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### ARE PATIENTS WITH ACUTE HEART FAILURE MORE LIKELY TO SURVIVE IN CARDIOLOGY WARDS BECAUSE OF SELECTION BIAS?

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**Introduction** Acute heart failure (AHF) is associated with 9% mortality. The National heart failure audit has consistently shown better survival of patients who are under the care of cardiologists. Heart failure mortality is 7% if the patient is in a cardiac ward compared to 11% in other wards. It is unclear whether the mortality benefit is a result of better management such as with disease modifying or are cardiologists selecting patients less ill (younger, better renal function, less severe heart failure). Also we aim to find out whether more patients in cardiac wards get an echocardiography within 48 hours as recommended by NICE guidance.

**Methods** A retrospective study of consecutive patients admitted in Blackpool Victoria Hospital (BVH) with AHF between August 2019 and January 2021.

**Results** 630 patients were admitted including 253 patients getting admitted into cardiac wards and 377 admitted into non-cardiac wards. Fourteen (5.5%) patients died during index admission in the cardiac wards and 40 (10.6%) patients died during index admission in the non-cardiac wards [P= 0.029]. The median age for patients in the cardiac wards was younger 75 [64,83] vs 82 [74,88] in non-cardiac wards [P <0.001]. However, patients admitted in cardiac wards had worse renal function- creatinine 108 umol/l [83, 141] vs 97 umol/l [78, 133] [P=0.049], and worse BNP levels 862 ng/L [466, 1653] vs 587 ng/L [294, 1140] [P <0.001]. Cardiac function in terms of recent Echocardiography finding of Ejection fraction (EF) showed worse baseline cardiac function for patients admitted in cardiac wards 37% vs the 49.5% non-cardiac wards [P<0.001]. 49% of the patients had a previous diagnosis of hypertension compared to 68% patients in non-cardiac wards [P= 0.011].

During hospital admission, 34 % of patients got an echocardiogram. Patients in cardiac wards were more likely to have had an echocardiogram done within 48 hours of admission 45.6% vs 26.9% P <0.001 [Odds ratio 2.3 [95% CI 1.6–3.2]]. Specialist input, irrespective of the place of admission was associated with higher rates of echocardiography.

A higher proportion of patients in cardiac wards were on Angiotensin-converting enzyme inhibitor (ACEi) or Angiotensin receptor blocker (ARB) or Sacubitril/Valsartan (Entresto), Beta blocker, and Mineralocorticoid receptor antagonists (MRA) on discharge. In the cohort whose EF is<40%, significantly more patients discharged from cardiac wards were on MRA(65% vs 39%, P<0.001).

**Conclusions** These findings show that despite worse renal and cardiac function in terms of BNP and echocardiography LVSD severity, patients had better prognosis in cardiac wards. However, they were younger. There was a greater proportion of male patients. They were less likely to be hypertensive. A higher proportion of patients in cardiac wards were discharged on disease modifying drugs on discharge(e.g. MRA).

**Conflict of Interest** None

Abstract 130 Table 1 Baseline characteristics

Characteristics	Cardiac	Non-Cardiac	P- Value
Age	75[64,83]	82[74,88]	<0.001
Gender, N (%) Male	167/253 (66%)	196/377 (52%)	<0.01
Previous Ischaemic Heart Disease	105/252 (42%)	142/377 (38%)	0.32
Previous Hypertension	125/253 (49%)	225/377 (68%)	0.011
Previous Diabetes	71/253 (28%)	112/377 (30%)	0.72
Creatinine umol/l	108[83,141]	97[78,133]	0.049
B-type natriuretic peptide (BNP) ng/L	862[466,1653]	587[294,1140]	<0.001
Ejection Fraction (EF) in most recent records,%	37 [20,50]	49.5 [35,55]	<0.001
Echo performed within 48 hours of admission	115/252 (45.6%)	101/376 (26.9%)	<0.001

Abstract 130 Table 2 Treatment data for patients with EF<40%

Drugs	Cardiac (N=253)	Non-Cardiac	P- Value
ACEi or ARB or Entresto on discharge	97/136 (71.3%)	63/99 (63.6%)	0.26
Beta-blocker on discharge	120/144 (83.3%)	94/120 (78.3%)	0.35
MRA on discharge	93/143 (65.0%)	47/120 (39.2%)	<0.001
SGLT2 inhibitor on discharge	3/138 (2.2%)	1/99 (1.0%)	0.64

ACEi=Angiotensin-converting enzyme inhibitor  
ARB=Angotensin receptor blocker  
Echo=echocardiography  
Entresto= Sacubitril/Valsartan  
MRA=Mineralocorticoid receptor antagonists  
SGLT2= Sodium-glucose co-transporter-2

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### HEART FAILURE BURDEN OF MENTAL HEALTH AND FRAILTY; CORRELATION OF EFI, NYHA WITH PHQ-9 AND GAD SCORES

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**Introduction** Long term conditions often co-exist with mental health co morbidity. We undertook a retrospective analysis of 122 patient records to see the association between the electronic frailty indices, New York Heart Association (NYHA) scores, anxiety and depression. In addition, these patients were all on beta blockers that worsen depression. Methods Patients on the heart failure register across three primary care sites were analysed. All patients with heart failure are screened for frailty using the (CGA) tool and anxiety (GAD tool) and depression (PHQ-9) as part of their biannual long term condition reviews.