Title: Assessing Medication Adherence with Group-Based Trajectory Modelling

Discussion Leader:

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Discussants:

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Level: Intermediate

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Purpose: Medication adherence is an important determinant of patient outcomes, their quality of life, and overall healthcare utilization. Identifying prevalent adherence patterns can assist decision-makers in targeting these populations and tailoring interventions to enhance medication adherence; however, current evaluation of adherence is limited. For instance, the Pharmacy Quality Alliance (PQA) organization has endorsed the use of the proportion of days covered (PDC) as the primary method of measuring adherence. While PDC is easy to calculate, there are several drawbacks to using it as the primary measure of medication adherence. As an alternative, group-based trajectory modelling (GBTM) that can determine and cluster groups of patients based on their dynamic adherence patterns may be better suited to study the dynamic nature of medication adherence behaviours. In this workshop, we aim to introduce concept of GBTM and provide a step-by-step overview on how to utilize these models to study medication adherence. At the end of this workshop, participants will gain a better understanding of how to conduct GBTM with R.

Description: Workshop participants with intermediate-level subject knowledge will be familiarized with key considerations when assessing medication adherence using GBTM. Dr. Park will begin the workshop by introducing the concept of medication adherence and the limitations of PDC (10minutes). Next Dr. Thorlund will introduce the concept of GBTM and other latent

trajectory analyses (10-minutes). Dr. Diop will demonstrate how GBTM can be used to study medication adherence using a case study and pre-population R codes (20 minutes). Dr. Metcalfe will conclude by discussing the Reporting Guidelines for GBTM and other latent trajectory analyses and ways to avoid common pitfalls of GBTM (10-minutes). In addition to conducting real-time polling to assess the audience's experience with medication adherence studies, we will allocate time for questions (10 minutes).