

**Supplementary Table 1** International Classification of Diseases Codes Used in the Study Design and to Identify Baseline Variables.

Diagnosis	International Classification of Diseases, Tenth Revision-Clinical Modification codes
Congestive heart failure	I0981, I110, I130, I132, I50.XX
Systolic heart failure	I502.XX, I504.XX
Diastolic heart failure	I503.XX
Type 2 MI	I21A1
Atrial fibrillation	I48.0, I48.1, I48.2, I48.91
Previous myocardial infarction	I25.2, I22.0, I22.1, I22.2, I22.8, I22.9
Previous CABG	Z95.1, I25.7xx, I25.810, I25.812
Previous PCI	Z95.5, Z98.61
Prior PPM	Z950, Z95812
Prior CVA	Z867.3, I69.XXX
Dyslipidemia	E78.XX
History of smoking	Z72.0, Z87.891, F17.XXX
ESRD	N186, Z992, Z9115
Takotsubo syndrome	I51.81
Acute Pulmonary embolism	I26XX
Myocarditis	I012, I40, A381, A3952, B2682, B3322, B5881, D8685, I090, I41, I514, J1082, J1182
Cardiogenic shock	R570, T8111XA
Cardiac arrest	I46, I9712XX, I9771XX, 5A12012
Myocardial Infarction type 1, 3, 4, 5	I21.XXX, I22.XXX, I21.A9
Severe sepsis/septic shock	R6520, R6521, T8112XA
<b>Procedures</b>	
Percutaneous left atrial appendage occlusion	02L7XXX
Transcatheter mitral valve repair	02UG3JZ
Transcatheter mitral valve replacement	02RG37Z, 02RG38Z, 02RG3JZ, 02RG3KZ
Transcatheter aortic valve replacement	02RF37Z, 02RF38Z, 02RF3JZ, 02RF3KZ 02RF37H, 02RF38H, 02RF3JH, 2RF3KH
Percutaneous coronary intervention	02703XX, 02704XX, 02713XX, 02714XX, 02723XX, 02724XX, 02733XX, 02734XX, 02C03XX, 02C04XX, 02C13XX, 02C14XX, 02C23XX, 02C24XX, 02C33XX, 02C34XX
Coronary artery bypass grafting	0210XXX, 0211XXX, 0212XXX, 0213XXX
Valvular surgery/repair (aortic, mitral, tricuspid, and pulmonic)	024XXXX, 027FXXX, 027GXXX, 027HXXX, 027JXXX, 02CFXXX, 02CGXXX, 02CJXXX, 02CHXXX, 02LHXXX, 02NFXXX, 02NGXXX, 02NJXXX, 02NHXXX, 02QFXXX, 02QGXXX, 02QJXXX, 02QHXXX, 02RF0XX, 02RF4XX, 02RG0XX, 02RG37H, 02RG38H, 02RG3JH, 02RG3KH, 02RG4XX, 02RJXXX, 02RHXXX, 02THXXX, 02UFXXX, 02UG0XX, 02UG4XX, 02UG37X, 02UG38X, 02UG3KX, 02UG37E, 02UJXXX, 02UHXXX, 02WFXXX, 02WGXXX, 02WJXXX, 02WHXXX, X2RFXXX,

CABG = coronary artery bypass grafting; CVA = cerebrovascular accident; ESRD = end-stage renal disease; MI = myocardial infarction; PCI = percutaneous coronary intervention; PPM = permanent pacemaker.

**Supplementary Table 2** Subgroup Analyses for Association of Type 2 MI with Length of Stay in Heart Failure Stratified by Type of Heart Failure, Sex Category, and Age.

Length of Stay, Days (mean [SE])	Type 2 MI		$\beta$ coefficient (95% CI)*	P Value	Interaction P Value
	No	Yes			
Systolic Heart Failure	5(0.03)	5(0.09)	0.46(0.31-0.62)	<.001	.263
Diastolic Heart Failure	5(0.02)	6(0.08)	0.58(0.44-0.71)	<.001	
Male	5(0.03)	5(0.07)	0.42(0.29-0.55)	<.001	.005
Female	5(0.02)	6(0.08)	0.67(0.53-0.81)	<.001	
Age <75 years	5(0.03)	6(0.09)	0.49(0.34-0.63)	<.001	.827
Age $\geq$ 75 years	5(0.02)	6(0.07)	0.57(0.45-0.69)	<.001	

CI = confidence interval; MI = myocardial infarction; OR = odds ratio; SE = standard error.

