Supplements

Supplement A: List of Performance Sites

Location of Work: CSP #576 was performed across 35 Veterans Affairs (VA) medical centers across the U.S., including: Atlanta VA Medical Center, Atlanta, Georgia; Bruce W. Carter VA Medical Center, Miami, Florida; Central Texas Veterans Healthcare System, Temple, Texas; Charles George VA Medical Center, Asheville, North Carolina; Cincinnati VA Medical Center, Cincinnati, Ohio; Clement J. Zablocki VA Medical Center, Milwaukee, Wisconsin; Edward Hines Jr VA Hospital, Hines, Illinois; James A Haley VA Hospital, Tampa, Florida; Kansas City VA Medical Center, Kansas City, Missouri; Long Beach VA Healthcare System, Long Beach, California; Louis A. Johnson VA Medical Center, Clarksburg, West Virginia; Louis Stokes VA Medical Center and Case Western Reserve University School of Medicine, Cleveland, Ohio; Memphis VA Medical Center, Memphis, Tennessee; Minneapolis VA Health Care System, Minneapolis, Minnesota; New Mexico VA Healthcare System, Albuquerque; Philadelphia VA Medical Center, Philadelphia, Pennsylvania; Phoenix VA Health Care System, Phoenix, Arizona; Richard L Roudebush VA Medical Center, Indianapolis, Indiana; Salem VA Medical Center, Salem, Virginia; San Francisco VA Health Care System, San Francisco, California; Southern Arizona VA Healthcare System, Tucson; Tuscaloosa VA Medical Center, Tuscaloosa, Alabama; University of California, San Diego; VA Eastern Colorado Healthcare System, Denver; VA Loma Linda Healthcare System, Loma Linda, California; VA Maryland Healthcare System, Baltimore; VA Nebraska Western Iowa Healthcare System, Omaha; VA New England Mental Illness Research, Education, and Clinical Center, VA Connecticut Healthcare System, West Haven; VA Palo Alto Healthcare System, Palo Alto, California; VA Pittsburgh Healthcare System, Pittsburgh, Pennsylvania; VA Puget Sound Health Care System, American Lake/Tacoma, Washington; VA San Diego Healthcare System, San Diego, California; Washington DC VA Medical Center; W.G. Hefner VA Medical Center, Salisbury, North Carolina; William S. Middleton Veterans Hospital, Madison, Wisconsin.

Supplement B: Calculated Bayesian Information Criterion (BIC) and Bayes Factor Results for Addition of Successive Groups (Trajectories)

No. of groups	[a]QIDS-C Analysis		[b]PHQ-9 Analysis	
	[c]BIC	[d]Log Bayes Factor	BIC	Log Bayes Factor
1	-31774	NA	-33602	NA
2	-29840	3867	-31516	4170
3	-29235	1211	-30794	1444
4	-29033	403	-30518	552
5	-28975	116	-30384	268
[e]6	-28933	84	-30326	116
[f]7	NA	NA	NA	NA

[a]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then summed to obtain a total QIDS-C score ranging from 0 to 27.
[b]PHQ-9, Patient Health Questionnaire – 9. Each of 9 questions is scored from 0 to 3, with 3 indicating greater severity. Possible scores on the PHQ-9 range from 0 to 27, with higher scores indicating greater degree of depression.
[c]Bayesian Information Criterion [BIC] = k log(n) - 2log(L(θ)), where k is the number of parameters which the model estimates, n is the sample size, and L(θ) represents the likelihood of the model tested.
[d]Log Bayes Factor = -2X (difference in BIC); > 10 is preferred
[e]Chosen model
[f]The resulting group size is <5% of sample – hence not used.

Supplement C: Performance of the Trajectory Groups

Trajectory No.	[a]QIDS-C Analysis					[b]PHQ-9 Analysis				
	[c]MPP	[d]OCC	Group Proportion Estimates	95% Confidence Limits	[e]DEAP	MPP	OCC	Group Proportion Estimates	95% Confidence Limits	DEAP
1	89%	32.2	20%	17 - 23	3.3%	85%	75.3	7%	4 - 9	4.3%
2	84%	11.9	31%	27 - 35	-1.3%	80%	12.0	32%	29 - 36	2.0%
3	73%	51.8	25%	20 - 30	22.5%	78%	40.8	25%	21 - 29	3.9%
4	75%	8.7	5%	2 - 8	-7.2%	88%	15.6	8%	5 - 11	-5.5%
5	80%	35.9	10%	7 - 13	6.7%	87%	26.8	20%	17 - 23	-3.2%
6	86%	78.9	7%	5 - 9	-3.0%	89%	153.7	5%	4 - 7	-14.3%

