

EVMS JC: CRITICAL APPRAISAL OF A GUIDELINE

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Reviewer: AJ Langa

Citation: Clinical Policy: Critical issues in the evaluation and management of adult patients presenting to the emergency department with acute heart failure syndromes. Ann Emerg Med 2007 May;49(5):627-69

I.	Are the Recommendations Valid?	Answer questions IA-D below
A.	<p>Did the recommendations consider all relevant patient groups, management options, and possible outcomes?</p>	<p>No, the policy aimed to answer 4 questions about pts presenting to the ED with s/sx of acute CHF.</p>
B.	<p>If necessary, was an explicit, systematic, and reliable process used to tap expert opinion?</p> <p><i>You should look for a clear description of how the panel was assembled along with the members' specialties and any organizations they are representing.</i></p>	<p>No, there is no explanation as to how the policy committee was formed or what qualifications each member held other than titles on the first page. The policy did incorporate expert opinion when studies were not available for review.</p>
C.	<p>Is there an explicit, systematic specification of values or preferences?</p> <p><i>Panelists' ratings presumably reflect the risk-benefit trade-offs of specific interventions, but whether other physicians or patients themselves would make the same decisions remains uncertain. Whether given options are value or preference related should be clearly stated in the guideline.</i></p>	<p>No, there were no explicit statements, just guidelines made.</p> <p>Regarding the BNP question, the panel did mention that in one study by Muelleret al there was a cost savings associated with the BNP measurement group from finding an alternative diagnosis other than CHF; this was not validated with other studies.</p> <p>As for CPAP, on page 632 there is mention of one study that did show a reduction in mortality, which while not verified by other studies, this did get quickly mentioned in the panels Level B recommendation.</p>

D.	<p>If the quality of the evidence used in originally framing the criteria was weak, have the criteria themselves been correlated with patient outcomes?</p> <p>When the studies utilized to produce guidelines are less than randomized-controlled trials, conclusions can be strengthened by noting how outcomes can be correlated with adherence to the guidelines.</p>	<p>Evidence was weak as they were no level A recommendations.</p> <p>There was level B evidence for BNP measurement - single BNP level improves diagnostic accuracy compared to clinical judgment alone, however, what level should be used is still up for debate. The results per Mueller's study show that discharge time and overall costs are decreased by using a BNP level.</p> <p>As for CPAP, using the guidelines consistently showed improved vital signs, leading to the panels level B recommendation.</p> <p>For the use of vasodilator therapy the use of nitrates in the patients evaluated showed a mortality benefit which made nitrates a level B and Nesirtide a level C, as no improvement was seen over nitrates with Nesirtide.</p> <p>Diuretic therapy per these guidelines should be used in conjunction with Nitrates, as the studies showed pts treated per these protocols fared better (decreased hospital death, MI, intubation, 25% vs 46%).</p>
II.	<p>Were the Criteria Applied Appropriately?</p>	
A.	<p>Was the process of applying the criteria reliable, unbiased, and likely to yield robust conclusions?</p>	<p>The recommended criteria have not been tested, as this policy statement was not meant to be tested.</p>
B.	<p>What is the impact of uncertainty associated with evidence and values on the criteria based ratings of process of care?</p>	<p>Little is known as ACEPs guidelines have not been tested.</p>
III.	<p>How Can I Apply the Criteria to</p>	

	Patient Care?	
A.	<p>Are the criteria relevant to your practice setting?</p> <p><i>Medical practice is shaped by an amalgam of evidence, values, and circumstances; clinicians should consider their local medical culture and practice circumstances before importing a particular set of audit criteria.</i></p>	<p>Yes, we see pts in the ED every day with possible CHF and readily have a test for evaluation of BNP levels, we specifically use NT-proBNP. Additionally we can easily use Bi-PAP, CPAP or face mask for O2 supplementation, and make a choice between nitrates and/or diuretics.</p>
B.	<p>Have the criteria been field-tested for feasibility of use in diverse settings, include settings similar to yours?</p>	<p>No, just guidelines based off of several small studies, some of which were based in settings similar to ours, others which were outpatient or inpatient settings.</p>

Clinical Bottom Line:

Support for the use of BNP's seems to be in the area of very high and very low values where their diagnostic accuracy may assist in establishing or ruling out CHF as a contributing cause.

Clinical Policy statement does not appear to meet STARD criteria for evaluation of diagnostic tests.