

of differences in the diagnostic and the CPAP titration SS in the same pts. **Results:** Using an AEI threshold (equivalent to AHI) of 5, the Chronicle algorithm correctly diagnosed 7 of 7 datasets with SA (sensitivity = 100%) and 4 of 5 datasets without SA (specificity = 80%). In an episode-by-episode comparison, the algorithm correctly identified 28 of 38 episodes, but also falsely detected 16 episodes. The algorithm detected CPAP correction of SA in 4 of 5 (80%) of pts. **Conclusion:** Hemodynamic data from the Chronicle can reliably detect and quantify periodic apnea-recovery cycles. The agreement with reference PSG demonstrates the feasibility of SA detection and monitoring using the Chronicle.

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A Motivational Approach Effectively Improves Heart Failure Self-Care

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Despite extensive patient education, many heart failure (HF) patients are unable to master self-care. **Purpose:** The purpose of this study was to identify 1) patients who improved in HF self-care or knowledge after receipt of an intervention by an APN trained in motivational interviewing and couples counseling, and 2) specific strategies that were effective. **Methods:** The intervention was provided during home visits ($M = 3.15$, range 1–6) following a HF hospitalization. Patients ($N = 15$) were followed for 3-months. Using a comparative mixed method design, one investigator categorized patients according to whether they improved in HF self-care (Self-Care of HF Index (SCHFI) .73 this sample) or HF knowledge (Representations, .75). A second investigator, blinded to the quantitative results, analyzed qualitative data obtained from audiotaped intervention sessions augmented with field notes and personal stories using Atlas software. Improvement was judged by consensus based on quantitative and qualitative results. Effective strategies were coded from the qualitative data. **Results:** Of the 15 patients who completed the study, sufficient data were available on 12 (66.7% female, 50% African American, age $M = 57.75$ (13.4) years, 66.7% functional class II, 75% systolic HF). Eleven of 12 (92%) improved in self-care, defined as ≥ 8 point improvement in SCHFI maintenance, management, or confidence scores or ≥ 5 points in knowledge plus qualitative evidence of behavioral change. Techniques used by the APN to improve self-care included motivational enhancement strategies such as linking self-care behaviors to symptoms, skill building, therapeutic listening, correcting misconceptions, activating resources and support, negotiating an action plan, and bridging the transition from hospital to home. **Conclusions:** A multifaceted counseling intervention that considers the unique needs of individual patients and actively targets ambivalence and motivation may be essential in promoting HF self-care.

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Disparity in Emergency Department Treatment of Acute Decompensated Heart Failure by Gender

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Background: Previous research suggests that there is a disparity in treatment between women and men with congestive heart failure. **Objective:** To treatment differences noted between men and women who present to the emergency department (ED) with acute decompensated heart failure (ADHF). **Methods:** Prospective, convenience sample of patients presenting to the ED patients with a complaint shortness of breath or leg swelling and an ED diagnosis of ADHF from 1/1/2003 to 12/1/2004. Acute treatments were defined as diuretics, Angiotensin Converting Enzyme (ACE) inhibitors, and vasodilators (nitrates, nesiritide, nitroprusside). Only medications administered during ED care were evaluated. Descriptive statistics were utilized to describe categorical variables, a p value < 0.05 was significant. A multivariate analysis including variables of age, radiographic evidence of heart failure, physical findings (rales, jugular venous distention), past medical history (diabetes, hypertension, coronary artery disease, heart failure, COPD), social history (current or remote smoking), if BNP testing was done, and current medications (Diuretics, ACE Inhibitors, Nitrates, B-blockers) was performed determine if gender was an independent predictor of acute therapy. **Results:** The study cohort consisted of 506 patients was comprised of 282 (56%) men and 224 (44%) women. Although women were older than men (59 yrs vs 55 yrs, $p = 0.026$), there was no difference in admission rates by gender (81% vs 80%, $p = NS$). There was no difference in the presence of JVD, S4, rales on exam, or radiographic evidence of pulmonary edema between women and men. Women were less likely to receive a diuretic (58% vs 67%, OR 0.6, 95% CI 0.4–.8). There was no difference by sex in vasodilator use (52% vs 56%, $p = .6$), and ACE inhibitor administration ($p = 0.8$). In multivariate analysis female sex was the only independent predictors of receiving a diuretic in the ED (OR 0.6, 95% CI 0.4–2.5). **Conclusion:** Women with ADHF were treated less often with a diuretic in the ED when compared to men. Further study is required to identify barriers to acute pharmacologic therapy in women.

