

## 1. STEMI Patient: Is there criteria for reperfusion therapy?

- |  |     |    |
|--|-----|----|
| A. ACS symptoms lasting longer than 20 minutes and less than 12 hours?           | Yes | No |
| B. i) 2mm of ST elevation in two or more contiguous precordial (chest) leads; or |     |    |
| ii) 1mm of ST elevation in two or more limb leads; or                            | Yes | No |
| iii) A presumably new LBBB?  |     |    |

If both 'YES' refer to Reperfusion Options below

### Indications for modified 12 lead:

- Check V4R if ST elevation noted in any inferior lead
- Check V8 and V9 if ST changes noted in any septal lead

Septal MI ( $\geq 2\text{mm ST}\uparrow$  V1, V2)  
 Anterior MI ( $\geq 2\text{mm ST}\uparrow$  V3, V4)  
 Inferior MI ( $\geq 1\text{mm ST}\uparrow$  in at least 2 leads of II, III, aVF or V4R)  
 Lateral MI ( $\geq 1\text{mm ST}\uparrow$  in at least 2 leads of I, aVL, V5, V6)  
 Posterior MI ( $\geq 1\text{mm ST}\uparrow$  in V8, V9)

## 2. STEMI Management

### General care of STEMI patient

- Oxygen (target SpO<sub>2</sub> 94-96%), ASA, nitroglycerin; avoid/limit use of morphine/fentanyl as per CPG.
- Obtain 2 IVs (if possible); preferably 18 gauge in LEFT arm (1 line and 1 lock)

## 3. Reperfusion Options

### A. Direct-to-PCI:

STEMI patient and time from diagnostic ECG to QEII 60 minutes or less? Yes No

If yes, transmit 12 lead to QEII, contact charge MD and discuss the following with the emergency physician

- Identify yourself, registration level, call location, and reason for call (possible PCI candidate)
- Confirm receipt of ECG and ensure ECG matches the patient
- Agree on interpretation
- Discuss patient signs and symptoms, patient history, and vitals
- Discuss if the patient has:
 

i) Serious systemic disease / terminal co-morbidity that will limit lifespan less than one year?	Yes	No
ii) Severe dementia?	Yes	No
iii) Prior CABG?	Yes	No
- Confirm appropriate destination choice
- Discuss back up plan in the event of complications
- Provide ETA to ED
- If time allows, complete 'Exclusion criteria for fibrinolysis' section (below)

Please let QEII physician know if the patient has a latex allergy

Not Direct-to-PCI candidate? Consider fibrinolysis (go to Reperfusion Option B)

----- OR -----

### B. Early Fibrinolysis:

STEMI patient and time to PCI lab more than 60 minutes or patient not a candidate for PCI

Exclusion criteria for prehospital fibrinolysis:

Note: Plavix and Lovenox are not to be administered unless TNK is being provided.

- |   |     |    |
|---|-----|----|
| i) Active bleeding or known bleeding/clotting disorder or on anticoagulants [e.g., warfarin (Coumadin), dabigatran (Pradaxa), rivaroxaban (Xarelto)]? | Yes | No |
| ii) Recent (within 6 weeks) major trauma, surgery (including eye surgery), GI / GU bleed?   | Yes | No |
| iii) History of stroke, TIA, severe dementia, or structural CNS damage (e.g., tumor, AV malformation, aneurysm)?                                      | Yes | No |
| iv) Significant closed head/facial trauma within last three (3) months?   | Yes | No |
| v) Significant hypertension (SBP > 180 or DsBP > 110) at any time from presentation? (relative)   | Yes | No |
| vi) Right arm versus left arm SBP difference of 15 mmHg?  | Yes | No |
| vii) Prolonged (greater than 10 minutes) CPR? (relative)  | Yes | No |
| viii) Cardiogenic shock? (relative – would do best with PCI; consult with MD)   | Yes | No |

### If fibrinolysis candidate:

- Transmit 12 lead to regional hospital
- Consult MD with information as outlined here
- Obtain consent from patient\*
- Proceed with management

\*Consent can be obtained from the substitute decision maker (SDM) if the patient does not have capacity. If an SDM is not available, implied consent is applicable.

### Discussion with Emergency Physician for fibrinolysis

- Identify yourself, registration level, call location, and reason for call (possible fibrinolysis candidate)
- Confirm receipt of ECG and ensure ECG matches the patient
- Agree on interpretation
- Discuss patient signs and symptoms, patient history, and vitals
- Confirm no exclusion criteria
- Identify and discuss any relative exclusion criteria noted
- Confirm appropriate destination choice
- Discuss back up plan in the event of complications
- Provide ETA to ED

## Consent to Treat With Pre-Hospital Fibrinolysis

You are having a heart attack resulting from a blocked artery in your heart caused by a blood clot. It is important that the blocked artery is opened. The medications we can provide in an attempt to re-open your blocked artery include aspirin, blood thinners, and a clot dissolving drug.

