MEASUREMENT OF DYSPNEA IN PATIENTS WITH ACUTE DECOMPENSATED HEART FAILURE PRESENTING TO BAYSTATE MEDICAL CENTER EMERGENCY DEPARTMENT

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Congestive heart failure (CHF) refers to a weakened state in which the heart is unable to adequately maintain a proper amount of blood throughout the body for circulation. In the U.S. alone, 500,000 new cases are reported each year with a population of 5 million living with the condition. The contractility of the heart is compromised over time from various factors, and a normal stroke volume (amount of blood pumped out of each ventricle with each contraction) cannot be maintained, which results in congestion or damming up of fluid in the venous system and consequently an inadequate amount of blood being supplied systemically. An acute decompensated phase, which is most often characterized by edema of the lungs and/or the body failing to use its compensatory mechanisms as the disease progresses, causes the symptom of dyspnea which is the most common chief complaint of patients diagnosed with CHF. Since dyspnea is subjective but nevertheless has been shown to be an important outcome measurement in patients with acute decompensated heart failure, a validated scale to measure dyspnea in the emergency department setting was needed.

A prospective observational study was conducted on patients who came to Baystate presenting with dyspnea on arrival. Of the 258 patients that were screened, 99 were enrolled, and data on 71 patients were analyzed. The mean age of the study population was 73.8 years ±14.6 years, with a distribution of 49% male and 51% female. The first objective was to assess the agreement between physician and patient-self reported measures of dyspnea, which showed a systematic higher rating from physician than from patient. The second objective was to assess the relationship between transition measures with the difference between pre and post static measures, which resulted in a significant difference between groups (paired t-test, p<0.05). Questionnaire data was collected on both ordinal and visual analog scales. A secondary analysis of left ventricular ejection fraction (LVEF) as a function of three month mortality post admission was also conducted resulting in a decreased LVEF for 60% of living patients, and 82% for patients that expired within 3 months of admission.
