning modules. Please let me know if you have any questions: chris.moore@yale.edu, 203-687-6776 or contact any of the Ultrasound Section.

Emergency Physician Performed Bedside Ultrasound-- Rev. May 2019

Policies and Procedures for Use of Ultrasound by Physicians in the Yale New Haven Hospital Adult ED

Background

Emergency ultrasound, performed and interpreted at the bedside by emergency physicians, is an emerging standard of care in emergency departments (EDs) in the United States. It is endorsed by the American College of Emergency Physicians (ACEP), the American College of Surgeons (ACS), the Society for Academic Emergency Medicine (SAEM) and the American Medical Association (AMA). Training in bedside emergency ultrasound is a required part of residency training through the Residency Review Committee (RRC), as part of the Accreditation Council in Graduate Medical Education (ACGME). When used appropriately bedside ultrasound can rapidly rule in and rule out many emergent or potentially emergent conditions, resulting in safely expedited patient care and the potential to diagnose potentially serious conditions that otherwise may have been missed or diagnosed in a less timely manner.

However, this is a powerful tool that is user dependent and has many implications regarding diagnosis, treatment and patient perception.

This document is intended to explicitly provide practitioners who utilize bedside Emergency Ultrasound (EUS) in the ED at Yale New Haven Hospital (YNHH) with guidelines for its use.

Scope of Bedside Emergency Ultrasound

It is important to understand that emergency ultrasound is not intended to replace consultant performed ultrasound.

Emergency ultrasound is a focused, goal-directed examination that seeks to rapidly rule in or rule out one or more conditions, typically in a binary (yes/no) fashion.

This differs from consultant performed ultrasound (typically performed by a radiologist or cardiologist) that is usually a more comprehensive examination of a single organ system.

SEM Policy for Credentialing ED Attendings in Bedside Emergency Ultrasound

Emergency ultrasounds performed in the ED are classified as below:

- Diagnostic
- Procedural
- Educational

Diagnostic Ultrasounds

Diagnostic ultrasounds are limited, focused examinations that are within the scope of practice of emergency medicine. At YNHH these can include any ultrasounds except DVT and testicular (unless you have fellowship training in ultrasound).

Procedural Ultrasounds

ED physicians who have undergone initial ultrasound training and who are privileged to perform any procedure without ultrasound guidance, may use ultrasound as an adjunct to any ED procedure they deem appropriate. This includes the assessment of body areas for aspiration, incision and drainage, or insertion of peripheral or central lines. Sterile precautions should be taken with the ultrasound equipment in any procedure that sterility is an issue. As with all procedures, appropriate attending supervision is required.

Educational Ultrasounds

All ED physicians who have undergone introductory training with the equipment and who have signed this form are privileged to perform educational ultrasounds. Educational ultrasounds are performed as learning examinations for both resident and attending physicians. Verbal consent should be obtained from the patient. The patient should be made aware that the exam is for educational purposes and that they have the right to refuse the examination.

Quality Assurance Log

All ultrasounds performed using ED equipment must be logged appropriately on QpathE. This includes filling in the worksheets with the indication for the exam and findings, as well as the attending attestation

Documentation of Bedside Emergency Ultrasound in the Patient Record

All diagnostic and procedural ultrasounds should be documented both on Qpath and in the patient's EPIC record. Qpath findings will automatically transfer with the signature of diagnostic and/or procedural ultrasound. Educational ultrasounds should be documented in Qpath.

Communication with Patients and Other Physicians

It is essential that we foster good communication, both with patients and treating physicians, in order to minimize confusion regarding educational and diagnostic ultrasounds performed in the ED. This begins with appropriate verbal communication with the patient before and after the EUS examination. When available, other physicians involved in the patient's care should be contacted and made aware of the results and intended follow-up.

Image Archival and Retrieval

In the ED at YNHH we utilize dynamic image recording for our ultrasound equipment. While not all of every exam needs be recorded, pertinent portions of the exam must be recorded representative of any suspected abnormal findings, as well as normal findings. These examinations are reviewed by the emergency ultrasound faculty, primarily for educational and QA purposes.

While attempts will be made to confirm that any pathologic findings were correctly identified, it is not within the scope of the emergency ultrasound faculty to comprehensively review all examinations, nor is this feasible in a contemporaneous manner. Thus, the correct interpretation for diagnostic ultrasounds is the responsibility of the attending involved in the performance of the examination. Educational examinations in symptomatic patients should have appropriate comprehensive studies performed.

Ultrasounds Performed in the ED by non-ED Personnel

If a consultant utilizes ED ultrasound equipment in the ED, it is the responsibility of the ED personnel caring for the patient to see that appropriate documentation occurs according to this policy (both on Qpath and in the patient record) and that the exam is appropriately recorded.

Ultrasounds Performed by Resident Physicians Outside of the Yale-New Haven Hospital Adult Emergency Department

The policies above apply to the YNHH Adult ED Ultrasound is increasingly available in diverse practice settings, specifically the Yale Pediatric Emergency Department, the Bridgeport Hospital Emergency Department, Intensive Care Units, and other areas. While our intent is to provide residents with appropriate education in using this tool it is important to understand that policies may differ in other settings. When using equipment in other areas resident physicians should specifically discuss their intent to use ultrasound equipment with the appropriate supervisory person (i.e. attending) and be aware of their specific policies prior to the use of any equipment.

End of Life Affairs

1. DNR Status:

A Do Not Resuscitate Order (DNR) is a physician's order not to use cardiopulmonary resuscitation (CPR) in case of cardiac or pulmonary arrest. A DNR order (alternatively "no ACLS") typically represents a forgoing of all emergent CPR procedures, including chest compressions, invasive airway management, vasopressors, assisted ventilation, defibrillation, and cardioversion. While Connecticut legislature has passed some legislation about MOLST/POLST, these forms are not in wide use in Connecticut yet. Patients from Nursing homes often arrive with a State of Connecticut Department of Public Health Transfer of DNR form. https://portal.ct.gov/-/media/departments-and-agencies/dph/dph/facility_licensing_and_investigations/forms/dnr-transfer-form-december-2023-revised.pdf

Some outpatients might arrive wearing a plastic or metal DNR bracelet provided by their PCP.

Patients may receive other forms of treatment (i.e.—fluid resuscitation, antibiotics, hemodialysis, non-invasive ventilation) but the decision to use these should be made after a goals of care conversation with the patient or their surrogate, as these may not be consistent with their goals. Keep in mind that many patients with chronic end-stage illness (including dementia, COPD, and cancer) who are dying do experience dehydration, renal failure, and/or an infection as part of the dying process. This does not mean that they need hydration or antibiotics, as these may only prolong the dying process and not be consistent with the patient's goals.

Capable adult patients may forego CPR for medical or non-medical reasons. Such requests may be made verbally by patients, whether or not he/she is terminally ill. A request to forego CPR may also be part of an Advanced Directive in EPIC. Many PCP groups have access to EPIC and are encouraged to document and/or upload Advanced Directive forms. If the patient has a well-documented Advance Directive memorialized in the EPIC EMR, they can change their mind, but their surrogate decision-maker should NOT be permitted to override the patient's documented wishes.

When it has been determined that the patient lacks decision-making capacity, the appropriate surrogate decision-maker should be identified to make treatment decisions, including decisions to forego CPR, if no such person has been designated by an Advance Directive. In the EPIC storyboard, providers can see who the patient may have designated as their primary decision-maker. The following hierarchy of persons with statutory authority for decision-making if the patient has not designated a specific person:

1. A legally appointed guardian or committee.
2. The patient's spouse if no divorce action has been filed.
3. An adult son or daughter of the patient
4. The patient's parent
5. An adult brother or sister of the patient.
6. Any other relative of the patient in descending order of relationship.

The physician will document discussions with the patient or surrogate in the Medical Record. If the patient has a written advance directive to forego CPR, physicians will exert reasonable effort to obtain a copy of it, or document verbal telephone correspondence with person's revealing the DNR status (i.e. nursing home personnel, durable power of attorney), but this is not mandatory. A DNR order may be reconsidered at any time at the request of the patient. Cancellation is accomplished by the physician updating the change in the medical record as a part of the ED documentation.

A DNR order represents a forgoing of all emergent CPR procedures as specified in the first paragraph of this policy, including intubation. Should a patient or surrogate wish to forego one or another but not all of the CPR procedures (e.g. refuses chest compressions but wants a trial of intubation), their preferences must be delineated in the Emergency Department note. The physician should caution the patient and family that while every effort will be made to honor the preferences, it is often best to approach individual treatment decisions in terms of goals for the patient.

In the event that the physicians involved, the patient, or the surrogate are unable to resolve conflicts regarding whether a DNR order is appropriate or not, it will be the ED attending physician's decision as to the degree of care provided to the patient. An ED provider is never obligated to provide medical care that they do not feel will be beneficial. An example is a patient with a large brain hemorrhage in DIC, for which Neurosurgery has said there are no treatment options, who is beginning to herniate and is becoming hypotensive and bradycardic. There is no obligation for the ED physician to offer chest compressions or epinephrine as the patient becomes asystolic, as none of these would be expected to be beneficial in this situation, regardless of prior expressed wishes of the patient or family.

In some cases of conflict, after the patient is admitted, it may be necessary to seek assistance in resolving the conflict, with the help of the YNHH Ethics Committee. Assistance can also be obtained from the patient's primary medical provider, Hospital Legal office, the Department of Social Work, the Department of Psychiatry, the Chaplain's Office, or the Office of Patient Relations. In the event a major conflict cannot be resolved, it may be necessary to seek resolution in a court of law. In the event where it is questionable as to whether or not the patient has capacity to make end-of-life decisions, it is advisable to acquire an ED psychiatry (Crisis Intervention Unit - CIU) consult for this specific question. Attending physicians should document assessment of the patient's capacity to make decisions whenever possible. (Remember "competency" is a

decision made by courts, but any physician can assess and document capacity).

It is recommended that the majority of DNR patients be admitted to general medical floors without telemetry monitoring, however, exceptions may be made by the attending Emergency Physician dependent upon individual circumstances of the case and care of the patient.

1. Palliative Care Yale New Haven Health System has a robust multidisciplinary palliative care team at both the York Street and SRC campuses. There is always an on-call provider available to answer questions about symptom management. Moreover, every admission order placed prompts a MSQ (Mandatory Surprise Question) which asks the provider if they would NOT be surprised if the patient died in the next six months. If the answer is "No, I would NOT be surprised", there is a prompt to consider placing a Palliative Care consult – which you can do in real time prior to finishing the admission order. Routine Palliative Care consults can also be placed for appropriate patients (any patient with a serious illness with significant symptomatology qualifies for a palliative care consult) who are admitted. If a patient already followed by Palliative Care is admitted, it is appropriate to place a consult in the computer, so the team knows one of their patients has been admitted. The order for an inpatient consult can be found by typing "ED Palliative Care consult..." into the order entry tab. For patients who are to be discharged from the ED, outpatient palliative care referrals can also be placed. While the outpatient palliative care service has been expanding their ability to see patients with a variety of diagnoses, the capacity to see patients with non-cancer diagnoses remains limited.

2. Comfort Care

In patients with DNR status who have a terminal illness or condition, the option of comfort care may be offered by the attending Emergency Physician. Comfort care is defined as medical care intended to provide relief from pain and discomfort from other end of life symptoms including dyspnea, nausea/vomiting, agitation, etc. The decision to initiate comfort care can be made by the Attending Emergency Physician in concordance with the agreement of the patient or surrogate decision maker listed above.

While legal in 10 states, including the nearby states of New Jersey, Maine and Vermont, there is no legalized Medical Aid in Dying or Physician-Assisted Suicide in Connecticut. In very exceptional cases, patients with overwhelming symptomatology can be managed with a trial of palliative sedation, (aka terminal sedation), under the guidance of the palliative care team. This may require ICU admission.

3. Hospice

Patients qualify for hospice if a physician certifies that the patient has less than six months to live if the disease runs its normal course. Patients do not have to be "comfort care" or even DNR/DNI to sign onto the hospice benefit. It is expected that the patient declines additional curative treatment for their index diagnosis for which they enroll in hospice. (A hospice patient with metastatic lung cancer would typically not be eligible to receive chemotherapy or immunotherapy for their cancer diagnosis, but could still get treatments for COPD, diabetes, hypertension etc. paid for under the hospice benefit). It is critical to understand that most hospice services are provided in the home. Home hospice patients generally have 24/7 access to medical professionals (via phone), but typically, they only receive a few hours per week of in-home care. If a patient and/or their family is not able to provide for routine ADL's, they need to arrange for additional caretaker assistance, often at their own expense. The Hospice benefit does provide for respite care for families, generally for a few days at a time. Patients can generally only be admitted to an inpatient hospice bed in the hospital or at Connecticut Hospice (GIP) if they have symptoms that cannot be managed by home hospice. There is a free-standing hospice in Branford, on Long Island Sound, about five miles from YNHH; The Connecticut Hospice was the first Hospice in the country. <https://www.hospice.com>

If the patient is currently on hospice care or appropriate for hospice care, the Care Coordinator (CC) should be contacted to meet with the patient and/ or family to discuss (re) admission to home hospice or inpatient hospice in lieu of a hospitalization. If the patient and/or family prefer comfort care at home the CC will work with the family to arrange the services. In the state of Connecticut, hospice care may be also provided in a skilled nursing facility and the CC can help to arrange these services, but the hospice benefit does not pay for the nursing home bed. The patient can be admitted to the hospital for comfort care if no other option is available; it is also not uncommon to admit a patient to ED Observation or Internal Medicine Observation to await a hospice bed.

4. EMS/Deaths in the ED.

In cases where the patient has received adequate ACLS in the field without ROSC or there are obvious signs of death, EMS may call medical control ("the red phone") to request permission to terminate resuscitative measures. If there is a declaration of death in the field, EMS will not transport the patient to the hospital, as they are not credentialed to transport dead bodies.

If patients receive full ACLS measures in the field/ en route to the hospital and arrive without ROSC, it may be appropriate to pronounce them DOA. A provider with bedside ultrasound can assist by confirming the absence of cardiac activity. It is NOT ethically appropriate to perform procedures or allow residents to perform procedures on the newly dead, so if the patient has had a prolonged downtime and has received full ACLS measures prior to arrival, it may be appropriate to discontinue resuscitative efforts shortly after arrival to the ED. For deaths in the ED, the Office of the Connecticut Medical Examiner must be notified [\(860\)679-3980](tel:(860)679-3980). After a discussion with the ME, the ME will choose to investigate deaths in which there is a concern for substance use, suicide, murder or accidents. If they accept the case, the body will be sent up to Farmington,

which is about an hour north of New Haven, and you can inform family that an autopsy will likely be done up in Farmington by the ME office (exceptions are occasionally made due to religious or other family preference, but this cannot be guaranteed). If the ME declines to take the case, families can request an autopsy from YNHH Anatomic Pathology. Family members only need call the funeral home of their choice as soon as possible and the funeral home will make all arrangements, regardless of whether there is an ME investigation, a YNHH autopsy or neither.

Death notifications to family are best done in person. If family is not in the ED, it is best to have social work or chaplain notify family that their family member was brought to the hospital in critical condition and that the family should come to the hospital. If family is not able to come to the hospital in a timely fashion, phone notification may be necessary. Regardless of whether in person or phone notification, it is expected that the attending physician supervise residents, especially junior residents, as death disclosure should be considered a procedure. Once family arrives in the ED, it is recommended that the ED providers disclose the death with the assistance of social work or chaplain representative. At York Street, there is a bereavement room, where family members can view and spend time with the deceased (except in some criminal cases). Nurses and techs will generally prepare the body and move them to the bereavement room and social work or the chaplain will often accompany family and stay with them while they visit after death.