\*Multivariate model adjusted for age, sex, admission status, and all baseline/hospital characteristics listed in Table 1

**Supplementary Table 3** Subgroup Analyses for Association of type 2 MI with Hospital Costs in Heart Failure Stratified by Type of Heart Failure, Sex Category, and Age.

Hospital costs, (mean [SE]) US\$	Type 2 MI		$\beta$ coefficient (95% CI)*	P Value	Interaction P Value
	No	Yes			
Systolic Heart Failure	10,829(125.2)	12,438(303.6)	1436(907-1965)	<.001	.01
Diastolic Heart Failure	10,302(87.2)	12,519(253.6)	2103(1684-2522)	<.001	
Male	10,753(108.6)	12,428(252.8)	1508(1070-1946)	<.001	.003
Female	10,408(89.9)	12,696(263.8)	2145(1697-2593)	<.001	
Age <75 years	11,189(124)	13,179(304.4)	1771(1259-2284)	<.001	.599
Age $\geq$ 75 years	9981(86.6)	11,946(237.3)	1804(1392-2217)	<.001	

CI = confidence interval; MI = myocardial infarction; OR = odds ratio; SE = standard error.

\*Multivariate model adjusted for age, sex, admission status, and all baseline/hospital characteristics listed in Table 1.

**Supplementary Table 4** Subgroup Analyses for Association of type 2 MI with Discharge to Nursing Facility in Heart Failure Stratified by Type of Heart Failure, Sex Category, and Age.

Discharge to Nursing Facility	Type 2 MI		Adjusted OR (95% CI)*	P Value	Interaction P Value
	No	Yes			
Systolic Heart Failure	55,783(15.3)	2085(18.4)	1.19(1.09-1.29)	<.001	.055
Diastolic Heart Failure	99,507(23.1)	2974(28.4)	1.30(1.22-1.39)	<.001	
Male	84,885(15.8)	3061(18.8)	1.18(1.09-1.27)	<.001	.217
Female	116,784(23.1)	3470(27.7)	1.25(1.17-1.34)	<.001	
Age <75 years	59,099(11.3)	1716(12.3)	1.12(1.04-1.21)	.003	.012
Age $\geq$ 75 years	142,569(27.4)	4815(32.5)	1.27(1.19-1.35)	<.001	

CI = confidence interval; MI = myocardial infarction; OR = odds ratio; SE = standard error.

Numbers are frequency (%).

\*Multivariate model adjusted for age, sex, admission status, and all baseline/hospital characteristics listed in Table 1.

**Supplementary Table 5** Subgroup Analyses for Association of type 2 MI with 30-Day All-Cause Readmission in Heart Failure Stratified by Type of Heart Failure, Sex Category, and Age.

30-Day All-Cause Readmission*	Type 2 MI		Adjusted OR (95% CI) <sup>†</sup>	P Value	Interaction P Value
	No	Yes			
Systolic Heart Failure	64,968(21.7)	2045(22.2)	1.02(0.95-1.10)	.631	.262
Diastolic Heart Failure	76,317(21.1)	1919(22.5)	1.07(0.99-1.15)	.089	
Male	92,945(21.5)	2845(22.0)	1.01(0.95-1.08)	.71	.025
Female	86,731(20.9)	2342(23.1)	1.12(1.04-1.21)	.002	
Age <75 years	92,731(22.1)	2536(22.9)	1.01(0.94-1.10)	.75	.111
Age $\geq$ 75 years	86,984(20.3)	2651(22.2)	1.11(1.04-1.18)	.003	

CI = confidence interval; MI = myocardial infarction; OR = odds ratio; SE = standard error.

Numbers are frequency (%).

\*Among patients discharged alive.

<sup>†</sup>Multivariate model adjusted for age, sex, admission status, and all baseline/hospital characteristics listed in Table 1.