

Supplementary information to:

Title: Longitudinal Trajectories of Symptom Change During Antidepressant Treatment Among Managed Care Patients with Depression and Anxiety

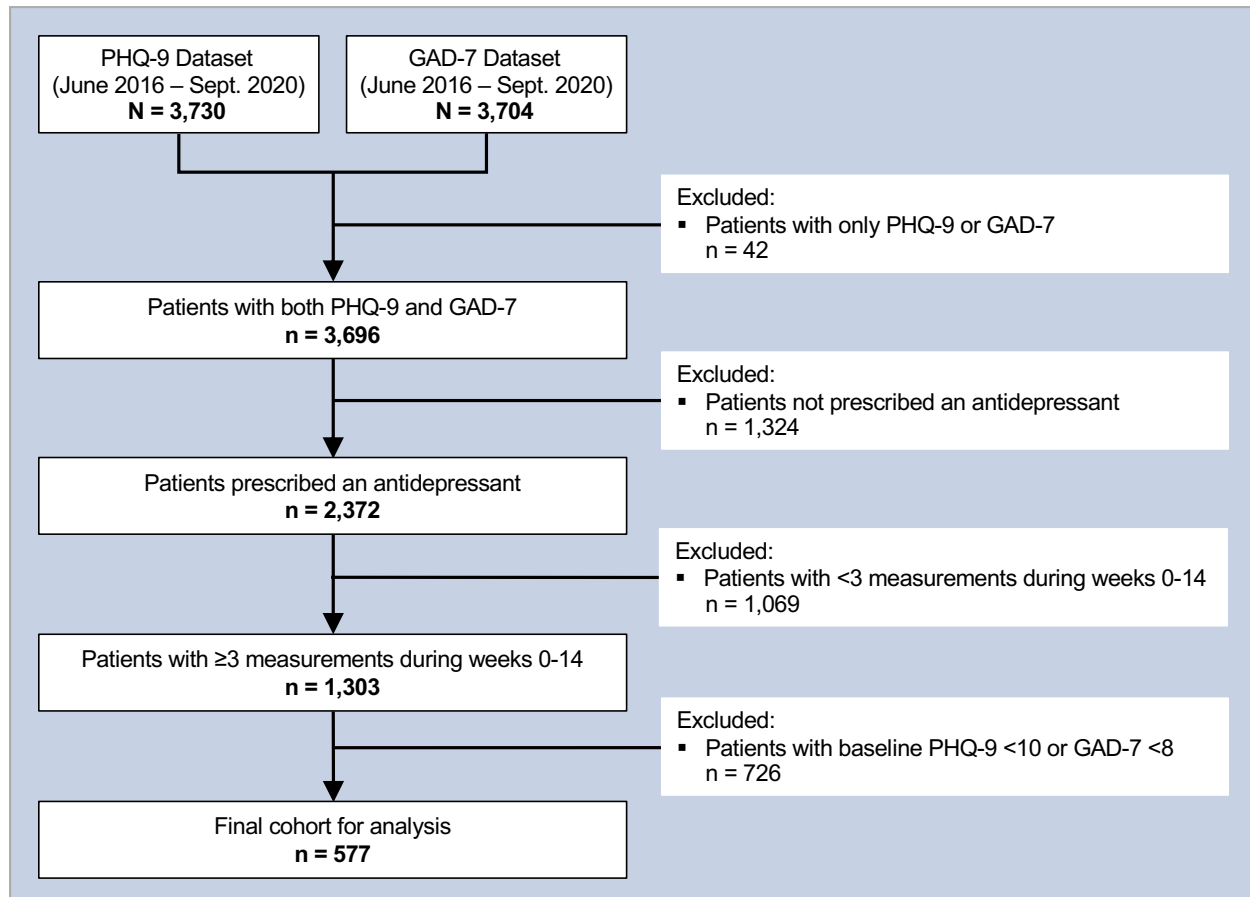
1. Characteristics of the overall sample