The patient's primary medical provider, Chaplain or the Department of Social Work are all available for consultative service and assistance. Patients will be admitted to a medical unit with the inpatient team being made aware of the implementation of comfort care. At the discretion of the attending Emergency Physician, other treatments may be concomitantly administered (ex—IV fluids, antibiotics).

In patients with DNR status who have a terminal illness or condition, the option of comfort care may be offered by the attending Emergency Physician. Comfort care is defined as medical care intended to provide relief from pain and discomfort, such as pain control drugs, oxygen, or scopolamine patches to decrease secretions. The decision to initiate comfort care can be made by the Attending Emergency Physician in concordance with the agreement of the patient or surrogate decision maker listed above.

The hospice service may be contacted to assist implementation. Assistance can also be obtained from the Chaplain's Office, the patient's primary medical provider, or the Department of Social Work. Patients will be admitted to a medical ward with the inpatient team being made aware of the implementation of comfort care. At the discretion of the attending Emergency Physician, other treatments may be concomitantly administered (ex—IV fluids, antibiotics).

3. DECEDENT AFFAIRS

A patient may be pronounced as deceased by either an attending physician or resident physician. Upon the pronouncement of a patient's death, the physician shall notify the family immediately. Notification shall be documented in the medical record. If the physician is unable to contact a family member, s/he shall enlist the assistance of social work, the patient's primary medical provider, or an appropriate law enforcement agency to locate and notify the family members to contact Yale New Haven Hospital.

For all patient deaths, in addition to the standard Nursing and Physician procedures, the following will be performed

1. Contact the Patient Relations/Clinical Advisor
2. Contact Religious Ministries
3. Contact the Patients Primary Medical Provider
4. Contact a Social Worker

For all patient deaths, the following completed paperwork must accompany the body to the morgue:

1. Death Certificate
2. Hospital Report of Death Form
3. New England Organ Bank Referral Form
4. Decedent Affairs Tracking Form
5. Medical Record
6. Division Checklist
7. Autopsy Permission Form
8. Medical Examiner Form

Physicians are responsible for completion of the Medical Examiner form in the medical record, and must contact the Medical Examiner for the following circumstances:

1. Accident, Homicide, or Suicide—including but not limited to, deaths from physical, chemical, thermal, electrical, or radiational injury.
2. Poisoning, drug abuse, or addiction.
3. Criminal abortion—whether apparently self-induced or not.
4. Disease which might constitute a threat to public health
5. Disease resulting from employment
6. Sudden infant death syndrome
7. Deaths occurring suddenly and unexpectedly, not caused by a readily recognized disease, and including deaths upon

arrival (DOA) or within 24 hours of admission to the hospital.

8. Deaths occurring under anesthesia, following transfusion, or during therapeutic or diagnostic procedures.

In any instance in which death results from any of the above categories, such a death must be reported to the Office of the Chief Medical Examiner regardless of the length of time between the event and death. If physicians are unsure about whether or not a death is reportable, the Office of the Chief Medical Examiner should be contacted to report the death.

The reporting physician will complete sections on the signs and symptoms upon presentation, course in the hospital, and operations and procedures section on the Medical Examiner form. Two copies of the Report will be made: one for the patient's record and one for the Assistant Medical Examiner.

If a death comes under the jurisdiction of the Medical Examiner's Office and the family or surrogate decision maker wishes to donate tissues or organs, prior approval must be obtained from the on-call pathologist in the Office of the Chief Medical Examiner. The Eye Bank and procurement organizations are familiar with this protocol.

If a death comes under the jurisdiction of the Medical Examiner's Office and the family or surrogate decision maker wishes to donate tissues or organs, prior approval must be obtained from the on-call pathologist in the Office of the Chief Medical Examiner. The Eye Bank and procurement organizations are familiar with this protocol.

4. BRAIN DEATH EVALUATION AND DECLARATION

The declaration of brain death will not be performed in the Emergency Department. Medications may be administered in the Emergency Department in order to facilitate the process of declaration once the patients leave the Emergency Department. However, the patient should always be transferred to an Intensive Care Unit (ICU) prior to this declaration.

5. TERMINAL EXTRICATION

Terminal extubations will not be performed in the Emergency Department under any circumstances. The patient should be transferred to an ICU in order to have this performed.

Death Certificates are completed by Pronouncing Physician. 2 Page Tip Sheet:



6. DEATH CERTIFICATES

On February 28, 2022, the remainder of YNHHS went live on the electronic death registration system.

Recommend every provider who certifies deaths, however infrequently, register if they haven't already done so. Please be attentive to the RL reports that will be entered by YNHH Morgue. The direct link: <https://ct-vitals.ct.gov/production/Logon.aspx> and instruct to click "New User Enrollment to self enroll"

This screenshot shows the 'New User Enrollment' page for the State of Connecticut - Department of Public Health, CT-VITALS. The page includes fields for Facility/Office (Yale-New Haven Health - York St. Campus), medical certification (Yes), event types (Death), name and contact information (First Name, Middle Name, Last Name, Suffix, Title, Title Other, Email, Phone Number), address (Street Number, Pre Directional, Street Name, Post Directional, Apt #, Suite #, City, State, Country, Zip Code), additional information, and an affirmation checkbox. At the bottom are 'Save' and 'Cancel' buttons.

YNHH SRC ED Need to Know Sheet

2024

Communications:

- ED Medical Director, Reinier Van Tonder (475-209-6336) or Reinier.vantonder@yale.edu
- ED Charge nurse direct line 203-789-6001.
- We use Mobile Heartbeat (MHB) Communication system at YNNH SRC ED. Please sign into the dynamic role for your ED assignment.
- Other Helpful numbers:
 - ED Communication center 789- 3464
 - Main ED fax 203-789-3600
 - Y Access at 203-688 4788
 - IT call HELP desk ext. 688-HELP (4357)
- Many important phone numbers can be found in MHB directory under contacts>directory> type “SRC-“
- Similar to YSC, we use ONECall for the call schedules. Accessible from Epic Menu.
- We have an excellent resource for follow up of patients being discharged from the ED. Deb Schwartz RN, she can be reached through “pt follow-up request” in the EPIC discharge navigator.
- Transfers to YNHH YSC for direct admission to surgical subspecialties go through Y Access. YAccess is used for all trauma transfers to YSC, Intracranial Hemorrhage (ICH) alert (non-traumatic) and Stroke code activations at SRC. Transfers from SRC ED to YSC ED other than trauma/stroke/ICH do not need to go through Y Access, just call YSC A side attending listed in ONECall, Mobile Heartbeat or 688-2222 and ask for A side attending. Pediatric transfers call YCH ED directly and speak to the attending.

Cardiology

- For Cardiac Cath lab activation for a STEMI call the communications center (789-3464) and tell them to activate “SRC ED Cath Lab Activation”. It is important to be specific so the page to the team can go out correctly. The cath lab is only open during normal business hours 8am to 5pm during the week and is not open on weekends or holidays. Y access can be used to contact the interventional cardiologist on call for SRC. During off hours, the YSC cath lab can be activated from the communication center, AMR contacted for a STAT emergent transfer by the charge RN and the YSC interventionist contacted through Y-Access.
- The Cardiology consult attending/fellow (use ONECall) should be first point of contact for non-STEMI cardiology emergencies (i.e., temporary transvenous pacer, refractory unstable angina/NSTEMI who may require urgent catheterization, cardiac arrest without ST elevation, etc.). Also, if the patient has a private cardiologist, you can contact that group directly and they should admit the patient directly to their service rather than the hospitalist. The Cardiology Consult team covers all patients on SRC with a YMG/YNHH cardiologist or patients without a cardiologist. Patients who have established private cardiologists should have their private physicians consulted if necessary.

YNHH SRC ED Stroke Process

- Stroke team activation is called by activating a “stroke code” (goals are 10 minutes to rolling to CT, 25 minutes to CT completion, 45 minutes to CT read and 60 minutes to TNK). Direct ambulance arrival to CT process in place, similar to YSC -The B side attending responds to Triage, order the Stroke CT/CTA per orders panel/pathway and call Y-access to consult Tele-stroke on arrival.
 - The Tele-stroke monitor will be brought to the room of every suspected stroke, which presents within the 24-hour window.
 - A stroke code can be activated by ED nurse or ED attending.
 - If the ED attending or nurse elects to activate a “stroke code” they will place a call to the ED Communications Center (789-3464) to page a “stroke code” in the SRC ED.
- If there are no contraindications to Intravenous contrast, CTA Head and Neck will become the default imaging study in a “stroke code”. A stroke code does not require a creatinine for CTA Head and Neck to be performed. Radiology is responsible for reviewing the noncontrast head CT to determine if a finding negates the need for the CTA.
 - ED attending will call stroke attending through Y-Access as soon as CT orders are placed. The Stroke Physician should see the patient via the Tele-stroke equipment once you have spoken with the patient.
- Please use the “ED Stroke Alert” order or use preferable use the Stroke Pathway set to make sure all appropriate orders are placed.
- All patients receiving TNK get admitted to the MICU as an acute stroke. TNK administration requires a measured weight performed on the stretcher going to or from CT. To order TNK you will need enter the order in EPIC.

SRC ED Stroke Codes – Provider Tips

For patients presenting with a suspected stroke / TIA within 24 hours of “last known well” (LKW) a stroke code should be activated and considered for the following:

EVALUATION

- For suspected ischemic stroke: IV thrombolysis (0 to 4.5 hours from LKW)
- For suspected ischemic stroke with a large vessel occlusion: a neuro-interventional procedure (0 to 24 hours from LKW)
-

For an ICH/SAH; blood pressure management and transfer to YSC, Activate ICH alert through Y-access.

- NOTE: For patients presenting with transient symptoms outside the 12-hour window, they may be undergo a prompt evaluation by the ED provider who may defer calling a stroke code and may request a neurologic consult.
- It is at the discretion of the treating provider and / or the stroke team to call a stroke code if LKW time is unknown (i.e. a "wake-up" stroke)
- Cancelling stroke codes only requires a call to the hospital operator to "cancel the stroke code" when deferring CT imaging.
- If deciding to "end the code" for any other reason, just announce "code ended" to the team and the nurse will document the time the code was ended in the ED stroke narrator.

ORDER-SET USE:

- The ED 'Stroke Code Order Set' must be used for stroke codes OR the Pathway.
- Following the CT scan order, the SRC provider calls Y Access for tele-stroke consult (staff bring the monitor to the bedside) If a stroke / TIA patient is to be admitted, they must be admitted to stroke designated floors (V3W/V3N & V5E)

METRICS: The following Joint Commission metrics are tracked for each stroke code:

- 'Door to' provider evaluation < 15" (stretch goal <10")
- 'Door to' CT scan completed within <25" (stretch goal <15")
- 'Door to' CT scan interpreted within <45" (stretch goal <30")
- 'Door to lab results' within < 45" of ED presentation (tracking POCT glucose & PT/INR for patients on anticoagulation)
- 'Door to' administration of IV TNK within <60" (stretch goal <45" – if stretch goal is met, all team members are awarded a brain pin)
- 'Door-In-Door-Out' for transferring ischemic patients to YNHH within 90" of ED presentation
- All suspected stroke / TIA patients must have an RN performed aspiration risk assessment (Yale Swallow Protocol) before ANY PO fluids / meds / food

REQUIRED DOCUMENTATION

- An NIHSS score (with all 11 elements)
- If the decision is made to treat, documentation of the discussion with the patient/family re: risks, benefits, and option for no treatment
- If the patient is not eligible for treatment, documentation of the reason why
- Use the EPIC stroke Smart-block in the MDM section of your note

Emergency Surgical Response

- PURPOSE: Emergency Surgical Response System has been developed to provide a mechanism to rapidly mobilize surgical providers to assist Emergency Medicine providers at the St. Raphael Campus (SRC) Emergency Department in caring for patients in extremis with suspected or confirmed traumatic injuries or other acute general surgical diseases. Expedited identification of the appropriate surgical providers and triage can avoid delays in definitive care. These guidelines should facilitate attending to attending level communication for critically ill patients.
- ACTIVATION CRITERIA:
 - Persistent hemodynamic instability
 - Systolic blood pressure < 90mm Hg
 - Tachycardia >140
 - Penetrating injury to the head, neck, chest, or abdomen, including wounds to the buttocks
 - Penetrating extremity trauma proximal to knees or elbows with significant hemorrhage
 - Patients with open body cavity injuries or with evisceration of internal organs
 - Concern for need of surgical airway
 - Patient's condition warranting immediate surgical evaluation
 - At the discretion of the Emergency Medicine Attending
- EXPECTATIONS
 - A discussion with the appropriate on-call surgical attending should be immediately initiated by the Emergency Medicine attending (or their designee if not possible).
 - In cases of confirmed or suspected traumatic injuries only, the appropriate Surgical provider is the York Street Campus (YSC) on-call Trauma Attending. They should be reached via the Y Access system and determine appropriate patient disposition.
 - For general surgery issues, other than trauma, the appropriate surgical provider is the on-call General Surgery Attending for SRC
 - The chief resident and mid-level resident from the on-call surgical service will respond.
 - The SRC on-call general surgeon should be immediately notified to response regardless of indication for activation (both trauma and non-traumatic issues).

- MODIFIED SURGICAL RESPONSE
 - This designation has been retired
- TRIAGE OF INJURED PATIENTS NOT MEETING EMERGENCY SURGICAL RESPONSE
- CRITERIA
 - The emergency medicine providers will communicate with the YSC on-call Trauma Attending. They should be reached via the Y Access system to discuss appropriate patient disposition.
 - The General Surgery resident on-call can be notified if further assistance is needed.
 - Identification of multi-system trauma patients and those patients with traumatic brain injury mandates transfer to YSC for management.
 - Additional criteria which may lead to transfer to YSC include:
 - Respiratory distress, need for intubation, or field intubation prior to arrival
 - Altered mental status with signs of trauma— Glasgow Coma Scale < 8
 - Paraplegia or quadriplegia
 - Any question of spinal cord injury other than Paraplegia or quadriplegia
 - Injuries above and below the diaphragm, e.g. Clavicle and femur fracture
 - Ejection from a moving vehicle-motorized
 - Falls from a height greater than 20 feet
 - GCS >8 but < 13 with signs of trauma
 - Amputation of limb proximal to wrist or ankle
 - Severe hypothermia in a trauma patient
 - Patients on anti-coagulation therapy with falls from other than standing position
 - Penetrating extremity trauma distal to elbow or knee but proximal to hands or feet
- PATIENT DISPOSITION
 - If the traumatically injured patient requires emergency operative management and cannot be safely transferred to the YSC, the SRC On-call general surgeon will be responsible for taking the patient to the operating room at SRC.
 - The SRC Surgical Intensive Care Unit attending may be mobilized at the discretion of the SRC on-call surgical attending for assistance in the operating room if needed.
 - If after evaluation at SRC a patient has only a single system injury, that patient may be managed at SRC by the on-call general surgeon. Those patients requiring admission may be admitted to general surgery, appropriate surgical specialty, or internal medicine as deemed appropriate by the on-call attending general surgeon.

