

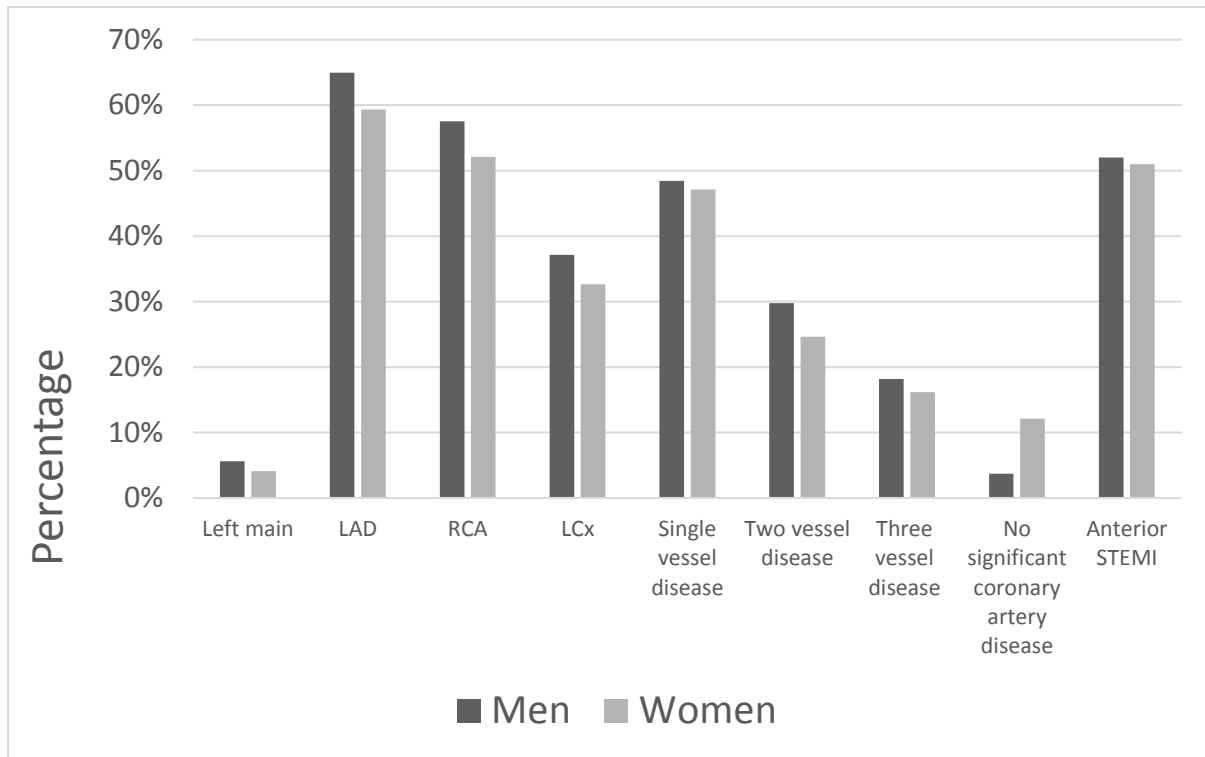


Appendix

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Khan E, Brieger D, Amerena J, et al. Differences in management and outcomes for men and women with ST-elevation myocardial infarction. *Med J Aust* 2018; 209: 118-123. doi: 10.5694/mja17.01109.

Figure 1. Type of coronary artery disease in men and women diagnosed with ST elevation myocardial infarction



Single vessel disease: Either left anterior descending (LAD), left circumflex (LCx) or right coronary artery disease (RCA) only

Two vessel disease: two of LAD, LCx and RCA or left main only

Three vessel disease: left main and RCA or LAD, LCx and RCA disease

Table 1. Total revascularisation in patients with STEMI, by sex and year of index admission

Year	Total reperfusion rates		P
	Women	Men	
2009*	84.2%	86.3%	0.60
2010	70.3%	88.7%	< 0.001
2011	76.3%	90.9%	0.011
2012	76.5%	90.1%	< 0.001
2013	77.7%	91.2%	< 0.001
2014	81.7%	93.8%	< 0.001
2015	80.8%	92.9%	< 0.001
2016*	94.4%	90.4%	0.56

* Sample size less than 100 patients.

