

**Allergies:**

- ☐ NKA  
☐ Unobtainable  
☐ \_\_\_\_\_

Patient Name: \_\_\_\_\_

(Last Name) (First Name)

DOB: \_\_\_\_\_ (DD/MM/YY) Age: \_\_\_\_\_

Gender: M / F / U NU MRN#: \_\_\_\_\_

## Tenecteplase for ST Elevation Myocardial Infarction (STEMI) Order Set for Nunavut Community Health Centres

- Use of this form should not replace sound clinical decision making.
- Consider Ottawa Cardiology consultation depending on nursing and physician comfort with STEMI management and/or tenecteplase administration.

**Monitoring**

- ☒ Continuous Cardiac Monitoring
- ☒ Continuous SpO<sub>2</sub> Monitoring
- ☒ Observe for signs of bleeding. If bleeding occurs, notify MD.
- ☒ Neurovitals q30minutes x 2, then q4h x 24 hours
- ☒ Notify MD for any clinical changes

➤ Oxygen is indicated in patients with hypoxaemia (SaO<sub>2</sub> less than 90%).

➤ Routine oxygen is not recommended in patients with SaO<sub>2</sub> greater than or equal to 90%.

*There is some evidence to suggest that hyperoxia may be harmful in patients with uncomplicated MI, presumably due to increased myocardial injury.*

**Lab Investigations**

- Draw blood prior to administering tenecteplase; do not delay treatment pending results
- Send blood with patient via Medevac if not able to perform at health centre

**Perform Point of Care testing (if available):**

- ☒ APTT/INR ☒ Blood glucose ☒ Hemoglobin

**Draw blood for (perform at health centre if available):**

- ☒ CBC ☒ Creatinine and eGFR ☒ BUN ☒ Troponin now
- ☒ APTT/INR ☒ Electrolytes ☒ Glucose ☒ Repeat Troponin in 3 hrs

**Diagnostics**

- ☒ Alert physician on call that ECG will be emailed and needs urgent assessment
- ☒ 12-lead ECG stat
- ☒ 12-lead ECG 60 minutes and 90 minutes after tenecteplase
- ☒ ECG PRN for any chest pain greater than 10 minutes and unresponsive to nitroglycerin
- ☒ CXR Portable

**Vitals****Vitals Pre Thrombolytic Therapy**

- ☒ Weight \_\_\_\_\_ kg
- ☒ Baseline T, HR, RR, BP, SpO<sub>2</sub>

**Vitals Post Thrombolytic Therapy**

- ☒ Do not use automatic BP cuff for the first 24 hours of tenecteplase therapy
- ☒ T q \_\_\_\_\_ h
- ☒ HR, RR, BP, SpO<sub>2</sub> q15minutes x 6 and PRN  
then HR, RR, BP, SpO<sub>2</sub> q1h x 4 and PRN  
then HR, RR, BP, SpO<sub>2</sub> q2h and PRN x 20 hours
- ☒ Pain score q \_\_\_\_\_ h and PRN

**Miscellaneous**

- ☒ Apply pressure dressings to all venipuncture sites, including failed sites and avoid giving IM injections.
- ☐ Insert urinary catheter, if indicated, prior to tenecteplase administration. Caution if insertion required post administration of tenecteplase due to increased risk of bleeding which is greatest in the first 24 hours.
- ☒ NPO until stable
- ☒ Bed rest
- ☒ Insert 2 Saline Locks #18 Gauge
- ☐ 0.9% NaCl at \_\_\_\_\_ mL/h

Prescribed by:

PHYSICIAN PRINTED NAME

PHYSICIAN SIGNATURE

YYYY-MM-DD

HH:MM

Transcribed by:

NURSE PRINTED NAME

NURSE SIGNATURE

YYYY-MM-DD

HH:MM



**Allergies:**

- ☐ NKA  
☐ Unobtainable  
☐ \_\_\_\_\_

Patient Name: \_\_\_\_\_

(Last Name) (First Name)

