

## **NASMeD position statement**

### **The use of pre-hospital thrombolysis for ST elevation myocardial infarction**

**July 2021**

Developed in conjunction with the British Cardiovascular Society, the College of Paramedics and the Joint Royal Colleges Ambulance Liaison Committee

#### **Scope**

##### **This position statement:**

- **applies to the use of pre-hospital thrombolysis for ST elevation myocardial infarction (STEMI)**
- **applies to clinicians, including paramedics and ambulance nurses working in a pre-hospital setting for UK NHS ambulance services**

#### **Background**

Timely reperfusion therapy is needed for people suffering STEMI to minimise damage to the heart and to improve prognosis.

Reperfusion therapy for STEMI can be delivered by primary percutaneous coronary intervention (PPCI) or by thrombolysis.

PPCI is the preferred reperfusion therapy for STEMI when patients present within 12 hours of onset of symptoms and when PPCI can be delivered within 120 minutes of the time when thrombolysis could have been administered.

There is a lack of evidence regarding which treatment (PPCI or pre-hospital thrombolysis) is best for patients with STEMI who are anticipated to encounter delays to PPCI beyond 150 minutes from call for help.

National and international guidance recommends that thrombolysis be considered as an alternative treatment for STEMI when it is not possible to provide PPCI within the target timeframe. This situation applies to limited, mostly rural, geographical areas within the UK.

Ambulance clinicians (including paramedics and ambulance nurses) may have difficulty retaining the skills necessary to administer thrombolytic therapy due to the

low frequency with which they administer this medication given the widespread availability of PPCI.

### **Current provision of pre-hospital thrombolysis by UK ambulance services**

Pre-hospital thrombolysis is now rarely used by UK ambulance services for STEMI treatment.

Pre-hospital thrombolysis is used in specified circumstances by the South East Coast Ambulance service (SECAMB), the South West Ambulance Service (SWASFT), the West Midlands Ambulance Service (WMAS), the Welsh Ambulance Service (WAS), the Scottish Ambulance Service (SAS), and on the Isle of Wight (IOW). It is used only by trained ambulance clinicians according to local ambulance service protocols.

### **Key statements**

1. The preferred treatment for STEMI is PPCI delivered within 150 minutes of call for help.
2. Ambulance services should ensure that patients with STEMI are assessed and conveyed to the nearest PPCI centre in the shortest possible time with a focus on reduction of on scene times.
3. The use of pre-hospital thrombolysis in the UK is not supported other than in specific geographical areas where this treatment time is significantly exceeded, such as the Isle of Wight, the Isles of Scilly, the Isle of Portland and the more remote areas of Scotland.
4. Pre-hospital thrombolysis should only be delivered as part of an established pathway which is agreed by local stakeholders including the ambulance service and local cardiac networks.
5. In cases which are anticipated to significantly exceed the 150-minute target time to PPCI, wherever possible there should be communication with a PPCI centre to discuss the benefits of thrombolysis versus a decision to convey the patient direct to a PPCI centre for treatment.
6. Ambulance clinicians delivering pre-hospital thrombolysis must be trained and competent in its use. Their competency must be assessed on a regular basis.
7. The use of pre-hospital thrombolysis must be subject to appropriate governance arrangements and audit by the relevant ambulance service.

### **References**

National Institute for Health and Care Excellence. (2020) Acute coronary syndromes. NICE guideline [NG185] [Online]. Available at <https://www.nice.org.uk/guidance/ng185> (Accessed 29<sup>th</sup> June 2021).

National Institute for Health and Care Excellence. (2020) Acute Coronary Syndromes in Adults Quality Standard (QS68) [Online] Available at: <https://www.nice.org.uk/guidance/qs68/chapter/Quality-statement-6-Primary-PCI-for-acute-STEMI>(Accessed 29<sup>th</sup> June 2021)