

Data Supplement 1: Baseline Covariates Collected

Covariate	Description, details
Demographics	Age, sex, race.
Vital Signs	Systolic blood pressure, diastolic blood pressure, heart rate (per minute), respiratory rate (per minute), oxygen saturation.
Lab values	BNP, serum sodium (mmol/L), serum potassium (mmol/L), creatinine, urea, troponin I (ng/ml), troponin T (ng/ml).
Ejection fraction	Most recent known left ventricular ejection fraction
Preceding signs	Weight gain, fatigue, peripheral edema, cold extremities.
Physical exam findings	Jugular venous distention, rales, wheezing, peripheral edema, cold extremities, abnormal heart sounds (e.g., murmur, gallop, other).
Cardiovascular co-morbidities	Coronary artery disease, prior myocardial infarction, valvular disease, primary cardiomyopathy, prior percutaneous coronary intervention, prior CABG, prior stroke, heart failure history.
Non-cardiovascular co-morbidities	Obesity, peripheral vascular disease, asthma/COPD, diabetes-insulin dependent, diabetes non-insulin dependent, renal insufficiency, liver disease, anemia (hemoglobin < 12 g/dL), cancer history, hypertension.
Precipitating factors	Acute coronary syndrome, arrhythmia, valvular dysfunction, infection, medication non-compliance, dietary non-compliance, drug-induced, post-surgical heart failure, worsening renal failure, hypertension, unknown.
Chest radiograph findings	Normal, cardiomegaly, redistribution/cephalization, interstitial edema, pulmonary edema, pleural effusion, other.
First electrocardiogram findings	Normal, sinus rhythm, left bundle branch block, right bundle branch block, paced rhythm, atrial fibrillation/flutter, ventricular tachycardia/ventricular fibrillation, non-sustained ventricular tachycardia, other abnormal rhythm, ischemic changes.
Background therapy	Beta-blockers, angiotensin converting enzyme inhibitors, angiotension II receptor blockers, statins, amlodipine/felodipine, nitrates, aldosterone antagonists, diuretics, cardiac glycoside, aspirin, clopidogrel, warfarin, other anti-coagulant, pacemaker, implantable cardiac defibrillator, cardiac resynchronization therapy.
Vasodilator treatment in last 6 hours since admission	Nitroglycerin, nitroprusside, nesiritide, other, none.
Inotropes/vasopressors in last 6 hours since admission	Dobutamine, dopamine, milrinone, enoximone, levosimendan, norepinephrine, epinephrine, other, none.
Other heart failure therapies in last 6 hours since admission	Sublingual nitroglycerin, transdermal nitroglycerin, sublingual ACE-I, intravenous ACE-I, other, continuous positive airway pressure, none.

BNP = brain natriuretic peptide; CABG = coronary artery bypass graft; COPD = chronic obstructive pulmonary disease; ACE-I = angiotensin-converting enzyme inhibitor