Care of the Ob/Gyn Patient at St. Raphael Campus ED

- An Ob/Gyn Response System has been developed to provide a mechanism to expeditiously communicate with Ob/Gyn providers to assist Emergency Medicine providers at the St. Raphael Campus (SRC) Emergency Department in caring for patients with obstetric and gynecologic problems and emergencies. This document is further separated to clarify the process for I) Obstetric and II) Gynecologic consults and emergencies.
- EMERGENCY OB ACTIVATION CRITERIA
 - Severe range BP; systolic blood pressure >160 mmHg or diastolic blood pressure >110 mmHg (most common obstetric emergency)
 - Persistent hemodynamic instability
 - SBP< 90mmHg or Tachycardia>140 bpm
 - Obstetric hemorrhage that is greater than 1000 cc and is not abating with standard medical therapy and interventions
 - Eclampsia or seizure activity
 - Impending preterm birth <35 weeks of gestation
 - Impending breech birth
 - At the discretion of the Emergency Medicine Attending
- EXPECTATIONS
 - In the case of an obstetric emergency involving a birth or impending birth, a Maternal Newborn Alert should be called overhead through the 155 system. It will sound as follows:
 - Medical Alert: Maternal Newborn Alert: SRC ED Rm #.
 - The SRC ED will activate any additional resources as needed and per discussion with the responding OB and NNICU teams.
 - If a birth is anticipated, the YSC Neonatal Resuscitation Team will mobilize in response to Maternal Newborn Alert and come to SRC ED by security vehicle. The Yale On Call Attending (YOCA) and YSC L&B Charge RN will determine which obstetrician and OB RN will respond to SRC via security vehicle. SRC Respiratory Therapy will mobilize to SRC ED.
 - In the event of an obstetric emergency meeting OB Activation Criteria above, the EM attending (or their designee) should also call Y-Access to speak with the Yale On-Call Obstetric Attending (YOCA).
 - The YOCA will provide immediate consultation for management and will aid in determining appropriate patient disposition, as well as the need for the OB Attending, resident and nurse to join the OB Response to SRC ED.
 - If necessary, the EM attending may also speak to the NNICU (Neonatal ICU) attending through Y-Access for immediate consultation regarding a newborn.
 - If the obstetric patient requires emergency operative management and cannot be safely transported to YSC, the YOCA will identify the team who will respond and will activate this response.
 - The SRC Surgical Intensive Care Unit and Anesthesia teams may be mobilized at the discretion of the ED and OB team for assistance if needed.
 - In the event of massive hemorrhage, the massive transfusion protocol (MTP) may be activated.
 - Severe range blood pressures are treated per the Clinical Care Pathway (Hypertension (HTN) of Pregnancy)

- PATIENT DISPOSITION
 - For patients in early labor or active labor, the patient should be transported to YSC Labor and Birth via rapid transport (i.e. similar to STEMI transport); the EM attending should discuss with the YOCA whether an OB or NICU provider dispatched from YSC should accompany the patient.
 - For patients imminently or precipitously delivering, Medical Alert: Maternal Newborn Alert should be activated, as described above.
 - For patients with obstetric or medical complications in pregnancy or postpartum, they will generally be stabilized and discharged or stabilized and admitted to Maternal Special Care at YSC.
- IMPORTANT PHONE NUMBERS:
 - Y-ACCESS: 203-688-4788
 - YSC On-Call OB Maternal Fetal Medicine Attending (YOCA): 203-688-2990 YSC On-Call OB Maternal Fetal Medicine Fellow (YOCA): 203-688-2995 YSC Labor and Birth Floor: 203-688-2309
 - YSC OB Chief Resident: 475-246-4394
 - YSC OB Charge Nurse: 203-688-7577
 - SRC ED: 203-789-3464
 - NNICU Code Team APP: 475-246-6587
- GYNECOLOGIC patients (includes non-pregnant and pregnant patients < 16 weeks):
 - While the Yale Gynecology Service will continue to support emergency and consultative services at SRC, consults will be triaged through the YSC GYN Service or the patient's primary gynecologist at YSC via the GYN Pager and triaged by the residents. There will no longer be an on-site GYN resident at SRC.
 - For stable gynecologic consults:
 - The SRC ED may contact YSC/SRC GYN Consult pager: GYN team Mobile Heart Beat 475- 246-5560. ONECall for reference and attending listing.
 - If the patient does not require immediate GYN attention, (this will be determined by SRC ED attending), the patient may be treated by the ED and discharged to appropriate GYN Providers. If the patient does not have a primary OB/GYN provider, the YSC resident will facilitate time sensitive follow-up appointments.
 - If disposition cannot be made over the phone, the patient should be transferred to YSC ED for ongoing management with the in-person GYN Consult service.
 - Critical/Unstable GYN consult (patients that require immediate attention):
 - In the event of unstable GYN patient the SRC ED will activate the SRC CRITICAL GYN Alert.
 - This alert through the MHB paging system will notify the:
 - GYN On-Call Attending
 - Women's Center Clinic Attending
 - GYN Chief Resident
 - GYN Oncology On-Call Resident 5. Security
 - This alert triggers the following to occur:
 - A GYN Resident and GYN On-call attending will travel urgently to the SRC ED. SRC security transport will be dispatched for emergent transport of resident, +/- attending. It will be at West Pavilion Pediatric ED bay available for transport.
 - In the event that the GYN On-call attending is urgently occupied, the Women's Center Clinic Attending will then serve as back-up or determine immediate staffing.
- IMPORTANT PHONE NUMBERS:
 - GYN Resident Pager: MHB 475-246-5560 GYN Chief Resident: MHB 475-247-3285 GYN On-Call Attending: MHB 476-246-5560

Medical Admissions

- Medical Admissions are admitted either to the Floor, Step Down Unit or MICU.
- Please use EPIC "UR" column to facilitate an evaluation by UR who will determine inpatient versus observation status. If you have a disagreement regarding the admission status determined by UR you can request a review by their physician supervisor.
- You have to complete an admit order requesting an inpatient or observation unit bed.
- Patients eligible for YSC ED Chest Pain Center can be transferred at any time of the day for observation and stress testing if there is a bed available. Criteria and process for CPC are available in charge nurse resource book and in online policy manual. Please consider CPC for all low to moderate risk patient's being admitted for evaluation of ACS. Reference the Chest Pain Pathway for direction.
- Pediatrics admissions require transfer to Children's Hospital through Y access if they are a direct admit and not going through pediatric ED. Most will be transferred ED to ED.
- Medical Oncology Admissions at SRC. There are no oncology units at SRC, so most patients will require transfer to York Street if being admitted to an oncology service

Admissions Surgical:

- Default to the ED on call panel unless the patient has a previous relationship with a surgeon or there is a specific preference by PCP/patient.
- If the patient has been recently discharge from a private surgeon, you can locate the resident that is covering that service by looking at the resident on call schedule in the SMART WEB directory and call the corresponding service (Red Vascular, White, Blue, Yellow, Thoracic). The communication center can help you get the correct service if you know the name of the general surgery attending. You may also find the service contact number in ONeCall.

Admissions ICU:

- For initial contact use MHB dynamic role or ONeCall to contact the SRC Pulmonary/Intensivist Attending directly if you want to admit to the ICU.
- If you are unclear on disposition of Acute (ICU) v. Subacute(stepdown) discuss the case with the intensivist to determine best patient disposition and/or use MICU/SDU admission guidelines.
- Subacute admissions require a discussion with the SDU hospitalist. (See "ED to MICU SDU Operational Guidelines" located under ED policies. Link to ED policies can be found "Tools" tab in EPIC and then "policy manuals")
- Hospitalists and Gen Med attendings cannot admit to the ICU.
- If an ICU patient is in ED for greater than 4 hours, please follow ED/MICU Co-Management guideline found online in policy manuals.

Airway Management:

- ED is responsible for all airways; anesthesia is in house if you need a backup.
- Airway carts are located in both Resuscitation Rooms-please familiarize yourself with the cart.
- Glidescopes with adult and pediatric handles are in both resuscitation rooms.
- See the policy for the Threatened Airway Response Team ("TART").

Ultrasound

- Dr. van Tonder is the SRC ED Ultrasound Contact.
- Same as Qpath system ar YSC.
- Please order the ED US study in EPIC, this will populate the demographic information on the US machine.
- We have three machines in the Department with one located in A, B and C areas. Images are uploaded to Qpath for documentation on the desktop workstations.

Psychiatry Consults

- Mental Health patients without a clear medical issue are sent directly to the Behavioral Care Unit (BCU). All these patients are seen by the ED attending to ensure medical clearance. The medical clearance is done in the BCU unless the ED attending feels the patient needs resources not available in the BCU (IV, cardiac monitor etc.). Enter order "ED Medical Psych Clearance" in EPIC for psychiatric evaluation.
- A mental health social worker and psychiatric physician coverage varies day to day.
- Psychiatry patients are monitored after medical clearance in the Behavioral Care area. Psychiatry is responsible for holding orders and psychiatric medications (except for acute need for sedation). Medical management is still under direction of the ED physician. At SRC, Psychiatry is only a consult service.

Other Consults

- Orthopedics: contact on call PA through ONeCall or SmartWeb
 - Fragility Hip Fracture service: Protocol for expedited hip fracture evaluation. You can ask ED communications or page directly in Smartweb. To page in Smartweb go to paging tab and type in hip under "last name". Include location and MR# in page to "Hip Fracture Alert YNHH". The Anesthesia block service needs a separate page if the patient is eligible for femoral nerve block. Inclusions for hip femoral nerve block include all of the following: 1) Patient has an isolated hip fracture, 2) Patient is hemodynamically stable, 3) Patient is not on anti-coagulation medication (aspirin excluded), 4) Patient is capable of giving consent for the SSFNB or a consenting individual is available or accessible. ED Provider can perform block. Admission is to the Orthopedic Team listed in ONeCall.
- Neurosurgery: For non-traumatic neurosurgery cases you can call Neurosurgery on call for SRC in ONeCall but they may elect to have patient transferred to York Street. We have Spine surgery at SRC.
- Neurology: consult service contact via ONeCALL. There is no Neurology admitting service at SRC.
- Urology: contact through MHB under their dynamic role or have the unit clerk page them. MHB is the fastest route.
- Vascular: contact Vascular surgery (red surgery) resident through 3464 or through ONeCall. After hours this is the in-house surgical resident.
- GI: Establish if they have a GI person previously. A GI Fellow is available for patients without GI physician or if there is an emergent need for GI consult and the patient's GI attending cannot be reached after two calls and 30 minutes has elapsed. GI is a consult service only and does not admit.
- Oral Maxillo Facial Surgery (OMFS): Will do facial laceration repairs, orbital fractures, jaw fractures, dental abscesses, in addition to oral surgery consults. However, there is a facial trauma call panel that should be followed that is on ONeCall and rotates between OMFS, plastics and ENT.

- ENT: Call on call resident usually based at YSC.
- Ophthalmology: Page through ONeCall. Patients who you deem stable for discharge can be sent to Temple Medical Center for evaluation after discussion with Ophthalmology.
- There is a foot and ankle panel (ortho and podiatry) in ONeCall that should be followed for ankle and foot fractures including open fractures. Orthopedics is on call on odd days. Podiatry is also available for other foot issues. You can also use ONeCall.
- Thoracic Surgery: Contact Thoracic surgery on call. CVT surgery resident on call on York Street. Post op patients contact attending surgeon directly. If you have an acute thoracic dissection call "Thoracic Emergencies" attending listed in ONeCall.
- Hand Surgery: Shared call alternate weeks between plastic surgery and ortho hand use call panel.
- Plastic Surgery: Contact resident based on YSC.
- Cardiology: as noted above.
- Renal: establish which group they use (there are two in town) and page group through 3464 or ONeCall. Can usually identify group from patient or EPIC notes.
If only need is for Dialysis – can Place in ED observation and call attending to arrange dialysis.
- Pediatrics: All admits need to be transferred to Yale Children's. contact Y Access for pediatric admissions. If you have questions about possible transfers call the Children's ED to discuss with the attending. Transfers to Children Hospital ED can be done by talking directly to the Pediatric ED attending and NOT through Y-Access. The preferred method for transfer to pediatric ED is by ambulance. (see transfer policy)
- Burns: Transfer to Bridgeport, contact Bridgeport Burn Fellow.
- Obstetrics --Please see the Emergency Obstetrics Response Guidelines in the Addendum.

Radiology

- Reading room extension is 6097 or 3912 (reading room after hours). Radiology is also available through "available" contact on MHB phone. Neurology reading room is 200-3181 if you need to get an MRI order or reading.
- CT tech extension 3858 or ext. 3959 to expedite a study.
- Any emergent case that needs to bump all others call the reading room or CT directly.
- Abdominal CT- The majority of CT Abdomen/Pelvis will be done with IV contrast only. Indications for PO contrast include very thin patients, patients unable to get IV contrast, recent bowel surgery, fistula or Crohn's disease, and pediatric patients. If PO is contrast ordered, the contrast must be brought over from radiology. Do NOT place CT orders on women of childbearing age until there is a pregnancy test resulted in the computer.
- Ultrasound is in house 24 hours per day.
- There is an attending radiologist available at all times if there is a question of a reading.

Utilization review

- Please make every effort to have admissions reviewed by UR for determination of OBS v. Inpatient before you place the admissions. The criteria are not intuitive in many situations and there is significant financial impact for the hospital if not done accurately. Additional proper designation allows the best use of limited resources. Having patient status changed after the fact effects system efficiency and can affect LOS in ED.
- UR should be rounding with you frequently but if you need a prompt decision call them on Mobile Heartbeat. Remember to use the "CM/UR" column on your track board to facilitate an earlier evaluation.
- UR may change an admit to observation if the patient does not qualify as an inpatient after speaking with the ED attending.

Care Management

- Contact CM for patients that need placement from the ED, VNA assistance, or additional resources when they return to assisted living.
- Care management is listed in the MHB directory.
- Care Management is available from 8AM- 8PM. If you have a patient after 8PM who does not meet admission criteria but is unable to be safely discharged, they will need to be admitted. Please have a discussion with UR to determine type of admission.
- If patients are being discharged home and need Care Management Assistance after discharge the please send an "in basket" message to "ED Care Management" Pool.

Transfers

- Contact Y Access for transfers to York Street Campus. Populations admitted to only York St. Campus include pediatrics, multisystem trauma, sickle cell, pulmonary HTN, transplant, patients needing a neuro ICU (other than CVA), OB/Gyn, and oncology.
- Get the admit order to the correct work queue in EPIC.
- When you are requesting a patient to go to York St. Campus, a call is placed to the Y- Access line 1-888-964-4233.
- After the transfer is confirmed, the Y-Access staff assigns the bed and this goes to the admitting clerks, providing them with the patients details and the bed the patient is assigned to.

EMS

- EMS should leave a run sheet on the chart, sometimes these are faxed to the communications office and can be found there. Run sheets and paperwork from ECF will be transferred into the media tab.
- EMS radio notifications to SRC ED are answered by the charge nurse. All medical control is done by YSC ED. There should be no diversion of ambulance by SRC charge nurse or attending unless there is an error in application of state trauma guidelines. If there is a question of need to be at YSC, the EMS unit should speak to medical control on YSC.
- All patient transfers back to nursing homes require a W 10 form (found in EPIC) to be completed by the physician summarizing findings and any medications that need to be ordered.
- Occasionally we must sign a form so EMS can replenish their use of narcotics they used for a patient, which is then given to the pharmacy.