DOB: \_\_\_\_\_ (DD/MM/YY) Age: \_\_\_\_\_

Gender: M / F / U NU MRN#: \_\_\_\_\_

## Tenecteplase for ST Elevation Myocardial Infarction (STEMI) Order Set for Nunavut Community Health Centres

### Consider Use of Tenecteplase

**Inclusion Criteria (for thrombolysis, patient must have all five):**

- ☐ Yes ☐ No Characteristic chest pain lasting more than 15 minutes  
☐ Yes ☐ No Joint ESC/ACCF/AHA/WHF Committee 2018 ECG manifestations suggestive of acute myocardial ischemia:

**New ST elevation** at the J-point in two contiguous leads with the following cut-points:

- Greater than or equal to 1 mm in all leads other than leads V2-V3;
- For leads V2-V3: greater than or equal to 2 mm in men 40 years of age and older;  
greater than or equal to 2.5 mm in men under the age of 40;  
greater than or equal to 1.5 mm in women regardless of age.

**Note:** Patients with typical and persistent symptoms in the presence of a new or presumable new left bundle branch block or a true posterior myocardial infarction are also considered eligible.

- ☐ Yes ☐ No Onset of chest pain 12 hours or less before expected start of infusion  
☐ Yes ☐ No Age greater than 18 years old  
☐ Yes ☐ No No contraindications to thrombolytic therapy (see below)

**Absolute contraindications:**

- ☐ Yes ☐ No Any prior intracerebral hemorrhage  
☐ Yes ☐ No Known structural cerebral vascular lesion (e.g., arteriovenous malformation)  
☐ Yes ☐ No Known malignant intracranial neoplasm (primary or metastatic)  
☐ Yes ☐ No Ischemic stroke within 3 months, EXCEPT acute ischemic stroke within 4.5 hours  
☐ Yes ☐ No Suspected aortic dissection  
☐ Yes ☐ No Active bleeding or bleeding diathesis (excluding menses)  
☐ Yes ☐ No Significant closed-head or facial trauma within 3 months  
☐ Yes ☐ No Intracranial or intraspinal surgery within 2 months  
☐ Yes ☐ No Severe uncontrolled hypertension (unresponsive to emergency therapy)

**Relative contraindications:**

- ☐ Yes ☐ No History of chronic, severe, poorly controlled hypertension  
☐ Yes ☐ No Significant hypertension on presentation (SBP greater than 180 mmHg or DBP greater than 110 mmHg)  
☐ Yes ☐ No History of prior ischemic stroke not within the last 3 months  
☐ Yes ☐ No Dementia  
☐ Yes ☐ No Known intracranial pathology not covered in absolute contraindications  
☐ Yes ☐ No Traumatic or prolonged (greater than 10 minutes) CPR  
☐ Yes ☐ No Major surgery less than 3 weeks previously  
☐ Yes ☐ No Recent (within 2 to 4 weeks) internal bleeding  
☐ Yes ☐ No Noncompressible vascular punctures  
☐ Yes ☐ No Pregnancy  
☐ Yes ☐ No Active peptic ulcer  
☐ Yes ☐ No Oral anticoagulant therapy

**Consent**

- ☒ Explain benefits and risks of treatment and obtain consent (see Appendix 1)

Prescribed by:

PHYSICIAN PRINTED NAME

PHYSICIAN SIGNATURE

YYYY-MM-DD

HH:MM

Transcribed by:

NURSE PRINTED NAME

NURSE SIGNATURE

YYYY-MM-DD

HH:MM



**Allergies:**

- ☐ NKA  
☐ Unobtainable  
☐ \_\_\_\_\_

Patient Name: \_\_\_\_\_

(Last Name) (First Name)

DOB: \_\_\_\_\_ (DD/MM/YY) Age: \_\_\_\_\_

Gender: M / F / U NU MRN#: \_\_\_\_\_

## Tenecteplase for ST Elevation Myocardial Infarction (STEMI) Order Set for Nunavut Community Health Centres

**Opioid Analgesia**

- ☐ Morphine 2 mg IV q5minutes until chest pain relieved  
(max 10 mg/h)  
☐ FentaNYL 25 mcg IV q5minutes until chest pain relieved  
(max 100 mcg total dose)

