Title: Efficacy and Safety of Dalbavancin and Oritavancin in the Treatment of Gram-Positive Infections

Author(s) and Institution(s): Vanessa Brown, PharmD[1,2], Travis Linneman, PharmD, BCPS[1,2], Ryan Moenster, PharmD, BCPS AQ-ID[1,2] 1. VA St. Louis Health Care System; 2. St. Louis College of Pharmacy

Introduction: Lipoglycopeptides are approved for acute bacterial skin and skin structure infections (ABSSSI), but are often used in other infections, including osteomyelitis (OM) and bloodstream infections (BSI).

Methods: This retrospective cohort study included VA St. Louis Health Care System patients aged ≥18 through ≤89 years treated for ABSSSI, BSI, or OM with lipoglycopeptides. Patients were excluded if they received ≥72 hours (ABSSSI, BSI) or ≥7 days (OM) of antibiotics prior to lipoglycopeptide administration or other intravenous antibiotics were administered for ≥48 hours after lipoglycopeptide. The primary efficacy outcome was clinical success in the lipoglycopeptide cohort, defined per infection. Secondary outcomes were a comparison of clinical success in the lipoglycopeptide cohort to historical controls of patients treated at the VA St. Louis for ABSSSI, BSI, or OM. A multivariate regression was also conducted to find factors in the lipoglycopeptide group independently associated with clinical success. Safety outcomes compared adverse drug reactions between single- and 2-dose regimens of lipoglycopeptide.

Results: A total of 36 patients were included in the analysis; no patients met inclusion for bloodstream infection. Twenty-nine patients were treated for ABSSSI and 7 patients met inclusion for OM treatment. Dalbavancin was the agent used most often for both OM (4/7) and ABSSSI (22/29). The primary outcome of clinical success occurred in 77.7% (28/36) of the lipoglycopeptide cohort. There was no difference in clinical success between the lipoglycopeptide cohort and historical controls for ABSSSI (86% [5/29] vs 84% [159/189], $p>0.05$) or OM (43% [3/7] vs 58% [83/143], $p>0.05$). No difference in adverse outcomes between single- and 2-dose regimens of lipoglycopeptide were observed.

Conclusions: Clinical success for patients treated with lipoglycopeptides for ABSSSI and OM in this small cohort were comparable to historical controls. No difference was identified in the safety between single- and 2-dose regimens of lipoglycopeptide.