## REMDESIVIR TREATMENT PROTOCOL

<table>
<thead>
<tr>
<th>CATEGORY:</th>
<th>Guidance</th>
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<tr>
<td>CLASSIFICATION:</td>
<td>Clinical</td>
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<tr>
<td>PURPOSE</td>
<td>An update on the eligibility, treatment,</td>
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<td>management and monitoring of remdesivir for</td>
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<tr>
<td>Controlled Document Number:</td>
<td>C144</td>
</tr>
<tr>
<td>Version Number:</td>
<td>V4.0</td>
</tr>
<tr>
<td>Document Author:</td>
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<tr>
<td>Approved By:</td>
<td>Medical Scientific Advisory Group (COVID-19)</td>
</tr>
<tr>
<td>Date / Time:</td>
<td>31/08/2021</td>
</tr>
<tr>
<td>Review Date:</td>
<td>28/02/2022</td>
</tr>
<tr>
<td>Distribution:</td>
<td>• <strong>Recommended Reading</strong> for: Clinicians, All</td>
</tr>
<tr>
<td></td>
<td>Non-Medical Prescribers, Pharmacists and Nurses</td>
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<tr>
<td></td>
<td>• <strong>Information for:</strong> Ward Managers, Senior</td>
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<td>Nurses, ADNs, Divisional Directors</td>
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CDN: C144
Remdesivir Treatment Protocol
Issued: 09/09/2021
REMDESIVIR TREATMENT PROTOCOL
(Updated 13/07/2021)

Remdesivir is licensed for the treatment of suspected or confirmed COVID-19. It is available either as concentrate for infusion or powder for reconstitution for infusion.

Patients who have a high probability of developing severe disease in the early stages of COVID-19 infection are most likely to benefit from remdesivir. See risk assessment section below for more details on how this should be assessed.

Remdesivir is available if the below criteria is met:

**Eligibility Criteria**

- Hospitalised with confirmed SARS-CoV-2 infection
- Age ≥ 12 years and weight above 40kg
- With pneumonia requiring oxygen via simple face mask or nasal cannula at a flow rate of up to 15 litres/min.
- Estimated glomerular filtration rate (eGFR) at least 30 ml/min or on continuous renal replacement therapy or on haemodialysis
- ALT below 5 times upper limit of normal at baseline

**Exemptions**

- Patients with end-stage renal disease on haemodialysis are exempt from the eGFR treatment threshold above and can receive any form of supplemental oxygen
- For immunocompromised patients see specific section below.

NEW- Patients re-admitted with COVID-19 (meeting the eligibility criteria above, with the exception of the requirement on the timing from symptom onset) are permitted a second course of up to 5 days upon readmission.

The following criteria must be used to identify patients suitable for remdesivir treatment:

**Initiation of treatment**

- See appendix 1 for how to initiate Remdesivir.
- See appendix 2 for Clinical pathway.
- Remdesivir should not be initiated in patients who present to hospital more than 10 days after symptom onset. For immunocompromised patients see specific section below.
- Discussion about the suitability of escalation to critical care, including invasive mechanical ventilation, multi-organ support and CPR should be considered through **shared decision making**.
- Some patients not eligible for escalation may be suitable for access to remdesivir as determined by multidisciplinary assessment.
- **Note:** Children aged under 12 years or pregnant mothers are able to access remdesivir through a separate compassionate use scheme operated by Gilead.

**Risk assessment**

- Clinical judgement around treatment with remdesivir can be informed by a risk score.
- This score is based on the following patient criteria:
  - Age, Sex, Number of comorbidities, Resp rate, Peripheral oxygen on room air, Glasgow coma score, Urea, CRP.
  - 4C mortality score (See link on how to calculate patient score)
  - Patients with a low 4C Mortality Score (0 to 3) are highly likely to recover without treatment with remdesivir.
Remdesivir should not be initiated in patients who present to hospital and are unlikely to survive (determined by clinical judgment). The 4C Mortality Score might be helpful in this assessment.

Treatment
- Dose for remdesivir is 200mg STAT on day 1 followed by 100mg once daily for 4 days (Maximum treatment course length of 5 days).
- Patient must be reviewed daily (see below)

Significantly Immunocompromised patients (NEW)
- Defined as patients with a significant impairment of humoral immune response and/or cellular immune competence:
  - Remdesivir can be extended to a maximum of 10 days
  - The criterion on time between symptom onset and treatment initiation does not apply
  - The criterion on the need for supplemental oxygen requirement does not apply

Administration
- Dose to be mixed within 250ml sodium chloride 0.9% & given IV over 60mins

Reassessment and review
- The use of remdesivir should be reassessed daily.
- Consider stopping remdesivir if:
  - The patient clinically improves and no longer requires supplemental oxygen 72 hours after commencement of treatment; or
  - The patient continues to deteriorate despite 48 hours of sustained mechanical ventilation.
- Discontinue if ANY of the following develop:
  - ALT ≥5 times the upper limit of normal (ULN) during treatment with remdesivir. Maybe re-started when ALT< 5 times (ULN)
  - ALT elevation with signs or symptoms of liver inflammation OR increasing conjugated bilirubin, alkaline phosphatase or INR
  - eGFR <30mL/min (except in patients with end-stage renal disease or in haemodialysis)

Monitoring
- Monitor renal and liver function tests daily.
- Send repeat swabs every 2-3 days to also monitor viral RNA.

Co-administration of corticosteroids
- Administration of dexamethasone (or hydrocortisone) is recommended in severe or critical COVID-19.
- Corticosteroids are not suggested in non-severe COVID-19 disease.
- There is no interaction of remdesivir with either dexamethasone or hydrocortisone.

References:
- Specific product characteristics (SPC) for Veklury® 100mg concentrate for solution for infusion and powder for concentrate for solution for infusion
- 4C Mortality Score
- Risk stratification of patients admitted to hospital with covid-19 using the ISARIC WHO Clinical Characterisation Protocol: development and validation of the 4C Mortality Score - LINK
Appendix 1

INITIATING REMDESIVIR FLOWCHART

**DIAGNOSTIC CRITERIA**
Patient matches diagnostic criteria for treatment.
See also **appendix 2** for clinical pathway
(If criteria not meet continue to monitor patient closely)

**4C mortality score**
*4C mortality score* assessed.
Patients with low score 0-3 are highly likely to recover without Remdesivir and should continue to be monitored closely

**BLUETEQ FORM**
Consultant looking after patient to complete Blueteq form
[https://www.blueteq-secure.co.uk/Trust/Default.aspx](https://www.blueteq-secure.co.uk/Trust/Default.aspx)
Once completed contact pharmacy via switchboard to inform them of future prescription and review

**PRESCRIBING**
QE site - Prescribe (Reg/Consultant) via PICS
HGS - Prescribe via JAC / Paper drug chart
Add Blueteq number onto the prescription as a note

**PHARMACY SUPPLY**
Pharmacy team will check diagnostic criteria has been met and referral made by consultant.
Supply will be made to complete course. Note, vials for concentrate are stored in the fridge and must be diluted prior to administration (See Medusa for details related to administration)
Appendix 2

CLINICAL PATHWAY AND CRITERIA FOR THE USE OF REMDESVIR IN PATIENTS HOSPITALISED WITH COVID-19 (ADULTS AND CHILDREN 12 YEARS AND OLDER)

*There should be careful consideration before initiating remdesivir treatment.