Use of single-dose oritavancin in moderate-to-severe ABSSSI patients, including those with suspected MRSA, was projected to deliver an estimated cost reduction to U.S. payers of $1.05 PMPM by avoiding hospitalization in appropriate patients and reducing outpatient costs associated with multiday parenteral antibiotic therapy” Jensen et al (2016).

Abstract:

BACKGROUND: It is estimated that acute bacterial skin and skin structure infections (ABSSSI) account for nearly 10% of hospital admissions and 3.4-3.8 million emergency department visits per year in the United States. Analyses of hospital discharge records indicate 74% of ABSSSI admissions involve empiric treatment with methicillin-resistant Staphylococcus aureus (MRSA) active antibiotics. Analysis has shown that payer costs could be reduced if moderate-to-severe ABSSSI patients were treated to a greater extent in the observational unit followed by discharge to outpatient parenteral antibiotic therapy (OPAT). Oritavancin is a lipoglycopeptide antibiotic with bactericidal activity against gram-positive bacteria, including MRSA.
OBJECTIVE: To estimate the impact on a U.S. payer’s budget of using single-dose oritavancin in ABSSSI patients with suspected MRSA involvement who are indicated for intravenous antibiotics.

METHODS: A decision analytic model based on current clinical practice was developed to estimate the economic value of decreased hospital resource consumption by using single-dose oritavancin over a 1-year time horizon. Use of antibiotics was informed by an analysis of the Premier Research Database. Demographic and clinical data were derived from a targeted literature review. Emergency department, observation, laboratory, and administration costs used were Medicare National Limitation amounts. Drug costs were 2014 wholesale acquisition costs.

RESULTS: For a hypothetical U.S. payer with 1,000,000 members, it is expected that approximately 14,285 members per year will be diagnosed with ABSSSI severe enough to indicate intravenous antibiotics with MRSA activity. Based on this simulation, use of single-dose oritavancin in 26% of these patients was estimated to reduce the number of inpatient admissions, reduce length of stay for patients requiring admission, and reduce the number of days a patient needs to receive daily infusions in the OPAT clinic. The total patient days decreased from 171,125 to 133,435 with a total annual budget impact of -$12,550,000 or -$1.05 per member per month (PMPM). Total inpatient and outpatient costs were reduced by $9,970,000 (19.7%) and $2,580,000 (4.2%), respectively. Inpatient cost savings were derived from a reduction in admissions, length of stay, and lower drug administration burden. Outpatient costs were reduced by lower drug administration burden in the OPAT setting. A sensitivity analysis demonstrated that the model was most sensitive to population estimates.

CONCLUSIONS: Use of single-dose oritavancin in moderate-to-severe ABSSSI patients, including those with suspected MRSA, was projected to deliver an estimated cost reduction to U.S. payers of $1.05 PMPM by avoiding hospitalization in appropriate patients and reducing outpatient costs associated with multiday parenteral antibiotic therapy.

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employees and shareholders of The Medicines Company. Dufour and Lodise have provided consulting services to The Medicines Company. Nicolau provided model input but did not receive an honorarium for contributions on this project. Nicolau is a speaker for The Medicines Company. Study concept and design were contributed by Jensen and Wu, along with the other authors. Jensen, Wu, Fan, and Sulham collected the data, with assistance from Cyr. Data interpretation was performed by Sulham, Jensen, Wu, and Fan, assisted by Lodise, Nicolau, and Dufour. The manuscript was written by Jensen, Wu, and Sulham, with assistance from Cyr, and revised by Lodise, Nicolau, and Dufour, with assistance from the other authors.

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