[a]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

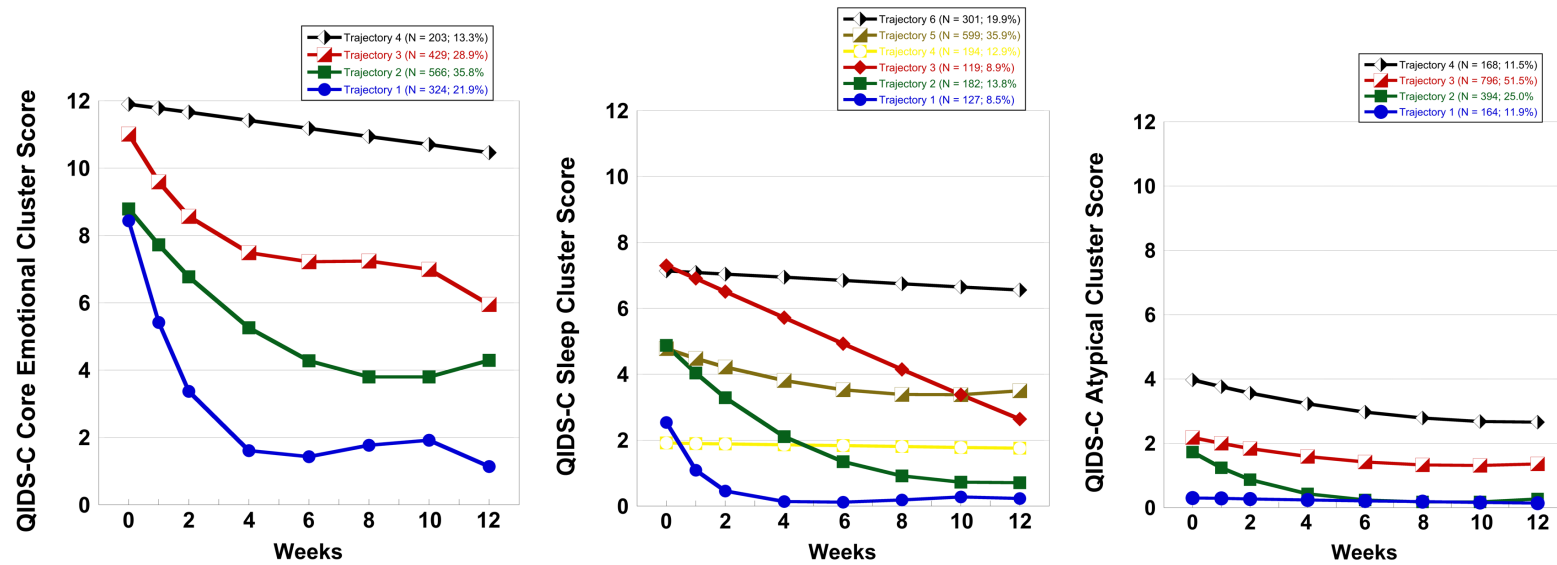[b] PHQ-9, Patient Health Questionnaire – 9. Each of 9 questions is scored from 0 to 3, with 3 indicating greater severity. Possible scores on the PHQ-9 range from 0 to 27, with higher scores indicating greater degree of depression.

[c]MPP, mean posterior probability of group membership.

[d]OCC, odds of correct classification.

[e]DEAP, difference between estimated and the actual group proportion.

Supplement D: Response Trajectories of the QIDS-C Clusters

Response trajectories for each of the QIDS-C Clusters. Group-based trajectory modeling (GBTM) identified six trajectories in the QIDS-C sleep cluster, but only 4 trajectories of response were found for the core emotional and atypical clusters.

Supplement E: Reasons for Withdrawal

Reasons for Withdrawal: [a]QIDS-C															
Trajectory Group	Participant changed mind about being in study		Participant moved away		Lack of treatment response, worsening of symptoms		Drug related side effect		Participant not compliant with protocol		Due to other illness		Other		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
1	22	2.5%	10	1.1%	8	0.9%	25	2.8%	21	2.3%	5	0.6%	17	1.9%	108
2	35	3.9%	13	1.5%	67	7.5%	41	4.6%	36	4.0%	8	0.9%	21	2.3%	221
3	3	0.3%	2	0.2%	8	0.9%	2	0.2%	2	0.2%	0	0.00%	4	0.5%	21
4	37	4.1%	6	0.7%	134	14.9%	58	6.5%	39	4.3%	3	0.3%	31	3.5%	308
5	1	0.1%	1	0.1%	118	13.2%	2	0.2%	2	0.2%	0	0.0%	3	0.3%	127
6	2	0.2%	0	0.0%	80	8.9%	14	1.6%	8	0.9%	2	0.2%	6	0.7%	112
Total	100	11.2%	32	3.6%	415	46.3%	142	15.8%	108	12.0%	18	2.0%	82	9.1%	897
Number of Completers = 625															

Chi square = 255, df = 30, $p < 0.001$

[a]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

Reasons for Withdrawal: [a]PHQ-9															
Trajectory Group	Participant changed mind about being in study		Participant moved away		Lack of treatment response, worsening of symptoms		Drug related side effect		Participant not compliant with protocol		Due to other illness		Other		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
1	9	1.0%	4	0.5%	1	0.1%	7	0.8%	4	0.5%	3	0.3%	6	0.7%	34
2	43	4.8%	12	1.3%	43	4.8%	56	6.2%	45	5.0%	4	0.5%	24	2.7%	227
3	7	0.8%	3	0.3%	16	1.8%	9	1.0%	9	1.0%	2	0.2%	6	0.7%	52
4	24	2.7%	9	1.0%	137	15.3%	29	3.2%	23	2.6%	4	0.5%	24	2.7%	250
5	16	1.8%	4	0.5%	156	17.4%	30	3.3%	24	2.7%	5	0.6%	18	2.0%	253
6	1	0.1%	0	0.0%	62	6.9%	11	1.2%	3	0.3%	0	0.0%	4	0.5%	81
Total	100	11.2%	32	3.6%	415	46.3%	142	15.8%	108	12.0%	18	2.0%	82	9.1%	897
Number of Completers = 625															

Chi square = 188, df = 30, p < 0.001

[a]PHQ-9, Patient Health Questionnaire – 9. Each of 9 questions is scored from 0 to 3, with 3 indicating greater severity. Possible scores on the PHQ-9 range from 0 to 27, with higher scores indicating greater degree of depression.

