**HMC Off-Hours Triage of Requested Echocardiograms:**

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| **Triage** | **Clinical Concern** |
| **Emergency/STAT**  **(*including weekday and weekend nights 5PM to 8AM*)**  \*\*\*\*\*\*\*\*\*\*\*\*  *IDEALLY RESTRICTED TO CLINICAL QUESTIONS IN WHICH RESULT OF ECHO WILL SUBSTANTIALLY CHANGE MANAGEMENT*  ***\*\*TO BE READ ASAP BY FELLOW\*\*\**** | **Acute chest pain:**  1. Evaluation of acute chest pain in patients with suspected myocardial ischemia/infarction and non-diagnostic ECG and cardiac enzymes, and when resting echocardiogram can be performed during the pain.  2. Evaluation of patients with chest pain and hemodynamic instability unresponsive to simple therapeutic measures.  3. Evaluation of chest pain in patients with suspected acute aortic syndromes when CT is not feasible, pulmonary embolism, myo-pericarditis, and Takotsubo/stress cardiomyopathy.  4. As an initial imaging modality for diagnosis of suspected aortic dissection in the emergency setting when CT scan not feasible.  5. In patients with suspected bleeding in the pericardial space (e.g. trauma, perforation)  6. Guidance and monitoring of emergency pericardiocentesis for tamponade.  **Acute dyspnea:**  1. Distinguishing cardiac vs. non-cardiac etiology of severe acute dyspnea in patients in whom clinical and laboratory findings are ambiguous.  3. Detection of echocardiographic signs of tamponade.  4. Detection of suspected acute severe valvular regurgitation and/or prosthetic valve dysfunction.  5. Detection of suspected complication of myocardial ischemia/infarction, including but not limited to acute mitral regurgitation, ventricular septal defect, free-wall rupture/tamponade, right-ventricular involvement, severe heart failure.  **Hemodynamic instability/shock**  1. For differential diagnosis of the cause of hypotension or shock, by detecting cardiac or non-cardiac etiologies.  2. Rapid identification of pericardial effusion, left-ventricular or right-ventricular dysfunction, and acute valvular dysfunction.  3. Rapid assessment of intravascular volume status.  4. Assess Impella position and function.  5. Rapid identification of right ventricular dysfunction in hemodynamically unstable patients with suspected or confirmed massive pulmonary embolism  **Chest trauma:**  Detection of pericardial effusion, myocardial contusion or laceration, regional wall motion abnormalities, acute valvular regurgitation, and aortic dissection in patients with severe deceleration injury or chest trauma.  **Cardiac arrest/CPR:**  Identification of the (unexpected) cause of cardiac arrest in order to guide CPR (e.g. tamponade, pulmonary embolism, hypovolemic heart, hypertrophic cardiomyopathy). |
| **Prioritized to first of study group in AM (*including weekend days 8AM to 5 PM*)**  **\*\*TO BE READ BY HMC ECHO ATTENDING\*\*\***  *Rationale:*  *-Complete study*  *-Expedited Formal Attending Read*  *-Rested Sonographer* | **Acute chest pain:**  1. In STABLE patients with suspected pericardial disease, including effusion, constriction, or effusive-constrictive process.  2. Evaluation of acute chest pain in patients with known underlying cardiac disease (valvular, pericardial, or primary myocardial disease).  3. Guiding the therapeutic approach in patients with *known pulmonary embolism* (e.g. thrombectomy and thrombolytics).  **Dyspnea:**  Assessment of left-ventricular size, shape, and global and regional function in patients with suspected clinical diagnosis of NEW heart failure or NEW pulmonary hypertension.  **New murmur:**  1. In patients with cardiac murmurs and symptoms or signs of or suggestive of heart failure, myocardial ischemia/infarction, syncope, thromboembolism, infective endocarditis, or clinical evidence of structural heart disease.  2. Detection of valvular vegetations, indicating infective endocarditis. |
| **Transesophageal Echo**  -NPO 6h, includes tube feeds  -Patient or family designate available for consent  -Plt count > 50k, PTT or INR in therapeutic range  -Patient must be in ICU or PACU for night/weekend studies.  **-**Anesthesia support as needed per UWMC /HMC Moderate Conscious Sedation Guidelines | **Acute chest pain:**   1. Evaluate chest pain with suspected acute aortic syndromes when CT is not feasible or possible myopericarditis 2. Evaluate acute chest pain with suspected myocardial ischemia and non-diagnostic ECG/enzymes   **Hemodynamic instability/shock**   1. Distinguish cardiac vs. non-cardiac etiology of the cause of hypotension or shock. 2. Rapid identification of pericardial effusion, LV/RV dysfunction, and acute valve dysfunction. 3. Rapid assessment of intravascular volume status. 4. Assess LVAD function, cannula velocities, ventricular function in patient with mechanical circulatory support 5. Identify(unexpected) cause of cardiac arrest in order to guide CPR   **Acute dyspnea:**   1. Distinguish cardiac vs. non-cardiac etiology of severe acute dyspnea where clinical/laboratory findings are ambiguous. 2. Evaluate for tamponade. 3. Evaluate for severe valve regurgitation and/or prosthetic valve dysfunction   **Arrhythmia:**  1. Left atrium for thrombus prior to DC cardioversion |
| **To be done within 1 hospital day**  **\*\*TO BE READ BY HMC ECHO ATTENDING\*\*\*** | **Acute Coronary Syndrome**   1. Evaluation of LV function/wall motion   **Source of Embolus**:   1. CVA, TIA, peripheral embolus, endocarditis   **Discharge pending result of TTE** |
| **To next business day (M-F)** | **Follow-up of stable patient with known cardiac diagnosis**  **Elective TTE in a medical/surgical patient with possible secondary cardiac diagnosis** |
| **Pediatric Echos**  **Images pushed to Seattle Children’s Hospital** | **Pediatric studies (Age ≤13, including infant/neonatal studies).**   1. Coordinate study with sonopgrapher in accordance with patient acuity and ordering provider request 2. Notify Seattle Children’s Cardiology Fellow of study (sonographer should push images to SCH) 3. Adult cardiology fellows need not read these studies |

***--Revised 04/20/2021 by Gary Huang, MD in coordination with UWMC and Fellowship, and from :***

Douglas, PS et al. ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR

2011 Appropriate Use Criteria for Echocardiography (J Am Soc Echocardiogr 2011; 24:229-67.)

Neskovic AN et al. Emergency echocardiography: the European Association of Cardiovascular Imaging

Recommendations. *Eur Heart J – Cardiovascular Imaging* (2013) 14, 1–11