

# Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department With Acute Heart Failure Syndromes (Executive Summary)

Approved by ACEP Board of Directors, June 23, 2022

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on Acute Heart Failure Syndromes:

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0196-0644/\$-see front matter

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[http://dx.doi.org/10.1016/S0196-0644\(22\)01077-0](http://dx.doi.org/10.1016/S0196-0644(22)01077-0)

[Ann Emerg Med. 2022;80:371-372.]

## BACKGROUND

This clinical policy from the American College of Emergency Physicians addresses key issues in the evaluation and management of adult patients presenting to the emergency department with acute heart failure syndromes. A writing subcommittee conducted a systematic review of the literature to derive evidence-based recommendations to answer the below critical questions. For each question, a systematic literature search was performed, evidence was graded and synthesized, and recommendations were made based on the strength of the available data.

## CRITICAL QUESTIONS

- In adult patients presenting to the emergency department with suspected acute heart failure syndrome, is the diagnostic accuracy of point-of-care lung ultrasound sufficient to direct clinical management?**

## Patient Management Recommendations

**Level A recommendations.** None specified.

**Level B recommendations.** Use point-of-care lung ultrasound as an imaging modality in conjunction with medical history and physical examination to diagnose acute heart failure syndrome when diagnostic uncertainty exists as the accuracy of this diagnostic test is sufficient to direct clinical management.\*

**Level C recommendations.** None specified.

- In adult patients presenting to the emergency department with suspected acute heart failure syndrome, is early administration of diuretics safe and effective?**

## Patient Management Recommendations

**Level A recommendations.** None specified.

**Level B recommendations.** None specified.

**Level C recommendations.** Although no specific timing of diuretic therapy can be recommended, physicians may

\*Use of lung ultrasound requires that the equipment is available, and the physician is proficient in its use.

consider earlier administration of diuretics when indicated for emergency department patients with acute heart failure syndrome, because it may be associated with reduced length of stay and inhospital mortality (consensus recommendation).

Physicians should be confident in the diagnosis of acute heart failure syndrome with volume overload in a patient before the administration of diuretics because treatment with diuretics may cause harm to those with an alternative diagnosis (consensus recommendation).

**3. In adult patients presenting to the emergency department with suspected acute heart failure syndrome, is vasodilator therapy with high-dose nitroglycerin administration safe and effective?**

**Patient Management Recommendations**

*Level A recommendations.* None specified.

*Level B recommendations.* None specified.

*Level C recommendations.* Consider using high-dose nitroglycerin as a safe and effective treatment option when administered to patients with acute heart failure syndrome and elevated blood pressure (consensus recommendation).\*

**4. In adult patients presenting to the emergency department with symptomatic acute heart failure syndrome, is there a defined group that may be safely discharged home for outpatient follow-up?**

**Patient Management Recommendations**

*Level A recommendations.* None specified.

*Level B recommendations.* Do not rely on current acute heart failure syndrome risk stratification tools alone to determine which patients may be discharged directly home from the emergency department.

Consider using the Ottawa Heart Failure Risk Scale (OHFRS) to help determine which higher-risk patients for adverse outcome should not be discharged home.

*Level C recommendations.* Consider using the Emergency Heart Failure Mortality Risk Grade for 7-day mortality (EHMRG7) or the STRATIFY decision tool to help determine which higher-risk patients for adverse outcome should not be discharged home.

Use shared decisionmaking strategies when determining the appropriate disposition of AHFS patients (consensus recommendation).

Translation of Classes of Evidence to Recommendation Levels

In accordance with the strength of evidence for each critical question, the subcommittee drafted the recommendations and supporting text synthesizing the evidence using the following guidelines:

*Level A recommendations.* Generally accepted principles for patient care that reflect a high degree of scientific certainty (eg, based on evidence from 1 or more Class of Evidence I or multiple Class of Evidence II studies that demonstrate consistent effects or estimates).

*Level B recommendations.* Recommendations for patient care that may identify a particular strategy or range of strategies that reflect moderate scientific certainty (eg, based on evidence from 1 or more Class of Evidence II studies or multiple Class of Evidence III studies that demonstrate consistent effects or estimates).

*Level C recommendations.* Recommendations for patient care that are based on evidence from Class of Evidence III studies or, in the absence of adequate published literature, based on expert consensus. In instances where consensus recommendations are made, “consensus” is placed in parentheses at the end of the recommendation.

\*Although nitroglycerin infusions of up to 400 mcg/min have been described as “standard dosing,” some may consider a dosage of 200 mcg/min or higher as “high dose.” “High dose” nitroglycerin has also been described as bolus intravenous dosing of 2,000 mcg every 3 to 5 minutes.