THE GRADUATE COLLEGE OF THE
UNIVERSITY OF OKLAHOMA HEALTH SCIENCES CENTER

ANNOUNCES THE FINAL EXAMINATION OF

Timothy Tung Pham

FOR THE DEFENSE OF THE DOCTOR OF PHILOSOPHY DEGREE

GRADUATE COLLEGE
GRADUATE PHARMACEUTICAL SCIENCES

Thursday, July 21, 2016, 10:00 a.m.
Room 230, College of Pharmacy Building, OUHSC

Clinical and Economic Outcomes of Direct-acting Antivirals for Chronic Hepatitis C Infection in Oklahoma Medicaid

COMMITTEE IN CHARGE: Grant H. Skrepnek, Ph.D., R.Ph., Chair; Shellie L. Keast, Ph.D., Pharm.D.; R. Chris Rathbun, Pharm.D., BCPS, AQ-ID; Kevin C. Farmer Ph.D.; Nancy J. Nesser, Pharm.D., J.D.; David M. Thompson, Ph.D.

ABSTRACT:

Background: Newer direct-acting antiviral (DAA) Hepatitis C virus (HCV) regimens have not been studied extensively in the Medicaid setting. The goal of this study was to determine post-treatment initiation clinical and economic outcomes for chronic HCV-infected Oklahoma Medicaid members, assess factors associated with those outcomes, and evaluate predictors of 3-day treatment gap between prescriptions or treatment failure (i.e., non-completion).

Methods: This cross-sectional study analyzed Oklahoma Medicaid pharmacy and medical claims data for adult members using a newer DAA agent during January 1, 2014 to June 30, 2015. During this period, a Prior Authorization (PA) program instituting stricter criteria for coverage was implemented. All analyses were stratified by presence in this program. Multivariable analyses assessed the economic outcome of combined pharmacy and medical costs, the clinical outcomes of healthcare utilization (i.e., hospitalization/ER visit), and gap/failure based on member demographics, clinical characteristics, comorbid conditions, PA program presence, and advanced liver disease.

Results: Overall, 354 members were included in the study. There were 184 pre-PA individuals and 170 PA individuals. Total post-treatment initiation expenditures summed to around $41.5 million, averaging $117,103±48,941 per member. Around 22.0% had at least one hospitalization or ER visit in the post-treatment period. The proportion with a greater than 3-day gap was 39.0% and 14.7% did not complete treatment. In multivariable analyses, presence of moderate or severe liver diagnosis (exponentiated beta [*exp(b)*] 1.21, 95% CI 1.06-1.37) and greater than 3-day gap (*exp[b]* 1.13, 95% CI 1.04-1.23) were significant predictors of increased expenditures. Indicators for initiating treatment after the PA program (odds ratio [OR] 2.28, 95% CI 1.01-5.15) and treatment failure (OR 3.17, 95% CI 1.27-7.91) were significantly associated with hospitalization/ER visit, although the relationship for the latter was not significant in analysis for the PA subgroup. Analysis of treatment gap/failure also suggested the positive relationship between hospitalization/ER visit and treatment failure.

Conclusion: Newer DAA regimens presented a substantial economic burden in the Oklahoma Medicaid setting. Healthcare utilization was associated with treatment failure, although this appeared to be moderated by presence in the PA program. Future studies should integrate comprehensive clinical data and evaluate interventions on treatment gap/failure.