Daptomycin Dosing and Use Guidelines

Dosing:

<u>Soft tissue infection</u> = 4 mg/kg every 24 hours <u>Staphylococcus aureus</u> bacteremia, other deep-seated infections = 6 mg/kg every 24 hours VRE bacteremia, other deep-seated infections = 8-10 mg/kg every 24 hours TBW

Morbidly Obese patients-

For daptomycin, AdjBW = IBW + [(TBW – IBW) x **0.6**], taking into account 60% of the excess body weight. IBW Males =50 kg +2.3 kg for each inch above 60 inches IBW Females =45 kg + 2.3 kg for each inch above 60 inches

Renal dysfunction-

<u>Creatinine Clearance (CICr) less than 30 ml/min</u> = change interval to every 48 hours <u>Intermittent hemodialysis (HD)</u> = Dose after HD at 6 mg/kg three times a week (Need to follow dialysis plans daily)

All doses will be rounded to the nearest 50 mg. Round doses of 501-550 mg to 500 mg (one vial). Daptomycin flag order should be submitted for every patient receiving therapy.

Doses greater than 6 mg/kg are not recommended at this time. In unusual circumstances, larger doses may rarely be indicated. Practitioners requesting the use of larger doses must obtain pharmacy authorization.

Medication Administration:

Daptomycin will be administered daily at 1600 in order to facilitate batching of medication to prevent waste and decrease cost.

Additional use guidelines:

All uses of daptomycin require ID physician approval.

Daptomycin use for treatment of an identified pathogen must have a confirmed MIC in the sensitive range (have microbiology result revealed).

Baseline CK should be obtained and rechecked weekly.

References:

- Dvorchik BH, et al. The Pharmacokinetics of daptomycin in moderately obese, morbidly obese, and matched nonobese subjects. J Clin Pharmcol 2005;45:48-56
- Patel N, et al. Use of pharmacokinetic and pharmacodynamic principles to determine optimal administration of daptomycin in patients receiving standardized thrice-weekly hemodialysis. Antimicrob Agent Chemother 2011;55:1677-83
- Kielstein JT, et al. Dosing of daptomycin in intensive care unit patients with acute kidney injury undergoing ext4ended dialysis a pharmacokinetic study. Nephrol Dial Transplant 2010;25:1537-41
- Benziger DP, et al. Pharmacokinetics and safety of multiple doses of daptomycin 6mg/kg in noninfected adults undergoing hemodialysis or continuous ambulatory peritoneal dialysis. Clin Nephrol 2011;75:63-9
- Wenisch JM, et al. Multiple-dose pharmacokinetics of daptomycin during continuous venovenous haemodiafiltration. J Antimicrob Chemother 2012;67:977-83
- Falcone, Marco, et al. "Considerations for higher doses of daptomycin in critically ill patients with methicillin-resistant Staphylococcus aureus bacteremia." *Clinical infectious diseases* 57.11 (2013): 1568-1576.
- Safdar N, Andes D, Craig WA. In vivo pharmacodynamic activity of daptomycin. Antimicrob Agents Chemother. 2004;48(1):63-8.
- Daptomycin [package insert]. Lexington, MA: Cubist; 2011.
- Bassetti M, Nicco E, Ginocchio F et al. High-dose daptomycin in documented Staphylococcus aureus infections. Int J Antimicrob Agents 2010;36:459-461.
- Britt NS, Potter EM, Patel N, Steed ME. Comparative Effectiveness and Safety of Standard-, Medium-, and High- Dose Daptomycin Strategies for the Treatment of Vancomycin-Resistant Enterococcal Bacteremia Among Veterans Affairs Patients. Clin Infect Dis 2016;64(15):605-613.

Approved by UCDH Pharmacy and Therapeutics Committee Jan 2019.