

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

NICE indicator validity assessment

Indicator IND74

The time between call for help and balloon inflation for patients with ST segment elevation myocardial infarction (STEMI) undergoing reperfusion by primary percutaneous coronary intervention.

Importance

Considerations	Assessment
<p>The NHS Long Term Plan identifies cardiovascular disease as a clinical priority, and the single biggest condition where lives can be saved by the NHS over the next 10 years.</p>	<p>The indicator reflects a specific priority area identified by NHS England.</p>
<p>Analysis of MINAP data by Bebb, Hall et al. (2017) found that median time from diagnosis of STEMI (first medical contact) to wire passage is 185 minutes (interquartile range (IQR) 135 – 284 minutes). Hospital performance showed a median of 188 minutes (IQR 169.8 – 210 minutes).</p> <p>The MINAP summary report 2020 reports that 69% of hospitals provide primary PCI within 150 minutes of the call for help. 42% provide primary PCI within 120 minutes of call for help. The median call to balloon time is 125 minutes for England in 2018/19, increased from 117 minutes in 2015/26.</p>	<p>The indicator relates to an area where there is known variation in practice.</p> <p>The indicator addresses under-treatment.</p>
<p>The Acute Cardiovascular Care Association's (ACCA) position paper on quality indicators for myocardial infarction (2017) writes that in patients with STEMI admitted during the first few hours after symptom onset, the choice of reperfusion strategy and the speed with which it is implemented have an impact on preserving myocardial function and improving long-term survival.</p>	<p>The indicator will lead to a meaningful improvement in patient outcomes.</p>

Evidence base

Considerations	Assessment
<p>Acute coronary syndromes. NICE guideline NG185 (2020), recommendation 1.1.3. Deliver coronary reperfusion therapy (either primary PCI or fibrinolysis) as quickly as possible for eligible people with acute STEMI.</p> <p>European Society of Cardiology. ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation (2017) Reperfusion is indicated in all patients with symptoms of ischaemia of less than or equal to 12 hours duration and persistent ST-segment elevation. (Class I Level A).</p>	<p>The indicator is derived from a high-quality evidence base.</p> <p>The indicator aligns with the evidence base.</p>

Specification

Considerations	Assessment
<p>Reported as median time between call for help and balloon inflation for patients with STEMI undergoing reperfusion with primary PCI.</p> <p>The percutaneous coronary interventions (PCI) dataset defines call for help as the time of the initial call by the patient, relative or attendant (field number 5.27 and 5.29).</p> <ul style="list-style-type: none"> • This may be to a GP, NHS Direct or the ambulance service. • If the patient self presents to accident and emergency this time should arrival at first hospital. • If a patient is already in hospital or en route at the time they develop STEMI, this should be the time of the diagnostic ECG. <p>Exclusions: Patients presenting in cardiogenic shock and patients requiring pre-PCI ventilation.</p> <p>Call for help is used rather than first medical contact due to data availability and comments at consultation.</p>	<p>The indicator has defined components necessary to construct the indicator, including numerator, denominator and exclusions.</p> <p>The construction proposed by the ESC ACCA has been adapted for publication on the NICE menu of indicators.</p>
<p>Audit data is presented at hospital trust level. This is proposed to be a CCG level NICE menu indicator.</p> <p>NICE CCG level indicators are intended for use where there is an average of 50 patients or more per CCG. Data presented as part of the study by Bebb et al (2017) based on the MINAP database for the period 2012 to 2013 shows 27,029 eligible patients and this indicates an average number of 200 patients per CCG (135 CCGs April 2020).</p>	<p>The indicator does outline minimum numbers of patients needed to be confident in the assessment of variation.</p>

Feasibility

Considerations	Assessment
Data is collected annually as part of the Percutaneous coronary interventions (PCI) dataset .	The indicator is repeatable.
Details of the PCI dataset, including definitions of the variables and guidance on applying options are also published by National Institute for Cardiovascular Outcomes Research (NICOR) . Data fields collected include: <ul style="list-style-type: none">• Date and time of call for help (5.27)• Presenting ECG (2.10)• Initial reperfusion treatment (3.39)• Date/time of first balloon inflation (3.09).• Cardiogenic shock (2.04)• Ventilated pre-op (5.07)	The indicator is measuring what it is designed to measure. The indicator uses existing data fields.

Acceptability

Considerations	Assessment
This is an assessment of the care pathway and does not distinguish responsibility of ambulance/hospital/PCI centre.	The indicator assesses performance that is attributable to or within the control of the audience.
Data tables are published on the NICOR website in order to compare practice and assist in quality improvement cycles.	The results of the indicator can be used to improve practice

Risk

Considerations	Assessment
NAPCI is a domain with the National Cardiac Audit Programme and under the governance of the Healthcare Quality Improvement Partnership (HQIP). Robust governance structures are in place to ensure data quality and monitor appropriateness of audit measures. There is a minimum dataset against which each participating hospital is assessed for data completeness.	The indicator has an acceptable risk of unintended consequences.

NICE indicator advisory committee recommendation

The NICE indicator advisory committee approved this indicator for publication on the menu.