(RCT) comparing inpatient versus outpatient acute heart failure management in the UK.

Method We developed a brief online survey by using SurveyMonkey® (Palo Alto, Calif) that was sent to 237 consultant cardiologists with an interest in heart failure in the UK identified from the Directory of Cardiology 2014. The survey was available from 26 February through 10 March 2015 and comprised questions regarding existence of an outpatient acute heart failure service (frusemide lounge) at the hospital where the consultant currently works, whether hospital/PCT currently support a community based acute heart failure management service including the use of parenteral frusemide, identity of person who delivers the community parenteral frusemide service, interest to take part in a multi-centre randomised controlled trial comparing outpatient acute heart failure management with standard inpatient care and if so the number of patients that can potentially be randomised over the next 2 years.

Results The survey was sent by direct e-mail invitation to 237 cardiologists; 55 (23%) took and completed the survey. 14 (25%) indicated existence of an outpatient acute heart failure service (frusemide lounge) at the hospital where they currently work and 14 (25%) mentioned that their hospital/PCT currently support a community based acute heart failure management service including the use of parenteral frusemide. Of these 14 (25%) centres, in 5 (9%) delivery of the community parenteral frusemide service was provided by district nurses, 2 (3.5%) by GP, 7 (12.5%) by heart failure nurse and 1 (1.7%) by an ambulatory care unit. Finally 21 (37.5%) expressed an interest in taking part in a multi-centre randomised controlled trial comparing outpatient acute heart failure management with standard inpatient care.

Conclusion Our study shows that only a very small minority of hospitals in the UK offers an outpatient based acute heart failure management such as frusemide lounges. No RCT has investigated the clinical effectiveness and safety of outpatient IV diuretic therapy in patients with decompensated HF yet. Hence our aim is to carry out the first RCT looking at safety and effectiveness of Out-of-hospital Acute Heart failure Care compared with inpatient management in the UK.

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PSYCHIATRIC CO-MORBIDITIES AND TENDENCIES IN PATIENTS WITH NON-ISCHAEMIC HEART FAILURE (NIHF) – A LARGE OBSERVATIONAL COHORT STUDY SPANNING 14 YEARS

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Introduction Studies have shown that one in four psychiatric patients also suffer from a cardiovascular co-morbidity, and in recent years the links between cardiovascular disease and psychiatric conditions have been on the rise. We decided to investigate the prevalence of psychiatric co-morbidities and tendencies in patients with NIHF over a 14 year period.

Methods We compiled an anonymous database of adult patients diagnosed with NIHF across 7 hospitals in the North of England, UK, during 01/01/2000 to 31/03/2013. We analysed the data for prevalence of psychiatric co-morbidities such as; anxiety disorder, schizophrenia, depression etc. and for

tendencies such as substance abuse and suicide attempts. We traced our patients with the ACALM (Algorithm for Co-morbidities, Associations, Length of Stay and Mortality) study protocol, which uses ICD-10 and OPCS-4 codes to allocate patients for statistical analysis using SPSS Version 20.0.

Results Between the years 2000–2013, 929,552 patients were admitted, 958 (0.1%) of which had NIHF. The majority of our patients were male (68%), had a mean age of 54.9 years $\pm$ 13.9 years, and had a Caucasian background (77%). Of these 958 patients, 8.1% (n = 78) had a psychiatric co-morbidity; depression and schizophrenia were most prevalent. Depression however, seems to be more prevalent in dilated cardiomyopathy (DCM) as opposed to hypertrophic cardiomyopathy (HCM). 10.3% (n = 99) suffered from substance abuse, made up mainly by alcohol and tobacco abuse. 2 of our patients (0.2%) were admitted following suicide attempts.

Conclusion It remains debatable whether these psychiatric conditions and tendencies represent a causative or correlative link. Studies exist to lend evidence to both claims. We did however find a steady increase in tobacco and alcohol abuse, and the diagnosis of depression in relation to our cohort during our 14-year period. We found that almost one in ten (8.14%) patients with NIHF suffer from psychiatric co-morbidity and that one in ten (10.33%) abuse some form of substance alongside their cardiac condition. Thus, a holistic approach to patients with NIHF should be adopted, and this approach would fall short if it did not explore patient's use of recreational drugs, suicidal intent and psychiatric wellbeing.

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THE DECENNIAL RELATIONSHIP BETWEEN HEART FAILURE AND ATRIAL FIBRILLATION – A LARGE POPULATION STUDY

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Introduction Heart Failure (HF) is common in the western world, has multiple causes and confers significant morbidity and mortality. It is thought a significant proportion of HF patients also have atrial fibrillation (AF) although data from a large population in the UK are lacking. We studied the prevalence of AF in patients with HF in the North West of England.