SRC Float in Triage (“FIT”)-Description of Responsibilities and Process

- Primary Goals-
 - Increase patient access to care by:
 - Assessing, treating and dispositioning lower acuity patients at triage (including “walking well” r/o COVID)
 - Assessing higher acuity patients in triage, writing initial orders on those patients, completing a brief medical exam and placing a FIT note in the chart
 - Increase our capacity to provide care for patients during time of high flow, census, and boarding
 - Decrease length of stay and LWBS in the Emergency Department
- Team & Responsibilities-
 - FIT Team-
 - The FIT team is made up of the Triage Nurse, the Express Care Nurse, the Triage Tech, the Express Care Tech, the FIT Physician and the Express Care APP.
 - Roles, Responsibilities, and Communication-
 - Physician and Express Care APP - The FIT physician (float shift physician), will sit in triage and see every triage patient that comes into walk-in triage. The FIT physician's role is to decide, for every triage patient, whether the patient should (1) go the main ED, (2) go to express care, or (3) be discharged from triage.
 - For patients going to the main ED, the physician will open the “Triage” tab for the patient in Epic and click the “FIRST PROVIDER TIME” button. The physician will then open a “PIT- TRIAGE NOTE”, also found under the triage tab, and use the dot phrase “.SRCTRIAGEDOC” to document the encounter. This is a very brief note. The physician will then enter orders on the patient. The FIT physician does not sign up for these patients unless they plan on keeping them as the primary physician when the patient is placed in a main ED room.
 - For patients going to Express Care, the physician will sign-up for the patient and place any necessary orders. The Express Care APP will sign up for the patient once the patient is placed in the Express Care area and see the patient. The patient will have a physician's name assigned, and will not be red on the board, but the APP should still sign up and manage the patient. The process for the Express Care APP doesn't change from the usual way they have been seeing patients in Express care, except for the fact that the APP is staffing the patient with the FIT Physician. The FIT Physician will do an attestation on the chart. If the patient goes back to the waiting room from triage because Express Care is full, the FIT physician will do a medical screening exam note as well.
 - For patients being discharged from triage, the physician will sign up for the patient, complete a normal full chart on the patient and do the usual discharge paperwork.
 - Occasionally, a patient will be sent to the waiting room from ambulance triage. When possible, the physician should call that patient back to triage 2 when available, do a brief screening exam, and follow the process described above for documentation, entering orders etc.
 - Important: As workups are completed on patients that are still in the waiting room, the FIT physician should be reviewing the patient's results, and pull the patient back to either triage or express care to discharge the patient when appropriate.
 - Triage Nurse - The Triage Nurse's responsibility is to triage patients as per the usual process.
 - For patients going to the main ED or Express Care, then normal process should be followed.
 - For patients being discharged from triage, they must be roomed in “A1 Hall disaster” in Epic. They must be placed in a room on the board in order to complete a discharge, as well as notify Registration to complete their intake prior to leaving. The patient can be physically placed in a chair outside the triage room or in Triage 2 to await registration and discharge paperwork. The discharge can be performed by either the Triage RN, Express Care RN, or A side lead.
 - Express Care Nurse / A side Lead (when available) - During FIT hours, the Triage RN, Express Care RN, and A side lead should communicate regularly so that Express Care/A lead can assist with performing patient discharges directly from triage so that the Triage RN may prioritize the triaging of new arrival patients, preventing a back-up at triage. They may also be utilized to assist with medication orders from the FIT provider and the escorting of patients back to the care areas.

Triage Tech - The Triage Tech will have the same responsibilities as during non-FIT hours and will be primarily responsible for starting the lab orders (blood, urine, & i-Stat) entered by the FIT physician. EKGs for waiting room patients will take priority. They will primarily work out of Triage 2. If unavailable to escort patients back to care areas, this should be delegated to Express Care Tech/RN or ED Greeter (when available).

Express Care Tech - The Express Care Tech will have the same responsibilities as during non-FIT hours and can be delegated to assist with walking main ED patients back to rooms. Can assist with orders in the WR, if needed.

Team Huddle - It is a good practice to huddle at the beginning of the FIT shift (and with any staff changes throughout the day) to promote communication and clarification regarding the roles and responsibilities on a given day. There should remain flexibility as to each team member's responsibilities depending on staffing, acuity, and the type of patients presenting on that shift.

Process & General Information

When a patient enters the ED, the patient will be "arrived" as usual and will then be called to triage. The triage nurse will triage the patient as per usual process.

While the patient is being triaged, the physician will listen to the intake process and, at appropriate times, so as to not disrupt the flow, will ask further questions and do the screening exam.

The triage process will proceed as normal if the FIT physician is not present. Because of the ebbs and flow in the emergency department, if the FIT physician is not able to be present for the triage of a patient, the physician should call the patient back in to one of the triage rooms for a medical screening exam when available.

For the FIT Physician, it is important to try to limit what you attempt to discharge in triage to things you can truly discharge without the patient staying in triage room for an extended period. For the patients that you see in triage and disposition, a full note must be done. The FIT physician does sign up for these patients.

Higher acuity patients will go directly to a bed when we are pulling until full or to the waiting room if there are no rooms available in the ED. Any orders the FIT physician has entered on patients not directly roomed will be performed on patients while they are in the waiting room. Once the patient is roomed, one of the providers in the main ED will then pick up/sign up for the patient and start a full note on the patient, per usual process.

If the patient leaves prior to being roomed, or completing treatment after having been seen by the FIT provider, the current LWBS process should be followed to ensure follow-up on any pending orders, however, these patients should be dispositioned as "ELOPED" in Epic since they were seen by a provider.

Any patient that is sent to Express Care by the FIT physician will be seen by the APP in Express Care, and the FIT will be responsible for signing up for the patient and doing an attestation.

In general, the FIT Physician should not be ordering IV or IM medications or fluids for patients in the waiting room. If a patient's condition necessitates higher level interventions, please discuss with the charge nurse so that the patient can be placed in the main ED expeditiously. The FIT physician should also communicate directly with one of the physicians in the main ED the nature of the patient being brought directly back if the patient is at risk for acute decompensation.

For patient's that are discharged from triage, the patient must be registered prior to leaving the ED. We should have the patient be seen by registration in a chair outside triage. If they are present, you can request to take them to the registration desk in the WR to complete registration. Please communicate with the Registration staff assigned to the A side for assistance in expediting this process.

YSM EM Leader Goals & Incentives Compensation

Guideline

Responsible Office: YSM Department of EM, Office of the Chair
Responsible Official: YSM Chair of Emergency Medicine

Document Administrator: Bonnie Lemelin

Date of Origin:

Approval Date

Effective Date: July 1, 2024

Scope

This guideline applies to all Yale School of Medicine (YSM) emergency medicine (EM) leaders including Vice Chairs and Section Chiefs with an incentive payment as a component of their total compensation.

Reason for the Guideline

To advance its missions and have the greatest impact, YSM and the department of emergency medicine (Yale EM) articulates its vision and develops strategic priorities.

Yale EM department leaders play an essential role in developing and realizing the goals of the department. Department objectives are set each year in alignment with the Yale New Haven Health System (YNHHS) and the department Chair's incentive compensation is based on departmental indicators of performance across YSM's core mission areas of education, research, and clinical care, as well as finance and climate and culture.

Similarly, EM departmental leaders are responsible for the success of a department in achieving its goals in the core missions as well as climate and culture and its operational and financial health. To ensure that EM departmental leaders are incentivized fairly and rewarded for this work, each leader will select goals from a set of common metrics developed across the missions using a standardized process.

Effective July 1, 2024, EM leader incentive compensation will be comprised of two distinct additional components. First, departmental leadership roles may include a core/base salary supplement to provide compensation for efforts not compensated elsewhere in the form of clinical commitment reductions, incentive compensation, or other flexibilities. This EM leadership role-specific core/base salary supplement will be developed collaboratively between the Chair and department leader to ensure that total compensation is preserved while distinguishing compensation specific to the leadership role as well as performance in this leadership role. For existing EM leaders, a portion of

this core/base salary supplement may be included within existing base compensation that exceeds industry benchmarks.

Second, EM leader incentive compensation will be comprised of both an individual as well as a leadership-based component. The target incentive component of total compensation will comprise ten to twenty percent of total compensation of faculty leaders. This incentive compensation target and process is outlined in the EM Leader Incentive Procedures document and will include selection of three to four goals from a menu with specific benchmarks for threshold, target, and exceeding performance.

Once established, should any department leader no longer continue in a leadership position, then this core/base salary supplement as well as EM leadership focused incentive compensation would be prorated within a given year.

Definitions – N/A see Departmental Compensation Plan for relevant definitions

Process

- All EM department leaders will select 3-4 annual goals with one related to climate and culture, including diversity, equity, inclusion, and belonging. These goals will be set to measure leading indicators that are measurable within a year but impact on lagging indicators or longitudinal goals of the institution.
- Setting common goals for each mission or area from which EM leaders can select avoids bias in metric determination solely by chairs.
- To establish a common set of departmental goals, the department of EM will:
 - Create a common vocabulary.
 - Choose across a defined set of categories (i.e., climate/culture, education, research, clinical quality and service, and clinical operations and finance).
 - Select goals that are measurable and able to be trended over time.
 - Set goals that are simple enough to manage and track.
 - Enable EM leaders to select goals as part of the annual planning process,
- Goals will be selected and finalized by July of each Fiscal Year and assessed at minimum twice yearly with the Chair.
- Leadership-based incentive compensation will accrue twice yearly at the same time as incentive compensation for all faculty.

References

Version History

The official version of this information will only be maintained in an on-line web format. Any and all printed copies of this material are dated as of the print date. Please make certain to review the material on-line prior to placing reliance on a dated printed version.

Point-of-care Emergency Ultrasound (POCUS)

Rev. June 2024

Policies and Procedures for Use of Point-of-care Ultrasound

Background

Emergency point-of-care ultrasound (POCUS) is routinely performed by Yale Emergency Medicine Faculty, Residents, and Advanced Practice Providers as endorsed by the American College of Emergency Physicians (ACEP), the Society for Academic Emergency Medicine (SAEM), and the American Medical Association (AMA). Training in bedside emergency ultrasound is a required part of residency training through the Residency Review Committee (RRC), as part of the Accreditation Council in Graduate Medical Education (ACGME). When used appropriately, POCUS can rapidly support acute diagnosis and treatment for many emergent or potentially emergent conditions. Effective use of POCUS requires training and ongoing program development and evaluation as use of the tool is user dependent.

As of June 20, 2024, emergency physician privileges and credentialing will be updated to reflect current national training and practice standards across Yale New Haven Hospital (YNHHS) and will include “global” point-of-care ultrasound privileges as a core privilege in emergency medicine. This means that (with the exception of DVT and testicular ultrasound as delineated below) POCUS may be used under the privileges of an attending physician to diagnose or exclude a range of conditions without a required confirmatory study.

This document is intended to explicitly provide clinicians who utilize POCUS in the adult ED at YNHH, to include the York St. Campus, St. Raphael’s Campus, and Shoreline Medical Center) with guidelines for use.

Scope of Point-of-care Emergency Ultrasound

It is important to understand that emergency ultrasound is not intended to replace consultant-performed or interpreted ultrasound. Point-of-care emergency ultrasound is a focused, goal-directed examination that seeks to rapidly rule in or rule out one or more conditions, typically in a binary (yes/no) fashion. This differs from consultant-performed ultrasound (typically performed by a radiologist, cardiologist, or other specialist) that is usually a more comprehensive examination of a single organ system or anatomic area.

Use and Documentation of Point-of-care Emergency Ultrasound

Emergency point-of-care ultrasounds performed in the ED are classified as below:

- Diagnostic
- Procedural
- Educational

Diagnostic Ultrasounds

Diagnostic POCUS examinations are limited, focused examinations that are within the scope of practice of emergency medicine. Core privileges for Emergency Medicine at YNHH include all recognized POCUS applications with the exception of

ultrasound for deep venous thrombosis (DVT) and testicular ultrasound. DVT and testicular ultrasound are special privileges that require fellowship training in ultrasound. Aside from DVT and testicular ultrasound, diagnostic ultrasound includes, but is not necessarily limited to the examinations that are briefly described below regarding typical uses. A more comprehensive description can be found in the ACEP Emergency Ultrasound Imaging Criteria Compendium.¹ The descriptions below are guidelines, POCUS should be used at the discretion of the attending physician based on their professional experience and judgement.

e-FAST

The extended FAST examination is done to rapidly rule-in and rule-out traumatic injury from blunt or penetrating trauma to the abdomen or thorax, specifically significant intraperitoneal bleeding, hemothorax, pneumothorax, and hemopericardium. Images captured should include the hepatorenal, splenorenal, suprapubic, pericardial, both inferior thoracic spaces, and both sides for lung sliding (labeled). FAST examination should be obtained in all modified and full traumas, and other traumas as indicated. Typically a patient with a positive FAST examination should be upgraded to a full trauma to expedite care and imaging. A negative eFAST does not necessarily exclude significant thoracoabdominal trauma and additional imaging should be obtained as clinically indicated.

Focused cardiac ultrasound (ED echo)

Emergency echo cardiography can be used to determine the presence or absence of pericardial effusion, left ventricular dysfunction, significant right ventricular strain, thoracic aortic root dilation, and inferior vena cava diameter. While occasionally other pathology may be grossly apparent (valvular abnormalities or vegetations, chamber size, etc.) these should generally be diagnosed by cardiology performed echocardiography. All pericardial effusions that are moderate or greater should be assessed by cardiology for possibility of tamponade. Images documented should typically include a parasternal long and short axis, and a subxiphoid image for IVC, with apical four chamber obtained if indicated and available. ED echo may be combined with other examinations (eFAST, hypotension, dyspnea).

Limited thoracic ultrasound

Thoracic ultrasound can be used to determine the presence or absence of pneumothorax, alveolar interstitial syndrome (AIS, “b-lines”) indicating pulmonary edema or interstitial lung disease, and pleural effusion. Images obtained should include left and right pleural lines (typically from the anterior superior midclavicular line) and the inferior thoracic spaces over the diaphragm for effusion. Images should be labeled left and right. This exam is often combined with other examinations such as the eFAST or dyspnea exams.

Focused renal and urinary tract ultrasound

¹ <https://www.acep.org/patient-care/policy-statements/Emergency-Ultrasound-Imaging-Criteria-Compendium>

Renal ultrasound may be performed to determine the presence or absence of hydronephrosis (typically from ureteral stone) and may occasionally identify kidney stones or renal cysts. The bladder may be imaged for identification of ureterovesicular junction (UVJ) stones, bladder volume, presence of mass or hemorrhage, and foley placement. Images should include a coronal scan through each kidney, labeled, and the bladder captured in two planes. Care should be taken not to rely only on POCUS for determination of an obstructing renal stone if there is suspicion of infection.

Abdominal aorta

The abdominal aorta may be imaged to determine the presence or absence of abdominal aortic aneurysm (AAA), which would be measured greater than 3cm from outside wall to outside wall. Ideally the aorta should be scanned with images captured in two planes from the celiac axis to the iliac bifurcation. More limited examinations may be used with professional discretion. Occasionally a dissection flap may be seen which is specific for this diagnosis, but POCUS of the abdominal aorta should not be used to exclude dissection.

