

Supplementary Material 1 Distribution of predictors in the original sample versus the contemporary sample, and whether those predictors were included in the final previously published models.

Predictor	Mental health specialty sample				General medical sample			
	Original	Contemporary	Included ^a in suicide:		Original	Contemporary	Included ^a in suicide:	
	n = 10,275,853 Mean or %	N = 6,832,439 Mean or %	Attempt model	Death model	N = 9,685,206 Mean or %	N = 3,987,078 Mean or %	Attempt model	Death model
Age	42.4	43.1	x	x	49.6	50.2	x	x
ac1	10.0 %	9.2 %	x	x	4.0 %	4.4 %	x	
ac2	16.9 %	17.9 %			13.0 %	13.6 %		
ac3	26.1 %	25.9 %	x		21.3 %	20.8 %	x	
ac4	36.7 %	33.8 %	x		39.2 %	35.0 %	x	
ac5	10.3 %	13.2 %	x		22.5 %	26.2 %		
Not Enrolled	2.5 %	0.0 %			1.7 %	0.0 %		
Medicaid	4.3 %	10.5 %			6.4 %	11.9 %	x	
commercial	75.7 %	69.0 %	x		66.7 %	57.3 %	x	
Privatepay	12.5 %	16.6 %	x		17.2 %	19.2 %		
Statesubsidized	0.4 %	0.2 %			0.6 %	0.4 %		
Selffunded	3.1 %	3.4 %			2.9 %	4.0 %	x	
Medicare	14.5 %	17.7 %	x	x	24.9 %	30.4 %		x
Highdeductible	7.4 %	10.8 %			6.9 %	8.5 %	x	
First_visit	7.0 %	3.7 %			23.1 %	15.4 %		
Days_since_prev	40	57	x	x	121	200	x	x
Female	62.3 %	64.5 %	x	x	61.5 %	63.8 %	x	x
dep_dx_pre5y_no_cumulative	71.2 %	73.9 %			49.8 %	58.7 %	x	
dep_dx_pre5y	48.1 %	50.1 %	x	x	39.4 %	46.8 %	x	
anx_dx_pre5y_no_cumulative	59.8 %	76.7 %			41.4 %	60.1 %		
anx_dx_pre5y	39.2 %	51.3 %	x	x	31.2 %	45.5 %	x	
bip_dx_pre5y_no_cumulative	13.1 %	12.3 %			5.6 %	5.7 %		

Supplementary Material 1 (Continued)

Predictor	Description	Mental health specialty sample				General medical sample					
		Original		Contemporary		Original		Contemporary			
		n	Mean or %	N	Mean or %	N	Mean or %	N	Mean or %		
		10,275,853	9.6%	6,832,439	9.0%	9,685,206	4.4%	3,987,078	4.3%		
bip_dx_pre5y	Bipolar DX, [1,5] years prior		9.6%		9.0%		4.4%		4.3%	x	
sch_dx_pre5y_noi_cumulative	Schizophrenia DX, (0,5] years prior		3.6%		4.3%		1.6%		1.7%		
sch_dx_pre5y	Schizophrenia DX, [1,5] years prior		2.8%		3.3%		1.3%		1.4%		
oth_dx_pre5y_noi_cumulative	Other Psychosis DX, (0,5] years prior		5.0%		5.8%		2.8%		3.1%		
oth_dx_pre5y	Other psychosis DX, [1,5] years prior		3.0%		3.6%		1.9%		2.1%		
dem_dx_pre5y_noi_cumulative	Dementia DX, (0,5] years prior		3.8%		1.4%		4.2%		2.8%		
dem_dx_pre5y	Dementia DX, [1,5] years prior		2.4%		0.8%		3.0%		1.8%		
add_dx_pre5y_noi_cumulative	ADD DX, (0,5] years prior		10.6%		11.4%		5.0%		7.8%		
add_dx_pre5y	ADD DX, [1,5] years prior		7.6%		8.2%		3.8%		6.0%	x	
asd_dx_pre5y_noi_cumulative	ASD DX, (0,5] years prior		1.1%		1.5%		0.5%		1.1%		
asd_dx_pre5y	ASD DX, [1,5] years prior		0.9%		1.2%		0.4%		0.9%		
per_dx_pre5y_noi_cumulative	Personality disorder DX, (0,5] years prior		6.1%		15.3%		2.3%		9.1%		
per_dx_pre5y	Personality disorder DX, [1,5] years prior		4.3%		10.7%		1.8%		7.2%		
alc_dx_pre5y_noi_cumulative	Alcohol use disorder DX, (0,5] years prior		12.8%		14.8%		6.0%		11.6%		
alc_dx_pre5y	Alcohol use disorder DX, [1,5] years prior		6.7%		8.6%		4.1%		7.5%	x	
pts_dx_pre5y_noi_cumulative	PTSD DX, (0,5] years prior		8.5%		10.0%		3.5%		4.5%		
pts_dx_pre5y	PTSD DX, [1,5] years prior		5.0%		5.6%		2.4%		3.1%		
eat_dx_pre5y_noi_cumulative	Eating disorder DX, (0,5] years prior		3.4%		3.7%		1.0%		1.2%		
eat_dx_pre5y	Eating disorder DX, [1,5] years prior		2.1%		2.2%		0.7%		0.8%		
tbi_dx_pre5y_noi_cumulative	TBI DX, (0,5] years prior		2.7%		3.5%		2.2%		3.2%		
tbi_dx_pre5y	TBI DX, [1,5] years prior		1.8%		2.6%		1.5%		2.3%		

