Supplemental Material

Table S1. Data dictionary for variables in Melbourne Interventional Group Registry.

Variable	Definition
Baseline characteristics	
Body mass index	Calculated from weight (in kilograms in light clothing) and height (in metres in bare feet), using formula: weight / height^2
Diabetes mellitus	Documented history of diabetes regardless of duration of disease or need for anti-diabetic agents
Hypertension	Must have one of the following documented findings - History of hypertension diagnosed and treated with medication, diet and/or exercise. - Blood pressure >140 systolic or >90 diastolic on at least 2 occasions. - Currently on antihypertensive medication.
Dyslipidemia	Must have one of the following documented findings - History of dyslipidemia diagnosed and/or treated by a physician.

	- Cholesterol > 5.0 mmol/L, HDL < 1.0mmol/L or Triglycerides > 2.0mmol/L.
Smoking status	History confirming any form of tobacco use in the past. This includes cigarettes, cigar and/or pipe. Choose from: - Currently smoking - within 1 month of this admission - Previously smoked - more than 1 month prior to this admission - Never smoked
Family history of coronary artery disease	Any first-degree relatives of the patient (parents, siblings, children) who have any of the following at age <60 years: - Coronary artery disease (angina, previous CABG or PCI) - MI - Sudden cardiac death without an obvious cause
Estimated glomerular filtration rate	Calculated using Cockroft-Gault formula using last serum creatinine level recorded prior to the current PCI

Chronic obstructive pulmonary disease	Documented history of chronic obstructive pulmonary disease - a slowly progressive disease that is characterized by a gradual loss of lung function. Includes chronic bronchitis, chronic obstructive bronchitis, or emphysema, or combinations of these conditions. Diagnosis of COPD is confirmed by the presence of airway obstruction on testing with spirometry.
Obstructive sleep apnea	Patient reports knowledge of, or has previously been diagnosed with obstructive sleep apnoea
Peripheral vascular disease	Evidence of either chronic or acute PVD. The presence of PVD must be demonstrated by vascular reconstruction or amputation for arterial insufficiency, bypass surgery or percutaneous intervention.
Previous stroke	History of stroke or cerebrovascular accident (CVA), resulting from an ischaemic or intracerebral haemorrhagic event ONLY where the patient suffered a loss of neurological function with residual symptoms remaining for at least 72 hours
Previous myocardial infarct (MI)	At least one documented MI greater than 7 days prior to admission. An MI is evidenced by any of the following.

	1. A rise and fall of cardiac biomarkers (Troponin, CK or CK-MB) with at least one value in an abnormal range for that laboratory above the upper reference limit (URL) of normal (i.e. above the 99th percentile of the URL measured with a coefficient of variation ≤10%). In partnership with at least one of the following manifestations of myocardial ischemia. a. Ischemic symptoms. b. ECG changes indicative of new ischemia (new ST-T changes, new left bundle branch block (LBBB) or loss of R wave voltage. c. Development of pathological Q waves in two or more contiguous leads on the ECG (or equivalent findings for true posterior MI) d. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality.

	e. Documentation in the medical record of the diagnosis of acute myocardial infarction based on the cardiac biomarker pattern in the absence of any items enumerated in a-d due to conditions that may mask their appearance (e.g. peri-operative infarct when the patient cannot report ischemic symptoms, baseline LBBB or ventricular pacing). 2. ECG changes associated with prior MI can include the following (with or without prior symptoms): a. Any Q wave in leads V2-V3 ≥ 0.02sec or QS complex in leads V2 & V3. b. Q wave ≥ 0.03 sec & ≥ 0.1mV deep or QS complex in leads I, II, aVL, aVF, or V4-V6 in any two leads of a contiguous lead grouping (I, aVL, V6; V4-V6; II, III, and aVF). c. R-wave ≥ 0.04 sec in V1-V2 and R/S ≥ 1 with a concordant positive T wave in the absence of a conduction defect.

	3. Imaging evidence of a region with new loss of viable myocardium at rest in the absence of non-ischemic cause. This can be manifested as: a. Echocardiographic, computed tomography (CT), magnetic resonance (MR), ventriculographic or nuclear imaging evidence of left ventricular (LV) thinning or scarring and failure to contract (i.e., hypokinesis, akinesis, or dyskinesis) b. Fixed (non-reversible) perfusion defects on nuclear radioisotope imaging (e.g. MIBI, Thallium) 4. Medical records documentation of prior MI.
Previous percutaneous coronary intervention	Patient has had a prior Percutaneous Transluminal Coronary Angioplasty, Coronary Atherectomy, and/or coronary stent done at any time prior to the current PCI procedure (this may have included a PCI performed during the current admission)
Previous coronary artery bypass graft surgery	Patient has undergone a previous Coronary Artery Bypass (CABG) surgery prior to the current PCI procedure
Presentation and PCI characteristics	

