

Session: P058 New data on new tetracyclines

**Category: 5d. Pharmacoepidemiology, improved prescribing and antibiotic stewardship**

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**Economic impact of omadacycline among acute bacterial skin and skin structure infections (ABSSSIs) patients: cost-saving opportunities due to avoidable hospitalizations using an antibiotic with IV-to-oral switch capability**

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**Background:** Many patients with acute bacterial skin and skin structure infections (ABSSSIs) with zero or stable comorbidities are admitted to the hospital largely for the administration of IV antibiotics. Omadacycline (OMC) is a first-in-class oral (PO) and IV once-daily aminomethylcycline antibiotic with broad spectrum activity, including MRSA, that is under development for the treatment of patients with ABSSSI. Given the costs of inpatient care, the present study examined the cost impact of shifting ABSSSI patients with few or no comorbidities and no life-threatening conditions from inpatient treatment with vancomycin to outpatient treatment with OMC. As part of this analysis, we estimated the proportion of ABSSSI patients that can initially receive OMC as an outpatient that can be subsequently admitted while still conferring cost savings.

**Material/methods:** A decision-analytic, cost-minimization model from the payer's perspective was constructed to compare the costs of inpatient vancomycin treatment versus outpatient OMC for the treatment of ABSSSI patients with few or no comorbidities and no life-threatening conditions presenting to the emergency department. Treatment scenarios considered for OMC: (1) receiving an IV loading dose of OMC and sent home from emergency department on OMC PO, (2) treated under observation status on IV OMC and discharged home on PO OMC, and (3) treated under observation status, discharged home,

and subsequently admitted. Costs associated with vancomycin inpatient treatment of ABSSSI patients were obtained from the Premier Hospital Database™. The costs of IV and PO OMC were varied from 0 to \$1,000/day. All OMC patients received OMC PO to complete a 10-day course of therapy.

**Results:** Treatment with vancomycin fully in hospital was determined to be \$6,525 per course of therapy in 2016 US dollars. Successfully switching an individual patient from vancomycin inpatient treatment to outpatient OMC was estimated to save \$2,491 to \$3,300 per patient, depending on use of observation unit and inputted daily cost of OMC. It is estimated that up to 48% of OMC patients discharged home from the emergency department could be subsequently admitted, while still maintaining budget neutrality.

**Conclusions:** Cost-saving for ABSSSI patients may be realized with OMC relative to vancomycin inpatient treatment if hospitalization is avoided due to outpatient management with OMC.