Supplement F: Comparisons of Demographic and Clinical Characteristics among Trajectory Groups of VAST-D Participants by Trajectory Group

Table 1a. Comparisons of Demographic Characteristics and Clinical Characteristics of VAST-D Participants by Trajectory Group for the [a]QIDS-C Total Score

Demographic Features	Trajectory												Chi Square	P Value
	1		2		3		4		5		6			
	N	%	N	%	N	%	N	%	N	%	N	%		
[b]Education													14.8	0.46
Some college	107	7.0%	197	12.9%	24	1.6%	155	10.2%	55	3.6%	48	3.2%		
High school or Less	92	6.0%	125	8.2%	11	0.7%	125	8.2%	40	2.6%	36	2.4%		
Associate Degree	37	2.4%	76	5.0%	10	0.7%	48	3.2%	18	1.2%	12	0.8%		
Bachelors Degree or Higher	61	4.0%	87	5.7%	17	1.1%	90	5.9%	31	2.0%	20	1.3%		
[c]Employment Status													36.5	<0.001
Employed	96	6.3%	132	8.7%	16	1.1%	91	6.0%	31	2.0	21	1.4%		
Retired (and not working)	100	6.6%	167	11.0%	19	1.2%	120	7.9%	35	2.3%	33	2.2%		

	n	%	n	%	n	%	n	%	n	%	n	%		
Unemployed (includes disability or assistance)	99	6.5%	184	12.1%	27	1.8%	207	13.6%	77	5.1%	60	3.9%		
[d]**Gender**													10.9	0.05
Male	254	16.7%	398	26.1%	49	3.2%	361	23.7%	130	8.5%	104	6.8%		
Female	43	2.8%	87	5.7%	13	0.9%	57	3.7%	14	0.9	12	0.8%		
[e]**Grief Endorsement**													18.6	<0.001
<=3	143	9.4%	213	14.0%	26	1.7%	155	10.2%	52	3.4%	34	2.2%		
>3	154	10.1%	272	17.9%	36	2.4%	263	17.3%	92	6.0%	82	5.4%		
[f]**Marital Status**													1.78	0.87
Single	165	10.8%	265	17.4%	38	2.5%	228	15.0%	75	4.9%	61	4.0%		
Married or Cohabiting	132	8.7%	220	14.5%	24	1.6%	190	12.5%	69	4.5%	55	3.6%		
[g]**Race**													23.6	0.01
White	203	13.3%	341	22.4%	49	3.2%	274	18.0%	84	5.5%	66	4.3%		
African-America or Black	71	4.7%	112	7.4%	7	0.5%	101	6.6%	39	2.6%	37	2.4%		
Other	23	1.5%	32	2.1%	6	0.4%	43	2.8%	21	1.4%	13	0.9%		

													F Statistic	P Value
[h]Substance or Alcohol Abuse													4.7	0.45
No	260	17.1%	427	28.1%	56	3.7%	360	23.7%	118	7.8%	102	6.7%		
Yes	37	2.4%	58	3.8%	6	0.4%	58	3.8%	26	1.7%	14	0.9%		
[i]Treatment Allocation													32.5	<0.001
Aug-ARI	115	7.6%	176	11.6%	29	1.9%	100	6.6%	49	3.2%	36	2.4%		
Aug-BUP	100	6.6%	157	10.3%	13	0.9%	148	9.7%	47	3.1%	41	2.7%		
Switch-BUP	82	5.4%	152	10.0%	20	1.3%	170	11.2%	48	3.2%	39	2.6%		

Clinical Characteristic	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	F Statistic	P Value
[j]ACES	2.9	2.37	3.1	2.51	3.7	2.64	3.2	2.48	3.4	2.81	3.2	2.77	1.61	0.15
[k]Age	55.4	12.4	54.8	12.3	52.7	11.7	53.7	12.7	53.7	11.6	54.3	10.7	1.18	0.32
[l]BAI	0.7	0.47	0.82	0.48	1.3	0.55	0.97	0.53	1.1	0.57	1.2	0.58	33.5	<0.001
[m]CIRS Severity Index	1.8	0.38	1.8	0.38	1.8	0.37	1.8	0.37	1.8	0.31	1.8	0.35	0.18	0.97
[n]DSM-5 Mixed Features	11.7	2.76	11.4	2.45	11.6	2.57	11.8	2.69	12.1	2.64	11.8	2.56	2.13	0.06
[o]Duration of Index Episode	68.3	113	82.6	129	102	147	80.7	124	120	151	128	169	5.66	<0.001

pLifetime Suicidal Ideation	2.2	2.02	2.2	1.97	3.1	1.89	2.3	1.94	2.3	1.89	2.5	1.97	2.94	0.012
QIDS-C	14.6	2.73	15.9	2.90	20.8	2.15	16.9	2.81	18.2	2.57	20.7	2.13	130	<0.001
qQ-LES-Q-SF	48.6	14.2	43.5	12.8	30.2	12.9	38.1	13.2	35.5	13.8	29.4	12.8	57.7	<0.001

aQIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated, at baseline. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

bEducation, at baseline. The level of educational attainment by the following categories: high school or less, some college, associate degree, bachelor degree, or higher.

cEmployment Status, at baseline. The employment status by the following categories: unemployed (includes disability or assistance), retired (and not working), or employed.

dGender. Male or female gender, as declared by the participant.

eGrief Endorsement, at baseline. Endorsement of ≤3 versus >3 items on the Complicated Grief Questionnaire, with endorsement of more items indicating greater complicated grief.

fMarital Status, at baseline. Identification of status as single vs. married/cohabiting.

gRace. The declared race of the participant in the following categories: white, African-American/black, or other.

hSubstance or Alcohol Abuse, at baseline. The presence of a substance or alcohol abuse diagnosis by the M.I.N.I.

iTreatment Allocation. Allocation to one of three treatment groups: Aug-ARI, Aug-BUP, or Switch-BUP.

jACES, Adverse Childhood Experiences Survey, at baseline. Possible scores range from 0 to 10, with higher scores indicating greater childhood adversity and greater risk of psychological or health problems.

kAge, in years, at baseline.

lBAI, Beck Anxiety Inventory, at baseline. Possible scores range from 0 to 3 (average rating of each of the 21 items), with higher scores indicating greater anxiety.