Stable angina	Angina without a change in frequency or pattern for the 6 weeks prior to presentation/procedure. Angina is controlled by rest and/or sublingual/oral/transcutaneous medications.
Unstable angina	Symptoms must include at least one of the following: 1. Angina that occurred at rest and was prolonged, usually lasting >20 mins 2. New-onset angina of at least CCS class III severity 3. Recent acceleration of angina reflected by an increase in severity of at least 1 CCS class (to at least CCS class III)
Non ST-elevation myocardial infarction (NSTEMI)	At least one of the following biomarkers for detecting myocardial necrosis must be present: 1. Troponin T or I: Maximal concentration of Troponin T or I greater than the MI diagnostic limit on at least one occasion within 24 hours from the index clinical event; 2. CK-MB: Maximal value of CK-MB >2x the upper limit of normal (ULN) on one occasion during the first hours after the

	index clinical event; OR Maximal value of CK-MB (preferable CK-MB mass) > ULN on two successive samples. 3. Total CK: Only where Troponin or CK-MB assays are unavailable, total CK >2x the ULN (or the B fraction of CK) may be employed. AND one of the following: 1. Either ST segment depression or T wave abnormalities in the ECG; or 2. Ischaemic symptoms in the presence or absence of chest discomfort. Ischaemic symptoms may include: unexplained nausea and vomiting or persistent shortness of breath secondary to left ventricular failure or unexplained weakness, dizziness, light-headedness, or syncope.
ST-elevation myocardial infarction (STEMI)	At least one of the following biomarkers for detecting myocardial necrosis must be present:

	1. Troponin T or I: Maximal concentration of Troponin T or I greater than the MI diagnostic limit on at least one occasion within 24 hours from the index clinical event; 2. CK-MB: Maximal value of CK-MB >2x the upper limit of normal (ULN) on one occasion during the first hours after the index clinical event; OR Maximal value of CK-MB (preferable CK-MB mass) > ULN on two successive samples. 3. Total CK: Only where Troponin or CK-MB assays are unavailable, total CK >2x the ULN (or the B fraction of CK) may be employed. AND one of the following: 1. ST-segment elevation: New or presumed new ST segment elevation at the J point in two or more contiguous leads with the cut-off points ≥ 0.2mV in leads V1, V2, or V3, or ≥0.1 mV in other leads. 2. Development of any Q wave in leads V1 through V3, or the development of a Q-wave ≥ 30ms (0.03s) in leads I, II, aVL,

	aVF, V4, V5, or V6. (Q wave changes must be present in any two contiguous leads, and be ≥1mm in depth).
Out-of-hospital cardiac arrest at presentation	Patient has experienced an out of hospital cardiac arrest (i.e. the lack of effective cardiac output) including if the person was under cardiac arrest at the time of presentation to the hospital.
Cardiogenic shock	All of the following must apply at the time of index PCI: 1. Sustained (>30 minutes) episode of systolic blood pressure <90 mm Hg (or vasopressors required to maintain BP >90 mm Hg); AND 2. Evidence of elevated filling pressures (e.g. pulmonary congestion on examination or chest radiograph); AND 3. Evidence of end organ hypoperfusion (e.g. urine output 30mL/hour; or cold/diaphoretic extremities; or altered mental status, etc.).
Left ventricular ejection fraction	Left ventricular ejection fraction measured immediately post PCI with angiography or prior to discharge with echocardiography
Multi-vessel disease	Lesion of ≥50% stenosis in 2 or more coronary systems.

	Coronary systems are defined as: left anterior descending (LAD)-Diagonal / left circumflex-marginal (Cx-OM) / right coronary artery (RCA). LAD-Diagonal is one coronary system as is Cx-OM and the RCA. Left main coronary artery (LMCA) is 2 coronary systems as it gives rise to the LAD & Cx systems, therefore is multi-vessel disease.
Left main disease	Lesion of ≥50% stenosis in the left main coronary artery.
Chronic total occlusion	Lesion treated was presumed to be a CTO defined as being >3 months old and/or bridging collaterals
AHA/ACC class B2/C lesion	Lesion type according to ACC/AHA guidelines: - B2: more than one type B characteristic (lesion moderately complex, tubular (10- 20mm), eccentric, moderately tortuosity of proximal segments, lesion in moderately angulated segment (>45 degrees but < 90 degrees), irregular contour, moderate to heavy calcification, total occlusions less than 3 months old, ostial in location, bifurcation lesions requiring double guide wires, some thrombus present).