**2019 Canadian Cardiovascular Society Recommendation:**

We suggest avoidance of routine IV opioid analgesic (e.g., morphine or fentanyl) administration for STEMI-related discomfort. However, selective use of opioid analgesic medications may be considered for severe pain with the goal of relieving pain and reducing anxiety. (Weak Recommendation, Low-Quality Evidence)

**Tenecteplase Thrombolytic Therapy****\*\*ensure blood drawn before thrombolytic administered\*\***

- ☒ Tenecteplase \_\_\_\_\_ mg IV over 5 seconds as per weight-based chart  
☒ Flush line with 10 mL 0.9% NaCl before and after administration of tenecteplase

Patient Weight (kg)	Tenecteplase dose (mg)	Tenecteplase volume <sup>1</sup> (mL)
Less than 60 kg	30	6
60 – 69	35	7
70 – 79	40	8
80 – 89	45	9
90 kg or greater	50	10

<sup>1</sup>From one vial of tenecteplase reconstituted with 10 mL SWFI (diluent provided)

Refer to *The Ottawa Hospital Parenteral Drug Therapy Manual* Monograph for Tenecteplase for additional information on reconstitution, administration, potential hazards and precautions.

**Management of Side Effects**

- ☒ If any of the following occurs, discontinue tenecteplase and anticoagulant and notify MD:
- Altered neurologic status that might indicate intracranial bleeding
  - Back or leg pain that might indicate retroperitoneal bleeding
  - Hematemesis or hemoptysis

**Antiplatelet Therapy****\*\*ASA contraindicated in ASA allergy or active GI Bleed\*\***

- ☐ Chewable acetylsalicylic acid 160 mg PO x 1 dose (if not already given)

**THEN**

- ☐ Enteric coated acetylsalicylic acid 81 mg PO daily

**For patients younger than 75 years:**

- ☐ Clopidogrel 300 mg PO x 1 dose  
**THEN** clopidogrel 75 mg PO once daily

**For patients 75 years and older:**

- ☐ Clopidogrel 75 mg PO x 1 dose  
**THEN** clopidogrel 75 mg PO once daily

Prescribed by:

PHYSICIAN PRINTED NAME

PHYSICIAN SIGNATURE

YYYY-MM-DD

HH:MM

Transcribed by:

NURSE PRINTED NAME

NURSE SIGNATURE

YYYY-MM-DD

HH:MM



**Allergies:**

- ☐ NKA  
☐ Unobtainable  
☐ \_\_\_\_\_

Patient Name: \_\_\_\_\_

(Last Name) (First Name)

DOB: \_\_\_\_\_ (DD/MM/YY) Age: \_\_\_\_\_

Gender: M / F / U NU MRN#: \_\_\_\_\_

## Tenecteplase for ST Elevation Myocardial Infarction (STEMI) Order Set for Nunavut Community Health Centres

**Anticoagulant Therapy**

Initiate Enoxaparin or Heparin within 15 minutes before and 30 minutes after tenecteplase administration:

Patients less than 75 years of age	Patients 75 years of age and older
<b>GFR greater than or equal to 30 mL/min</b>	
<input type="checkbox"/> Enoxaparin 30 mg IV x 1 dose, followed in 15 minutes by: enoxaparin _____ mg SC (1 mg/kg) <b>THEN</b> enoxaparin _____ mg SC <b>q12h</b> (1 mg/kg) (maximum 100 mg for the first two SC doses)  If weight greater than 100 kg and 100 mg given for the first two SC doses, subsequent doses = _____ mg (1 mg/kg) SC <b>q12h</b>	<input type="checkbox"/> Enoxaparin _____ mg SC (0.75 mg/kg) SC <b>q12h</b> (maximum 75 mg for the first two doses)  If weight greater than 100 kg and 75 mg given for the first two SC dose, subsequent doses = _____ mg (0.75 mg/kg) SC <b>q12h</b>
<b>GFR 20 to 29 mL/min</b>	
<input type="checkbox"/> Enoxaparin 30 mg IV x 1 dose, followed in 15 minutes by: enoxaparin _____ mg SC (1 mg/kg) (maximum 100 mg for the first SC dose) <b>THEN</b> enoxaparin _____ mg SC <b>q24h</b> (1 mg/kg)	<input type="checkbox"/> Enoxaparin _____ mg SC (0.75 mg/kg) <b>q24h</b> (maximum 75 mg for the first dose)  If weight greater than 100 kg and 75 mg given for the first SC dose, subsequent doses = _____ mg (0.75 mg/kg) SC <b>q24h</b>
<b>GFR less than 20 mL/min</b>	
<input type="checkbox"/> Use Unfractionated IV Heparin Nomogram REDUCED Dose Order Set	<input type="checkbox"/> Use Unfractionated IV Heparin Nomogram REDUCED Dose Order Set