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Supplementary Material 1 (Continued)

Predictor	Mental health specialty sample				General medical sample			
	Original	Contemporary	Included ^a in suicide:		Original	Contemporary	Included ^a in suicide:	
	n = 10,275,853 Mean or %	N = 6,832,439 Mean or %	Attempt model	Death model	N = 9,685,206 Mean or %	N = 3,987,078 Mean or %	Attempt model	Death model
Drug use disorder DX, (0,5] years prior	25.8%	15.7%			16.3%	15.4%	x	
Drug use disorder DX, [1,5] years prior	14.2%	9.3%	x		11.6%	10.3%	x	
Antidepressant rx (0,3] months	44.3%	50.6%	x	x	29.9%	36.1%	x	
Antidepressant rx (0, 1] year	54.3%	60.8%	x		40.3%	47.5%	x	
Antidepressant rx (0, 5] years	63.0%	68.9%	x		51.8%	58.9%		
Benzo rx (0,3] months	24.4%	23.4%	x	x	16.9%	17.0%	x	x
Benzo rx (0, 1] year	34.3%	33.0%	x		25.2%	25.4%		
Benzo rx (0, 5] years	45.8%	45.2%	x		37.9%	39.1%		
Hypnotic rx (0,3] months	5.0%	3.0%	x		3.5%	2.1%	x	
Hypnotic rx (0, 1] year	8.1%	4.7%	x	x	5.8%	3.4%		
Hypnotic rx (0, 5] years	13.9%	10.2%	x		10.8%	8.5%	x	
SGA rx (0,3] months	12.2%	13.3%	x		4.5%	4.5%		
SGA rx (0, 1] year	15.8%	17.0%	x		6.1%	6.1%	x	
SGA rx (0, 5] years	20.0%	21.6%	x	x	8.7%	8.8%	x	
MH Inpatient stay (0, 3] months	6.7%	6.7%	x	x	4.6%	4.7%	x	x
MH Inpatient stay (0, 1] year	13.2%	12.9%	x	x	9.8%	9.6%	x	x
MH Inpatient stay (0, 5] years	24.2%	23.4%	x	x	20.5%	19.9%	x	
MH outpatient utilization (0, 3] months	79.2%	78.6%	x		21.1%	19.1%	x	
MH outpatient utilization (0, 1] year	87.1%	87.5%	x		31.4%	29.9%	x	
MH outpatient utilization (0, 5] years	91.2%	91.8%	x		45.4%	45.9%	x	

Supplementary Material 1 (Continued)

