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Protocolized Admissions Guidelines

RIH Admission Service Determination and Patient Placement Guideline

Prepared by: RIH Departments and Services of Cardiology, Hematology/Oncology, Medicine, Neurology, Surgery, Orthopaedic Surgery, Neurosurgery, Emergency Medicine, Urology and the Chief Medical Officer of Rhode Island Hospital

Background

Ambiguity regarding admissions from the ED can lead to confusion among treating teams that delays patient care, exacerbates ED crowding, and creates provider frustration. This Guideline, divided into 5 parts, seeks to reduce this ambiguity while establishing pathways to resolve any conflicts or concerns about quality that may arise.

Part I of this Guideline, **Selected conditions and service determination**, sets forth criteria to determine the appropriate service for certain cardiac conditions, hip fractures, and brain mass(es).

Part II of this Guideline, **Services and appropriate conditions for admission**, lists selected services and conditions these services should routinely admit.

Part III of this Guideline, **Express admission criteria**, lists selected conditions and services in which acceptance to the service should occur after initial telephone consultation and does not require bedside consultation.

Part IV of this Guideline, **Escalation of admission disagreements**, sets forth a framework to resolve disagreements about the need to admit the patient to the hospital, the service to which the patient should be admitted, or whether or not the patient meets express admission criteria.

Part V of this Guideline, **Quality assurance process**, outlines a mechanism for review of any cases for which this guideline is invoked.

Part I: Selected conditions and service determination

A. Cardiac conditions

1. CCU

- Acute ST-segment elevation myocardial infarction (STEMI)
- Symptomatic complete heart block with rate ≤ 30
- Acute cardiogenic pulmonary edema requiring intubation
- Cardiogenic shock requiring inotropic support
- Refractory sustained ventricular tachycardia or torsades des pointes
- Recurrent (2 or more episodes) ventricular fibrillation

2. ICCU

- Refractory ventricular arrhythmias requiring medication adjustment
    - Premature ventricular contractions, bigeminy, and brief non-sustained ventricular tachycardia are NOT considered refractory ventricular arrhythmias.
- Patients on continuous infusions of anti-arrhythmic agents for
- Patients with planned transcatheter aortic valve replacement
- Patients with an indwelling left ventricular assist device (LVAD)
- Patients status post cardiac transplant
- Syncope with associated advanced heart block and/or heart rate < 40
- Symptomatic complete heart block with heart rate 30 – 50
- Non-STEMI acute coronary syndrome (Type 1)/hemodynamically stable.
- Known need for imminent cardiac catheterization
- Pericardial effusion requiring or status post drainage

Note: Admisionss to CCU and ICCU will continue to be actively managed by the ED providers until they physically leave the ED- whether they are in Critical Care or the Urgent Area

A. Hospital Medicine/General Internal Medicine

- Type II myocardial infarction (e.g. troponin elevation associated with, for example, pneumonia, tachycardia, or congestive heart failure)
- Non-sustained asymptomatic arrhythmia
- Syncope without heart block or severe bradycardia (< 40)
- Congestive heart failure with ejection fraction > 30% not requiring inotropic support
- New atrial fibrillation not requiring continuous infusion of anti-arrhythmic medication

- Chronic heart block requiring admission for non-cardiac causes

A. Hip fractures

Orthopedic Surgery

- Fracture secondary to mechanical fall
- No comorbidities or compensated comorbidities (including coronary artery disease, atrial fibrillation, stroke, chronic kidney disease, etc.) on appropriate home medications
- No medical issues identified during ED workup (defined below*) that would independently require admission (such as pneumonia with hypoxia, ongoing chest pain, diabetic ketoacidosis)
- Minor medical issues that would not independently require admission (mild hyperglycemia, urinary tract infection)

Note: Patients over 65 who are admitted to the orthopedic service will be evaluated by the geriatrics service M-F 8A-4P

Hospital Medicine/General Internal Medicine

- Fracture secondary to non-mechanical fall, such as seizure or syncope
- Decompensated comorbid condition, defined as acute concurrent medical condition that would interpedently warrant admission (such as pneumonia with hypoxia, ongoing chest pain, diabetic ketoacidosis)

X-rays: Chest, Pelvis, 2 View Hip, 2 view ipsilateral Femur and Knee, any additional areas of point tenderness
Laboratory testing: complete blood count, basic metabolic panel, type and screen, international normalized ration (INR), vitamin D level
Other: Electrocardiogram, make patient NPO.

A. Newly diagnosed brain mass(es)

Neurosurgery

- Need for immediate (<24h) surgery due to shift, mass effect
- Surgeon discretion
  Neurology
- Symptoms attributable to mass such as headache, seizure (even if not seizing and without a post-ictal state in ED), or focal neurological signs and symptoms in patients WITHOUT a previous diagnosed malignancy
  Hospital Medicine/General Internal Medicine
- No symptoms (for example, found after workup for syncope) but still requiring admission.
- Patients WITH previously diagnosed malignancy whose brain mass(es) are felt to represent metastases and who are not in need of immediate (<24h) surgery due to shift or mass effect

A. Newly diagnosed thoracic or abdominal mass(es)

- Patients who have a thoracic or abdominal mass that is either newly discovered or persistently uncharacterized who need admission to the hospital should be admitted to Hospital Medicine or General Internal Medicine.

