ED OBSERVATION UNIT:
ACUTE HEART FAILURE PROTOCOL
NYC H+H KINGS COUNTY HOSPITAL CENTER

General Observation Guidelines apply for all ED observation patients

INCLUSION CRITERIA	*EXCLUSION CRITERIA*
• Prior diagnosis of CHF • Imaging (bedside ultrasound, CXR) or laboratory studies (BNP) suggestive of acute heart failure • Initial treatment with diuretic in the ED	• Exacerbation meeting admission criteria[1] • Evidence of altered mental status • ESRD, or evidence of end organ damage • Severe electrolyte imbalance • Positive troponin or elevated troponin from baseline • RR >30 • Requirement of NIPPV • ECG with ischemic changes unless prior available to confirm no change

[1] Heart failure admission criteria per Millman (23rd edition) is met by 1 or more of the following:

- Hemodynamic instability
- Severe electrolyte abnormalities requiring inpatient care
- Cardiac arrhythmias of immediate concern
- Precipitating cause for acute decompensation (eg, pneumonia, pulmonary embolism) requires inpatient care.
- Acute cardiac ischemia causing or associated with failure.
- Pulmonary edema that is very severe (eg, invasive or noninvasive assisted ventilation needed, imminent or likely, or need for 100% oxygen to keep oxygen saturation above 90%)
- Massive skin edema (anasarca) with complications (eg, tissue breakdown with infection, inability to void due to edema)
- Expand Pulmonary edema that is persistent as indicated by need for ALL of the following: New need for oxygen therapy to keep oxygen saturation above 90% (or increased FiO2 need from baseline); Has not improved sufficiently with emergency department and observation care treatment (eg, IV diuretics)
- Tachypnea that persists despite emergency department and observation care treatment
- Dyspnea (above baseline) that persists despite emergency department and observation care treatment
- Altered mental status that is severe or persistent
- Increased creatinine (new on laboratory test) with reduction of more than 50% in estimated glomerular filtration rate from baseline
- Progressively (ongoing) rising creatinine (known from past laboratory test) with reduction of more than 25% in estimated glomerular filtration rate from baseline
- Acute renal failure
- Acute peripheral ischemia (eg, examination shows pulseless, cool, mottled, or cyanotic extremity)
- Pulmonary artery catheter monitoring needed

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Authored by A. Aurrecoechea MD

Reviewed by R. Allen MD, E. Madden MD, R. Balakrishnan MD, S. Brewster MD

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INTERVENTIONS

- Telemetry monitoring for 24 hours
- Continuous pulse oximetry and oxygen therapy as indicated
- Serial troponins and EKGs on presentation and 3 hours after
- Sublingual nitroglycerin, aspirin, and furosemide
- TTE up to date within 6 months
- Serial Weight and Urine Output

DISPOSITION

Home:

- Stable vital signs
- Mental Status at baseline
- Ambulatory (or at baseline with ADLs)
- Oxygen requirement at baseline
- Adequate oral intake
- Cardiology follow up within 1 week

Admission:

- Persistent hypoxemia
- Hemodynamic Instability
- AMS
- Failure to respond to diuresis or adverse event due to medication
- Worsening of comorbid conditions
- Acute ischemic EKG changes
- Elevated cardiac enzymes

Sources

1. Collins SP, Pang PS, Fonarow GC, Yancy CW, Bonow RO, Gheorghiade M. Is hospital admission for heart failure really necessary?: the role of the emergency department and observation unit in preventing hospitalization and rehospitalization. *J Am Coll Cardiol*. 2013;61(2):121–126. doi:10.1016/j.jacc.2012.08.1022
2. Mebazaa A, Yilmaz MB, Levy P, et al. Recommendations on pre-hospital & early hospital management of acute heart failure: a consensus paper from the Heart Failure Association of the European Society of Cardiology, the European Society of Emergency Medicine and the Society of Academic Emergency Medicine. Eur J Heart Fail. 2015;17(6):544-58.
3. Schrock JW, Emerman CL. Observation unit management of acute decompensated heart failure. Heart Fail Clin. 2009;5(1):85-100, vii.

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4. Miró Ò, Peacock FW, Mcmurray JJ, et al. European Society of Cardiology - Acute Cardiovascular Care Association position paper on safe discharge of acute heart failure patients from the emergency department. Eur Heart J Acute Cardiovasc Care. 2017;6(4):311-320.