	- C: severely complex diffuse (>20mm), excessive tortuosity of proximal segment, lesion in extremely angulated segment > 90 degrees, total occlusion greater than 3 months old or bridging collaterals, inability to protect major side branches, degenerated vein graft with friable lesions.
PCI complications:	
- **Dissection**	If a dissection > 5 mm was observed during the PCI procedure for the treated segment (or for a significant side branch). Dissection is defined as the appearance of contrast materials outside of the expected luminal dimensions of the target vessel and extending longitudinally beyond the length of the lesion.
- **Perforation**	If a coronary perforation occurred during the procedure for the treated segment. A coronary artery perforation occurs when there is angiographic or clinical evidence of a dissection or intimal tear that extends through the full thickness of the arterial wall. This does not include pre-existing AV fistula and other coronary anomalies.

- **Transient no-reflow**	If there was a period of temporary lack of flow distal to the treated segment during the PCI procedure
- **Persistent no-reflow**	If there was persistent lack of flow distal to the treated segment during the PCI procedure
Unsuccessful PCI	>50% residual stenosis for a lesion treated by balloon angioplasty only OR >20% residual stenosis for stented lesion
In-hospital outcomes	
Death	Patient died in hospital during or after the index PCI procedure, but prior to discharge
Cardiac death	Primary cause of death was cardiac i.e. sudden death, myocardial infarction, heart failure or arrhythmia
Myocardial infarction	New presence of a peri-procedural MI during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits) as documented by at least 1 of the following criteria: - Evolutionary ST-segment elevations, development of new Q-waves in 2 or more contiguous ECG leads, or new or presumably new LBBB pattern on the ECG.

	- Biochemical evidence of myocardial necrosis. This can be manifested as: a) CK-MB > 3x the upper limit of normal or, if CK-MB not available b) Total CK > 3x upper limit of normal. (Because normal limits of certain blood tests may vary, please check with your lab for normal limits for CK-MB and total CK). Note: Must be distinct from the index event
Heart failure	Patient experienced documented new onset HF or an acute reoccurrence of HF which necessitated new or increased pharmacologic therapy during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits). HF can be diagnosed based on careful history and physical exam, or by one of the following criteria: - Paroxysmal nocturnal dyspnoea (PND) and/or fatigue - Dyspnoea on exertion (DOE) due to heart failure

	- Chest X-Ray (CXR) showing pulmonary congestion - Pedal oedema or dyspnoea treated with medical therapy for heart failure
Acute kidney injury	Patient experienced new acute or worsening renal failure after the cardiac catheter lab visit but prior to discharge, defined as an absolute rise of serum creatinine $\geq$ 44.2 mmol/L OR > 25% up to 5 days after the index PCI, when compared to baseline creatinine immediately prior to PCI
Major bleeding	Bleeding that occurred during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay and/or cause a drop in haemoglobin > 3.0 g/dL.
Stroke	The patient experienced a stroke or new central neurologic deficit (persisting for > 72 hours) during the cardiac catheter lab visit, after the lab visit, but prior to discharge and/or any subsequent lab visits. Stroke is evidenced by persistent loss of neurological function caused by an ischaemic or haemorrhagic event.
Target vessel revascularisation	

Major adverse cardiovascular events (MACE)	Composite endpoint of death, myocardial infarction and target vessel revascularization (any revascularisation due to restenosis/occlusion within the target coronary artery and/or the same arterial branch that was treated during the index PCI. This includes any percutaneous revascularisation within the same arterial branch treated during the index PCI, regardless of whether the index PCI was successful).
30-day outcomes	
Death	Patient died in hospital during or after the index PCI procedure, but prior to discharge
Cardiac death	Primary cause of death was cardiac i.e. sudden death, myocardial infarction, heart failure or arrhythmia
Myocardial infarction	Readmission with primary reason documented as acute myocardial infarction (STEMI or NSTEMI)
Stroke	Readmission with primary reason documented as stroke (loss of neurological function persisting for >72 hours caused by an ischaemic or haemorrhagic event)

Target vessel revascularisation	Readmission with primary reason documented as revascularization by PCI or CABG
Readmission	Any overnight stay in hospital since discharge from the index PCI
MACE	Composite endpoint of death, myocardial infarction and target vessel revascularization (any revascularisation due to restenosis/occlusion within the target coronary artery and/or the same arterial branch that was treated during the index PCI. This includes any percutaneous revascularisation within the same arterial branch treated during the index PCI, regardless of whether the index PCI was successful).
Beta-blocker	Patients on any of the following medications: metoprolol, atenolol, carvedilol, propranolol, bisoprolol, sotalol, labetolol, oxprenolol, nebivolol
Angiotensin converting enzyme inhibitor / angiotensin II receptor blocker	Patients on any of the following medications: perindopril, lisinopril, ramipril, enalapril, fosinopril, captopril, quinapril, trandalopril, candesartan, telmisartan, irbesartan, losartan, olmesartan, valsartan, eprosartan

Statin	Patient on any of the following medications: atorvastatin, fluvastatin, pravastatin, rosuvastatin, simvastatin