

BCC Clinical Support Systems Program Feedback Newsletter #4 –ALL Hospitals CONGESTIVE HEART FAILURE



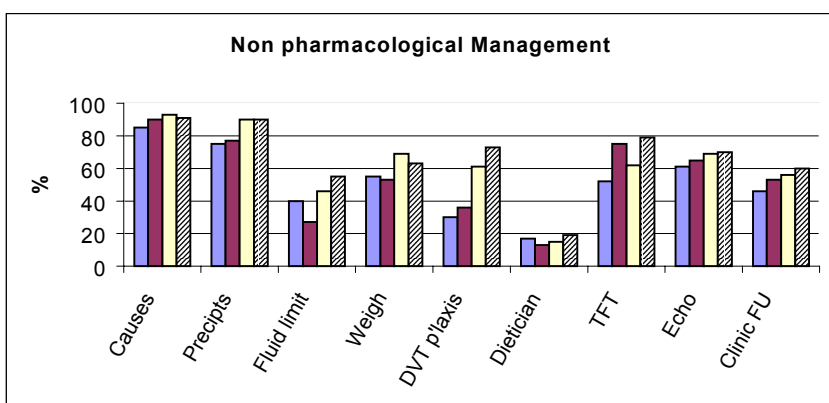
Issued November 2002

Case definition: Provisional diagnosis of heart failure made by admitting/reviewing medical or cardiology registrar AND at least 3 of the following clinical predictors: elevated JVP, gallop heart rhythms, bilateral chest crackles to the midzones, pedal oedema, or cardiomegaly or pulmonary oedema on CXR.

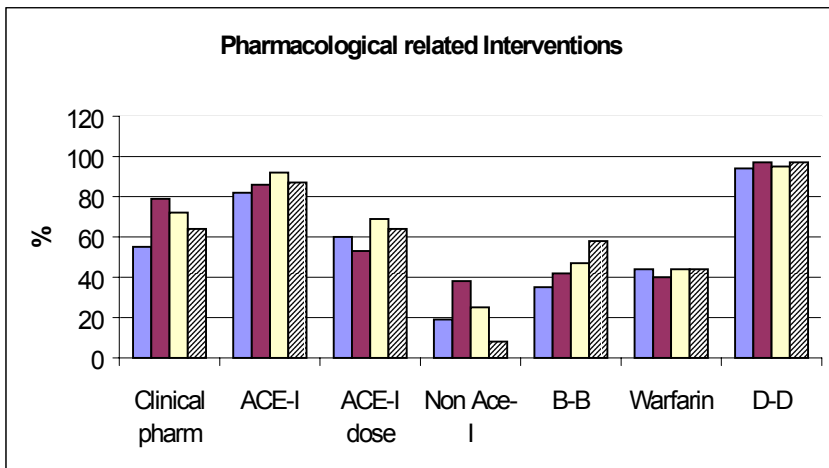
| Pt. characteristics | Baseline (n=220) (1/10/00-17/4/01) | Measurement 1 (n=286) (18/4/01 – 22/9/01) | Measurement 2 (n=188) (23/9/01 – 22/3/02) | Measurement 3 (n=210) (23/3/02 – 22/9/02) |
|---------------------|---------------------------------------|--|--|--|
| Age | 75 +/- 12.8 years | 77 +/- 12.6 years | 74 +/- 12.2 years | 78 +/- 12.3 years |
| Sex | Female 53%; male 47% | Female 55%; male 45% | Female 42%; male 58% | Female 55%; male 45% |

Clinical Indicators*

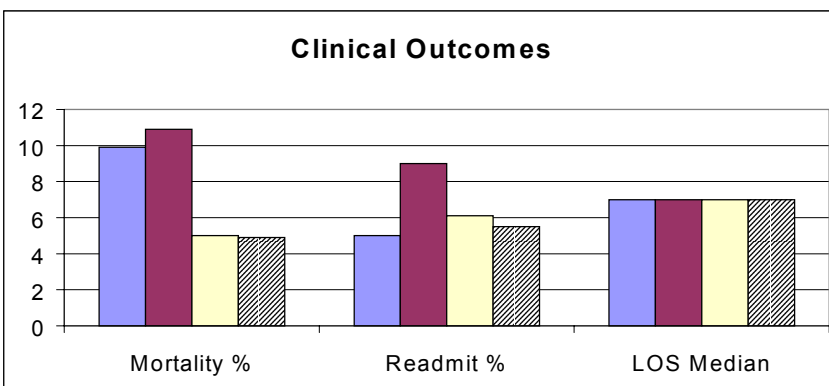
■ Baseline ■ Measurement 1 ■ Measurement 2 ▨ Measurement 3



Causes: % assessed for underlying causes of CHF
Precipits: % assessed for acute precipitating factors
Fluid limit: % subject to prescribed fluid balance
Weigh: % subject to daily weighing during first 3 days
DVT p'laxis: % eligible pts receiving DVT prophylaxis
Dietician: % receiving dietary counselling re salt/fluid
TFT: % eligible pts with request for TFTs
Echo: % requests for echocardiographic or nuclear imaging of LV function during, or 12 months prior to, admission
Clinic FU: % discharged pts scheduled for follow-up clinic <4 weeks



