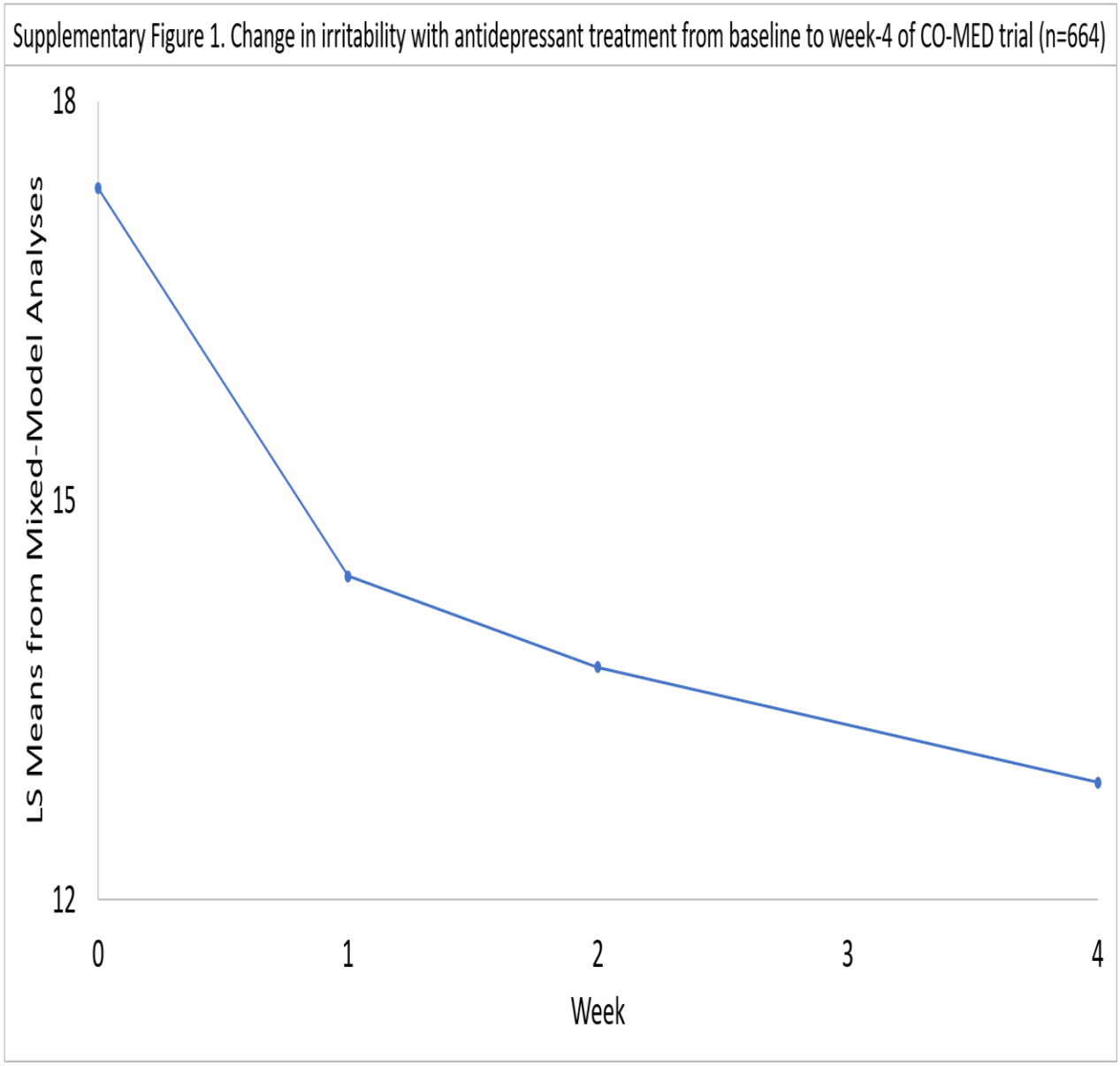
Supplementary Table 1. Baseline sociodemographic variables of participants of CO-MED trial and SAMS who were excluded from analyses with complete data