Table 2. Revascularisation therapies for patients with STEMI: odds ratios (women v men), unadjusted and adjusted for GRACE risk score and time to presentation

Revascularisation therapy	Unadjusted odds ratio	P	Adjusted odds ratio ^d	P
Total revascularisation^a	0.37 (0.30–0.45)	< 0.001	0.42 (0.34–0.53)	< 0.001
Timely revascularisation^b	0.70 (0.61–0.80)	< 0.001	0.73 (0.64–0.83)	< 0.001
Coronary angiography	0.42 (0.33–0.56)	< 0.001	0.54 (0.41–0.70)	< 0.001
PCI	0.56 (0.46–0.67)	< 0.001	0.63 (0.52–0.76)	< 0.001
Primary PCI	0.73 (0.59–0.90)	0.003	0.76 (0.61–0.96)	0.022
Door-to-balloon time < 90 minutes ^c	0.92 (0.71–1.19)	0.54		
Other PCI	0.81 (0.63–1.05)	0.11	0.88 (0.68–1.14)	0.32
Thrombolysis	0.95 (0.79–1.14)	0.60	1.02 (0.86–1.21)	0.85
Door-to-needle time < 30 minutes ^c	0.66 (0.45–0.98)	0.038		
CABG	0.45 (0.29–0.70)	< 0.001	0.41 (0.26–0.64)	< 0.001

^a Total revascularisation: composite end-point of patients receiving PCI, thrombolysis or coronary artery bypass; grafting (CABG) during the index admission.

^b Timely revascularisation: primary PCI with door to balloon time less than 90 minutes or thrombolysis with door to needle time less than 30 minutes in patients presenting within 12 hours of symptom onset.

^c This was only able to be calculated in the subset of patients with time data complete on arrival and ballooning or arrival and needle time.

^d Adjusted for time to presentation, GRACE risk score (age, development (or history) of heart failure, peripheral vascular disease, systolic blood pressure, Killip class, initial serum creatinine concentration, elevated initial cardiac markers, cardiac arrest on admission, and ST segment deviation).

PCI: percutaneous coronary intervention, CABG: coronary artery bypass graft, STEMI: ST-elevated myocardial infarction

Table 3. Total revascularisation, by sex and GRACE risk score quartile

GRACE risk quartile	Total revascularisation rates		
	Women	Men	P
0–93	83.7%	94.7%	< 0.001
94–111	89.1%	93.5%	0.08
112–133	85.1%	93.9%	< 0.001
> 133	68.2%	85.1%	< 0.001

Table 4. Revascularisation therapies for STEMI patients at hospitals with catheterisation laboratory, by sex

