

**FLOYD CHEROKEE MEDICAL CENTER
POLICY AND PROCEDURE MANUAL
PATIENT CARE SERVICES**



TITLE: CARBAPENEM POLICY	Policy No.: C-PCS-06-071-O
Purpose: To provide information for the safe handling, storage, use and administration of Carbapenem.	Developed Date: Review Date: 1/21 Revised Date:
Policy: Administration of drugs shall comply with all laws of this state, federal laws, rules, and regulations that govern such acts, and medical staff rules and regulations.	Review Responsibility: CNO, Clinical Council, Director of Pharmacy; Pharmacy & Therapeutics Committee, Executive Committee of the Medical Staff
Expected Outcomes: Reduction in Medication Errors related to reconciliation issues.	
Reference Standards: NPSG 03.06.01	

EVALUATION OF A SOLE FORMULARY CARBAPENEM STRATEGY

MEDICATIONS FOR REVIEW: Imipenem/Cilastatin, Meropenem, Doripenem
DRUG CATEGORY: Carbapenems, β -Lactams, Anti-infectives

PHARMACY RECOMMENDATION: Due to the robust data across both pediatric and adult indications for meropenem; and due to meropenem’s comparable safety data to other carbapenems; and due to dose optimization opportunities with meropenem positively impacting both patient outcomes and cost of therapy; and due to the superior cost-effectiveness of meropenem to other carbapenems; **it is then recommended in consideration of all these factors that meropenem be the sole carbapenem agent on formulary, and that doripenem and imipenem be designated non-formulary.**

PEDIATRIC DOSING OF MEROPENEM:

Common Indications and Conventional Pediatric Dosing Table for Carbapenems

Age/Weight	Meropenem	Doripenem	Imipenem
<i>Infection Indications</i>	IAI, Meningitis, cSSSI Septicemia/Bacteremia, Pneumonias*, Febrile neutropenia*	<i>No pediatric indications or dose recommendations at this time</i> <i>Studies Pending</i>	Complicated intra-abdominal (cIAI), Respiratory tract, Complicated skin/skin structure (cSSSI), Endocarditis, Bone/joint, Septicemia, Febrile neutropenia*

Children and Adolescents > 50 kg	1 g q 8 h Meningitis: 2 g q 8 h Max 40 mg/kg dose, not to exceed 2g q8h	--	--
≥ 3 months ≥ 1500 grams	10-20 mg/kg q 8 h Meningitis: 40 mg/kg q8h Max 40 mg/kg dose	--	15-25 mg/kg q 6 h Max 100 mg/kg/day, not to exceed 4 g/day
1 – 3 months ≥ 1500 grams	20 mg/kg q 8 h [‡] Meningitis: 40 mg/kg q8h[‡]	--	25 mg/kg q 6 h Max 100 mg/kg/day
1 – 4 weeks ≥ 1500 grams	20 mg/kg q 8 h [‡] Meningitis: 40 mg/kg q8h[‡]	--	25 mg/kg q 8 h Max 75 - 100 mg/kg day
< 7 days ≥ 1500 grams	20 mg/kg q 8 h [‡] Meningitis: 40 mg/kg q8h[‡]	--	25 mg/kg q 12 h Max 50 mg/kg day
0 – 4 weeks 1200 – 1499 grams	20 mg/kg q 12 h [‡] Meningitis: 40 mg/kg q12h[‡]	--	20 mg/kg q 12 h [‡]
0 – 4 weeks < 1200 grams	20 mg/kg q 12 h [‡] Meningitis: 40 mg/kg q12h[‡]	--	20 mg/kg q 18-20 h [‡]

ADULT DOSING OF MEROPENEM:

If ordered to be dosed by pharmacy or if auto-SUBSTITUTION is to be done, it will be done according to the following table:

Indication/Pathogen	Meropenem*	Doripenem	Imipenem
Bacteremia	500 mg q 6 h	500 mg q 8 h [‡]	250-500 mg q 6-8 h
Complicated Urinary Tract Infection (UTI)	500 mg q 8 h	500 mg q 8 h	500 mg q 6 h
Febrile Neutropenia	1 g q 8 h [‡]	--	250-500 mg q 6-8 h [‡]
Intra-abdominal Infection (IAI)	500 mg q 6 h	500 mg q 8 h	250-500 mg q 6-8 h
Meningitis	2 g q 8 h	--	--
Respiratory Infections	500 mg q 6 h [‡]	500 mg q 8 h [‡]	500 mg q 6-8 h
Skin & Skin Structure Infection (SSSI)	500 mg q 8 h	500 mg q 8 h [‡]	250-500 mg q 6-8 h <i>or</i> 500-750 mg IM q 12 h
Severe Gram-negative Infection	500 mg q 6 h	500 mg q 8 h	500-1000 mg q 6-8 h
Renal Dose Adjustment based on patient CrCL (mL/min)	26-50: Extend interval to q 12h 10-25: ↓ dose by 50% & extend	31-50: 250 mg q 8 h 10-30: 250 mg q 12 h < 10: Insufficient data	See separate table

	interval to q 12 h < 10: ↓ dose by 50%, & extend interval to q 24 h		
Pharmacodynamic Dosing Data	Yes	Yes	No