Focused biliary ultrasound

Ultrasound of the gallbladder may be performed to determine the presence or absence of gallstones, cholecystitis, and common bile duct (CBD) dilation indicating choledocholithiasis. Good images that do not show gallstones, wall thickening, pericholecystic fluid, sonographic Murphy's, or CBD dilation may be used to exclude biliary pathology without further imaging. Markedly positive evidence of cholecystitis should prompt surgical consultation with further imaging obtained at the discretion of the consulting service. The gallbladder should be fully scanned through two planes with images recorded and particular attention to the gallbladder neck, where symptomatic stones may lodge. An attempt should be made to visualize the CBD and measure it (using zoom and color Doppler) from inside wall to inside wall. Liberal confirmatory imaging should be used if there is doubt about the presence of pathology or quality images are not completely obtained.

Limited abdomen ultrasound

The abdomen in general may be imaged to determine the presence of ascites, evidence of bowel obstruction, or evidence of appendicitis. Ascites may be determined without further confirmatory imaging. Clear appendicitis may prompt surgical consultation though further imaging with radiology ultrasound or CT may be needed. Evidence of bowel obstruction will typically require CT imaging.

Pelvic ultrasound

In a pregnant patient POCUS is typically used to confirm the presence, appropriate location, and condition (live) of an intrauterine pregnancy (IUP). IUP can be determined by identifying a yolk sac or fetal pole with an appropriate myometrial mantle to ensure it is not interstitial. If there is low suspicion for heterotopic (i.e. no in vitro fertilization) then this ultrasound can generally be used to exclude an ectopic pregnancy. The uterus should be scanned through entirely and recorded in two planes. If there is a fetal pole (or further along) the fetus

should be dated: crown rump length (CRL) for 12 weeks or less, biparietal diameter (BPD) for over 12 weeks. Patients with pregnancies 16 weeks or over with possible pregnancy related complaints, should proceed to L&D. If there is no definitive IUP (NDIUP) and a suspicion of ectopic then a beta-hCG and transvaginal ultrasound should be obtained. If there is a suspicion for ectopic the pelvis and RUQ should be interrogated for fluid. NDIUP with significant free fluid should prompt immediate consultation with OB/gyn. In a non-pregnant patient, a bedside pelvic ultrasound may be performed to determine the presence or absence of significant ovarian cysts and/or free fluid. If torsion is considered a diagnostic possibility, then a transvaginal radiology ultrasound should be obtained. Simple cysts do not necessarily require follow-up, but complex cysts should have outpatient follow-up.

Ocular ultrasound

Ocular ultrasound may be used to diagnose or exclude retinal/vitreous detachment and vitreous hemorrhage, as well as optic nerve sheath diameter or papilledema. While ultrasound is specific for detachments and may prompt appropriate consultation, generally it should not be relied on to completely rule out these diagnoses which should occur with ophthalmologic consultation. Images should be obtained and recorded in two planes, with the side labeled.

Musculoskeletal and soft tissue

POCUS may be used to aid in the diagnosis of tendinitis, tendon injury, muscle injury, fracture, dislocation abscess, foreign body, and other extremity conditions. Some of these diagnostic purposes will be concurrent with potential procedural applications of POCUS.

Deep venous thrombosis ** (fellowship trained only)

Point-of-care ultrasound for DVT should include images documenting full compressibility of the common femoral (with proximal greater saphenous), femoral, and popliteal veins through the trifurcation to exclude proximal thrombus. POCUS does not typically include calf veins, so it should typically be paired with a negative d-dimer or an appropriate follow-up study if there is ongoing concern for DVT.

Testicular ultrasound ** (fellowship trained only)

Testicular ultrasound may be used to diagnose or exclude hydrocele, epididymo-orchitis, or torsion. Intermittent torsion may occur, so caution is indicated with appropriate consultation even if the ultrasound does not demonstrate torsion.

Other diagnostic applications and general approach

Ultrasound is a dynamic technology that continues to evolve, and other applications may emerge or develop. It is essential that a residency trained and board-certified emergency physician use POCUS appropriately within their professional judgement, obtaining confirmatory imaging and consultation as required.

Procedural Ultrasounds

ED physicians who have undergone initial ultrasound training and who are privileged to perform any procedure without ultrasound guidance, may use ultrasound as an adjunct to any ED procedure they deem appropriate. This includes the assessment of body areas for aspiration, incision, and drainage, insertion of peripheral or central lines, and regional anesthesia. Sterile precautions should be taken with the ultrasound equipment in any procedure for which sterility should be ensured. For percutaneous non-sterile procedures (i.e. peripheral IV placement), a probe cover should be used. For all IVs, a flush of the IV should be recorded and documented. For ultrasound-guided nerve blocks of volume > 10 cc, patients should be placed on a monitor, and intra-lipid should be available in the department. A neurovascular exam should be documented pre and post procedure, and the chart should contain information as to the agent, concentration and volume used. As with all procedures, appropriate attending supervision is required.

Educational Ultrasounds

Educational ultrasounds occur when an examination is done purely for educational reasons, and is accompanied by an appropriate confirmatory study. An example would be a patient in whom a DVT ultrasound is ordered from radiology, and there is a learner who would like to practice this examination. All emergency medicine physicians who have undergone introductory training with the equipment and who have signed this form are privileged to perform educational ultrasounds. Educational ultrasounds are performed as learning examinations for both resident and attending physicians. Verbal consent should be obtained from the patient. The patient should be made aware that the exam is for educational purposes and that they have the right to refuse the examination. An appropriate comprehensive study should be arranged, with the type and timing of the study at the discretion of the emergency physician. Documentation in the chart that an educational examination occurred is encouraged, but results from the educational scan should not be included in the patient record. Any discrepant or additional findings on the educational ultrasound when compared to the diagnostic ultrasound should be discussed with the emergency physician. QpathE should include documentation of the appropriate study.

Incidental Findings

As mentioned above, emergency medicine POCUS is intended to diagnose or exclude a variety of urgent and emergent conditions, and to provide procedural guidance. Occasionally, there may be findings outside of the intent of the exam that are captured on images that should merit follow-up. If these are recognized on initial exam or on QA, an appropriate confirmatory study should be arranged. However, it is understood that identifying and recognizing all incidental findings is outside of the scope of the limited and goal-directed ultrasounds performed as part of a POCUS examination and is not considered standard of care.

Ultrasounds Performed by Non-attending Physicians

All POCUS performed by emergency medicine within YNHH emergency departments are ultimately performed under the privileges and guidance of the attending physician responsible for the care of the patient. It is encouraged that the attending be in the room for POCUS imaging for patient care, teaching, and

maintenance of competence. However, images may be obtained by others involved in the care of the patient including residents, APPs, and students, who may provide a preliminary interpretation in Qpath. Any ultrasound performed by a non-attending physician should be clearly communicated with the attending caring for the patient. The ultimate responsibility for the quality of the images and accuracy of the interpretation falls under the attending physician, who should review all images and interpretations prior to signing.

Quality Assurance Log

All ultrasounds performed using ED equipment, for any reason, must include a captured image and be logged appropriately on QpathE, with diagnostic and procedural reports transferred into Epic. This includes filling in the worksheets with the indication for the exam and findings, as well as the attending attestation.

Documentation of Bedside Emergency Ultrasound in the Patient Record

All ultrasounds should be documented both in QpathE and in the patient record. Signed diagnostic studies from Qpath will transfer to the Epic record, with images in the PACS system. However, educational ultrasounds should not document any findings, positive or negative. This is to avoid confusion in the patient record when these findings have not been confirmed. However, the patient record should reflect that an educational ultrasound was performed. If a finding on an educational ultrasound prompts a further imaging study because of questionable findings, this should be documented.

Image Archival and Retrieval

In the ED at YNHH we utilize dynamic image recording for our ultrasound equipment. While not all of every exam needs be recorded, pertinent portions of the exam must be recorded representative of any suspected abnormal findings, as well as normal findings. Laterality should be noted, particularly for thoracic and ocular exams. A portion of these examinations are reviewed by the emergency ultrasound faculty, primarily for educational and QA purposes, and feedback will be provided.

During QA attempts will be made to confirm that any pathologic findings were correctly identified, however it is not within the scope of the emergency ultrasound faculty to comprehensively review all examinations, nor is this feasible in a contemporaneous manner. Thus, the correct interpretation for diagnostic ultrasounds is the responsibility of the attending involved in the performance of the examination. Educational examinations in symptomatic patients should have appropriate confirmatory studies performed.

Timely Completion of Qpath Documentation

Timely completion of documentation is essential for patient care, medicolegal reasons, and reimbursement. It is expected that non-attending physicians who are performing and providing initial interpretations complete this prior to leaving an ED shift. Attendings should sign the study as soon as feasible, ideally prior to leaving a shift but within 72 hours at the latest.

Temporary IDs

An image requires a patient identifier in order to be captured. While this is discouraged unless absolutely necessary, a temporary ID may be used for an emergent

study in an unregistered patient. Once the patient is registered an order should be placed and the images should be reconciled by editing the study in Qpath and entering the correct medical record number.

Ultrasounds Performed in the ED by non-ED Personnel

If a consultant utilizes ED ultrasound equipment in the ED it is the responsibility of the *ED personnel caring for the patient* to see that appropriate documentation occurs according to this policy (both in QpathE and in the patient record), and that the exam is appropriately recorded.

Ultrasounds Performed by Resident Physicians Outside of the Yale-New Haven Hospital Adult Emergency Department

The policies above apply to the YNHH ED. Ultrasound is increasingly available in diverse practice settings, specifically the Yale New Haven Children's Hospital Emergency Department, the Bridgeport Hospital Emergency Department, YNHHS Intensive Care Units, and other areas. While our intent is to provide residents with appropriate education in using this tool it is important to understand that policies may differ in other settings. When using equipment in other areas, resident physicians should specifically discuss their intent to use ultrasound equipment with the appropriate supervisory person (i.e. attending) and be aware of their specific policies prior to the use of any equipment.

Tablet Ultrasound Devices

Tablet or smartphone ultrasound devices are becoming increasingly available. These devices may not be used unless discussed with ED Ultrasound leadership (Dr. Chris Moore, Dr. Rachel Liu) and approved. At this time, these devices may only be used for educational purposes, and examinations performed using these devices need to be followed by comprehensive imaging. As with the above, images need to be captured appropriately and logged into the QpathE system.

Machine Maintenance and Cleanliness

It is the responsibility of those using the ultrasound equipment in the ED to ensure that they are appropriately cleaned after use, with cords untangled and hung up, and no debris on machines. If a machine is not working or damaged appropriate action should be taken by following the QR instructions on the machine. If there is a connection issue (exams not showing up or transferring), an email should be sent to radiologyissues@ynhh.org. If there is a physical equipment issue please call biomedical engineering at 203-688-9000. Please email/ cc: chris.moore@yale.edu with any of these calls or emails.

Questions Comments or Communication

Please email, call, or text Chris Moore at chris.moore@yale.edu 203-687-6776 if any questions, comments, concerns, or communication.

Summary

Key points are:

- No phantom or ghost scans. Any time an ultrasound is performed, regardless of reason, at least one representative image must be captured, with accompanying documentation in QpathE.
- Diagnostic ultrasounds include all ultrasounds done for clinical care that do not have an accompanying confirmatory study and need to be documented in QpathE.
- All QpathE documentation should be completed promptly, ideally before leaving a shift and always fully by the attending within 72 hours.

I agree that I have read, understand, and will comply with the guidelines stated above.

Signature

Date

Printed Name

DEM - CME/Professional Development Fund and Reimbursement Guideline

Guidelines per Yale University/DEM

Discretionary Funds – Eligible are clinical faculty who are at least 50% Yale Emergency Medicine FTE. Depending upon department finances, you will receive \$3,000-\$6,500 (dependent upon rank) each year to support bona fide business expenses such as continuing medical education, membership in professional societies, subscriptions to professional journals, conferences, travel, and other similar expenses. **These expenses must meet the policies and guidelines of Yale University and the School of Medicine.**

Clinical Professional Development Funds - Annual Allotment by Track (AC/CES/CS)

Professor - \$6,500

Associate Professor - \$6,000

Assistant Professor & Instructor - \$5,500

Investigator Track Professional Development Funds

Professor - \$6,500

Associate Professor - \$6,000

Assistant Professor & Instructor - \$5,500

Clinical Fellows- \$3,000

Duration:

Annual fiscal year July 1 through June 30. Fund balances will not roll over year to year.

Allowable Expenditures:

Travel/Conferences- registration, airfare, transportation, meals, etc. ([World Travel required for federal grant-funded travel activity](#))

Professional Organization Dues/Memberships, Journals

Publication costs

Secondary Computer Purchase (i.e. laptop, iPad, etc.) for remote clinical responsibilities*

Standard Medical Exam Devices- i.e. ultrasound/stethoscope, reflex hammer, shears, etc.

Standard uniform purchases- ED scrubs/fleece (excluding department supplied)

Unallowable Expenditures:

Home office supplies, medical equipment, research consumables/services, desktop computers, meals/food (non-travel related business meals)

All Other items:

Any exceptions to the discretionary items listed above or extension into the subsequent year's discretionary fund will need prior approval from the Office of the Chair. Please submit requests to the Emergency Medicine Business Office.

Reporting:

Automated monthly account holder reports will be sent reflecting current account balances and YTD activity. Please contact business office for off-cycle balance requests and allowability/policy inquiries.

Purchase Methods:

Yale University issued p-card or out-of-pocket. Preferred purchase method is p-card via administrative support staff or Sciquest for contracted vendors. Please note: any purchase deemed unallowable by YU policy will become faculty member's personal expenditure.

Expense reimbursement procedure: confirm funding and allowability with business office or administrative assistant prior to purchase.

DEPARTMENT COVERED CLINICAL EXPENSES

Licenses, Boards, Credentialing - Eligible are clinical faculty credentialed under Yale Medicine (YM), for whom Yale is the primary employer. Costs are allocated to the individual's section.

Types: State of Connecticut Medical License
State of Connecticut Controlled Substance Registration (SCSR – due every odd year)
Federal Department of Drug Enforcement Administration License (DEA)

Boards

Types: Initial and maintenance

Annual Membership dues SAEM and ACEP annual dues

YNHH Credentialing Application Covered by Yale Medicine

VA faculty credentialed under Yale Medicine and providing clinical care at a Yale facility will have the three licenses listed above paid through the Department.

Malpractice – Department will fund malpractice costs.

Computer- The Department will issue standard laptop/computer. Please refer to discretionary policy for secondary computer/device purchases.

**All computers and peripherals purchased with University funds shall be returned to the department upon departure/termination of employment with YU.

When purchasing a secondary or replacement device (i.e. obsolete, warranty lapse, etc.)- the original equipment must be relinquished to the department prior to receiving additional items.

PRIOR APPROVAL- faculty are encouraged to inquire about expense allowability at any time. Expenses beyond the annual allotment or outside common allowable expenditures are considered individual non-discretionary expenses without prior approval.

Per Yale University policy- [3215 PR.02 Yale Expense Management \(PCard and Out-of-Pocket Expenses\)](#), all receipts should be submitted within 30 days of transaction date. Transactions are recorded in the accounting period in which they are approved by the business office.