Revascularisation therapy	Event rate		Unadjusted odds ratio ^d (95% CI)	P	Adjusted odds ratio ^{d,e} (95% CI)	P
	Men	Women				
Total number of patients	1937	635				
Total revascularisation^a	1789/1937 (92.4%)	507/635 (79.8%)	0.34 (0.27–0.43)	< 0.001	0.39 (0.30–0.50)	< 0.001
Timely revascularisation^b	760/1734 (43.8%)	196/559 (35.1%)	0.70 (0.60–0.81)	< 0.001	0.72 (0.62–0.83)	< 0.001
Coronary angiography	1875/1937 (96.8%)	577/635 (90.8%)	0.35 (0.24–0.50)	< 0.001	0.44 (0.31–0.64)	< 0.001
PCI	1550/1937 (80.0%)	428/635 (67.4%)	0.53 (0.42–0.67)	< 0.001	0.60 (0.48–0.75)	< 0.001
Primary PCI	1112/1937 (57.4%)	299/635 (47.1%)	0.71 (0.56–0.90)	0.005	0.74 (0.58–0.95)	0.019
Door-to-balloon time ≤90 minutes ^c	533/1013 (52.6%)	134/266 (50.4%)	0.91 (0.70–1.17)	0.46		
Other PCI	436/1937 (22.5%)	129/635 (20.3%)	0.82 (0.59–1.13)	0.23	0.89 (0.64–1.24)	0.50
Thrombolysis	566/1937 (29.2%)	187/635 (29.5%)	0.99 (0.80–1.23)	0.96	1.03 (0.84–1.27)	0.77
Door-to-needle time ≤30 minutes ^c	171/458 (37.3%)	45/149 (30.2%)	0.72 (0.47–1.10)	0.13		
CABG	129/1937 (6.7%)	19/635 (3.0%)	0.43 (0.27–0.70)	< 0.001	0.40 (0.25–0.64)	< 0.001

^a Total revascularisation: composite end-point of patients receiving PCI, thrombolysis or coronary artery bypass grafting (CABG) during the index admission

^b Timely revascularisation: Primary PCI with door to balloon time less than 90 minutes or thrombolysis with door to needle time less than 30 minutes in patients presenting within 12 hours of symptom onset

^c This was only able to be calculated in the subset of patients with time data complete on arrival and ballooning or arrival and needle time

^d Women v men.

^e Adjusted for GRACE risk score (age, development (or history) of heart failure, peripheral vascular disease, systolic blood pressure, Killip class, initial serum creatinine concentration, elevated initial cardiac markers, cardiac arrest on admission, and ST segment deviation)

PCI: percutaneous coronary intervention, CABG: coronary artery bypass graft, STEMI: ST-elevated myocardial infarction

Table 5. In-hospital and 6-month events for STEMI patients, unadjusted and adjusted for time to presentation and GRACE risk score, by sex

Event ^a	Unadjusted odds ratio ^b	<i>P</i>	Adjusted odds ratio ^{b,d}	<i>P</i>
Congestive heart failure	1.55 (1.13–2.13)	0.007	1.12 (0.86–1.60)	0.31
Cardiogenic shock	1.34 (1.07–1.68)	0.011	0.92 (0.70–1.22)	0.56
Acute renal failure	1.56 (1.07–2.28)	0.022	1.08 (0.77–1.52)	0.66
MI or re-infarction	1.01 (0.69–1.47)	0.97	1.0 (0.68–1.46)	0.99
AF or atrial flutter	1.27 (0.95–1.70)	0.12	0.91 (0.69–1.19)	0.48
Sustained VT	0.59 (0.35–1.02)	0.06	0.47 (0.26–0.83)	0.010
2° or 3° AV block	1.95 (1.23–3.09)	0.005	1.74 (1.05–2.90)	0.034
Cardiac arrest or VF	0.99 (0.73–1.34)	0.95	0.71 (0.51–0.98)	0.038
Stroke	1.79 (0.91–3.52)	0.09	1.62 (0.75–3.53)	0.22
Major bleeding	1.17 (0.90–1.51)	0.24	1.00 (0.75–1.34)	1
MACE ^c in-hospital	1.38 (1.06–1.77)	0.009	1.14 (0.89–1.46)	0.31
MACE ^c at 6 months	3.22 (2.09–4.95)	< 0.001	2.64 (1.74–4.02)	< 0.001
Mortality in-hospital	1.64 (1.18–2.27)	0.003	1.10 (0.74–1.65)	0.63
Mortality at 6 months	2.83 (1.52–5.26)	0.001	2.22 (1.28–3.84)	0.005

^a In-patient event – These events were recorded during the index admission unless otherwise stated.

^b Women v men.