Prescribed by:

PHYSICIAN PRINTED NAME

PHYSICIAN SIGNATURE

YYYY-MM-DD

HH:MM

Transcribed by:

NURSE PRINTED NAME

NURSE SIGNATURE

YYYY-MM-DD

HH:MM



**Allergies:**

- ☐ NKA  
☐ Unobtainable  
☐ \_\_\_\_\_

Patient Name: \_\_\_\_\_

(Last Name) (First Name)

DOB: \_\_\_\_\_ (DD/MM/YY) Age: \_\_\_\_\_

Gender: M / F / U NU MRN#: \_\_\_\_\_

## Tenecteplase for ST Elevation Myocardial Infarction (STEMI) Order Set for Nunavut Community Health Centres

**Nitrates**

**\*\*Nitrates contraindicated if PDE-5 inhibitor used within past 24 hours (sildenafil, vardenafil) or 48 hours (tadalafil) or severe hypotension. Use with extreme caution in patients with inferior MI.\*\***

- ☐ Nitroglycerin spray 0.4 mg SL q5minutes x 3 PRN for chest pain
- ☒ If SBP less than 100 mmHg, hold and notify MD
  - ☒ If no relief after 3 doses or chest pain worsening/recurs, notify MD and obtain ECG
- ☐ Nitroglycerin 50 mg in 250 mL D5W IV infusion (Use premixed bottle and refer to infusion pump chart)
- ☒ If SBP less than 100 mmHg, hold and notify MD

Start nitroglycerin IV infusion at \_\_\_\_\_ mcg/min and titrate to pain free and SBP \_\_\_\_\_ mmHg

**Nitroglycerin IV infusion Dosing Recommendations**

**Using special non-PVC administration set:**  
(e.g., Primary PLUM™ Set Polyethylene Lined Tubing by ICU Medical)

- Initiate with 5-10 mcg/min, and increase every 3 to 5 minutes in 5 mcg/min increments.
- If no response at 20 mcg/min, increments of 10 mcg/min and later 20 mcg/min can be used.

**Using PVC administration set:**

- Higher dosages are generally required.
- Initiate with 25 mcg/min.
- Dosage is then titrated according to response and tolerance of the patient.

Maximum rate for angina/coronary artery disease: 400 mcg/min

**Additional Therapy**

**\*\*Beta blockers absolutely contraindicated in cocaine MI, severe bradycardia, and acute heart failure\*\***

- ☐ Metoprolol \_\_\_\_\_ mg PO q12h
- ☒ if HR less than 60 beats/min or SBP less than 100 mmHg, hold metoprolol and notify MD
- ☐ Ramipril \_\_\_\_\_ mg PO daily
- ☐ Atorvastatin \_\_\_\_\_ mg PO daily (if available)

**Patient Transfer**

- ☐ Arrange for medevac to Tertiary Cardiac Centre

Prescribed by:

PHYSICIAN PRINTED NAME

PHYSICIAN SIGNATURE

YYYY-MM-DD

HH:MM

Transcribed by:

NURSE PRINTED NAME

NURSE SIGNATURE

YYYY-MM-DD

HH:MM





## Appendix 1: Tenecteplase Consent Form

### PURPOSE AND BENEFITS:

A heart attack happens when the blood flow to part of your heart muscle is blocked. The part of your heart that does not get enough oxygen starts to die. The blockage can be from a blood clot in one or more of the blood vessels that give blood flow to your heart.

