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Assessing biologics adherence behaviors among patients with psoriasis through group-based trajectory models

Yunfeng Li
Novartis Pharmaceuticals Corporation, USA

Abstract

The quartiles of proportion days covered (PDC) is a commonly used metric to examine adherence and health outcomes; however, this metric cannot distinguish between different patterns of adherence. In this study, group-based trajectory modeling (GBTM) was applied to study adherence behaviors of 3,249 psoriasis patients initiated on a biologic treatment during a 1-year follow-up period. Four GBTM adherence groups were classified as high-to-high (Group 4), high-to-low (Group 3), medium-to-low (Group 2), and medium-to-medium (Group 1), based on the adherence curve changes. For comparison purposes, four PDC groups were constructed: Group 4 (PDC ≥75%), Group 3 (25%≤ PDC < 50%), Group 2 (PDC <25%), and Group 1 (50%≤ PDC < 75%) . The majority of patients (97.9%) from PDC Group 2 were in Trajectory Group 2, and the majority (96.4%) of those from PDC Group 4 were in Trajectory Group 4. The other two adherence groups showed different patterns: 25.3%, 17.2%, and 57.5% patients from PDC Group 3 fell into Trajectory Group 1, 2, and 3, respectively, and 70.8%, 23.6%, 5.7% from PDC Group 1 fell into Trajectory Group 1, 3, and 4, respectively. The variances of adherence rates from corresponding PDC and GBTM groups were compared and the results showed the GBTM groups had slightly less variation than the PDC groups, indicating that the GBTM adherence groups were more homogeneous than the PDC groups. The study demonstrated that GBTM may be a better approach to classifying patients in terms of adherence in outcome research.

Biography

Yunfeng Li, Research Analyst/Assistant Director in US Medical Affairs and Regulation Department in Novartis Pharmaceutical Corporation, focuses on assessment of patient medications adherence measure, disease landscape analysis, treatment patterns, health economic and outcome research etc. by using large medical claim database, patient reported outcomes (PRO) and electronic medical records (EMR). Prior to joining the Novartis, he worked for health insurance and disease management companies to conduct patient profiling and clinical quality measurement for evaluation on disease management programs. He completed his PhD in Public Health from Columbia University in 2005.