Salary Program for Faculty

Salary Plan Objectives

Compensation is one of several ways, although a very important one, whereby the Department of Emergency Medicine recognizes the contributions of its large and diverse faculty. This document describes the program the Department has developed to guide these recommendations and decisions regarding faculty compensation and will be updated and distributed annually in the Emergency Medicine Faculty handbook which is also posted on the department intranet. This program has the following objectives:

- Comparability and structural equity of compensation systems across ranks, sections, and tracks
- Flexibility in recognizing individual achievement and responding to market forces, while ensuring that compensation advances the University's clinical and academic missions
- Sound management of financial risks and resources of the Department, the School, and the University

I. Compensation Structure

Faculty compensation in the Department of Emergency Medicine is designed to be aligned with departmental funding per the YSM-YNHHS alignment efforts to support clinical, educational and research missions. The compensation of faculty members at the School of Medicine consists of three possible components: base, supplement, and bonus. The base and supplement together comprise the institutional base salary. Total compensation is the sum of the base salary and bonus

Base Salary:

- Faculty base salaries are initially determined at the time of initial appointment and then reviewed each year by the Compensation Committee.
- Base salary is reviewed and adjusted at the time of promotion per the guideline outlined in the Appendix A.
- Base salary may be adjusted to reflect specific leadership roles or significant changes in responsibilities.
- Base salary decreases may be made to adjust for individual performance and productivity.
- Pursuant to federal grant reimbursement policy, a faculty member's institutional base salary (meaning base plus base supplement) may not be increased as a result of replacing organizational salary funds with federal grant funds.
- In any given year, a raise or increase in base salary is not guaranteed. Annual adjustments to base salary will be determined by the Compensation Committee and are contingent upon organizational finances and individual productivity.
- Midyear renegotiation of faculty salaries is permissible only under extraordinary circumstances. These are generally limited to (1) a material change in responsibilities, such as a change in administrative or teaching responsibilities, or (2) situations in which a faculty member decreases to part-time status or increases to full-time status. Raising or lowering salaries as a consequence of receiving or losing grants is not permissible.

Bonus (Incentive) Compensation

- Incentive compensation for clinical faculty is based on criteria determined and disseminated annually at the beginning of the academic year. Incentive compensation includes specific metrics across the clinical, educational, and research missions that are aligned to faculty member track.

- Incentive compensation for research faculty is based on criteria determined and disseminated annually at the beginning of the academic year.
- In any given year, an increase in incentive compensation is not guaranteed. Incentive compensation will be determined by the Compensation Committee each year contingent upon organizational finances and individual success in meeting pre-specified criteria.

Total Compensation

- The department generally seeks to ensure that median faculty compensation within a given rank and track is at or above the Northeast AAMC 50th percentile compensation for emergency medicine faculty.
- Total compensation will be reviewed each year for equity across multiple domains with necessary adjustments reflected in subsequent base salary determination.
- In any given year, a total compensation increase is not guaranteed. Consistent with above, for some faculty, a compensation adjustment may occur solely through the department's incentive plan, base salary adjustment, or combination of both.

II. Compensation Structure Details

A. Base Salary

i. **LADDER FACULTY TRACKS (Traditional Track, Academic Clinician Track, Clinician-Scholar Track, Clinician-Educator Track, Investigator Track)**

The base salary represents the School's annual commitment to faculty who meet the basic expectations (teaching, clinical, research) of their departments and the School.

The base amounts are set annually by the Office of the Dean and are consistent for all faculty members who hold a given rank at the School of Medicine. A faculty member's compensation cannot be reduced below the base for his or her rank without the Dean's approval and acknowledgment from the faculty member.

The current base components for ladder track faculty members are:

Professor:	\$85,000
Associate Professor without Term:	\$76,500
Associate Professor with Term:	\$67,500
Assistant Professor:	\$61,000

A. II. RESEARCH RANKS (Senior Research Scientist, Research Scientist, Associate Research Scientist)

The nature of appointments and compensation in the research ranks differs from the ladder track faculty in that the base and supplement components do not apply.

The minimum salary payable to research faculty in 2024-2025 is as follows:

Senior Research Scientist	\$85,000
Research Scientist	\$80,000
Associate Research Scientist	\$72,000

iii. Other Instructional Ranks (Instructors, Lecturers and Visiting Faculty)

The minimum salary payable to an Instructor or Lecturer in 2024-2025 is \$40,300. Minimum salary for Visiting Faculty will be determined based on the arrangements with the faculty member's home institution.

B. Base Salary Supplements:

Select faculty may receive a core supplement intended to ensure that the total base salary ensures a total compensation that is market competitive. The base salary supplement will be reviewed annually and may be adjusted upwards or downwards consistent with the principles for base salary outlined above as well as based on changes in market circumstances, the overall financial condition of the department and changes in the University determined base salary.

Levels of core supplements are recommended annually by department chairs and must be approved by the Office of the Dean. Generally, the base salary supplement should be considered guaranteed for one year.

1. **Clinical Ranks.** The core supplement for a faculty member performing primarily clinical activities will be increased or decreased each year based on changes in market compensation, the overall financial condition of the department and clinical performance. Faculty whose clinical productivity does not meet department expectations may receive reductions in their supplements within an academic year.

II. Investigator Ranks: The core supplement for ladder track faculty members primarily conducting research may be increased or decreased based on individual productivity that is primarily measured by grant submission, grants awarded, and support or leadership of department research programs.

III. Research Ranks: Research rank faculty are generally not guaranteed base salary supplement with the rare exception of those with substantial experience or research activities commensurate with the productivity of investigator faculty as outlined above.

C. Administrative Supplement for Ongoing Additional Responsibilities

Faculty members may receive an administrative supplement as a part of their regular pay for the performance of ongoing responsibilities in addition to teaching, research, and clinical service expectations. These additional responsibilities, may be supported by clinical commitment reductions, administrative supplement, or a combination of both. Administrative supplements are generally designed as a fixed payment that is appropriate for the nature of the additional responsibilities assumed and the period of time during which those duties are to be performed. If a faculty member is reassigned or ceases to perform the additional responsibilities, the related extra supplement paid to a faculty member will be discontinued.

D. Bonus (Incentive) Plan:

The departmental incentive plan is an essential component of total compensation that is at-risk based on productivity in the domains of clinical, administrative, education and scholarly activities. The formulation of incentive is an important component to engage and motivate the

faculty for successful attainment of the overall goals of the department and to advance the mission of YSM.

In general, bonus compensation is targeted to range between 10% and 15% of base salary to ensure that incentive compensation has salience to individual faculty while minimizing the unintended consequences of higher proportions of compensation at-risk. Specific metrics exist to guide incentive compensation and may be subject to change at Chair discretion due to unforeseen circumstances or evolving department needs.

Incentive Compensation for Clinical Faculty:

There are specific minimum performance criteria that each faculty must meet which are outlined in Appendix B. These may include metrics such as:

- Attendance at weekly EM conference
- Teaching in weekly conferences
- Teaching at Yale Center for Healthcare Simulation. Attendance at faculty meetings and faculty development meetings
- Completion of responsibilities related to functioning as resident advisors
- Timely completion of medical records, and documentation accurately reflecting the level of care given.
- Completion of resident evaluations
- FDAQ completion

Incentive Compensation for Investigator Faculty:

There are specific minimum performance criteria that each faculty must meet which are outlined in Appendix C. If criteria are met and a faculty member has 50% effort funding, they will receive 5% and up to 15% if 100% funded. Effort assessment will be calculated each year.

- Faculty Meeting and WIP Meetings in person attendance
- Lead WIP meeting
- Role: journal club, thesis chair, mentor/advise
- Students/trainees, IRB Liaison
- FDAQ completion

Incentive Compensation for Research Faculty:

- Research rank faculty are not eligible for incentive

To support faculty seeking to improve incentive compensation, each individual faculty member prepares goals and objectives for the academic year as part of the FDAQ process. The FDAQ is reviewed with the Section Chief, departmental leader and/or Chair prior to each academic year, and periodically meetings occur throughout the year to assess progress.

E. Extra Compensation:

Faculty employed full-time by the University normally may not receive additional income from the University for work performed during a period of full-time employment. However, faculty members in the School of Medicine may be paid extra compensation for additional work such as

on call pay, pay for additional shifts, or for taking on additional duties on an interim basis. Prior approval to pay extra compensation in these circumstances must be obtained before this type of work is performed.

In the Department of Emergency Medicine, extra compensation is paid for Clinical shifts performed in addition to faculty commitment are paid at a rate of \$250 per hour for weekday shifts and \$275 per hour for nights and weekends. Night shifts for SRC begin at 10pm and night shifts for YSC and SMC begin at 11pm.

III. Appeal Process

Faculty with questions or concerns about their compensation should seek assistance from the Department Administrator and their Chair. If after this escalation, questions still remain, the faculty member should be directed to the YSM Dean's Office (Associate Dean for Faculty Affairs, the Deputy Dean for the Academic and Scientific Affairs, or the Deputy Dean for Finance and Administration).

IV. Postdoctoral Appointees

Postdoctoral Appointees at the School of Medicine are not faculty members and fall into two general categories: Clinical and Research.

Clinical:

Postdoctoral appointees who are paid through YSM and who perform clinical work are categorized as **Clinical Fellow** (Code = 252) if the individual participates in 1) an ACGME accredited program; 2) a board-certified program; or 3) a non-accredited department-based clinical fellowship.

Research:

Postdoctoral appointees who participate in research-based programs may be categorized as either **Postdoctoral Fellows** (Code = 250) or **Postdoctoral Associate** (Code = 260). The 2024-2025 salary plan for Postdoctoral Appointees is distributed through the University's Office for Postdoctoral Affairs. A copy of the plan is provided as an attachment to this document.

Appendix A: Promotion Based Base Salary Adjustment

To acknowledge the significant individual achievement of academic promotion, base salary will be adjusted commensurate with promotion to ensure total compensation is aligned with YSM guidelines for total compensation between the 25th and 50th percentile of AAMC benchmarks.

- Base Salary adjustment will be implemented in a standardized fashion using an equity review. Upon the effective date of promotion, each faculty member's total compensation will be compared to the relevant AAMC benchmark and base salary adjustment will be made as follow:

Rank (after promotion)	Total Compensation Compared to AAMC benchmark	Base Salary Adjustment
Associate Professor	Between 25 th and 50 th Percentile	Equity (% adjustment) + \$5,000
Associate Professor	Between 50 th and 75 th Percentile	+\$5,000
Associate Professor	Above 75 th Percentile	+\$3,000
Professor	Between 25 th and 50 th Percentile	Equity (% adjustment) + \$10,000
Professor	Between 50 th and 75 th Percentile	+\$10,000
Professor	Above 75 th Percentile	+\$6,000

- If a faculty member's promotion is approved by the BPO as retroactive, an equity review of compensation by the Compensation Committee will occur at the time of promotion for retroactive implementation.
- These changes will be included in the FY25 compensation plan but will be implemented for all promotions made effective July 1, 2024 (FY24 Academic Year and budget).

Appendix B: Bonus (Incentive) Compensation Criteria for Clinical Ladder Track Faculty

Incentive compensation for clinical faculty will first be based on core performance criteria based on faculty track.

Performance Criteria f(Clinical)	CS	CE	AC
In-person Faculty Meetings, Development Series or WIP 66%	x	x	x
Conferences Attended (60 hours)	x	x	
Residency Teaching (15 hours)	x	x	
Simulation Teaching/Engagement (3 hours)	x	x	
Resident Evaluations (1:1 Teaching shifts, A1-A5, B1-B3)	x	x	x
Maintain US Credentials	x	x	x
95% Charts signed in 7 days	x	x	x
% billable ultrasounds signed in 4 days	x	x	x
FDAQ completion	x	x	x

*May increase in FY25

In addition, incentive compensation may also be rewarded for exceptional performance inclusive of the following criteria and areas:

	CS	CE	AC
Extramural support exceeding 80% of actual compensation	x	x	x
Teaching/Education –ILCE, Clinical Reasoning, UME POCUS, etc.	x	x	x
Submitted grants and contracts	x	x	x
% Attending only visits for relevant shifts	x	x	x
98% Charts signed in 7 days	x	x	x
98% coding inquiries responded in 7 days	x	x	x
CITIZENSHIP: advancing the mission through extra commitment or achievement (DEI, Wellness, Recruitment, External Commitments)	x	x	x

Appendix C: Bonus (Incentive Compensation Criteria) for Investigator Faculty

Performance Criteria for Investigators
In-person Faculty Meetings/WIP 80% (19/24)
Lead one WIP per year
Assume departmental roles: Journal Club, Medical Student Thesis Chair, MHS thesis chair, mentor/advise students and trainees, IRB liaison
FDAQ Completion
Submitted grants and contracts

FY25 Estimated Investigator Track Faculty funding-based incentive schedule. Note this is subject to department finances and achievement of academic incentive metrics each year. Note that evidence of substantial grant submission activity will be expected among those receiving clinical incentives at lower tiers of extramural funding support as evidence of active research program growth intention.

% Extramural funding	
100%	15%
90%	13%
80%	11%
70%	9%
60%	7%
50%	5%

For the purposes of calculation inclusive of extramural or intramural competitive grants support, dedicated and supported teaching roles, centrally derived sabbatical support, and contract/IPA income. Use of gift funds, academic program support, or internal support funds are not considered extramural support.



Yale
NewHaven
Health

FOUR EASY WAYS TO ACCESS

Wellness Benefits

All the options below will be kept private from your employer

The infographic is divided into four colored sections (light blue, light orange, light pink, and light teal) by large, semi-transparent numbers 1, 2, 3, and 4. Each section contains an illustration of people interacting and a brief description of a wellness resource.

- 1 Emotional Wellbeing Solutions**
This resource is available 24/7. It is best for "in the moment" needs to speak with someone. It is also available for family members.
Call 1-866-416-6586
- 2 Talkspace App**
This is available through the Employee Assistance Program. Six sessions are available for each concern. Just call the number to obtain the code prior to your first use.
Call 1-866-416-6586
- 3 Behavioral Health Plan**
This option is better for longer term therapy. It is part of the health insurance plan and can be accessed from your insurance card. It can also include medication management.
- 4 Dedicated Live Counselors**
Two counselors are available for virtual or in-person sessions. One is a Social Worker, and one is a Clinical Psychologist. You can make appointments with them for a variety of different concerns.

First Appointment to Ladder Track Considerations

2024

Scope: This document is intended to guide the initial ladder track appointment of faculty in the department of emergency medicine.

Principles: These guidelines are intended to –

- Standardize initial faculty appointment within the department based on anticipated track and rank.
- Support faculty development to match appointment process to faculty needs. For example, new appointments intending to pursue the Clinical Scientist track may elect for longer terms at the Instructor rank until future anticipated extramural funding is secured.
- Appointment to a ladder clinical track requires board certification.
- All faculty new to clinical practice after residency or fellowship training, or who have not secured ladder track appointment at another peer institution, will complete a minimum of one year at the Instructor rank.

Approach – a new ladder appointment process will be initiated each July with an anticipated course of 6-8 months for departmental approval and ultimate BPO approval for anticipated start date of the following academic year:

Last position	New appointment	Initial faculty status
Yale EM resident	Faculty	Instructor
Yale EM fellow (typically 2 year)	Faculty	Assistant Professor
Non-Yale Resident	Faculty	Instructor
Non-Yale Fellow	Faculty	Instructor
Non-Yale Instructor	Faculty	Instructor
Assistant Professor Faculty	Faculty	Assistant Professor
Higher faculty	Faculty	Discussion with Chair/VC

Board Certification

Board Eligibility / Certification Requirements for Physicians, Dentists and Podiatrists

Prospective Members of the Medical Staff must either (a) be currently certified by one of the U.S. specialty certifying boards as applicable to his/her practice and identified below or (b) have completed all of the relevant U.S. specialty board certification training requirements and, at the time the application is considered complete, consistent with these Bylaws, be considered by the relevant board as "eligible" to take the required examination(s) leading to Board Certification, or as eligible to do so after obtaining any Board required practice experience.