Tenecteplase (also known as TNKase®) is a clot-dissolving drug that helps to open up the blocked blood vessel. This will allow better blood flow to your heart. Better blood flow means your heart can get more oxygen. Also, you may have fewer long-term problems from your heart attack. The sooner the tenecteplase is given after the start of your symptoms, the better your chances for recovery. Without this treatment, heart muscle will be more severely damaged and this could lead to heart failure, irregular heart rhythms and other heart problems.

### RISKS AND SIDE EFFECTS:

The most common side effect of tenecteplase is bleeding. Bleeding can occur anywhere in the body (head, stomach, skin, urine, throat or nose). Tenecteplase causes major bleeding in about five (5) patients for every 100 treated. The most serious risk of tenecteplase is hemorrhagic stroke, which affects about two (2) patients in every 100. Irregular heart rhythms may occur as a result of treatment. As with any drug, there is a risk of an allergic reaction and other side effects including nausea, vomiting and fever.

\*\*\*\*\*

I, \_\_\_\_\_ (patient name), authorize the Government of Nunavut community health nurse, under the direction of a physician, to administer tenecteplase for my treatment.

I, \_\_\_\_\_ (patient name), certify that this consent has been fully explained to me and that I understand the benefits and risks.

Patient name: \_\_\_\_\_ Patient signature: \_\_\_\_\_

Nurse name: \_\_\_\_\_ Nurse signature: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

#### If patient is unable to sign:

Authorized representative name and signature: \_\_\_\_\_

Relationship to patient: \_\_\_\_\_

Reason patient unable to sign: \_\_\_\_\_





## Annexe 1 : Formulaire de consentement – ténectéplase

### OBJECTIF ET BIENFAITS :

Une crise cardiaque (infarctus du myocarde) survient quand le flux sanguin vers une partie du myocarde (muscle cardiaque) est bloqué. La partie de votre cœur qui ne reçoit pas assez d'oxygène commence à mourir. L'obstruction peut prendre la forme d'un caillot dans l'un ou plusieurs des vaisseaux sanguins qui assurent le flux sanguin vers votre cœur.

Le ténectéplase (aussi connu sous le nom de TNKase®) est un médicament qui dissout les caillots afin de débloquent les vaisseaux sanguins. Ceci permettra un meilleur flux sanguin vers votre cœur. Avec un meilleur flux sanguin, votre cœur recevra plus d'oxygène. De plus, vous pourriez subir moins de problèmes à long terme en raison de votre crise cardiaque. Le plus tôt le ténectéplase est administré après l'apparition des symptômes, meilleures sont vos chances de rétablissement. Sans ce traitement, le myocarde sera endommagé de façon plus grave, ce qui pourrait entraîner une insuffisance cardiaque, un rythme cardiaque irrégulier ou d'autres problèmes cardiaques.

### RISQUES ET EFFETS SECONDAIRES :

L'hémorragie est l'effet secondaire le plus courant. L'hémorragie peut survenir n'importe où sur le corps (tête, estomac, peau, urine, gorge, nez). Le ténectéplase provoque une hémorragie sévère chez environ cinq (5) patients par groupe de 100 patients traités. L'effet secondaire le plus grave du ténectéplase est l'attaque d'apoplexie hémorragique qui affecte environ deux (2) patients sur 100. Un rythme cardiaque irrégulier peut survenir en raison du traitement. Comme pour n'importe quel médicament, il existe un risque de réaction allergique et d'autres effets secondaires comme la nausée, les vomissements et la fièvre.

\*\*\*\*\*

Je, \_\_\_\_\_ (nom du patient), autorise l'infirmier en santé communautaire du gouvernement du Nunavut, sous la direction d'un médecin, à m'administrer le ténectéplase dans le cadre de mon traitement.

Je, \_\_\_\_\_ (nom du patient), atteste que ce consentement m'a été expliqué de façon détaillée et que je comprends les bienfaits et les risques.

