**Supplementary Table 1:** Dictionary of the 35 variables included in the present study.

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| **DEMOGRAPHIC DATA** | |
| **Age** | Age calculated as the difference in decimal years between the date of inclusion in the study and the date of birth. |
| **Sex** | Male/Female |
| **MEDICAL HISTORY** | |
| **Hypertension** | Indicate if the patient has **Arterial Hypertension** because this is shown under previoius clinical history or the patient is receiving specific treatment. |
| **Diabetes Mellitus** | Indicate if the patient has **Diabetes Mellitus** because this is shown under previous clinical history or the patient is receiving specific treatment. |
| **Dyslipidemia** | Indicate if the patient has **Dyslipemia** because this is shown under previous clinical history or the patient is receiving specific treatment. |
| **Ischaemic heart disease** | Indicate if the patient has any form of **Ischaemic Heart Disease** (SCASEST, SCACEST, unstable angina, stable angina, ACI, etc) p because this is shown under previous clinical history or the patient is receiving specific treatment. |
| **Cerebrovascular disease** | Indicate if the patient has had a previous **Cerebrovascular Accident or Cerebrovascular Disease** because this is described in the clinical history or shown in CT or MR imaging studies within the previous year and reported as cerebrovascular disease. |
| **Atrial fibrillation** | Indicate if the previous history describes **Permanent or Chronic Atrial Fibrillation** or an ECG performed within the previous year shows atrial fibrillation and this continues to be present. |
| **Peripheral vascular disease** | Indicate if the patient has Peripheral **Artery Disease in either the lower extremities or carotid artery**, and if the patient is receiving specific treatment, has undergone specific surgery (by-pass of lower extremities, endarterectomy, etc.) or there is previous history of an ankle brachial index <0.90. |
| **Heart valve disease** | Indicate if the patient has any type of clinically significant **Heart Valve Disease** according to an ultrasound or haemodynamic study reported in the previous clinical history. |
| **Chronic obstructive pulmonary disease** | Indicate if the patient has **Chronic Obstructive Pulmonary Disease** because this is described in the clinical history, the patient has undergone spirometry which was not normal or is receiving chronic treatment with specific drugs. |
| **Active cancer** | Indicate if the clinical history describes the presence of any type of **Cancer** of any grade at present or in the past independently of the current status (active, cured, in complete remission, with or without treatment, etc.). |
| **Dementia** | Indicate if the patient has **Dementia or Cognitive Deterioration** or is receiving specific treatment. |
| **Previous diagnosis of heart failure** | Indicate if the patient had received **a Previous diagnosis of Heart Failure** before the current episode of acute heart failure |
| **BASAL SITUATION** | |
| **Basal Barthel index** | Barthel index value of the patient at least 15 days prior to the date seen in the ED. |
| **Basal functional grade for dyspnoea according to the NYHA scale** | Indicate the functional grade of basal dyspnoea (in the 15 days prior to the exacerbation episode) of the patient according to the NYHA scale. |
| **Left ventricular ejection fraction** | In percentage, if echocardiographic data is obtained during the 6 previous month before ED admission or during ED or hospital stay |
| **Systolic dysfunction** | Patients with left ventricular ejection fraction below 50% and abnormalities in the contractility of the left ventricle walls |
| **CHRONIC TREATMENT AT HOME** | |
| **Angiotensin-II receptor blocker or ACE inhibitors** | Receiving chronic treatment with angiotensin-II receptor blocker or angiotensin-2 converter enzyme inhibitors |
| **Beta-blocker** | Receiving chronic treatment with beta-blocker |
| **Aldosterone-receptor antagonists** | Receiving chronic treatment with aldosterone-receptor antagonists |
| **VITAL SIGNS AT EMERGENCY DEPARTMENT ARRIVAL** | |
| **Systolic blood pressure** | Systolic blood pressure (SBP) measured in mmHg of the patient on arrival to the ED. This value can be that obtained during triage or the first taken on initiating care. |
| **Heart rate** | Central heart rate measured as beats per minute of the patient on arrival to the ED. V This value can be that obtained during triage or the first taken on initiating care. |
| **Arterial oxygen saturation** | Oxygen saturation expressed as percentage obtained by capillary pulsioxymetry on arrival to the ED. This value can be that obtained during triage or the first taken on initiating care. |
| **BLOOD TESTS AT EMERGENCY DEPARTMENT ARRIVAL** | |
| **Glucose** | In mg/dL, first determination performed at ED |
| **Creatinine** | In mg/dL, first determination performed at ED |
| **Sodium** | In mmol/L, first determination performed at ED |
| **Potassium** | In mmol/L, first determination performed at ED |
| **Troponin** | Quoted as percentage of patients with a positive value in the first determination in the emergency department. Positive value was defined as a troponin value over the upper limit of normality provided by the manufacturer used in each centre. |
| **NTproBNP** | Quoted as percentage of patients with a NTproBNP value determined at emergency department equal or over 5180 pg/mL. |
| **INTENSIVE TREATMENT AT EMERGENCY DEPARTMENT** | |
| **Use of intravenous morphine** | Has received any dose of intravenous morphine while in the ED. |
| **Intravenous nitrates** | Has received treatment with intravenous nitrates during the first care given in the ED |
| **Need for vasoactive drugs** | Has received treatment with vasoactive drugs during the first care given in the ED, including levosimendan, dopamine, dubutamine or noradrenaline. |
| **Non-invasive or invasive (mechanical) ventilation** | Has received treatment with non-invasive ventilation (either, in CPAP or BiPAP mode) or has received treatment with orotracheal intubation and invasive (mechanical) ventilation during the first care given in the ED |
| **Admission at hospital** | Has been transferred to a hospital ward after the first assessment and management in the ED |