[m]CIRS Severity Index, Cumulative Illness Rating Scale Comorbidity Severity Index, at baseline. Possible scores range from 0 to 4, with higher scores indicating greater severity of co-occurring medical conditions.

[n]DSM-5 Mixed Features, presence of mixed features by a self-rated 9-item mixed features scale based on the DSM-5, at baseline. Possible scores range from 0 to 18, with higher scores indicating more hypomanic or manic symptoms.

[o]Duration of Index Episode, duration in months of the depression episode that is currently being treated, at baseline.

[p]Lifetime Suicidal Ideation, Columbia Suicide Severity Rating Scale-Lifetime Suicidal Ideation, at baseline. Possible scores range from 0 to 5, with higher scores indicating greater suicidal ideation or intent.

[q]Q-LES-Q-SF, Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form, at baseline. Possible scores range from 0 to 100% of the maximum scale score of 70, with higher scores indicating greater life satisfaction and enjoyment.

Table 1b. Comparisons of Demographic and Clinical Characteristics Indicators of VAST-D Participants by Trajectory Group for the [a]QIDS-C Core Emotional Cluster

Demographic Features	Trajectory								Chi Square	P value
	1		2		3		4			
	N	%	N	%	N	%	N	%		
[b]Education									7.72	0.56
Some College	127	8.3%	209	14%	167	11%	83	5.5%		
High School or Less Than High School Degree	99	6.5%	150	9.9%	128	8.4%	52	3.4%		
Associate degree	39	2.6%	88	5.8%	48	3.2%	26	1.7%		
Bachelor's degree or higher	59	3.9%	119	7.8%	86	5.7%	42	2.8%		
[c]Employment Status									30.5	<0.001
Employed	100	6.6%	150	9.9%	99	6.5%	38	2.5%		
Retired (and not working)	106	7.0%	197	13%	115	7.6%	56	3.7%		

Unemployed (includes those on disability or assistance)	117	7.7%	216	14%	214	14%	107	7.0%		
[d]**Gender**									4.77	0.19
Male	275	18.1%	469	30.8%	375	24.6%	177	11.6%		
Female	49	3.2%	97	6.4%	54	3.5%	26	1.7%		
[e]**Grief Endorsement**									22.8	<0.001
<=3	165	10.8%	235	15.4%	157	10.3%	66	4.3%		
>3	159	10.4%	331	21.7%	272	17.8%	137	9.0%		
[f]**Marital Status**									1.50	0.59
Single	183	12.0%	300	19.7%	242	15.9%	107	7.0%		
Marriage or Cohabitation	141	9.3%	266	17.5%	187	12.3%	96	6.3%		
[g]**Race**									7.72	0.56
Some College	127	8.3%	209	13.7%	167	10.9%	83	5.5%		
High School Diploma or Less	99	6.5%	150	9.9%	128	8.4%	52	3.4%		

Associate Degree	39	2.6%	88	5.8%	48	3.2%	26	1.7%	
Bachelor's Degree or higher	59	3.9%	119	7.8%	86	5.7%	42	2.8%	
[h]**Substance or Alcohol Abuse**								0.67	0.88
No	284	18.6%	490	32.2%	370	24.3%	179	11.6%	
Yes	40	2.6%	76	4.9.%	59	3.9%	24	1.6%	
[i]**Treatment Allocation**								16.5	0.01
Aug-ARI	134	8.8	185	12.2%	119	7.8%	67	4.4%	
Aug-BUP	100	6.6%	186	12.2%	151	9.9%	69	4.5%	
Switch-BUP	90	5.9%	195	12.8%	159	10.4%	67	4.4%	

Clinical Characteristic	X	SD	X	SD	X	SD	X	SD	F Statistic	P value
[j]ACE	3.04	2.48	3.03	2.51	3.29	2.51	3.25	2.75	1.20	0.31
[k]Age	55.2	12.4	54.8	12.6	53.5	11.9	53.8	11.5	1.64	0.18
[l]BAI	0.72	0.48	0.85	0.50	1.01	0.55	1.17	0.57	40.3	<0.001
[m]CIRS Severity	1.81	0.37	1.83	0.39	1.85	0.35	1.80	0.35	1.09	0.35
[n]DSM-5 Mixed Features	11.6	2.85	11.6	2.56	11.8	2.59	11.6	2.43	0.36	0.79
[o]Duration of Index Episode	68.0	112	82.1	129	97.1	139	110	150	5.35	<0.01
[p]Lifetime Suicidal Ideation	2.26	2.04	2.21	2.00	2.43	1.92	2.18	1.90	1.14	0.33
[q]QIDS-C	14.9	2.86	15.8	2.93	17.9	2.93	19.4	2.69	141	<0.001
[r]Q-LES-Q-SF	48.1	14.0	43.1	13.2	36.3	12.8	31.1	13.9	89.5	<0.001

[a]QIDS-C, Quick Inventory of Depressive Symptomatology –Clinician Rated Core Emotional Cluster. Possible scores are based upon a sum of QIDS-C scores for the 5 following items: energy/fatigability, concentration/decision making, loss of interest, mood, and feelings of worthlessness. Each item is rated on a scale from 0 to 3, with 3 representing greater severity. Scores range from 0 to 15, with higher scores indicating greater severity of symptoms.

[b]Education, at baseline. The level of educational attainment by the following categories: high school or less, some college, associate degree, bachelor degree, or higher.

[c]Employment Status, at baseline. The employment status by the following categories: unemployed (includes disability or assistance), retired (and not working), or employed.

[d]Gender. Male or female gender, as declared by the participant.

[e]Grief Endorsement, at baseline. Endorsement of ≤3 versus >3 items on the Complicated Grief Questionnaire, with endorsement of more items indicating greater complicated grief.

[f]Marital Status, at baseline. Identification of status as single vs. married/cohabiting.