Nom du patient : \_\_\_\_\_ Signature du patient : \_\_\_\_\_

Nom de l'infirmier : \_\_\_\_\_ Signature de l'infirmier : \_\_\_\_\_

Date : \_\_\_\_\_ Heure : \_\_\_\_\_

#### Si le patient n'est pas en mesure de signer le formulaire de consentement :

Nom et signature du représentant autorisé : \_\_\_\_\_

Lien avec le patient : \_\_\_\_\_

Raison pour laquelle le patient n'est pas en mesure de signer le formulaire : \_\_\_\_\_







## Naunaitkutaq 1: Angirut Titiraa Havautituriami Tenecteplasemik taivagaat

### PIDJUTIGILLUANGA IKAYUUTITLU:

Uummaliqtaaqtuq auk talvungaqqan ilagannut uummatit nukinganut himitpaktuq. Ilanga uummatit aniqhaarut hakuiqpalliavaktuq. Himiktin'nga augiangmit pivagungnaqhiyuq atauhirmi amigaittuniluunniit taqait aulavikhainnut aungmik ummatmut.

Tenecteplase havaut (naunaittuqlu TNKase® mik) mikhivalliadjutauyuq havaut ikayuutigipluni ammaktigiplugu himikhimayuq taqak. Taimaa nakuuyumik auqtaqtiqtuq aulavikharnik uummatirnut. Nakuuyumik auqtaqtigumi uummatirnut aniqhaaqtaqniaqtuq nakuuyumik. Imaalu, ilvit hivuniraalurmum ikittunik ayuqhautiqalimaittutin uummallirnit. Qilaminnuq tuniyauqpat tenecteplase havaut talvanga takudjutiqliqpat aanniarunmik, nakuuhidjutihungnguyuq. Havautiqangitpat, uummatip nukia hukpaluihungnguyuq talvangu uummallirniaqtuq, kayumiiqluni kayummakluniluunniit uummat aadlaniklu ummatmut ayuqhautiqarniaqtuq.

### QAYARIYAUDJUTIT QANURITTAAGUTITLU:

Ilanggit aullaqivaktut tenecteplase havautimit. Aullaqivaktuq humimi timimi (niaqurmi, aqiaruq, uvinik, anarmi, iggiaq qin'ngaqmiluunniit). Tenecteplase havautaa aullaqipiaqtitpaktuq talimani (5) havautituqtuni talvami 100 nit havautituqtuni. Qayarnatqiaq tenecteplase havautaannit aullaqipiaqami nuukiiqtittihimayuq, pidjutivaktuq taimaatun malrungi (2) havautituqtuni talvami 100 nit havautituqtuni. Uummatit kayumiigumi kayummakpallaagumiluunniit piniaqtuq havautimin. Havautitut aadlanik, nakuungigutit timimut pittaaqtut aadlaniklu taapkuatut kaiffunguhuklutik, miriannguhuqlutik kidjaklutiklu.

\*\*\*\*\*

Uvanga, \_\_\_\_\_ (aanniaqtup atia), angirutigiyaga Nunavut Kavamanga nunalaani munarhit, atuqtakharnik taaktimin, aulatituyukhaq tenecteplasemik havautikhainik.

Uvanga, \_\_\_\_\_ (aaniaqtup atia), naammagiyara una anggirut kangiqhipkaiyut uvamnut kangiqhiplugulu ikayuutit qayarnautitlu.

**Anniaqtup atia:** \_\_\_\_\_ **Anniaqtup sainiutaa:** \_\_\_\_\_

**Munaqhip atia:** \_\_\_\_\_ **Munaqhip sainiutaa:** \_\_\_\_\_

**Ublua:** \_\_\_\_\_ **Ikaangnia:** \_\_\_\_\_

#### Anniaqtup sainilimaikumiup:

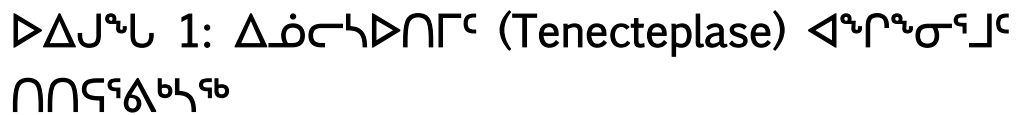
Angiqtauyuq una atia sainiqtuqhaqlu: \_\_\_\_\_

Qanuqtun ilagiyaa aanniaqtup: \_\_\_\_\_

Huuq aanniaqtup sainilimaittaa: \_\_\_\_\_





[illegible]

OSTNKCHC