	CO-MED				SAMS			
	Excluded from prediction of outcomes		Comparison of included versus excluded		Excluded from prediction of outcomes		Comparison of included versus excluded	
Number	233				103			
Categorical variables	**N**	**%**	**χ^2 (df)**	**p value**	**N**	**%**	**χ^2 (df)**	**p value**
Sex			0.59 (1)	0.44			0.25 (1)	0.61
Male	70	30.0			28	27.2		
Female	163	70.0			75	72.8		
Race			17.88 (2)	<0.001			2.68 (2)	0.26
White	127	54.5			65	63.1		
Black	84	36.1			32	31.1		
Other	22	9.4			6	5.8		
Education[@]			10.95 (2)	0.004			2.65 (2)	0.27
<12 years	48	21.4			19	61.2		
12 –15 years	119	53.1			63	20.4		
>15 years	57	25.5			21	18.4		
Hispanic ethnicity	33	14.0	0.31 (1)	0.58	15	14.6	1.38 (1)	0.24
Employed at baseline	104	44.4	3.90 (1)	0.05	58	56.3	0.51 (1)	0.47
Onset of depression before age 18 years [$ %]	104	45.0	0.03 (1)	0.86	44	43.6	3.53 (1)	0.06
Chronic depression[$]	132	57.1	0.42 (1)	0.52	26	25.2	0.23 (1)	0.63
Recurrent depression[$ *]	174	75.3	1.42 (1)	0.23	53	63.1	0.63 (1)	0.43
Continuous variables	**Mean**	**SD**	**t (df)**	**p value**	**Mean**	**SD**	**t (df)**	**p value**
Mean age in years	40.6	13.3	3.05 (456)	0.002	39.0	14.4	2.07 (197)	0.04
Mean depressive symptom severity (QIDS-C)	16.3	3.5	–2.50 (461)	0.013	15.1	3.2	–1.37 (219)	0.17
Mean irritability severity (CAST-IRR)[& #]	17.6	3.9	–1.43 (464)	0.15	15.7	4.9	0.68 (181)	0.50

[@] Missing values for N=9 in Combining Medications to Enhance Depression Outcomes (CO-MED) trial, [#] missing value for N=1 in CO-MED, [$] missing values for N=2 in CO-MED, [%] missing values for N=2 in Suicide Assessment and Methodology Study (SAMS), * missing values for N=19 in SAMS, and missing values for N=3 in SAMS. Irritability was measured with the 5-item irritability domain of Concise Associated Symptom Tracking scale (CAST-IRR). Depressive symptom severity was measured with 16-item Quick Inventory of Depressive Symptomatology Clinician-Rated version (QIDS-C

Supplementary Figure 1. Change in irritability with antidepressant treatment from baseline to week-4 of CO-MED trial (N=664). Figure legend: Irritability was measured with 5-item irritability domain of the Concise Associated Symptom Tracking scale (CAST-IRR) in the Combining Medications to Enhance Depression Outcomes (CO-MED) trial. Changes in irritability was measured with repeated-measured mixed model analyses and the least square (LS) means at each visit from baseline to week-4 of CO-MED trial are presented here.



Supplementary Figure 2. Calibration plots of remission and no-meaningful-benefit predictive models in CO-MED trial and SAMS. Figure legend: CO-MED is Combining Medications to Enhance Depression Outcomes, SAMS is Suicide Assessment and Methodology Study, remission was ascribed if Quick Inventory of Depressive Symptomatology Clinician-Rated version (QIDS-C) at week 8 was≤5, and no-meaningful-benefit was ascribed if percent reduction in QIDS-C from baseline to week 8 was<30%.

Supplementary Figure 2. Calibration plots of remission and no-meaningful-benefit predictive models in CO-MED trial and SAMS