^c MACE (Major adverse cardiovascular event): composite end-point of myocardial re-infarction, stroke or death from cardiac cause

MI: myocardial infarction, AF: atrial fibrillation, VT: ventricular tachycardia, AV: Atrioventricular, VF: ventricular fibrillation

^d Adjusted for time to presentation and GRACE risk score (age, development (or history) of heart failure, peripheral vascular disease, systolic blood pressure, Killip class, initial serum creatinine concentration, elevated initial cardiac markers, cardiac arrest on admission, and ST segment deviation)

Table 6. Medications for STEMI patients at discharge, by sex

Medication/treatment	Unadjusted odds	
	ratio ^a	<i>P</i>
Aspirin	0.77 (0.55–1.07)	0.11
Second antiplatelet	0.71 (0.57–0.89)	0.003
Beta blocker	0.77 (0.62–0.95)	0.02
ACEI/ARB	0.81 (0.63–1.03)	0.09
Statin	0.47 (0.32–0.68)	< 0.001
Cardiac rehabilitation referral	0.69 (0.56–0.84)	< 0.001

^a Women v men.

ACEI: Angiotensin converting enzyme inhibitor, ARB: Angiotensin receptor blocker

Table 7. Baseline characteristics of patients with STEMI, by whether they were followed up at 6 months

	Followed up	Not followed up	<i>P</i>
Number of patients	2075	552	
Age (years), mean (SD)	61.5 (13.0)	60.7 (15.7)	0.20
Aboriginal or Torres Strait Islander	119/2075 (5.7%)	33/552 (6.0%)	0.11
Hypertension	1026/2068 (49.6%)	275/551 (49.9%)	0.90
Diabetes	397/2075 (19.1%)	119/552 (21.6%)	0.34
Dyslipidaemia	886/2068 (42.8%)	244/552 (44.2%)	0.64
Smoking status			0.10
Current	813/2068 (39.3%)	251/550 (45.6%)	
Ex-smoker	571/2068 (27.6%)	132/550 (24.0%)	
Never smoker	684/2068 (33.1%)	167/550 (30.4%)	
PAD	70/2075 (3.4%)	19/552 (3.4%)	0.95
Prior MI	282/2075 (13.6%)	86/552 (16%)	0.23
Previous CAD	302/2075 (14.6%)	84/552 (15%)	0.57
Previous PCI	207/2075 (10.0%)	61/552 (11%)	0.35
Prior CABG	57/2075 (2.8%)	11/552 (2.0%)	0.31
Prior heart failure	49/2075 (2.4%)	20/552 (3.6%)	0.09
Previous AF	89/2075 (4.3%)	15/552 (2.7%)	0.10
Prior stroke	85/2075 (4.1%)	25/552 (4.5%)	0.68
Prior major bleeding	22/2075 (1.1%)	4/552 (0.7%)	0.60
Dementia	33/2075 (1.6%)	9/552 (1.6%)	0.95
CKD	85/2075 (4.1%)	13/552 (2.4%)	0.08
Time to presentation (min), median (IQR)	108 (60–253)	112.0 (62–291)	0.13
Killip class			0.54
I	1904/2075 (91.8%)	512/552 (92.8%)	
II	132/2075 (6.4%)	28/552 (5.1%)	
III	22/2075 (1.1%)	8/552 (1.5%)	
IV	17/2075 (0.8%)	4/552 (0.7%)	
GRACE score, mean (SD) ^a	112.0 (28.7)	109.1 (28.9)	0.041

^aGRACE (Global Registry of Acute Coronary Events) risk score: (age, development (or history) of heart failure, peripheral vascular disease, systolic blood pressure, Killip class, initial serum creatinine concentration, elevated initial cardiac markers, cardiac arrest on admission, and ST segment deviation)

PAD: peripheral artery disease, MI: myocardial infarction, CAD: coronary artery disease, PCI: percutaneous coronary intervention, CAG: coronary artery grafting, AF: atrial fibrillation, CKD: chronic kidney disease