



<b>DESCRIPTION</b>	<p>Cefepime is a fourth generation cephalosporin antibiotic. It interferes with bacterial cell wall peptidoglycan synthesis by binding to penicillin-binding proteins resulting in cell lysis.<sup>1</sup></p> <p>Cefepime is active against the majority of the enteric Gram-negative bacilli, including <i>Pseudomonas aeruginosa</i>.<sup>2</sup></p>
<b>ChAMP INDICATIONS AND RESTRICTIONS</b>	<p><b>IV: Category B: Monitored</b>          ChAMP team to be informed of use and will review if ongoing therapy is required and does not meet specified indications.</p> <p><b>Standard Indications:</b></p> <ul style="list-style-type: none"> <li>• Febrile neutropenia in penicillin allergic patients</li> <li>• Empiric treatment of meningitis (nosocomial or post-surgical)</li> </ul>
<b>FORMULATIONS</b>	2g powder for injection vials
<b>DOSAGE</b>	<p>The doses listed below fall within the standard range. Higher doses may be prescribed for certain situations. This should be in consultation with Infectious Diseases or Microbiology consultants.</p> <p><b>IV:</b>  <b>Usual dose:</b> 50mg/kg to a maximum of 2 grams 8 hourly<sup>3</sup></p> <p><b>Neonates:</b>          Please refer to neonatal clinical care drug protocols  <a href="#">Neonatology Clinical Care Unit - Drug Protocols - Services A — Z - Women and Newborn Health Service</a></p>
<b>DOSAGE ADJUSTMENT</b>	<p>Dosage adjustment may be required in cases of impaired renal function (with creatinine clearance of less than 50mL/min).  <a href="http://cahs.hdwa.health.wa.gov.au/_data/assets/pdf_file/0003/106986/01_Guidlines_for_calculating_CLcr.pdf">http://cahs.hdwa.health.wa.gov.au/_data/assets/pdf_file/0003/106986/01_Guidlines_for_calculating_CLcr.pdf</a></p> <p><b>Dosage adjustment required in renal impairment:</b>          CrCl &gt; 50mL/minute : normal          CrCl 30 - 50mL/minute : 50% -100% 12-24 hourly          CrCl 11 - 29mL/minute : 50% -100% 24 hourly          CrCl &lt;10mL/minute : 25% - 50% 24 hourly<sup>1,2</sup>          Contact Pharmacy for further advice</p>
<b>RECONSTITUTION</b>	<p><b>IV:</b>          Reconstitute 2 gram vial with 17.4mL of water for injection to give 100mg/mL solution.<sup>4</sup></p>
<b>ADMINISTRATION</b>	<p><b>IV push:</b>          Reconstitute to a concentration of 100mg/mL and give slowly over 3 to 5 minutes<sup>5</sup></p> <p><b>IV infusion:</b>          Dilute with compatible fluid and infuse over 30 minutes<sup>5</sup></p> <p><b>Continuous infusion:</b>          May be given over 24 hours by continuous infusion. Contact Pharmacy for advice.</p>
<b>MONITORING</b>	Renal, hepatic and haematological function should be monitored weekly with prolonged therapy (i.e. longer than 7 days) <sup>1</sup>
<b>ADVERSE EFFECTS</b>	<p><b>Common:</b>          Diarrhoea, nausea, vomiting, pain and inflammation at injection site, rash, headache, dizziness, allergy and <i>Clostridium difficile</i>- associated disease.<sup>1</sup></p> <p><b>Rare:</b>          Neurotoxicity (eg confusion, seizures, encephalopathy) and nephrotoxicity</p>

	(increased in renal impairment), blood dyscrasias (eg neutropenia), thrombocytopenia, bleeding and renal impairment. Immunological reactions (including eosinophilia, drug fever, anaphylaxis, angioedema, urticaria, haemolytic anaemia, Stevens-Johnson syndrome, toxic epidermal necrolysis, interstitial nephritis, arthritis, serum sickness-like syndrome). <sup>1</sup>
<b>COMPATIBLE FLUIDS</b>	Glucose 5% Glucose/sodium chloride combinations Sodium chloride 0.9% Hartmann's solution <sup>5</sup>
<b>PRECAUTIONS</b>	Cefepime is contraindicated in patients with a history of severe allergy to a cephalosporin antibiotic. Care should also be taken with penicillins and carbapenems as cross reactivity may occur between penicillins, cephalosporins and carbapenems. <sup>1</sup>
<b>COMMENTS</b>	IV aminoglycoside antibiotics are inactivated by IV cephalosporins, penicillins and teicoplanin. Administration of these agents should be separated by at least 1 hour. If this is not possible, (for example HITH patients) lines should be flushed well with sodium chloride 0.9% before and after giving each medication <sup>4,6</sup>


**\*\*Please note: The information contained in this guideline is to assist with the preparation and administration of cefepime. Any variations to the doses recommended should be clarified with the prescriber prior to administration\*\***

## References:

1. Australian Medicines Handbook Pty Ltd. Australian Medicines Handbook [online] Adelaide (SA): Australian Medicines Handbook Pty Ltd accessed online 5<sup>th</sup> April 2013
2. Therapeutic Guidelines Ltd. eTG complete [online]. West Melbourne: Therapeutic Guidelines Ltd; accessed online 5<sup>th</sup> April 2013.
3. Kemp CA, McDowell JM, editors. Paediatric Pharmacopoeia 13<sup>th</sup> edition. Melbourne: Pharmacy Department, Royal Children's Hospital; 2005. p.48-49.
4. Standard procedures for the reconstitution and administration of intravenous drugs [Internet] Pharmacy Department: Princess Margaret Hospital; [updated April 2012; cited 16<sup>th</sup> January 2012]. Available from: [http://cahs.hdwa.health.wa.gov.au/\\_\\_data/assets/pdf\\_file/0006/38760/IV\\_DRUGS\\_Reconstitution\\_and\\_Administration\\_Protocol\\_Oct2012.pdf](http://cahs.hdwa.health.wa.gov.au/__data/assets/pdf_file/0006/38760/IV_DRUGS_Reconstitution_and_Administration_Protocol_Oct2012.pdf)
5. Burrige N, Deidun D, editors, Australian injectable drugs handbook, fifth edition [online]. Collingwood: The Society of Hospital Pharmacists of Australia; 2011. accessed online 5<sup>th</sup> April 2013.
6. Pharmacy Department, Royal Children's Hospital. Paediatric Injectable Guidelines, 4<sup>th</sup> edition. : Pharmacy Department, Royal Children's Hospital; 2011. p.16.

## Disclaimer

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