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Et al.

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UMass Clinical and Translational Science Research Retreat Poster Abstract

Impact of Ivacaftor on Medication Use, Hospital and Outpatient Provider Visits and Associated Costs in a Medicaid Population

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BACKGROUND: Ivacaftor is the first Food and Drug Administration-approved medication to treat an underlying genetic defect in patients with cystic fibrosis (CF). With an approximate annual cost of \$300,000 per patient, ivacaftor may have a profound financial impact on health systems, even when utilized by a small population. Clinical data has demonstrated that treatment with ivacaftor may reduce pulmonary exacerbations (PE) and associated hospitalizations. As a result, patients receiving ivacaftor may need less outpatient care and fewer medications to treat CF complications. Evaluating the impact of ivacaftor therapy on medication utilization, PEs and hospital/outpatient visits can aid formulary decision makers in its effective management.

OBJECTIVES: The primary objective is to examine the effects of ivacaftor on patients' overall medication regimen and associated costs within a Medicaid population. The secondary objective is to examine its effect on the rates of PEs and hospital/outpatient visits.

METHODS: Pharmacy and medical claims data for Medicaid members \geq six years of age was collected for six months before and after the first reported pharmacy claim of ivacaftor. Data included: total number of unique claims, days supply, dose, and total cost for each medication, number of short-term antibiotic and/or steroid courses, outpatient provider visits, hospitalizations, ER visits and corresponding diagnosis codes. Diagnosis codes and short-term antibiotic and/or steroid courses were reviewed to determine if a PE may have occurred.

RESULTS: Ivacaftor treatment did not decrease the utilization of medications used to treat patients with CF and resulted in increased pharmacy expenditures for other medications. However, a 65% reduction in PEs as well as a reduction in hospitalizations/ER visits was observed in members receiving ivacaftor.

CONCLUSIONS: This study found that while ivacaftor treatment may not decrease total medication utilization or associated costs, it may decrease the number of PEs and associated hospitalizations in patients with CF.

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