Predictor	Description	Mental health specialty sample				General medical sample				Included ^a in suicide: Death model	Included ^b in suicide: Attempt model	Death model
		Original		Contemporary		Original		Contemporary				
		n	Mean or %	N	Mean or %	N	Mean or %	N	Mean or %			
mh_ed_pre3m	MH ED utilization (0, 3] months	10,275,853	10.2 %	6,832,439	11.8 %	9,685,206	8.2 %	3,987,078	9.5 %	x	x	x
mh_ed_pre1y_cumulative	MH ED utilization (0, 1] year		20.0 %		22.5 %		16.7 %		18.2 %	x	x	x
mh_ed_pre5y_cumulative	MH ED utilization (0, 5] years		34.2 %		36.9 %		30.7 %		31.9 %	x	x	
any_sui_att_pre3m	Prior suicide attempt (0, 3] months		1.2 %		1.3 %		0.3 %		0.4 %	x	x	
any_sui_att_pre1y_cumulative	Prior suicide attempt (0, 1] year		2.4 %		2.5 %		0.7 %		0.9 %	x	x	
any_sui_att_pre5y_cumulative	Prior suicide attempt (0, 5] years		4.1 %		4.6 %		1.7 %		2.1 %	x	x	x
lvi_sui_att_pre3m	LVI suicide attempt (0, 3] months		0.3 %		0.3 %		0.1 %		0.1 %			
lvi_sui_att_pre1y_cumulative	LVI suicide attempt (0, 1] year		0.6 %		0.6 %		0.1 %		0.2 %			
lvi_sui_att_pre5y_cumulative	LVI suicide attempt (0, 5] years		1.0 %		1.2 %		0.3 %		0.4 %	x	x	
ovi_sui_att_pre3m	OVI suicide attempt (0, 3] months		0.0 %		0.0 %		0.0 %		0.0 %			
ovi_sui_att_pre1y_cumulative	OVI suicide attempt (0, 1] year		0.1 %		0.1 %		0.0 %		0.0 %			
ovi_sui_att_pre5y_cumulative	OVI suicide attempt (0, 5] years		0.1 %		0.1 %		0.1 %		0.1 %			
any_inj_poi_pre3m	Any Inj/Poi DX (0, 3] months		11.0 %		11.7 %		10.1 %		10.6 %	x	x	
any_inj_poi_pre1y_cumulative	Any Inj/Poi DX (0, 1] year		28.4 %		30.3 %		25.6 %		27.7 %	x	x	x
any_inj_poi_pre5y_cumulative	Any Inj/Poi DX (0, 5] years		59.0 %		63.3 %		55.6 %		58.8 %	x	x	
Charlson_score	Charlson score on index date		0.5		0.6		0.8		0.8	x	x	x
Charlson_mi	Individual Charlson indicators		1.3 %		1.3 %		2.8 %		2.4 %			
Charlson_chd	Individual Charlson indicators		1.1 %		1.2 %		2.7 %		2.9 %			
Charlson_pvd	Individual Charlson indicators		0.9 %		3.7 %		2.5 %		6.1 %			

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Supplementary Material 1 (Continued)