A. Intractable Low Back Pain

- If the patient has a pre-existing relationship with a spine surgeon who has privileges at Rhode Island hospital, the Emergency Department (ED) should give that surgeon's service the right of first refusal for admission
- If the patient does not have a pre-existing relationship with a spine surgeon who has privileges at Rhode Island hospital OR the patient's spine surgeon does not want to admit the patient to his or her service, the patient should be admitted to Hospital Medicine or General Internal Medicine if the admission diagnosis is intractable low back pain

Part II: Services and appropriate conditions for admission

A. **General rule for unexpected returns after discharge**
Any patient who returns for re-admission within 48 hours of hospital discharge related to the condition for which he or she was treated during the admission should first be presented to the service that discharged that patient and, barring unusual circumstances, that service should admit the patient.

Unless otherwise stated, these guidelines apply to patients followed by hematology-oncology providers within the Lifespan Cancer Institute

1. **All** new acute and chronic leukemia, aggressive lymphoma, and myeloma requiring inpatient chemotherapy
2. **All** complications from chemotherapy regimens
3. Acquired bone marrow failure syndromes requiring inpatient chemotherapy (example: aplastic anemia)
4. Patients with hematologic malignancies requiring inpatient chemotherapy regimens
5. Central nervous system lymphoma requiring high-dose methotrexate
6. Newly diagnosed solid tumor oncology patients requiring inpatient chemotherapy
7. Patients with complications that, in the judgment of the Oncology attending, arose directly from their hematologic and/or oncologic conditions(s) or its therapy
8. Neuro-oncology patients with non-neurologic complications of cancer or its therapy (examples: thromboembolism, cytopenias, sepsis and other non-CNS infections, metabolic disorders, pain management)

Note 1: There is a cap to the Med A Hematology/Oncology Service of 18 patients. All of the

above patients over this cap will be admitted to medicine service with hematology/oncology consultation
Note 2: Caveats and exceptions

- *Thrombotic thrombocytopenic purpura requiring plasma exchange requires consultation with, and is usually admitted to, the Medical ICU*
- *Suspected idiopathic thrombocytopenic purpura will be admitted to medicine*
- *Sickle cell patients will be admitted to Hospital Medicine or General Internal Medicine*
- *Private Hematology/Oncology Attending patients are not admitted to the Hematology/ Oncology service*
- *Rintels, Sambandam, Joseph (admit to themselves)*
- *Sikov, Sakr (admit to medicine)*
- *Roger Williams: Armenio, Chaquette,Rathore (admit to medicine)*

A. **Conditions appropriate for admission to Neurology**

- Admit to Neurology-vascular-stroke unit
  - Ischemic stroke
    - Late presenting ischemic stroke, outside treatment window for systemic thrombolytics or mechanical thrombectomy
  - Hemorrhagic stroke

    Non-traumatic intraparenchymal hemorrhage, not meeting criteria for admission to Neuro Critical Care Unit (NCCU). Some pertinent NCCU admission criteria include: size 20cc or greater, infratentorial location, anticoagulated patient, unstable patient.
- Admit to Neurology-general
  - Patient with known history of Epilepsy
    - Epilepsy with status epilepticus, not meeting criteria for admission to NCCU (Some pertinent NCCU admission criteria include: convulsive status epilepticus, intubation)
    - Epilepsy with prolonged post-ictal state, not expected to resolve in a timely fashion (example: patient whose previous post-ictal state has been prolonged)
  - Multiple sclerosis and other central nervous system inflammatory diseases (eg. transverse myelitis, autoimmune encephalitis, acute disseminated encephalomyelitis, neuromyelitis optica, myelin oligodendrocyte glycoprotein disease, and neurosarcoidosis)
  - Acute neuro-inflammatory diseases (Guillain-Barre syndrome, multiple sclerosis, myasthenia gravis)
  - Acute myopathy, neuropathy, movement or gait disorder not resulting from spinal cord compression

        - Neurodegenerative conditions (amyotrophic lateral sclerosis, Parkinson's disease, Huntington's Disease, prion disease) when a non-provoked exacerbation or progression is the primary issue requiring treatment and warranting admission

A. **Conditions appropriate for admission to Neurosurgery**

- Ventriculoperitoneal shunt complication within 6 weeks of placement
- CNS infections likely requiring surgery (eg: brain abscess with mass effect)
- Symptomatic/ruptured aneurysm and arteriovenous malformations
  Note: Admits to NCCU will continue to be actively managed by the ED providers until they physically leave the ED.

A. **Conditions appropriate for admission to Orthopaedic Surgery:**

- Septic arthritis when that is the only active problem; most such patients will have multiple comorbid conditions which may be active and will be more appropriate for admission to a medical service
    - Post-operative infection related to orthopedic surgery (except fracture-fixation related infections)
    - Any orthopedic-related infection (cellulitis, deep soft tissue infection, etc.) over or near site of previous surgery performed by the orthopedic service

The above criteria pertain to patients without a decompensated concurrent medical condition that would interpedently warrant admission (such as pneumonia with hypoxia, ongoing chest pain, diabetic ketoacidosis)

A. **Conditions appropriate for admission to Spine Service (either Orthopaedic Surgery or Neurosurgery)**
   • Cord-impingement syndromes, spine tumors, back pain with motor deficit, epidural abscess requiring operative intervention
   • Service attending believes the patient may need operative intervention.