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Audiotelic Cardiographic Parameters for the Bedside Detection of Heart Failure

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The third heart sound (S3) often provides acoustical evidence of heart failure (HF). Using new audioelectric technology, we tested the ability of the electronically recorded S3 and other computerized audioelectric cardiographic parameters to detect HF in a variety of clinical settings. **Hypothesis:** A combination of ECG and cardiac acoustical data can distinguish between subjects with and without HF. **Methods:** We obtained recordings from 482 age and heart rate matched subjects (272 men, ages 25–90, mean 60 years) using Audicor™, a device that records and algorithmically interprets simultaneous 12-lead ECG and heart sound data using acoustical sensors attached to the V3 and V4 leads. Of the 482 subjects, 131 had clinical evidence of HF and 351 did not. Of the 131 patients with HF, 58 had presented to an emergency department (ED) with acute HF and 73 were being managed in a chronic HF clinic. Of the 351 subjects without HF, 198 were ambulatory and asymptomatic, and 153 had presented to an ED with dyspnea, but were found to have a non-HF etiology. The mean \pm SD BNP in pg/mL was 1247 ± 1269 in ED patients with heart failure, and 251 ± 595 pg/mL in ED patients without HF. The mean \pm SD pro-BNP in pg/mL was 2771 ± 5264 in chronic HF clinic. The clinical diagnoses were made independent of the Audicor findings. We evaluated the following computerized parameters: the S3, the Electromechanical Activation Time (EMAT) (the time from the onset of the Q wave to the acoustical detection of closure of the mitral valve), and EMAT as a proportion of the cardiac cycle (EMAT/RR). Unpaired t-test and chi square analysis were utilized to test statistical significance between the two groups. **Results:** The following table shows the results (mean \pm SD)

Parameter	No HF (n = 351)	HF (n = 131)	P
S3 Prevalance	9%	34%	< 0.001
EMAT	97 ± 19 ms	124 ± 26 ms	< 0.00001
EMAT/RR	$0.11 \pm .03$ ms	$0.15 \pm .04$ ms	< 0.00001

For these parameters there was no significant difference between ambulatory patients who were asymptomatic and those who had dyspnea without heart failure. **Conclusions:** HF patients demonstrated a prolonged EMAT when compared to patients without HF. Audioelectric cardiography may provide a new, non-invasive method for diagnosing patients with heart failure.

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Functional Class, Quality of Life, and 6 Minute Walk Test in HF Patients with Low vs. Preserved Systolic Function: Baseline Data from HearT-I

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Background: Patients with HF and preserved systolic function (PSF) account for a large proportion of HF hospitalizations, although their overall prognosis appears to be more favorable compared to HF patients with reduced EF. Less is known about health status and functional status between these 2 groups of HF patients. We sought to compare symptoms, functional class (NYHA), quality of life (QOL), and 6 Minute Walk Test (6-MWT) in HF patients with low EF vs. PSF. **Methods:** We studied patients at baseline who had been enrolled into a Heart failure Telephone Intervention study, HearT-I. All patients had a current or past history of HF, and were enrolled regardless of EF. Two health status measures, the Kansas City Cardiomyopathy Questionnaire (KCCQ) and the SF-36V were completed at baseline in all patients, and 6-MWT was performed in all patients who had a KCCQ composite score > 32 . **Results:** Out of 469 patients, 379 had assessment of EF within 1 year prior to enrollment. HF patients enrolled in this study had marked limitation of 6-MTWT, demonstrated decreased QOL, and showed reduced functional capacity, with similar scores on most measures between groups (see table). **Conclusions:** HF patients with PSF have similar functional capacity and health status compared to patients with reduced EF indicating similar degrees of limitations. While mortality may be lower in this group, these patients remain highly symptomatic and perform as poorly as do patients with low EF.

	Health Status and EF		p-value
	Low EF ($\leq 40\%$)	PSF(EF $>40\%$)	
n	263	116	–
NYHA	3.50 ± 0.04	3.54 ± 0.05	0.51
6-MWT (m)	257 ± 7	253 ± 10	0.96
KCCQ			
Symptom change	50.2 ± 1.3	46.2 ± 1.8	0.08
Symptom severity	59.7 ± 1.4	55.5 ± 2.1	0.10
Self efficacy	67.3 ± 1.5	66.5 ± 2.3	0.78
QOL	48.2 ± 1.5	52.8 ± 2.1	0.09
Total symptom score	56.7 ± 1.3	52.9 ± 2.1	0.13
Functional status	53.9 ± 1.2	51.0 ± 1.8	0.19
Clinical summary	50.4 ± 1.2	50.6 ± 1.8	0.91
SF-36V			
Physical functioning	61.9 ± 1.5	58.2 ± 2.5	0.76
General health	47.7 ± 0.9	48.4 ± 1.3	0.69
Vitality	36.1 ± 1.1	37.1 ± 1.8	0.64
Social	61.2 ± 1.7	65.7 ± 2.5	0.14
Mental	65.6 ± 1.3	66.9 ± 1.8	0.58
Emotional	53.7 ± 1.8	60.3 ± 2.7	0.04