Predictor	Description	Mental health specialty sample				General medical sample				Included ^a in suicide:	
		Original	Contemporary	Attempt model	Death model	Original	Contemporary	Attempt model	Death model	Attempt model	Death model
		n = 10,275,853 Mean or %	N = 6,832,439 Mean or %			N = 9,685,206 Mean or %	N = 3,987,078 Mean or %				
Charlson_cvd	Individual Charlson indicators	1.6 %	1.7 %			3.0 %	3.0 %			x	
Charlson_dem	Individual Charlson indicators	0.1 %	0.6 %			0.2 %	1.2 %				
Charlson_cpd	Individual Charlson indicators	13.2 %	14.2 %	x		14.8 %	14.9 %				
Charlson_rhd	Individual Charlson indicators	0.9 %	1.1 %			1.5 %	1.6 %				
Charlson_pud	Individual Charlson indicators	0.5 %	0.5 %			0.6 %	0.7 %				
Charlson_mlivd	Individual Charlson indicators	0.6 %	0.8 %			0.7 %	1.0 %				
Charlson_diab	Individual Charlson indicators	8.1 %	9.4 %			12.0 %	12.6 %			x	
Charlson_diabc	Individual Charlson indicators	3.7 %	4.4 %			6.5 %	6.9 %				
Charlson_plegia	Individual Charlson indicators	0.2 %	0.3 %			0.4 %	0.4 %				
Charlson_ren	Individual Charlson indicators	3.9 %	4.9 %			7.3 %	7.5 %				
Charlson_malign	Individual Charlson indicators	2.3 %	2.4 %			3.5 %	3.4 %				
Charlson_slivd	Individual Charlson indicators	0.3 %	0.3 %			0.4 %	0.4 %				
Charlson_mst	Individual Charlson indicators	0.5 %	0.6 %			0.8 %	0.8 %				
Charlson_aids	Individual Charlson indicators	0.3 %	0.3 %			0.4 %	0.3 %				
Raceasian	VDW Race 1 = Asian	4.5 %	5.5 %		x	6.0 %	4.5 %			x	x
Raceblack	VDW Race 1 = Black	9.0 %	9.2 %		x	8.2 %	8.2 %			x	
Racehp	VDW Race 1 = HI/PI	1.1 %	1.0 %		x	1.6 %	0.8 %				
Racein	VDW Race 1 = Native American / Alaskan Native	1.0 %	0.9 %		x	1.1 %	1.0 %			x	
Racemuot	VDW Race 1 = Multiple/other	0.6 %	0.3 %			0.7 %	0.7 %				x
Raceun	VDW Race 1 = Unknown	15.5 %	17.5 %		x	16.3 %	15.0 %			x	x
Racewh	VDW Race 1 = White	68.3 %	65.6 %			66.1 %	69.8 %				

Supplementary Material 1 (Continued)

Predictor	Description	Mental health specialty sample				General medical sample			
		Original	Contemporary	Included ^a in suicide:		Original	Contemporary	Included ^a in suicide:	
		n = 10,275,853 Mean or %	N = 6,832,439 Mean or %	Attempt model	Death model	N = 9,685,206 Mean or %	N = 3,987,078 Mean or %	Attempt model	Death model
Hispanic	VDW Hispanic = Yes	22.3 %	27.8 %			22.7 %	23.3 %		
census_missing	Census variables observed (0/1)	10.2 %	3.8 %	x		9.7 %	15.5 %		
hhld_inc_lt40k	Neighborhood income 40 (<\$40k/>=\$40k)	11.1 %	12.5 %			12.9 %	12.1 %		
coll_deg_lt25p	Neighborhood education (<25% coll grad/>= 25% coll grad)	39.2 %	44.2 %	x		44.0 %	40.8 %	x	
phqNumber90	Total # of PHQs in prior 90 days	0.3	0.7	x		0.1	0.2	x	
phqMode90_0	Modal PHQ9 value in prior 90 days = 0	8.4 %	21.3 %	x		2.7 %	6.8 %		
phqMode90_1	Modal PHQ9 value in prior 90 days = 1	2.5 %	6.5 %	x		0.6 %	1.6 %		
phqMode90_2	Modal PHQ9 value in prior 90 days = 2	1.0 %	2.2 %	x		0.3 %	0.6 %		
phqMax90_0	Maximum PHQ9 value in prior 90 days = 0	7.5 %	19.7 %			2.6 %	6.6 %		
phqMax90_1	Maximum PHQ9 value in prior 90 days = 1	2.7 %	6.9 %			0.7 %	1.7 %		
phqMax90_2	Maximum PHQ9 value in prior 90 days = 2	1.3 %	2.8 %	x		0.3 %	0.6 %		
phqMax90_3	Maximum PHQ9 value in prior 90 days = 3	1.3 %	2.5 %			0.2 %	0.5 %		
phqNumber183	Total # of PHQs in prior 183 days	0.5	1.1	x		0.1	0.3	x	
phqMode183_0	Modal PHQ9 value in prior 183 days = 0	10.1 %	25.6 %			3.9 %	9.9 %		
phqMode183_1	Modal PHQ9 value in prior 183 days = 1	2.9 %	7.4 %			0.9 %	2.2 %		
phqMode183_2	Modal PHQ9 value in prior 183 days = 2	1.2 %	2.4 %			0.3 %	0.7 %		
phqMax183_0	Maximum PHQ9 value in prior 183 days = 0	8.7 %	22.5 %			3.7 %	9.3 %		
phqMax183_1	Maximum PHQ9 value in prior 183 days = 1	3.3 %	8.3 %	x		1.0 %	2.4 %		
phqMax183_2	Maximum PHQ9 value in prior 183 days = 2	1.6 %	3.5 %			0.4 %	0.9 %		