[g]Race. The declared race of the participant in the following categories: white, African-American/black, or other.

[h]Substance or Alcohol Abuse, at baseline. The presence of a substance or alcohol abuse diagnosis by the M.I.N.I.

[i]Treatment Allocation. Allocation to one of three treatment groups: Aug-ARI, Aug-BUP, or Switch-BUP.

[j]ACES, Adverse Childhood Experiences Survey, at baseline. Possible scores range from 0 to 10, with higher scores indicating greater childhood adversity and greater risk of psychological or health problems.

[k]Age, in years, at baseline.

[l]BAI, Beck Anxiety Inventory, at baseline. Possible scores range from 0 to 3 (average rating of each of the 21 items), with higher scores indicating greater anxiety.

[m]CIRS Severity Index, Cumulative Illness Rating Scale Comorbidity Severity Index, at baseline. Possible scores range from 0 to 4, with higher scores indicating greater severity of co-occurring medical conditions.

[n]DSM-5 Mixed Features, presence of mixed features by a self-rated 9-item mixed features scale based on the DSM-5, at baseline. Possible scores range from 0 to 18, with higher scores indicating more hypomanic or manic symptoms.

[o]Duration of Index Episode, duration in months of the depression episode that is currently being treated, at baseline.

[p]Lifetime Suicidal Ideation, Columbia Suicide Severity Rating Scale-Lifetime Suicidal Ideation, at baseline. Possible scores range from 0 to 5, with higher scores indicating greater suicidal ideation or intent.

[q]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated, at baseline. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite,

concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

[r]Q-LES-Q-SF, Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form, at baseline. Possible scores range from 0 to 100% of the maximum scale score of 70, with higher scores indicating greater life satisfaction and enjoyment.

Table 1c. Comparisons of Demographic and Clinical Characteristics of VAST-D Participants by Trajectory Group for the [a]QIDS-C Sleep Cluster

Demographic Features	Trajectory												Chi Square	P Value
	1		2		3		4		5		6			
	N	%	N	%	N	%	N	%	N	%	N	%		
[b]Education													22.8	0.09
Some college	45	3.0%	79	5.2%	67	4.4%	44	2.9%	226	14.8%	125	8.2%		
High school or less than high school degree	32	2.1%	43	2.8%	44	2.9%	39	2.6%	179	11.8%	92	6.0%		
Associate degree	16	1.1%	24	1.6%	34	2.2%	11	0.7%	77	5.1%	39	2.6%		
Bachelors degree or higher	34	2.2%	36	2.4%	49	3.2%	25	1.6%	117	7.7%	45	3.0%		
[c]Employment Status													31.2	<0.001
Employed	44	2.9%	52	3.4%	65	4.3%	25	1.6%	146	9.6%	55	3.6%		
Retired (and not working)	38	2.5%	58	3.8%	61	4.0%	38	2.5%	193	12.6%	86	5.7%		
Unemployed (includes	45	3.0%	72	4.7%	66	4.3%	56	3.7%	256	16.8%	159	10.4%		

those on disability or assistance)													
[d]**Gender**												12.6	0.03
Male	106	7.0%	145	9.5%	162	10.6%	95	6.2%	529	34.8%	259	17.0%	
Female	21	1.4%	37	2.4%	32	2.1%	24	1.6%	70	4.6%	42	2.8%	
[e]**Grief Endorsement**												27.3	<0.001
<=3	62	4.1%	78	5.1%	100	6.6%	35	2.3%	249	16.3%	99	6.5%	
>3	65	4.3%	104	6.8%	94	6.2%	84	5.5%	350	22.9%	202	13.3%	
[f]**Marital status**												11.4	0.04
Single	66	4.3%	101	6.6%	98	6.4%	81	5.3%	317	20.8%	169	11.1%	
Married or Cohabitating	61	4.0%	81	5.3%	96	6.3%	38	2.5%	282	18.5%	132	8.7%	
[g]**Race**												49.3	<0.001
White	91	6.0%	120	7.9%	149	9.8%	67	4.4%	430	28.2%	160	10.5%	
African-American or Black	28	1.8%	44	2.9%	35	2.3%	37	2.4%	120	7.9%	103	6.8%	
Other	8	0.5%	18	1.2%	10	0.7%	15	1.0%	49	3.2%	38	2.5%	

													F Statistic	P Value
[h]Substance or Alcohol Abuse													2.1	0.84
No	113	7.4%	158	10.4%	169	11.1%	107	7.0%	519	34.1%	257	16.8%		
Yes	14	0.9%	24	1.6%	25	1.6%	12	0.8%	80	5.3%	44	2.9%		
[i]Treatment Allocation													8.3	0.60
Aug-ARI	46	3.0%	68	4.5%	64	4.2%	46	3.0%	184	12.1%	97	6.4%		
Aug-BUP	42	2.8%	59	3.9%	71	4.7%	36	2.4%	205	13.5%	93	6.1%		
Switch-BUP	39	2.6%	55	3.6%	59	3.9%	37	2.4%	210	13.8%	111	7.3%		

Clinical Characteristic	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	F Statistic	P Value
[j]ACES	2.9	2.37	3.1	2.51	3.7	2.64	3.2	2.48	3.4	2.81	3.2	2.77	1.61	0.15
[k]Age	55.4	12.4	54.8	12.3	52.7	11.7	53.7	12.7	53.7	11.6	54.3	10.7	1.18	0.32
[l]BAI	0.7	0.47	0.82	0.48	1.3	0.55	0.97	0.53	1.1	0.57	1.2	0.58	33.5	<0.001
[m]CIRS Severity Index	1.8	0.38	1.8	0.38	1.8	0.37	1.8	0.37	1.8	0.31	1.8	0.35	0.18	0.97
[n]DSM-5 Mixed Features	11.7	2.76	11.4	2.45	11.6	2.57	11.8	2.69	12.1	2.64	11.8	2.56	2.13	0.06