Methods Anonymous data of adult patients aged $\geq$ 18 with HF and AF attending seven hospitals between 2000–2013 was obtained and processed using the ACALM (Algorithm for Co-morbidity, Associations, Length of stay and Mortality) study protocol. ACALM uses the ICD-10 and OPCS-4 coding systems to identify patients and the data was analysed in SPSS.

Results Of 929,465 adult patient population there were 31,760 (3.4%) patients with HF. Mean age 73.6 years with a male population of 50.3%. Of these 10,992 (34.6%) patients had AF. The prevalence of AF in patients with HF increases with age from 8.1% in the 30–39 year age group to 42.4% in the 80–89 years group (See Table 1).

Conclusion Whilst a significant number of elderly patients with HF patients do have concurrent AF, we found that the majority of patients do not. We believe our findings are

Abstract 11 Table 1 Prevalence of atrial fibrillation in patients with heart failure according to age groups

	Heart Failure Patients (%)	Atrial Fibrillation %	Mean Age (Years)
All age groups	31760 (100.0)	34.6	73.6
Age group 18-29 years	256 (0.8)	8.6	24.2
Age group 30-39 years	528 (1.7)	8.1	35.4
Age group 40-49 years	1158 (3.6)	12.8	45.2
Age group 50-59 years	2571 (8.1)	21.5	55.2
Age group 60-69 years	5423 (17.1)	29.0	65.0
Age group 70-79 years	9743 (30.7)	36.8	74.8
Age group 80-89 years	9503 (29.9)	42.4	84.0
Age group 90-99 years	2533 (8.0)	40.5	92.6
Age group ≥ 100 years	45 (0.1)	42.2	101.8

important to appreciate whilst optimising heart failure medications in elderly patients.

12 ANALYSIS OF THE EVOLUTION OF MYOCARDIAL INFARCTION AND HEART FAILURE EPIDEMIOLOGIES IN BRAZIL FROM 1998 TO 2015

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Introduction Coronary heart disease and its most common complication, myocardial infarction, are among the main causes of mortality in Brazil. Despite its severeness, the mortality rates for myocardial infarction are decreasing all over the world due to better treatment and management of the disease on its acute presentation. The damage caused by the ischaemia and tissue necrosis from the coronary disease is one of the main causes of heart failure, a disease associated with poor prognosis despite of the development of many novel treatment options in the last two decades. The current trend in the developed countries is an increase in the number of heart failure cases, which can be explained by increasing on survival to the acute presentation of heart disease. In this study, our team analysed the Brazilian trend for heart failure and myocardial infarction mortalities in order to see if it corresponds to what is expected for the world population.

Methods In our ecologic observational study, mortality rate was defined as the ratio between the number of deaths and the number of authorized hospital admission, with results multiplied by 100. Data were obtained from DATASUS, a Brazilian epidemiologic database organized by the Ministry of Health. Both health conditions analysed were selected based on the CID BR-10 classification. Our study comprised mortality rate data for the month of January of each year from 1998 to 2015.

Results Myocardial infarction still has higher mortality rates than heart failure, but results show a constant decline in its mortality statistics in the analysed period. In 1998, the mortality rate for myocardial infarction in Brazil was 17.95. Today, the country reached a rate of 11.80, approximately 65% of the first measure. On the other hand, heart failure mortality increased from 6.63 in 1998 to 10.36 in 2015, an increase of 56%.

Conclusion Our results suggest that the gap between mortality in myocardial infarction and heart failure is becoming narrower in Brazil, with a trend for an increase in mortality caused by heart failure and a decrease in mortality caused by myocardial infarction. This effect is probably caused by better treatment of the disease in Brazil in the last decades, with better treatment options and better training of health professionals. Heart failure, on the other hand, is becoming more common in part due to an increase in the survival from acute presentations of heart disease that can lead to this condition. This trend is similar to what is happening in the most developed countries, where this process is already more consolidated, and could indicate that the development of the Brazilian economy is reflecting in its health indicators.

Abstract 12 Table 1 Mortality rates for myocardial infarction and heart failure from 1998 to 2015

Year	Myocardial infarction	Heart failure	Year	Myocardial infarction	Heart failure
1998	17.95	6.63	2007	13.48	7.68
1999	17.07	6.31	2008	14.62	6.91
2000	15.13	6.39	2009	12.90	8.19
2001	16.99	6.36	2010	12.21	8.80
2002	15.84	6.90	2011	13.32	9.29
2003	14.31	6.99	2012	12.01	8.72
2004	14.82	7.10	2013	11.86	9.40
2005	13.93	7.24	2014	11.35	9.07
2006	13.96	7.83	2015	11.80	10.36