B. **Conditions appropriate for admission to Urology**

- Non-infected kidney stone (obstructing or partially obstructing) with poorly controlled pain not suitable for CDU
    - Note: obstructing stones with infection should be addressed in the operating room by urology vs VIR for percutaneous nephrostomy and then admit to MICU or Medical Service depending on clinical condition.
- Isolated genitourinary trauma

Part III: Express admission criteria

- Certain diagnoses are acceptable for admission to the designated service after telephone handoff and should not require routine bedside evaluation.
- For such patients, the ED attending must see and evaluate the patient before deciding the designated service.

- This protocol is not a replacement for verbal communication regarding admission. All patients require verbal handoff from ED to admitting service and acceptance for admission from the admitting service.
- When disagreements exist after discussion between the ED and requested admitting service, providers should use appropriate escalation pathways to rapidly resolve such disagreements so that patient placement and care can occur without significant delay.

A. **General Surgery**

Patients who meet criteria below meet EXPRESS ADMISSION criteria

- CT-proven appendicitis. For patients with a high pretest probability of appendicitis, refer also to the Express Appendicitis pathway.
- CT -proven free abdominal air suspicious for a perforated viscus (does not include micro-perforation associated with diverticulitis)
- Patient referred to ED for admission by University Surgical Associates
- CT -proven small bowel obstruction with clear high-grade transition point
- CT- or ultrasound-proven acute cholecystitis with EITHER of these signs of acute inflammation:
    - Temperature greater than or equal to 101.5 °F
    - White Blood Cell (WBC) count greater than or equal to 16,000

A. **Medical ICU and Respiratory ICU**

Patients who meet criteria below who have had enough evaluation/work up to exclude a cardiac, neurosurgical or surgical etiology or emergency meet EXPRESS ADMISSION criteria. These criteria are:

- Newly intubated patients
- Medical patients on continuous infusion vasopressors or inotropic support
- Severe sepsis with lactate of 4.0 or greater
- Diabetic ketoacidosis with initial pH<7.1 or hyperosmolar coma with glucose> 900
- Gastrointestinal Bleeding with Hgb <6 or Hgb drop of >4
- Pulmonary hypertension on continuous infusion pumps
- Severe electrolyte disorders
    - Sodium < 115 or > 170
    - Potassium < 2.0 or > 6.5
    - Calcium < 4.0 or > 13.0
    - Phosphorous < 1.0
- Massive Pulmonary Embolism

Note: Admits to MICU and RICU will continue to be actively managed by the ED providers until they physically leave the ED- whether they are in Critical Care or the Urgent Area

Part IV: Escalation of admission disagreements

A. **Disputes arising between ED provider and an admitting service regarding necessity for admission, or whether the patient meets Express Admission criteria**

1. If the ED Attending Physician or his or her delegate (resident or advanced practice provider) contacts a service to admit a patient, and that service believes that the patient is not currently appropriate for admission (by not meeting admission criteria or not having a completed workup) or does not in fact meet express admission criteria, the service will discuss this concern directly with the ED attending physician.
2. If the communication in #1 (above) does not resolve the disagreement, the service will evaluate the patient in the Emergency Department in person (if they have not done so) and then communicate directly with the ED attending physician. The requested service attending or designee has 30 minutes to complete this evaluation and discuss with ED attending.
3. If the communication in #2 (above) does not resolve the disagreement, the ED attending physician and service attending physician (if he or she was not the service representative to evaluate the patient in person) will discuss the case directly.
4. If the communication in #3 (above) does not resolve the disagreement, the matter will escalate to the Emergency Medicine System Administrator on call, and to the Administrative physician on call for the admitting service.
5. If the communication in #4 (above) does not resolve the disagreement, the matter will escalate to the Department Chairs or their delegate.
6. If the communication in #5 (above) does not resolve the disagreement, the matter will escalate to the Chief Medical Officer of Rhode Island Hospital for adjudication.

A. **Disputes arising between two admission services regarding which should admit a patient**

1. The process of resolving disputes or disagreements regarding the appropriate service to admit a patient is set forth in Section I, Rule 6 of THE RULES AND REGULATIONS OF THE RHODE ISLAND HOSPITAL MEDICAL STAFF as revised January, 2020.

Part V: Quality assurance process

1. If a service believes a patient was inappropriately admitted using any portion of this guideline and the care team believe there is an opportunity for process improvement, the caregivers should email the service attending and have the case escalated to the service chief. The service chief will forward these vetted concerns to ED leadership and hospital medical leadership. If there are patient safety concerns, the case should be reported using SafetyNet and/or calling Risk Management as per usual practice.
2. Concerns will be followed up rapidly by the appropriate clinical leadership.

Approval Signatures

Step Description	Approver	Date