Across the entire sample, 42.98% of patients were characterized as responders for depressive symptoms, while 57.01% were non-responders. Baseline characteristics that significantly differed between groups included PHQ-9 and C-SSRS scores. Similar patterns emerged for anxiety symptoms, with 44.89% of patients in the responder groups, and 55.11% non-responders. Significant differences between groups were identified in the GAD-7 and PSQI scores. The types of antidepressants (SSRIs, SNRIs, TCAs, MAOIs, and atypical antidepressants) did not significantly differ across groups.

2. Baseline characteristics

The baseline was defined as the first session and encounter where care was established at the outpatient behavioral health clinic. Demographic variables extracted from this session included age, gender, and self-reported race. Comorbidities included post-traumatic stress disorder (PTSD), bipolar disorder, and “suicidal behavior,” which comprised ICD-coded suicide attempt, suicidal ideation, and self-harm. The individual’s PHQ-9 and GAD-7 scores at baseline were also extracted. Several other prognostic factors were measured at baseline using multiple validated scoring instruments and questionnaires. These included the Alcohol Use Disorders Identification Test (AUDIT) which measures alcohol use and drinking behaviors; the Columbia-Suicide Severity Rating Scale (C-SSRS) measuring suicide risk; the Pittsburgh Sleep Quality Index (PSQI) which assesses sleep patterns and quality; the Patient-Reported Outcomes Measurement Information System (PROMIS) which evaluates overall physical, mental, and social wellbeing; and the Sheehan Disability Scale (SDS) which measures functional impairment in work/school, social, and family life. Lower symptom severity is indicated by lower scores on the AUDIT, C-SSRS, PSQI, and SDS questionnaires and a higher score on the PROMIS. The associations of these baseline characteristics with trajectories of depression and anxiety were investigated. All instruments were administered to the clinic patients as part of their routine clinical care.