Clinical pharm: % pts reviewed by clinical pharmacist
ACE-I: % eligible pts receiving ACE inhibitors
ACE-I dose: % eligible pts receiving target dose of ACE inhibitors
Non-ACE-I: % eligible pts receiving alternative vasodilators where ACE inhibitors are contra-indicated
B-B: % eligible pts receiving β -blockers
Warfarin: % eligible pts receiving warfarin
D-D : % pts not receiving deleterious drugs (NSAIDS, Ca antagonists, Class 1 anti-arrhythmics)



Mortality: % in-patient deaths
Readmit: % pts readmitted at 30 days with same diagnosis
LOS: median length of hospital stay (days)

*Detailed indicator definitions, patient eligibility criteria, and raw data tabulated overleaf

Congestive Heart Failure- Newsletter#4 – ALL Hospitals - November 2002

| Non Pharmacological Management | Baseline | | Measurement 1 | | Measurement 2 | | Measurement 3 | |
|--|----------|-------------|---------------|--------------|---------------|-------------|---------------|-------------|
| Causes Underlying cause of heart failure stated in record | 188/220 | 85% | 258/286 | 90% | 175/188 | 93% | 191/210 | 91% |
| Precipits Acute precipitating factors stated in record | 166/220 | 75% | 221/286 | 77% | 169/188 | 90% | 189/210 | 90% |
| Fluid limit Prescribed fluid intake stated in record | 89/220 | 40% | 78/286 | 27% | 86/188 | 46% | 115/210 | 55% |
| Weigh Patient weight measured daily and recorded during first three days of admission | 121/220 | 55% | 153/286 | 53% | 129/188 | 69% | 132/210 | 63% |
| DVT prophylaxis Heparin or compression prophylaxis stated in chart in patients not receiving warfarin | 31/104 | 30% | 48/134 | 36% | 51/83 | 61% | 88/120 | 73% |
| Dietician review Patients receiving dietary counselling re salt/fluid intake | 38/220 | 17% | 36/286 | 13% | 28/188 | 15% | 39/210 | 19% |
| Thyroid function Test (TFT) TFT requests in patients who have arrhythmia as precipitating factor and atrial fibrillation on admission ECG | 16/31 | 52% | 46/61 | 75% | 33/53 | 62% | 37/47 | 79% |
| Echo Patients for whom request for echocardiographic or nuclear imaging of LV function has been made during index admission, or within previous 12 months. | 135/220 | 61% | 185/286 | 65% | 130/188 | 69% | 146/210 | 70% |
| Physician clinic follow-up Patients discharged alive and not transferred who are scheduled for a follow-up visit within 30 days | 87/191 | 46% | 129/243 | 53% | 97/172 | 56% | 118/195 | 61% |
| Pharmacological Interventions at discharge (pt. Discharged alive and not transferred) | | | | | | | | |
| Clinical pharmacist review | 105/191 | 55% | 192/243 | 79% | 124/172 | 72% | 124/195 | 64% |
| ACE inhibitors (ACE-I) Patients with past history or in-hospital onset of heart failure; EF >0 and ≤40% or 'LV systolic dysfunction' on echo. <i>Exclusions: K⁺>5.5mmol/l; Cr >0.3mmol/l; systolic BP <90 mmHg; adverse drug reaction, severe aortic stenosis.</i> | 58/71 | 82% | 73/85 | 86% | 58/63 | 92% | 53/61 | 87% |
| ACE-I dose Target daily doses prescribed in patients receiving ACE inhibitors (captopril 150mg, enalapril 20mg, lisinopril 20mg, perindopril 4 mg, ramipril 10mg, fosinopril 20mg, trandalopril 4mg.) | 82/136 | 60% | 94/176 | 53% | 92/134 | 69% | 94/146 | 64% |
| Non-ACE-I Patients with LVEF >0 and ≤40% or 'LV systolic dysfunction' on echo. <i>Exclusions: Systolic blood pressure <90mmHg, patients receiving ACE inhibitors</i> | 3/16 | 19% | 6/16 | 38% | 3/12 | 25% | 1/12 | 8% |
| β-blocker (B-B) Patients with pulse rate at discharge >=60 bpm and systolic BP at discharge >=90 mmHg. <i>Exclusions: Asthma/severe chronic obstructive pulmonary disease (COPD); adverse drug reaction</i> | 47/135 | 35% | 73/175 | 42% | 54/114 | 47% | 79/137 | 58% |
| Warfarin Patients in atrial fibrillation <i>Exclusions: serum Cr>=0.3mmol/l, past CVA, active peptic ulcer; recent major bleed; systolic blood pressure>=180mmHg</i> | 22/50 | 44% | 32/81 | 40% | 28/63 | 44% | 24/55 | 44% |
| Deleterious agents (avoidance of). Patients NOT receiving calcium antagonists (diltiazem or verapmil), class 1 antiarrhythmic agents, and non-steroidal anti-inflammatory agents (NSAIDs). | 180/191 | 94% | 235/243 | 97% | 164/172 | 95% | 190/195 | 97% |
| Clinical Outcomes | | | | | | | | |
| In-hospital mortality Patients not transferred | 21/212 | 9.9% | 30/273 | 10.9% | 9/181 | 5.0% | 10/205 | 4.9% |
| Re-admission Patients not transferred. 30 day same cause re-admission rate | 10/199 | 5.0% | 23/256 | 9.0% | 11/179 | 6.1% | 11/200 | 5.5% |
| Length of stay <i>Median days.</i> Pts discharged alive and not transferred | | 7 | | 7 | | 7 | | 7 |