Your ECG has been sent to the Emergency Department and has been reviewed by Dr. \_\_\_\_\_. I have also spoken to Dr. \_\_\_\_\_ and discussed your signs and symptoms. The Doctor confirmed that you are having a heart attack and has recommended that we begin treatment prior to you arriving in hospital. The reason for the treatment prior to arrival is to reduce the amount of damage occurring to your heart muscle.

Prior to receiving this medication, we need to inform you of the potential risks involved. Specifically the clot busting medication (TNK) may cause bruising and bleeding from needle sites and internal bleeding. Bleeding in the brain occurs rarely, in about 1 in 100 patients, and can lead to permanent disability or death. Severe bleeding may require a blood transfusion and may be life threatening. While very rare, you need to be aware of the risks. The benefits of receiving this medication now exceed the risks.

This is the same medication that will be offered to you by a physician within the Emergency Department. It is being offered to you now to reduce the time that the heart attack is causing damage. If you decline the treatment we will continue to treat your symptoms within our protocols without using the clot busting drug. Are you interested in receiving the treatment? Do you have any questions about the therapy?

**After discussion with MD and consent is obtained, reconstitute TNK with 10mL sterile water.**

### Fibrinolysis Medication Dosages

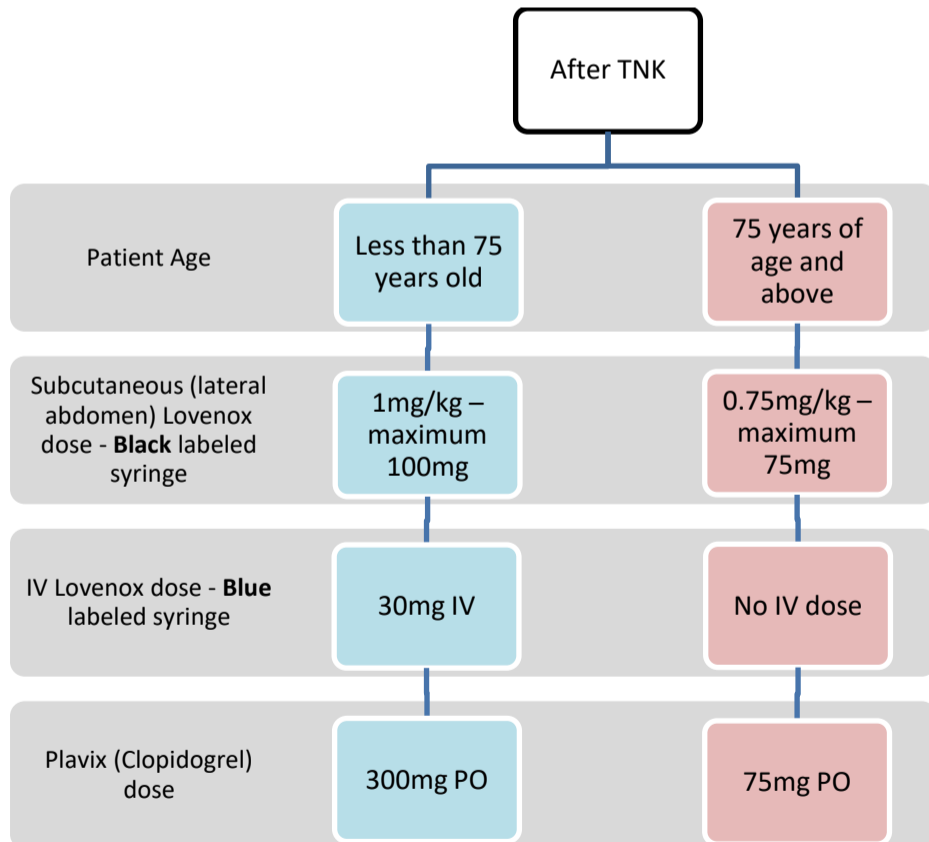
#### Administer TNK

Patient's weight: \_\_\_\_\_

TNK Dose (see table): \_\_\_\_\_

Time administered: \_\_\_\_\_

Weight		TNK (mg)	TNK (mL)
kgs	lbs		administered
Less than 60	Less than 130	30	6
60 to 69	130 to 154	35	7
70 to 79	155 to 174	40	8
80 to 89	175 to 199	45	9
90 or greater	200 or greater	50	10



Subcutaneous Lovenox		
Weight kg (lbs)	Less than 75 years old	75 years and older
50 (110)	50 mg	38 mg
60 (130)	60 mg	45 mg
70 (154)	70 mg	53 mg
80 (175)	80 mg	60 mg
90 (200)	90 mg	68 mg
≥ 100 (220)	100 mg	75 mg

Time administered: \_\_\_\_\_

Time administered: \_\_\_\_\_

Time administered: \_\_\_\_\_

#### Transfer of care to receiving staff

- Time of onset
- Medication list (most specifically if patient on any blood thinners)
- Medical history
- Vitals
- Did the patient go into cardiac arrest at any time during care?
- Does the patient currently have an arrhythmia or unstable rhythm?
- Interventions done
- If going to PCI, complete the EHS Information Sheet (provided by PCI staff)