3. Supplementary Figure 1: The inclusion/exclusion cascade for identifying study participants



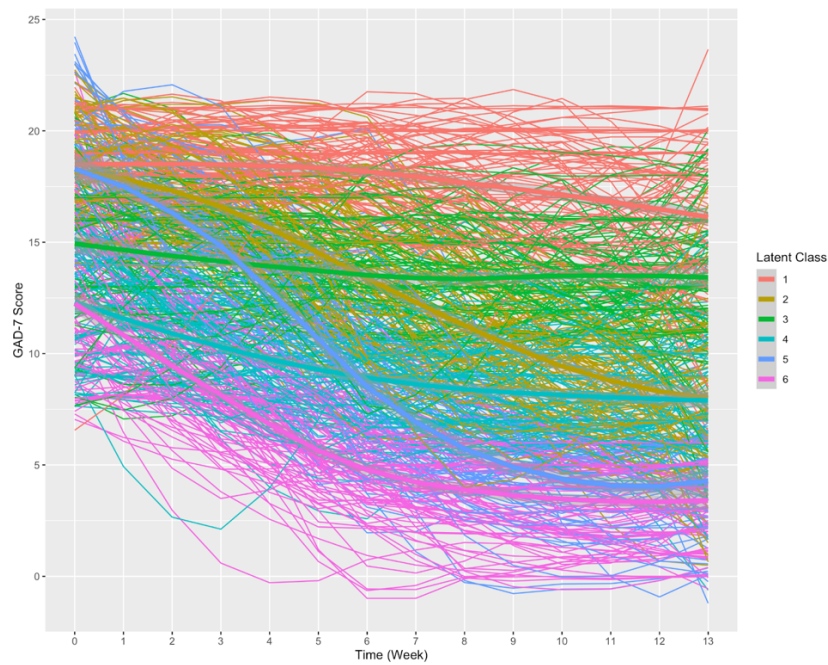
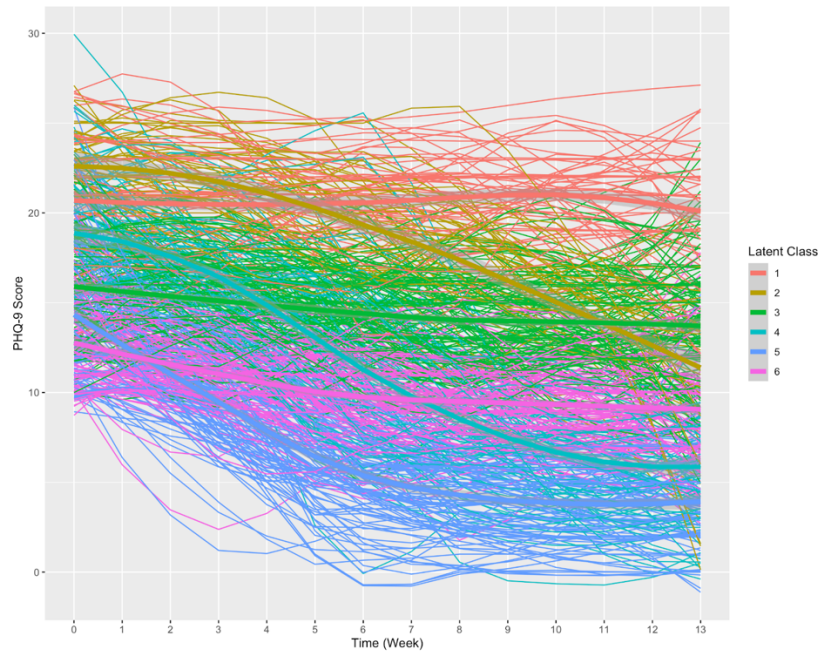
4. Supplementary Table 1: The process for choosing the best number of groups based on GAD-7 score in GBTM with AIC, BIC, entropy, and SABIC

ClusterNum (GAD-7)	AIC	BIC	entropy	SABIC
2	44068.18043	44116.11669	0.936918979	44081.19617
3	42798.79618	42859.80597	0.917761232	42815.36166
4	42103.66332	42177.74663	0.925233289	42123.77854
5	41429.09182	41516.24866	0.932391285	41452.75679
6	41435.09182	41535.32219	0.939270849	41462.30654
7	40836.88434	40950.18824	0.917184621	40867.6488
8	40561.92638	40688.30381	0.923142986	40596.24059
9	40437.07758	40576.52853	0.906029861	40474.94154
10	40318.88704	40471.41152	0.900770684	40360.30074

5. Supplementary Table 2: The process for choosing the best number of groups based on PHQ-9 score in GBTM with AIC, BIC, entropy, and SABIC

ClusterNum (PHQ-9)	AIC	BIC	entropy	SABIC
2	46325.66064	46351.8077	0.942941789	46332.76014
3	44877.13886	44916.35944	0.932969675	44887.78809
4	44192.99143	44245.28554	0.931134778	44207.19041
5	43616.64276	43682.01039	0.918373104	43634.39149
6	43190.37978	43268.82094	0.926774642	43211.67825
7	42923.32201	43014.83669	0.925320807	42948.17023
8	42701.14214	42805.73036	0.916977688	42729.54011
9	42587.88323	42705.54498	0.918090127	42619.83095
10	42386.78976	42517.52503	0.917626773	42422.28722

6. Supplementary Figure 2: The raw individual figure (thin line in figure) for each patient in each cluster and the overall curves (thick line in figure) for each cluster.



7. Supplementary Figure 3: The results of using PHQ-9 and GAD-7 with Group-based Multi-Trajectory Modeling (We obtained 4 clusters, including cluster 1: 52 (9.01%), cluster 2: 219 (37.95%), cluster 3: 41 (7.11%), and cluster 4: 265 (45.93%) patients in each cluster.)

