Acute coronary syndromes: 3c-PCI patients with STEMI with door-to-device within 90 minutes

Identifying and definitional attributes

Metadata item type:	Indicator
Indicator type:	Indicator
Short name:	Indicator 3c-PCI patients with STEMI with door-to-device within 90 minutes
METEOR identifier:	612070
Registration status:	• Health, Standard 12/09/2016
Description:	Proportion of patients with **ST-segment-elevation myocardial infarction (STEMI)** treated with percutaneous coronary intervention (PCI), who have a door-to-device time of 90 minutes or less, after arrival at a PCI-capable hospital, or 120 minutes or less if transferred from a non PCI-capable hospital.
Rationale:	Timely PCI has been shown to improve short-term and long-term outcomes such as a reduction in mortality, myocardial infarctions and strokes in patients with STEMI who present to hospital within 12 hours of symptom onset (Keeley et al. 2003; GUSTO IIb Angioplasty Substudy Investigators 1997). The G*uidelines for the management of acute coronary syndromes 2006* state that "*a time delay of 90 minutes from first medical contact to balloon inflation is the maximum desirable*" (Acute Coronary Syndrome Guidelines Working Group 2006).
Indicator set:	Clinical care standard indicators: acute coronary syndromes Health, Standard 12/09/2016
Outcome area:	Timely reperfusion Health, Standard 12/09/2016

Collection and usage attributes

Computation description: Both the numerator and the denominator include patients with STEMI.

For the numerator, patients undergoing PCI include those for which one of the following Episode of admitted patient care—procedure, code (ACHI 9th edn) NNNNN-NN is recorded:

- 38300-00 [670] Percutaneous transluminal balloon angioplasty of 1 coronary artery
- 38303-00 [670] Percutaneous transluminal balloon angioplasty of >=2 coronary arteries
- 38306-00 [671] Percutaneous insertion of 1 transluminal stent into single coronary artery
- 38306-01 [671] Percutaneous insertion of >= 2 transluminal stents into single coronary artery
- 38306-02 [671] Percutaneous insertion of >= 2 transluminal stents into multiple coronary arteries.

The denominator excludes patients for whom PCI is contraindicated (where the contraindication is documented in their medical record). Contraindications for PCI and fibrinolysis may include advance care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

For hospitals using the Acute coronary syndrome (clinical) National best practice data set, the door-to-device time can be calculated as the difference between the following data elements:

- Episode of admitted patient care—admission date, DDMMYYYY combined with Episode of admitted patient care—admission time, hhmm

and

- Person—primary percutaneous coronary intervention date, DDMMYYYY combined with Person—primary percutaneous coronary intervention time, hhmm

However, this can only be calculated for patients arriving at a PCI-capable hospital. For patients arriving at another hospital and then being transferred to the PCI-capable hospital, the time between the patient's admission at the other facility and transfer and admission to the PCI-capable facility would need to be added to the above time.

Presented as a percentage.

Computation: (Numerator ÷ denominator) x 100

Numerator: Number of patients with STEMI, treated with PCI, who have a door-to-device time of 90 minutes or less, after arrival at a PCI-capable hospital, or 120 minutes or less if transferred from a non PCI-capable hospital.

Denominator: Number of patients with STEMI who arrive at a PCI-capable hospital or are transferred from a non PCI-capable hospital.

Comments: It is recognised that this target of 90 minutes is difficult to achieve in the management of patients with STEMI who suffer a cardiac arrest, and for whom advanced resuscitation is effected prior to PCI.

Representational attributes

Representation class: Percentage

Data type: Real

Unit of measure: Episode

Format: N[NN]

Source and reference attributes

Reference documents:

Acute Coronary Syndrome Guidelines Working Group 2006. Guidelines for the management of acute coronary syndromes 2006. Medical Journal of Australia 184(8):S1–S30.

GUSTO IIb Angioplasty Substudy Investigators 1997. A clinical trial comparing primary coronary angioplasty with tissue plasminogen activator for acute myocardial infarction. New England Journal of Medicine 336(23):1621–1628.

Keeley EC, Boura JA, & Grines CL 2003. Primary angioplasty versus intravenous thrombolytic therapy for acute myocardial infarction: a quantitative review of 23 randomised trials. Lancet 361(9351):13–20.