Current Members must remain board eligible by one of the U.S. specialty-certifying boards identified below, to remain eligible to be a member of the medical staff. This requirement is applicable to Members of all medical staff categories.

Members who are not certified at the time of appointment have five (5) years from the date of appointment to the Medical Staff by the Board of Trustees to achieve initial certification by the U.S. specialty certifying board applicable to his/her practice to remain eligible for membership and privileges.

If an applicant for initial appointment previously held certification from a U.S. specialty certifying board that has lapsed, but he/she remains eligible for recertification, he/she shall have three (3) years from the date of appointment to the Medical Staff by the Board of Trustees to achieve certification. If U.S. Board Certification is not achieved within such period, the member shall no longer be eligible for membership and privileges.

This requirement shall not apply to physicians or dentists engaged in the general practice of Medicine or Dentistry who held an appointment prior to January 1, 1982, for members of the Courtesy Staff appointed prior to July 1, 1991, or for other Staff appointed prior to July 1, 1991, who, absent Specialty Board Certification, shall be reassigned to the Courtesy Staff. This requirement shall also not apply to individuals appointed to as a result of the acquisition of the Hospital of Saint Raphael who were members of the Medical Staff of the Hospital of Saint Raphael prior to January 31, 1995.

Board Re-Certification Requirements for Physicians, Dentists and Podiatrists

Members whose U.S. board certification bears an expiration date shall successfully complete recertification no later than three (3) years following such date in order to maintain appointment.

Exceptions to Board Certification Requirements

Under special circumstances at the discretion of the relevant Department Chief and Chief Medical Officer, an exception to the requirements for initial certification and recertification as described above may be requested. Such requests shall be made in writing and submitted to the Credentials Committee for consideration.

Exceptions may be recommended based upon: (1) board certification granted in another country that is determined to be equivalent to U.S. certification; (2) special clinical expertise held by the applicant and desired to support patient care or (3) unique educational contribution.

The Credentials Committee shall consider all exceptions and make its recommendation to the Medical Executive Committee (MEC). The Medical Executive Committee shall, in turn, consider the recommendation of the Credentials Committee and forward its own recommendation to the Patient Safety and Clinical Quality Committee of the Board of Trustees (PSCQ).

Foreign trained practitioners who are approved under any exception will be required to obtain certification by the appropriate U.S. board as identified below whenever the relevant board offers a pathway for them to become certified and, if applicable, under these circumstances, certification from the applicable U.S. board will be required within five (5) years of eligibility.

Physicians

American Board of Medical Specialties (ABMS) certifying board
American Osteopathic Board

Dentists

American Board of Oral & Maxillofacial Surgery
American Board of Pediatric Dentistry
American Board of Orthodontics
American Board of Prosthodontics
American Board of Periodontology
American Board of Endodontics
American Board of Oral & Maxillofacial Pathology

Note: Dentists in the practice of general dentistry are exempt from requirements for board certification.

Podiatrists

American Board of Foot and Ankle Surgery (ABFAS) (formerly known as the American Board of Podiatric Surgery (ABPS)
American Board of Podiatric Medicine (ABPM)

Sabbatical and Triennial Leave Request Guideline

The department of EM sabbatical and triennial leave is designed to ensure departmental implementation of the YSM policy detailed on the [YSM website](#) as well as in the Yale University Faculty Handbook.

Each year, the Office of Faculty Affairs will contact eligible faculty in advance of the YSM Sabbatical and Triennial Leave application deadline. This inquiry will remind faculty of eligibility status and inquire about their leave intentions. If a faculty member indicates they plan to apply, the Faculty Affairs IBO will provide a YSM application form. Upon form completion the departmental business office reviews for:

- Valid Academic Purpose/Benefit to Yale
- Availability of Sabbatical funds
- Clinical Coverage Support
- Department Chair Approval/Signature

In the event there are NOT enough sabbatical funds to cover the LOA, the department will reach out to YSM Finance and Administration to request supplement funds for funding shortfalls. Should YSM supplemental funds be unavailable, department business office will review department budget for availability of funds for LOA funding shortfalls. Initial funding availability will be governed by two primary questions:

- How many faculty are applying for LOA?
- Are enough funds available to cover all leaves (YSM and/or Departmental)?

If funds are NOT available, an LOA may be denied. If funds are available but insufficient to approve all eligible and requested LOAs, the following considerations will be reviewed:

- Has the faculty member taken leaves before? If so, how many LOA has the faculty member taken?
- How long since the faculty member's last leave?
- What is the budgetary impact per request?

In the event that there is NOT sufficient clinical coverage to cover an LOA, the department will further explore the duration and timing of sabbatical plans and needs to determine what flexibilities may exist for sabbatical leaves among all eligible faculty.

If you would like to apply for a leave, submit the form to faculty.affairs@yale.edu to verify leave eligibility.

The fully approved signed leave form will be sent to the department's Faculty Affairs coordinator for distribution to the eligible faculty and to be entered in Workday.

Calculation of incentive compensation will be prorated to account for absences from clinical responsibilities during sabbatical or triennial leaves.

An application for leave will be subject to review and will require re-approval if, prior to the leave, either the activities proposed for the leave are changed, the faculty member's employment status changes, or departmental needs and resources for funding or clinical coverage change. This rule does not apply to faculty on phased retirement.

Nocturnist Program

Responsible Office: Office of the Chair, Department of Emergency Medicine

Responsible Official: Chair, Department of Emergency Medicine

Sponsor: Arjun Venkatesh

Version: 1.0

Effective Date: 07/01/2024

Scope

This document outlines the department of Emergency Medicine procedure for nocturnist staffing. The nocturnist program principles will remain consistent, however definitions, scheduling details and compensation will be reviewed and revised annually based on departmental clinical commitments, fiscal outlook, and market conditions.

Principles – The department of EM nocturnist program is designed to:

- Ensure consistent overnight clinical coverage of all clinical staffing commitments of the department of emergency medicine.
- Provide an alternative scheduling option for select faculty seeking a more regular or predictable clinical schedule.
- Support the broader personal wellness and clinical well-being of all faculty by reducing circadian disruption.
- Adapt to evolving individual faculty interest in nocturnist clinical models and nocturnal departmental patient care needs.

Definitions:

- To be considered a nocturnist emergency physician the minimum annual nocturnist commitment must be at least 768 hours (16 hours/wk or 96 shifts) and a target of 90% of shifts annually must be overnight
- Overnight shifts will be defined as any shift ending at 4am or later
- Only full-time faculty may be eligible to serve as nocturnist physicians. Alternative arrangements may be available to clinical fellows or non-faculty medical staff on an ad-hoc basis.

Nocturnist Clinical Scheduling

Nocturnist emergency physicians clinical scheduling will follow several conditions:

- Faculty members will generally make a minimum one-year commitment to nocturnist coverage. When possible, a single block (4 month) “test period” may be available for faculty seeking to better evaluate nocturnist opportunities.
- Nocturnist faculty will ensure a mid-year check-in with the Vice Chair for Clinical Operations is completed to review and accommodate changes in nocturnist status.
- Nocturnist emergency physicians will be afforded priority scheduling flexibility in coordination with the physician scheduler. Schedule flexibility will require early and timely submission of schedule requests to the Associate Medical Director, Physician Staffing.
- Nocturnist emergency physicians will not have reduced weekend or holiday commitments.

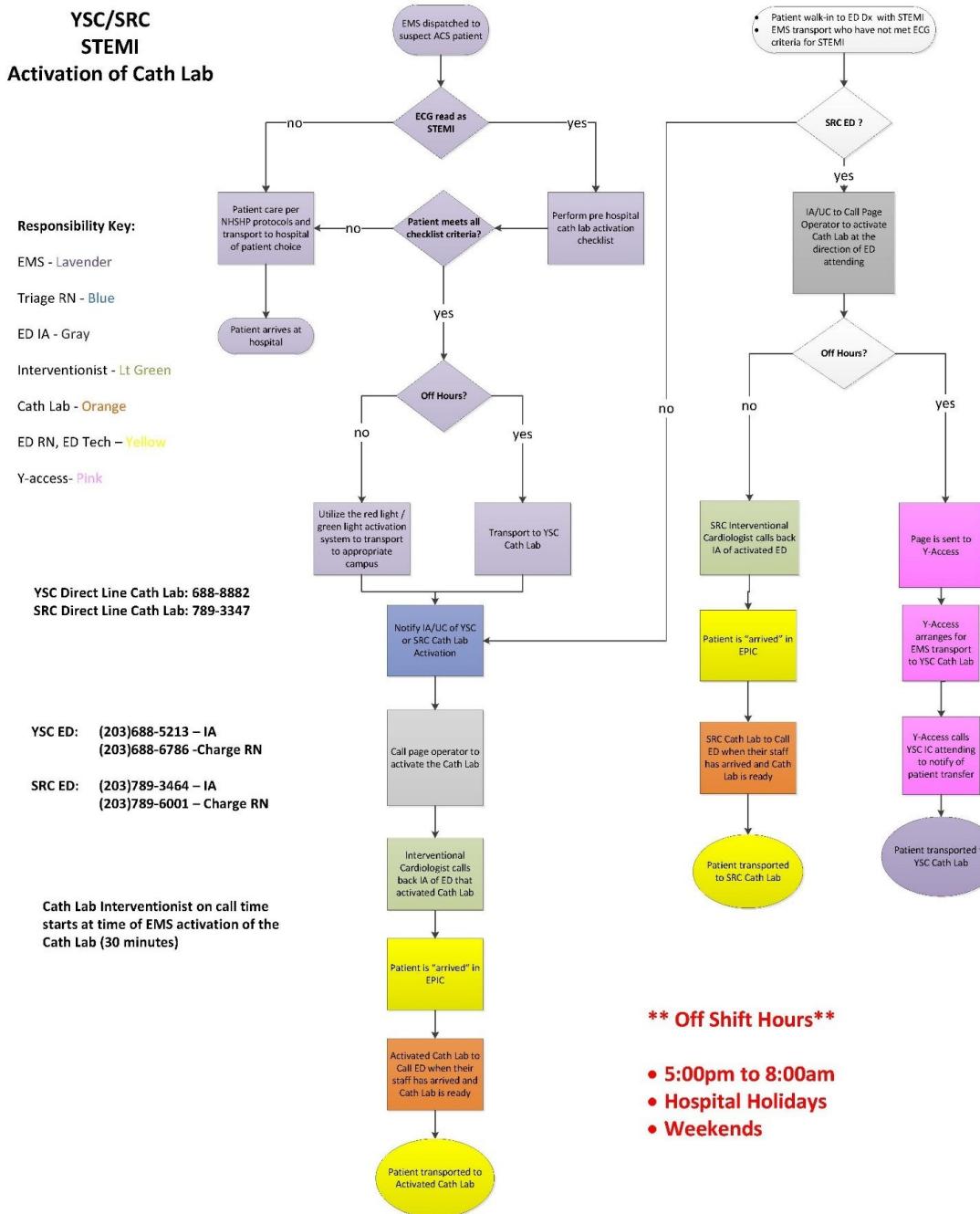
Compensation

- Nocturnist physicians in or anticipating the Academic Clinician track without extramural support or commitments may elect to receive a clinical base salary supplement or a reduction in annual shift commitments.
 - For FY25 the clinical base salary supplement will be calculated as 15% of base salary
 - For FY25 the shift reduction would be calculated as an annual shift commitment that is 85% of expected. As an example, for a faculty member with a 1000 annual clinical commitment, 85% would be 900 hours, or 70.8 shifts that would be rounded down to 70 shifts.
- Nocturnist physicians in or anticipating the Clinical Educator Scholar and Clinical Scientists tracks may elect to join the nocturnist model for the base-salary supplement.
 - Academic expectations or duties will not be adjusted for those in nocturnist positions.
 - For FY25 the clinical base salary supplementation will be calculated as 15% of base salary proportional to clinical effort as % of 32 hours. As an example, for a faculty member with a 16 hour clinical commitment (50% of 32 hours) and base salary of \$100,000 anticipating, the base salary supplement would be 15% of \$50,000 or \$7500.

Implementation:

- Nocturnist scheduling will begin at the beginning of each block schedule (and not mid-block), and nocturnist physicians are expected to fulfill all scheduled shifts prior to changing nocturnist status.
- Nocturnist physicians are expected to give notification of discontinuation before block scheduling begins, and should generally provide greater than one block notification to accommodate coverage changes.

Appendices



IA = Information Associate (ED)
 IC = Interventional Cardiologist
 UC = Unit Clerk (ED)
 YSC = York Street Campus
 SRC = St. Raph Campus

Revised 12/20/18

Yale New Haven Hospital
ADMINISTRATION of IV ALTEPLASE FOR ACUTE ISCHEMIC STROKE

INDICATION:	Ischemic Stroke
DOSE:	0.9 mg/kg with a max dose of 90 mg
ADMINISTRATION:	<p>Drug must be given within 4.5 hours after symptom onset.</p> <p>Administer ONLY after Head CT / MRI confirms no hemorrhage.</p> <p>Pharmacy will prepare a bolus dose (10% of total dose) in a 10 ml syringe to be given IV push over 1 minute and an infusion bag (90% of total dose) to be given over 1 hour via IV pump.</p> <p>Concentration is 1mg/ml.</p>
COMPATABILITY:	Must be given in a dedicated line.
NOTIFICATION:	The treating provider will call pharmacy to order IV alteplase and report NAME, MRN, and WEIGHT in kg.
DOCUMENT:	<p>Accurate patient weight, drug dose, route, time given: Recommend using 2 RNs or RN/MD dual signature</p>
COMPL/MONITORING:	<p>Bleeding is the most common complication (GI, catheter site, intracranial, gingival, retro-peritoneal).</p> <p>Medication will be processed, reconstituted & delivered to ED bedside with a goal turnaround time of 15 minutes or less from initial verbal request</p> <p>Monitor & record stroke exam and vital signs per orders once the infusion begins:</p> <ul style="list-style-type: none">• Every 15 minutes x 2 hours (+/- 5 minutes)• Every 30 minutes x 6 hours (+/- 10 minutes)• Every <u>1 hour</u> x 16 hours (+/- 15 minutes) <p>Monitor for:</p> <ul style="list-style-type: none">• Changes in LOC• New onset headache• Nausea/vomiting• Overt signs of bleeding• Face/Lips/Tongue swelling (angio-edema)• Arm bruising – (recommend rotating blood pressure cuff) <p>Provider calls SRC central pharmacy @ 203-789-3493</p>
	<p>Management of Anaphylaxis</p> <ul style="list-style-type: none">• If stridor, oropharyngeal swelling, or urticaria develop, <u>immediately discontinue alteplase infusion</u>. Admin IV methylprednisolone 125 mg, IV diphenhydramine 50 mg, IV famotidine 20 mg, Consider early elective intubation if significant stridor or oropharyngeal swelling. Early ENT notification if cricothyrotomy may be <u>needed</u> Consider CT scan to exclude retropharyngeal hematoma if <u>suspected</u>• When pump infusion is complete, attach a 50 cc NS bag to alteplase IV tubing & deliver remaining drug (~20 mg) over 5 minutes to administer full dose.

Prepared in conjunction with Y-NHH pharmacy
Reviewed:10.04; Revised,6.05;5.06;7.07;10.08;3.09;7.0

Yale New Haven Health
Yale New Haven Hospital – Department of Patient Services

Threatened Adult Airway Response Team Activation
Standard Operating Procedure

Original: 2/2019
Last Reviewed: 3/18/2020

Resuscitation and Rapid Response Team Committee

Purpose:

To provide the procedures for responding to a threatened airway emergency of a patient at Yale New Haven Hospital.

