### Prescribing Protocol SESLHDPR/575

**Ticagrelor in Acute Coronary Syndromes**

<table>
<thead>
<tr>
<th>Areas where applicable</th>
<th>Emergency and Cardiology</th>
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<td>Areas where not applicable</td>
<td>Other clinical services</td>
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<td>Authorised Prescribers</td>
<td>Medical staff in Emergency and Cardiology departments</td>
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<td><strong>Indication for use</strong></td>
<td>Patients presenting with acute coronary syndrome (Unstable Angina, Non-ST elevation myocardial infarction, ST elevation myocardial infarction)</td>
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</table>
| **Clinical condition** | Patients presenting with 2 out of 3 of  
1. Chest pain  
2. Dynamic ECG changes consistent with ischaemia  
3. Evidence of myocardial ischaemia on cardiac enzymes; i.e. a rise and/or fall in troponin levels |
| **Contra-indications** | • Active bleeding  
• History of intracranial bleed  
• Hypersensitivity to ticagrelor or any of the excipients  
• Moderate to severe hepatic impairment.  
• Co-administration of ticagrelor with strong CYP3A4 inhibitors |
| **Precautions** | • Significant cardiac conduction disease  
• Patients with concomitant administration of drugs that may increase the risk of bleeding  
• Asthma/ chronic obstructive pulmonary disorder  
• Weight < 60 kg  
• Hyperuricaemia |
| **Place in Therapy** | In conjunction with aspirin as part of STEMI/ACS pathway protocol at the discretion of treating cardiologist. |
| **Part of combination therapy, other drugs:** | Aspirin and IV heparin bolus |
| **Dosage** | Initiate therapy with a single 180 mg loading dose (2 x 90mg tablets) and then continue at 90 mg twice daily. |
| **Duration of therapy** | For duration of inpatient admission, and following discharge for up to 12 months. |

### Important Drug Interactions

- Ticagrelor is a cytochrome P450 3A4 substrate and mild inhibitor of CYP3A4.
- Strong CYP3A4 inhibitors are contraindicated and include ketoconazole, clarithromycin, nefazadone, ritonavir and atazanavir.
- Moderate CYP3A4 inhibitors may increase exposure to ticagrelor and include diltiazem, amprenavir, aprepitant, erythromycin, fluconazole and verapamil.
- CYP3A4 inducers reduce efficacy of ticagrelor and include rifampicin, dexamethasone, phenytoin, carbamazepine and phenobarbitone.
- Concentrations of simvastatin, atorvastatin, digoxin and cyclosporin are increased by ticagrelor. Monitor cautiously for toxicity.
**Administration instructions**

**Loading dose:** for rapid onset of action use oro-dispersible tablets (2 x 90mg). Tablets should be placed on the tongue and allowed to dissolve. Oro-dispersible tablets can be administered with or without water. Film-coated tablets may also be used to administer the loading dose.

**Maintenance dosing:** Film-coated tablets should be used for ongoing dosing and at discharge. Tablets should be swallowed whole and can be administered with or without food.

Note: Oro-dispersible tablets are not available in the community on the PBS.

**Monitoring requirements**

Major bleeding
If necessary, monitor concentrations of digoxin and ciclosporin, and monitor for adverse effects of simvastatin or atorvastatin.

**Management of complications**

Symptomatically managed on a case by case basis and assessment of risk of drug cessation.

**Basis of Protocol/Guideline:**

TGA AUSPAR report
Steg et al. Circulation 2010; 122:2131 -2141
European Society of Cardiology. Acute Myocardial Infarction in patients presenting with ST-segment elevation (Management of)
Joint ACC/AHA Guidelines for the Management of Patients with STEMI Prescribing Information (TGA) last updated 28/07/2015

**Groups consulted in development of this guideline**

Department of Cardiology, Cardiothoracic Surgery, Emergency and Cardiac Anaesthetics at the POWH

**AUTHORISATION**

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### GOVERNANCE

<table>
<thead>
<tr>
<th>Enactment date</th>
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<tr>
<td>Expiry date:</td>
<td>March 2023</td>
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<tr>
<td>Ratification date by SESLHD Drug &amp;QUM Committee</td>
<td>5th March 2020</td>
</tr>
<tr>
<td>Chair, Drug and Quality Use of Medicines Committee</td>
<td>Dr Jo Karnaghan</td>
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