

BCC Clinical Support Systems Program Feedback Newsletter #4 –RBH **CONGESTIVE HEART FAILURE**



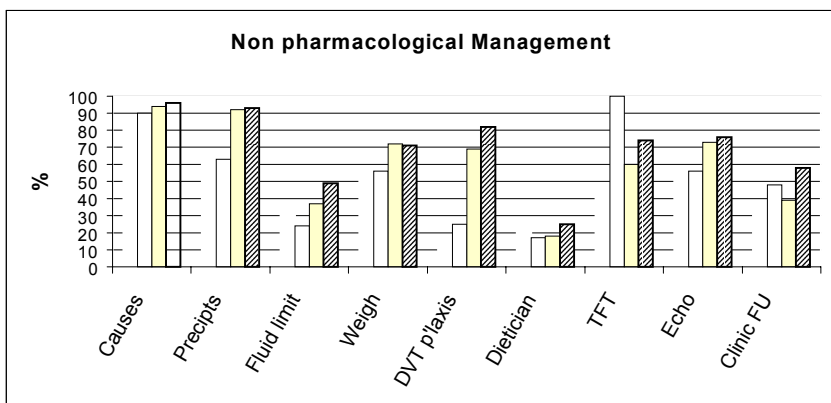
Issued October 2002

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.

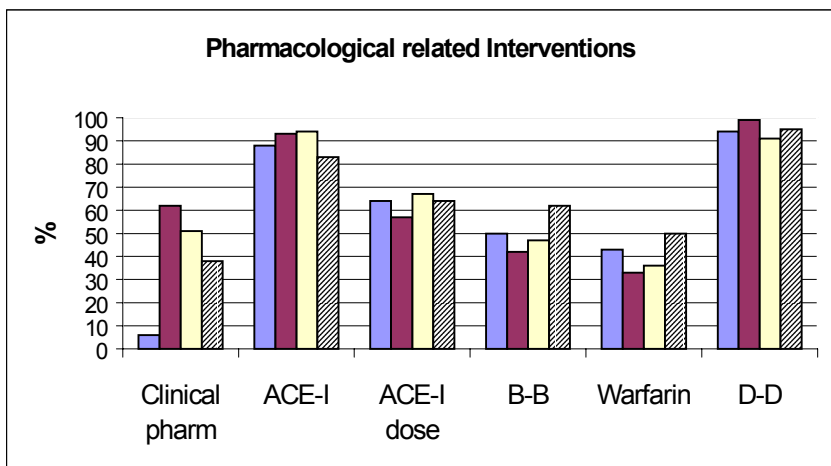
Pt. characteristics	Baseline (n=95) (1/10/00-17/4/01)	Measurement 1 (n=135) (18/4/01 – 22/9/01)	Measurement 2 (n=89) (23/9/01 – 22/3/02)	Measurement 3 (n=103) (23/3/02 – 22/9/02)
Age	75 +/- 12.8 years	77 +/- 13.1 years	76 +/- 10.8 years	77 +/- 14.0 years
Sex	Female 55%; male 45%	Female 58%; male 42%	Female 39%; male 61%	Female 58%; male 42%

Clinical Indicators*

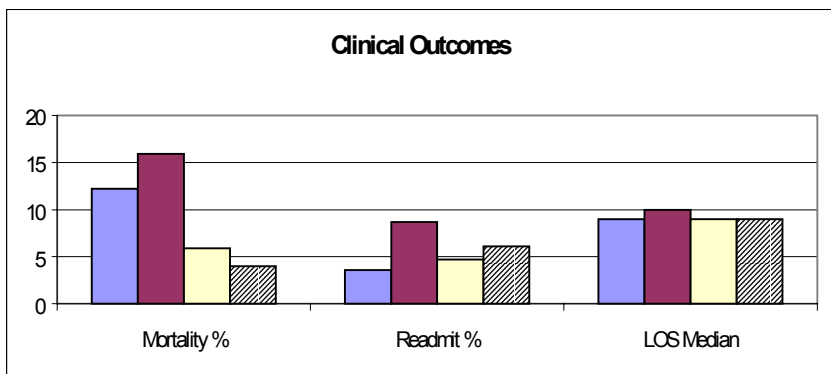
■ Baseline
 ■ Measurement 1
 ■ Measurement 2
 Measurement 3



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
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**

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Non Pharmacological Management	Baseline	Measurement 1	Measurement 2	Measurement 3
Causes Underlying cause of heart failure stated in record	82/95 86%	122/135 90%	84/89 94%	99/103 96%
Precipits Acute precipitating factors stated in record	59/95 62%	85/135 63%	82/89 92%	96/103 93%
Fluid limit Prescribed fluid intake stated in record	32/95 34%	32/135 24%	33/89 37%	50/103 49%
Weigh Patient weight measured daily and recorded during first three days of admission	54/95 57%	75/135 56%	64/89 72%	73/103 71%
DVT prophylaxis Heparin or compression prophylaxis stated in chart in patients not receiving warfarin	7/38 18%	16/65 25%	25/36 69%	46/56 82%
Dietician review Patients receiving dietary counselling re salt/fluid intake	21/95 22%	23/135 17%	16/89 18%	26/103 25%
Thyroid function Test (TFT) TFT requests in patients who have arrhythmia as precipitating factor and atrial fibrillation on admission ECG	2/5 40%	15/15 100%	15/25 60%	17/23 74%
Echo Patients for whom request for echocardiographic or nuclear imaging of LV function has been made during index admission, or within previous 12 months.	53/95 56%	76/135 56%	65/89 73%	78/103 76%
Physician clinic follow-up Patients discharged alive and not transferred who are scheduled for a follow-up visit within 30 days	28/79 35%	51/106 48%	31/80 39%	55/95 58%
Pharmacological Interventions at discharge (pt. Discharged alive and not transferred)				
Clinical pharmacist review	5/79 6%	66/106 62%	41/80 51%	36/95 38%
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>	21/24 88%	25/27 93%	31/33 94%	30/36 83%
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.)	36/56 64%	44/77 57%	42/63 67%	47/73 64%
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>	29/58 50%	30/72 42%	24/51 47%	42/68 62%
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>	10/23 43%	13/39 33%	13/36 36%	11/22 50%
Deleterious agents (avoidance of). Patients NOT receiving calcium antagonists (diltiazem or verapamil), class 1 antiarrhythmic agents, and non-steroidal anti-inflammatory agents (NSAIDs).	74/79 94%	105/106 99%	73/80 91%	90/95 95%
Clinical Outcomes				
In-hospital mortality Patients not transferred	11/90 12.2%	20/126 15.9%	5/85 5.9%	4/99 4.0%
Re-admission Patients not transferred. 30 day same cause re-admission rate	3/84 3.6%	10/115 8.7%	4/84 4.7%	6/99 6.1%
Length of stay <i>Median days.</i> Pts discharged alive and not transferred	9	10	9	9