Criteria for activation:

- 1) Cardio-pulmonary compromise or likely progression cardio-pulmonary compromise to that requires airway management, and
- 2) the perception that the patient's airway will be difficult to manage by routine techniques

Criteria assessment:

Adult: A clinician from anesthesia, otolaryngology (ENT), trauma surgery, emergency medicine critical care medicine, emergency/critical care/SWAT nursing, and/or respiratory care evaluates the patient and determines that criteria* for a threatened airway response team call is satisfied and initiates the call for threatened airway team activation.

The threatened airway response team is activated by calling 155 and specifying if the patient is adult or pediatric, and providing the location detail including the campus, building/pavilion and floor, room and call back phone number. Using repeat back, the caller waits on the line for the 155 operator to read back the information before ending the call.

Pediatric threatened airway response is available at YSC only; see Pediatric Threatened Airway Response Team SOP. The operator notifies all team members by overhead alert, and where appropriate, via pager and/or phone.

Examples: Medical alert, threatened airway response team adult, YSC, NP 9 MICU, room xxx

If the patient has a history of laryngotracheal reconstruction, tracheostomy, or airway stent, the attending physician or covering provider on call for the service that placed the airway should be contacted in addition to the threatened airway response team.

Procedures:

YSC Threatened Airway Response Team (Adult)

- The adult threatened airway cart with supplies needed for a difficult intubation and surgical airway are located in the South Pavilion OR. The cart is brought to the bedside by either the responding anesthesia team or another member of the team as appropriate and available.
- At the conclusion of the event, the airway cart is returned to the South Pavilion OR for restocking of supplies.
- Supplies are restocked by the CRNA or anesthesiologist during weekend and off-shift hours and the anesthesia technician during daytime hours during the week as available.

SRC Threatened Adult Airway Response

- The supplies needed for a difficult intubation and surgical airway are located in the Verdi 2nd floor OR holding area. The cart is brought to the bedside by the responding V2W SICU RN.
- At the conclusion of the event, the cart is returned to the Verdi 2nd floor OR holding area for restocking of supplies.
- Supplies are restocked by the CRNA or anesthesiologist during the off-shift and weekend hours and the anesthesia technician Monday through Friday day time hours.

For all campuses:

- Non-disposable equipment is cleaned and returned for use as per equipment specific procedure.
- The medication trays are supplied by Pharmacy for restocking.
- A visual cue may be placed at the bedside for clinical guidance on the type of altered airway placed, and information about the clinical service managing that airway. Please see Appendix B.
- Following the event, the patient may have "Difficult Airway" documented in Problem list and Patient Header/Banner of EMR by the intubating provider for future notification of threatened airway.

Appendix A: Team composition:

YSC Threatened Airway Response Team (Adult):

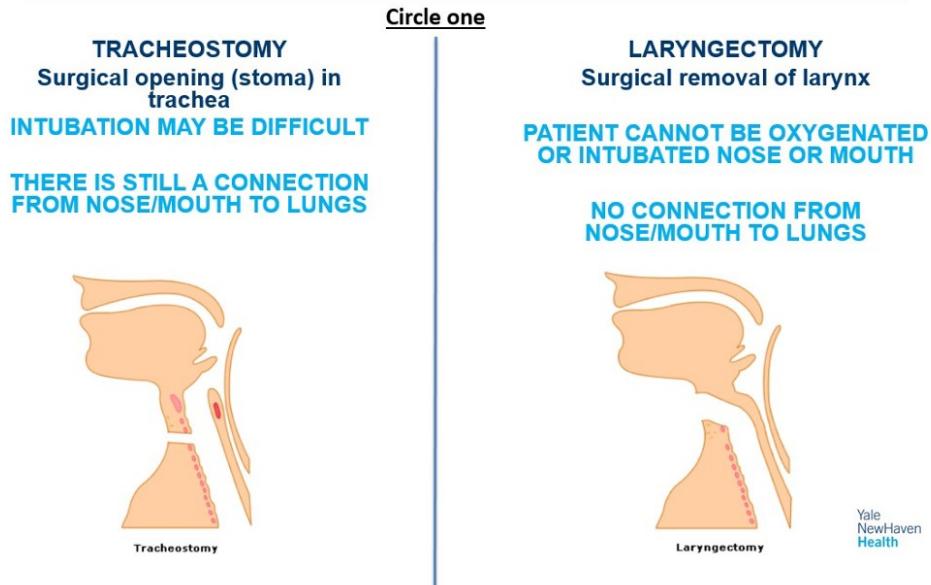
Anesthesia Attending (South Pavilion Floor Runner)
Anesthesia Medical Emergency/Code Resident (South Pavilion Floor Runner) Trauma Surgery on-call
Attending
Otolaryngology (ENT) Resident
Otolaryngology Attending (if in-house and available) SWAT RN
Respiratory therapist

SRC Threatened Airway Response Team (Adult):

Anesthesia Attending Medical ICU Attending Surgical Resident SWAT RN
MICU RN SICU RN
Respiratory Therapist
CRNA (as available and in house)
Surgeon Attending on-call (as available and in house)
Otolaryngology (ENT) Attending and/or Resident (as available and in house)

Appendix B: Bedside Visual Cues

ALERT: ALTERED AIRWAY ANATOMY



Subject: Admission guidelines for cancer patients who present to SRC ED

Situation: Cancer patients presenting to the SRC ED are being admitted to the hospitalist service when they should be admitted to the Oncology service

Background: Smilow inpatient units for medical oncology, gynecologic oncology, surgical oncology and some of hematologic oncology have moved from North Pavilion on the York Street Campus to Verdi 4 at SRC. Because of this move, increased number of cancer patients are now presenting to the SRC ED. As SRC did not previously have inpatient oncology services the practice was to admit to the hospitalist service.

Assessment: Moves in oncology populations from YSC to SRC has created a need to re-evaluate admitting procedures from the SRC ED. As inpatient cancer units are now located at SRC, these patients should be admitted to the oncology service and not hospitalist service.

Recommendation: When a patient under active oncology care presents to the SRC ED and requires admission, contact Eileen Dehm, Smilow patient flow coordinator Monday through Friday 8 am to 5 pm at 203-710-2256 who will offer direction about which service the patient should be admitted to.

For:

- Solid tumor contact (listed in AMION under Adult Med Onc with a dedicated Oncology night provider for SRC) Verdi 4 West
- Hematologic malignancy (please call Night /Weekend APP/Fellow listed under Adult Hematology in AMION. They will determine if patient needs to be transferred to YSC NP11 or will be admitted to SRC Verdi 4 East under Purple team). The pager for the SRC Purple Team is 203-766-4022.
- Gynecologic Oncology (listed in AMION under GYN/ONC there is a fellow during the day and a resident night float and 24 hour consult resident is 203-200-1783) Verdi 4 North
- Surgical Oncology (listed in AMION Resident daytime pager 128-2528 and resident Nights and Weekend 203-412-6358 with Surgical Oncology Attending also listed) Verdi 4 North

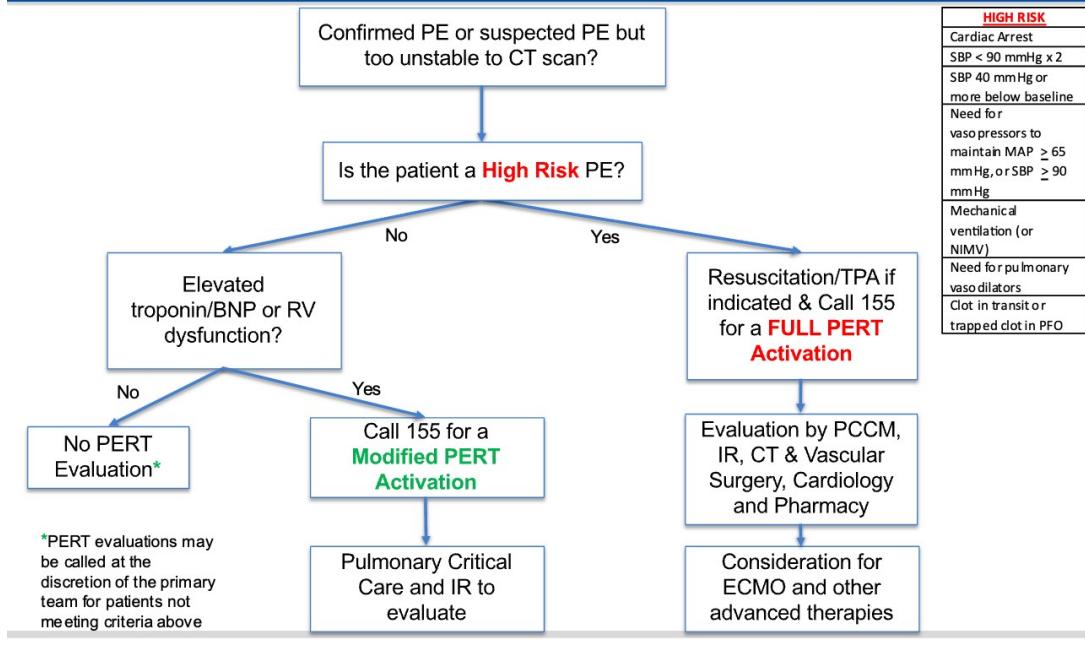
Yale Pulmonary Embolism Response Team

Yale SCHOOL OF MEDICINE



*****Please refer to the Pathway on Epic for current guidelines and orders

PERT Activation



Yale SCHOOL OF MEDICINE

SLIDE 2

Modified PERT Activation

- Page will notify both Pulmonary Critical Care and IR
- Pulmonary Critical Care will evaluate the patient and make formal recommendations about treatment/management (evaluate within 30 minutes of page)
- IR to review images and to assess for potential IR guided therapies if indicated
- Pulmonary Critical Care and IR should discuss activations as part of the shared decision making process of a PERT
- 155
 - Modified + Pulmonary Embolism Response Team + Location + CB#

Yale SCHOOL OF MEDICINE

SLIDE 3

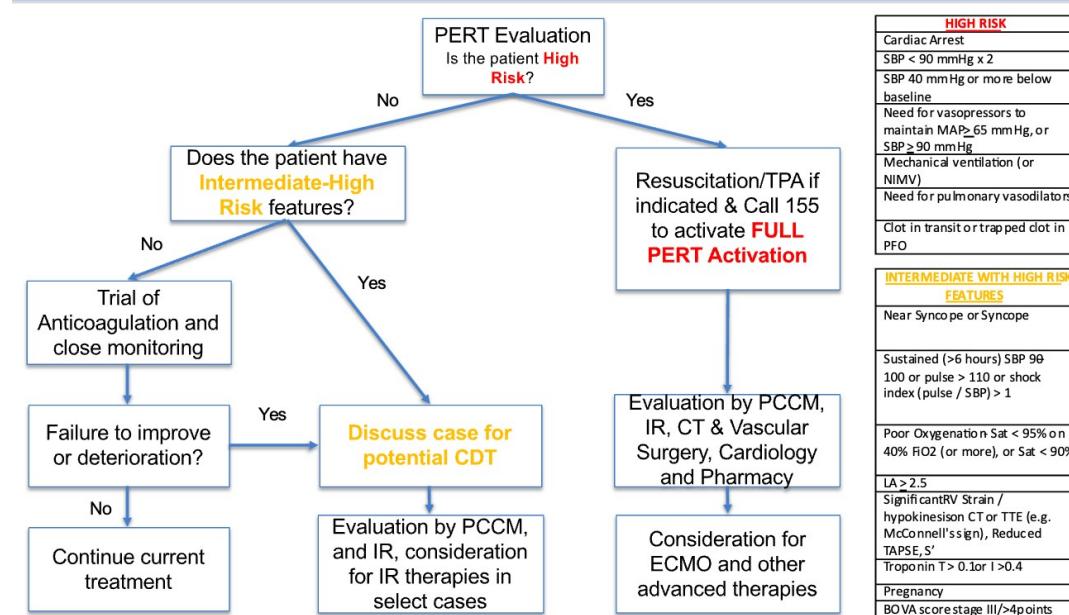
FULL PERT Activation

- Allows for a high-risk/massive PE risk pathway to mobilize multiple resources simultaneously for high risk patients
- Involves PCCM/Intensivist, IR, Cardiothoracic & Vascular Surgery, Cardiology, and Pharmacy
 - Critical Care is the point-person for Full PERTs
- Immediate assessment for: VA -ECMO and other advanced therapies including IR or surgical embolectomy, pulmonary vasodilators, vasoconstrictors, fluids, and IV access
- If patient is an ECMO candidate prefer to cannulate in IR suite/OR if stable for transfer
- 155
 - FULL + Pulmonary Embolism Response Team + Location + CB#
 - Overhead call = Medical Alert + Full Pulmonary Embolism Response Team + Location

Yale SCHOOL OF MEDICINE

SLIDE 4

PERT Treatment Workflow Reference



Yale SCHOOL OF MEDICINE

SLIDE 5

Treatment for Low and Intermediate Risk PE

Consider trial of anticoagulation (AC) for stable patients with:

- Low-risk PE (negative cardiac biomarkers and no evidence of RV dysfunction on CT/TTE)
- Intermediate-low risk PE (positive cardiac biomarkers or evidence of RV dysfunction on CT/TTE)
- Intermediate-high risk PE (positive cardiac biomarkers and evidence of RV dysfunction on CT/TTE) –without high risk features and with minimal symptoms
- Consider Lovenox as first line AC for these patients rather than Heparin
- Consider monitoring on AC in the SDU/MICU for intermediate high risk patients with plan for CDT or systemic lytic therapy if evidence of deterioration

*All cases should be discussed between Pulmonary Critical Care and IR

11/29/23 Morning Safety Report (MSR) Safety & Quality Announcement RE: **SAFER** Platform

S: The situation is that on December 5th Yale New Haven Health will launch a new patient and employee safety event reporting and management platform.

The platform, called **SAFER** (Situational Awareness for Feedback and Event Review) is replacing RL Datix.

B: The background is that the **SAFER** platform includes streamlined incident reporting and analysis, with a user-friendly interface and an anonymous reporting feature to encourage reporting. Responding to event submitters will be easier with improved methods for providing follow-up feedback and closing the loop to those who report events. It also includes real time alerts, action plans for causal analysis, and performance dashboards. **SAFER** has improved integration with existing hospital systems for more seamless data sharing that will help to proactively identify trends and areas for improvement enterprise wide.

A: The assessment is that on November 4th all users were assigned training via LMS “Event Reporting Using **SAFER**” with completion due prior to December 5th.

For leaders, “**SAFER** Leader Training” sessions were held on November 8th and 20th. There is another session scheduled on December 19th, 12-2pm, to review searches, reports, and dashboards.

R: The recommendation is to ensure your teams complete the LMS assignment prior to December 5th. Leaders to complete Safety Event Classification and event follow up, in RL Datix prior to December 5th.

❖ Utilize the links & attachments below to harness the capabilities of **SAFER**!

- Training session recording:



SAFER Leader
Training_ Submittin

- PG Demo Overview:

<https://pressganey.wistia.com/medias/7icsmtduor>



Submitting a SAFER
Report OnePager_1



YNHHS SAFER



HRP Quick Tip -



HRP Quick Tip -



HRP Quick Tip -

Together we can make care safer for our patients and our workforce!