°Duration of Index Episode	68.3	113	82.6	129	102	147	80.7	124	120	151	128	169	5.66	<0.001
ᵖLifetime Suicidal Ideation	2.2	2.02	2.2	1.97	3.1	1.89	2.3	1.94	2.3	1.89	2.5	1.97	2.94	0.012
qQIDS-C	14.6	2.73	15.9	2.90	20.8	2.15	16.9	2.81	18.2	2.57	20.7	2.13	130	<0.001
ʳQ-LES-Q-SF	48.6	14.2	43.5	12.8	30.2	12.9	38.1	13.2	35.5	13.8	29.4	12.8	57.7	<0.001

[a]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated Sleep Cluster. Possible scores are based upon a sum of QIDS-C scores for the following 3 items: mid-nocturnal insomnia, sleep-onset insomnia, and early morning insomnia. Scores range from 0 to 9, with higher scores indicating greater severity of symptoms. Comparisons among six trajectory groups

[b]Education, at baseline. The level of educational attainment by the following categories: high school or less, some college, associate degree, bachelor degree, or higher.

[c]Employment Status, at baseline. The employment status by the following categories: unemployed (includes disability or assistance), retired (and not working), or employed.

[d]Gender. Male or female gender, as declared by the participant.

[e]Grief Endorsement, at baseline. Endorsement of ≤3 versus >3 items on the Complicated Grief Questionnaire, with endorsement of more items indicating greater complicated grief.

[f]Marital Status, at baseline. Identification of status as single vs. married/cohabiting.

[g]Race. The declared race of the participant in the following categories: white, African-American/black, or other.

[h]Substance or Alcohol Abuse, at baseline. The presence of a substance or alcohol abuse diagnosis by the M.I.N.I.

[i]Treatment Allocation. Allocation to one of three treatment groups: Aug-ARI, Aug-BUP, or Switch-BUP.

[j]ACES, Adverse Childhood Experiences Survey, at baseline. Possible scores range from 0 to 10, with higher scores indicating greater childhood adversity and greater risk of psychological or health problems.

[k]Age, in years, at baseline.

[l]BAI, Beck Anxiety Inventory, at baseline. Possible scores range from 0 to 3 (average rating of each of the 21 items), with higher scores indicating greater anxiety.

[m]CIRS Severity Index, Cumulative Illness Rating Scale Comorbidity Severity Index, at baseline. Possible scores range from 0 to 4, with higher scores indicating greater severity of co-occurring medical conditions.

[n]DSM-5 Mixed Features, presence of mixed features by a self-rated 9-item mixed features scale based on the DSM-5, at baseline. Possible scores range from 0 to 18, with higher scores indicating more hypomanic or manic symptoms.

[o] Duration of Index Episode, duration in months of the depression episode that is currently being treated, at baseline.

[p]Lifetime Suicidal Ideation, Columbia Suicide Severity Rating Scale-Lifetime Suicidal Ideation, at baseline. Possible scores range from 0 to 5, with higher scores indicating greater suicidal ideation or intent.

[q]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated, at baseline. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

[r]Q-LES-Q-SF, Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form, at baseline. Possible scores range from 0 to 100% of the maximum scale score of 70, with higher scores indicating greater life satisfaction and enjoyment.

Table 1d. Comparisons of Demographic and Clinical Characteristics of VAST-D Participants by Trajectory Group for the [a]QIDS-C Atypical Cluster

Demographic Features	Trajectory								Chi Square	P value
	1		2		3		4			
	N	%	N	%	N	%	N	%		
[b]Education									9.87	0.36
Some College	55	3.6%	149	9.8%	324	21.3%	58	3.8%		
High School or Less Than High School Degree	46	3.0%	111	7.3%	225	14.7%	47	3.1%		
Associate degree	30	2.0%	53	3.5%	90	5.9%	28	1.8%		
Bachelor's degree or higher	33	2.2%	81	5.3%	157	10.3%	35	2.3%		
[c]Employment Status									18.5	0.01
Employed	100	6.6%	150	9.9%	99	6.5%	38	2.5%		
Retired (and not working)	59	3.9%	108	7.1%	192	13%	28	1.8%		
Unemployed (includes those on	43	2.8%	125	8.2%	248	16.3%	58	3.8%		

disability or assistance)										
[d]Gender									21.1	<0.001
Male	123	8.1%	326	21.4%	697	45.7%	150	9.9%		
Female	41	2.7%	68	4.5%	99	6.5%	18	1.2%		
[e]Grief Endorsement									1.44	0.70
<=3	71	4.7%	168	11.0%	319	20.9%	65	4.3%		
>3	93	6.1%	226	14.8%	477	31.3%	103	6.8%		
[f]Marital status									7.8	0.05
Single	97	6.4%	234	15.4%	416	27.3%	85	5.6%		
Marriage or Cohabitation	67	4.4%	160	10.5%	380	24.9%	83	5.5%		
[g]Race									9.46	0.15
White	104	6.8%	248	16.3%	541	35.5%	124	8.1%		
African-America or Black	46	3.0%	105	6.9%	181	12%	35	2.3%		
Other	14	0.9%	41	2.7%	74	4.9%	9	0.6%		
[h]Substance or Alcohol Abuse									6.44	0.09
No	142	9.3%	355	23.3%	677	44.5%	149	9.8%		
Yes	22	1.4%	39	2.6%	119	7.8%	19	1.2%		
[i]Treatment Allocation									9.31	0.16
Aug-ARI	54	3.5%	143	9.4%	257	16.8%	51	3.4%		

Aug-BUP	61	4.0%	133	8.7%	248	16.2%	64	4.2%		
Switch-BUP	49	3.2%	118	7.8%	291	19.1%	53	3.5%		

Clinical Characteristics	X	SD	X	SD	X	SD	X	SD	F Statistic	P value
[j]ACES	3.09	2.48	3.01	2.50	3.15	2.55	3.41	2.60	0.98	0.40
[k]Age	52.6	12.0	54.1	12.3	54.5	12.3	55.8	11.7	2.03	0.11
[l]BAI	0.64	0.42	0.81	0.51	0.98	0.54	1.08	0.57	28.5	<0.001
[m]CIRS Severity Index	1.79	0.36	1.83	0.39	1.84	0.37	1.81	0.35	0.99	0.40
[n]DSM-5 Mixed Features	11.2	2.19	11.4	2.42	11.9	2.76	11.6	2.66	4.08	0.01
[o]Duration of Index Episode	72.5	106	84.5	135	84.4	129	120	158	4.20	0.01
[p]Lifetime Suicidal Ideation	2.09	1.97	2.10	2.03	2.26	1.94	2.98	1.86	8.64	<0.001
[q]QIDS-C	14.6	2.61	16.0	2.93	17.0	3.17	19.1	3.17	70.9	<0.001
[r]Q-LES-Q-SF	45.8	13.0	43.1	13.9	39.4	14.5	35.5	14.6	20.4	<0.001

QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated Sleep Cluster. Possible scores are based upon a sum of QIDS-C scores for the following 3 items: mid-nocturnal insomnia, sleep-onset insomnia, and early morning insomnia. Scores range from 0 to 9, with higher scores indicating greater severity of symptoms. Comparisons among six trajectory groups

[b]Education, at baseline. The level of educational attainment by the following categories: high school or less, some college, associate degree, bachelor degree, or higher.

[c]Employment Status, at baseline. The employment status by the following categories: unemployed (includes disability or assistance), retired (and not working), or employed.

[d]Gender. Male or female gender, as declared by the participant.

[e]Grief Endorsement, at baseline. Endorsement of $\leq$3 versus >3 items on the Complicated Grief Questionnaire, with endorsement of more items indicating greater complicated grief.

[f]Marital Status, at baseline. Identification of status as single vs. married/cohabiting.

[g]Race. The declared race of the participant in the following categories: white, African-American/black, or other.

[h]Substance or Alcohol Abuse, at baseline. The presence of a substance or alcohol abuse diagnosis by the M.I.N.I.

[i]Treatment Allocation. Allocation to one of three treatment groups: Aug-ARI, Aug-BUP, or Switch-BUP.

[j]ACES, Adverse Childhood Experiences Survey, at baseline. Possible scores range from 0 to 10, with higher scores indicating greater childhood adversity and greater risk of psychological or health problems.

[k]Age, in years, at baseline.

[l]BAI, Beck Anxiety Inventory, at baseline. Possible scores range from 0 to 3 (average rating of each of the 21 items), with higher scores indicating greater anxiety.

[m]CIRS Severity Index, Cumulative Illness Rating Scale Comorbidity Severity Index, at baseline. Possible scores range from 0 to 4, with higher scores indicating greater severity of co-occurring medical conditions.

[n]DSM-5 Mixed Features, presence of mixed features by a self-rated 9-item mixed features scale based on the DSM-5, at baseline. Possible scores range from 0 to 18, with higher scores indicating more hypomanic or manic symptoms.

[o]Duration of Index Episode, duration in months of the depression episode that is currently being treated, at baseline.

[p]Lifetime Suicidal Ideation, Columbia Suicide Severity Rating Scale-Lifetime Suicidal Ideation, at baseline. Possible scores range from 0 to 5, with higher scores indicating greater suicidal ideation or intent.

[q]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated, at baseline. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale

of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

ʳQ-LES-Q-SF, Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form, at baseline. Possible scores range from 0 to 100% of the maximum scale score of 70, with higher scores indicating greater life satisfaction and enjoyment.

Table 1e. Comparisons of Demographic and Clinical Characteristics of VAST-D Participants by Trajectory Group for the [a]PHQ-9

Demographic Features	Trajectory												Chi Square	P Value
	1		2		3		4		5		6			
	N	%	N	%	N	%	N	%	N	%	N	%		
[b]Education													13.1	0.59
Some college	38	2.5%	154	10.1%	195	12.8%	47	3.1%	115	7.5%	37	2.4%		
High school or less than high school degree	38	2.5%	103	6.8%	30	2.0%	136	8.9%	98	6.4%	24	1.6%		
Associate degree	12	0.8%	57	3.7%	19	1.2%	69	4.5%	35	2.3%	9	0.6%		
Bachelors degree or higher	14	0.9%	74	4.9%	21	1.4%	114	7.5%	66	4.3%	17	1.1%		

[c]**Employment Status**												23.9	0.01
Employed	28	1.8%	102	6.7%	25	1.6%	149	9.8%	64	4.2%	19	1.2%	
Retired (and not working)	33	2.2%	132	8.7%	32	2.1%	167	10.9%	88	5.8%	22	1.4%	
Unemployed (includes those on disability or assistance)	40	2.6%	152	10.0%	60	3.9%	196	12.9%	161	10.6%	45	3.0%	
[d]**Gender**												24.0	<0.001
Male	87	5.7%	342	22.4%	86	5.7%	423	27.8%	280	18.4%	78	5.1%	
Female	15	1.0%	46	3.0%	31	2.0%	91	6.0%	34	2.2%	9	0.6%	
[e]**Grief Endorsement**												26.9	<0.001
<=3	53	3.5%	150	9.9%	41	2.7%	243	16.0%	113	7.4%	23	1.5%	
>3	49	3.2%	238	15.6%	76	5.0%	271	17.8%	201	13.2%	64	4.2%	
[f]**Marital status**												6.7	0.24
Single	66	4.3%	101	6.6%	98	6.4%	81	5.3%	317	20.8%	169	11.1%	

Married or Cohabitating	61	4.0%	81	5.3%	96	6.3%	38	2.5%	282	18.5%	132	8.7%		
[g]**Race**													14.8	0.14
White	64	4.2%	254	16.7%	83	5.5%	358	23.5%	206	13.5%	52	3.4%		
African-America or Black	26	1.7%	102	6.7%	25	1.6%	122	8.0%	69	4.5%	23	1.5%		
Other	12	0.8%	32	2.1%	9	0.6%	34	2.2%	39	2.6%	12	0.8%		
[h]**Substance or Alcohol Abuse**													4.52	0.48
No	93	6.1%	337	22.1%	100	6.6%	445	29.2%	268	17.6%	80	5.3%		
Yes	9	0.6%	51	3.4%	17	1.1%	69	4.5%	46	3.0%	7	0.5%		
[i]**Treatment Allocation**													8.97	0.54
Aug-ARI	31	2.0%	116	7.6%	44	2.9%	186	12.2%	97	6.4%	31	2.0%		
Aug-BUP	38	2.5%	126	8.3%	36	2.4%	167	11.0%	108	7.1%	31	2.0%		
Switch-BUP	33	2.2%	146	9.6%	37	2.4%	161	10.6%	109	7.2%	25	1.6%		

Clinical Characteristic	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD	F Statistic	P Value
[j]ACES	3.13	2.52	3.24	2.44	3.53	2.49	3.01	2.50	3.04	2.66	3.20	2.79	1.03	0.40
[k]Age	55.6	12.9	54.5	12.1	55.0	12.3	52.5	12.3	53.9	12.3	53.3	10.6	1.23	0.29
[l]BAI	0.51	0.37	0.90	0.50	1.06	0.56	0.74	0.43	1.12	0.56	1.46	0.52	60.8	<0.001
[m]CIRS Severity Index	1.82	0.41	1.82	0.38	1.86	0.33	1.81	0.38	1.84	0.34	1.89	0.40	1.12	0.35
[n]DSM-5 Mixed Features	11.7	2.75	11.8	2.52	11.2	1.96	11.4	2.56	12.0	2.91	11.8	2.65	3.15	0.01
[o]Duration of Index Episode	68.3	123	86.6	127	100	156	74.9	119	90.6	131	151	181	5.61	<0.001
[p]Lifetime Suicidal Ideation	1.94	1.97	2.24	1.94	2.25	2.01	2.56	2.01	2.35	1.95	2.42	1.90	1.25	0.28
[q]QIDS-C	9.59	4.95	15.3	3.66	13.9	4.50	20.9	2.93	19.5	3.32	23.2	2.38	235	<0.001
[r]Q-LES-Q-SF	54.5	13.0	41.2	12.2	33.4	13.0	46.1	12.6	33.4	12.5	25.3	13.4	99.0	<0.001

[a]PHQ-9, Patient Health Questionnaire – 9. Each of 9 questions is scored from 0 to 3, with 3 indicating greater severity. Possible scores on the PHQ-9 range from 0 to 27, with higher scores indicating greater degree of depression. Comparisons for six trajectory groups.

[b]Education, at baseline. The level of educational attainment by the following categories: high school or less, some college, associate degree, bachelor degree, or higher.

[c]Employment Status, at baseline. The employment status by the following categories: unemployed (includes disability or assistance), retired (and not working), or employed.

[d]Gender. Male or female gender, as declared by the participant.

[e]Grief Endorsement, at baseline. Endorsement of ≤3 versus >3 items on the Complicated Grief Questionnaire, with endorsement of more items indicating greater complicated grief.

[f]Marital Status, at baseline. Identification of status as single vs. married/cohabiting.

[g]Race. The declared race of the participant in the following categories: white, African-American/black, or other.

[h]Substance or Alcohol Abuse, at baseline. The presence of a substance or alcohol abuse diagnosis by the M.I.N.I.

[i]Treatment Allocation. Allocation to one of three treatment groups: Aug-ARI, Aug-BUP, or Switch-BUP.

[j]ACES, Adverse Childhood Experiences Survey, at baseline. Possible scores range from 0 to 10, with higher scores indicating greater childhood adversity and greater risk of psychological or health problems.

[k]Age, in years, at baseline.

[l]BAI, Beck Anxiety Inventory, at baseline. Possible scores range from 0 to 3 (average rating of each of the 21 items), with higher scores indicating greater anxiety.

[m]CIRS Severity Index, Cumulative Illness Rating Scale Comorbidity Severity Index, at baseline. Possible scores range from 0 to 4, with higher scores indicating greater severity of co-occurring medical conditions.

[n]DSM-5 Mixed Features, presence of mixed features by a self-rated 9-item mixed features scale based on the DSM-5, at baseline. Possible scores range from 0 to 18, with higher scores indicating more hypomanic or manic symptoms.

[o]Duration of Index Episode, duration in months of the depression episode that is currently being treated, at baseline.

[p]Lifetime Suicidal Ideation, Columbia Suicide Severity Rating Scale-Lifetime Suicidal Ideation, at baseline. Possible scores range from 0 to 5, with higher scores indicating greater suicidal ideation or intent.

[q]QIDS-C, Quick Inventory of Depressive Symptomatology–Clinician Rated, at baseline. The QIDS-C score is calculated from a total of 16 clinician-administered questions, which map onto 9 psychiatric domains: sleep, mood, appetite, concentration, guilt, acute suicidal ideation, interest, fatigue, and psychomotor function. Each domain is scored on a scale of 0 to 3, with a score of 3 indicating greater severity. These scores are then added up to obtain a total QIDS-C score ranging from 0 to 27.

[r]Q-LES-Q-SF, Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form, at baseline. Possible scores range from 0 to 100% of the maximum scale score of 70, with higher scores indicating greater life satisfaction and enjoyment