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Supplementary Material 1 (Continued)

	Mental health specialty sample				General medical sample			
	Original	Contemporary	Included ^a in suicide:		Original	Contemporary	Included ^a in suicide:	
	n = 10,275,853	N = 6,832,439	Attempt model	Death model	N = 9,685,206	N = 3,987,078	Attempt model	Death model
Predictor	Mean or %	Mean or %			Mean or %	Mean or %		
phqMax183_3	1.6%	3.3%			0.4%	0.8%		
phqNumber365	0.7	1.7			0.2	0.4	x	
phqMode365_0	11.8%	29.1%			5.5%	14.0%		
phqMode365_1	3.2%	8.0%			1.2%	2.9%		
phqMode365_2	1.3%	2.5%	x		0.4%	0.9%	x	
phqMax365_0	9.7%	24.3%	x		5.1%	12.8%	x	
phqMax365_1	3.8%	9.3%			1.3%	3.3%	x	
phqMax365_2	1.9%	4.2%	x		0.6%	1.3%	x	
phqMax365_3	2.0%	4.1%	x		0.5%	1.1%	x	
dep_dx_pre5y_cumulative	74.0%	76.8%	x	x	54.5%	65.7%	x	x
anx_dx_pre5y_cumulative	61.9%	79.6%	x	x	46.1%	71.4%	x	x
bip_dx_pre5y_cumulative	13.3%	12.6%	x	x	5.8%	6.0%	x	x
sch_dx_pre5y_cumulative	3.6%	4.3%	x	x	1.7%	1.8%	x	
oth_dx_pre5y_cumulative	5.0%	5.9%	x		2.8%	3.2%	x	
dem_dx_pre5y_cumulative	3.8%	1.4%	x		4.4%	2.9%	x	
add_dx_pre5y_cumulative	11.0%	11.8%	x		5.5%	8.7%		
asd_dx_pre5y_cumulative	1.2%	1.6%	x		0.5%	1.1%		
per_dx_pre5y_cumulative	6.3%	15.8%	x		2.3%	9.7%	x	
alc_dx_pre5y_cumulative	13.0%	15.2%	x	x	6.3%	12.5%	x	x

Supplementary Material 1 (Continued)

Predictor	Description	Mental health specialty sample				General medical sample			
		Original	Contemporary	Included ^a in suicide:		Original	Contemporary	Included ^a in suicide:	
		n = 10,275,853 Mean or %	N = 6,832,439 Mean or %	Attempt model	Death model	N = 9,685,206 Mean or %	N = 3,987,078 Mean or %	Attempt model	Death model
dru_dx_pre5y_cumulative	Drug use disorder DX, [0,5] years prior	26.4%	16.1%	x		17.1%	16.3%	x	
pts_dx_pre5y_cumulative	PTSD DX, [0,5] years prior	8.9%	10.4%	x		3.7%	4.8%	x	
eat_dx_pre5y_cumulative	Eating disorder DX, [0,5] years prior	3.4%	3.8%	x		1.0%	1.2%	x	
tbi_dx_pre5y_cumulative	TBI DX, [0,5] years prior	2.7%	3.5%			2.2%	3.2%	x	
phq8_index_score_calc	PHQ8 total score	0.9	2.3	x		0.5	1.4	x	x
phq8_missing	PHQ8 missing at visit (1 if missing)	90.8%	78.0%			94.9%	84.8%		
q9_0	PHQ9 = 0 at index visit	7.2%	17.3%	x		3.9%	10.1%	x	
q9_1	PHQ9 = 1 at index visit	1.7%	3.8%	x		0.7%	1.6%	x	x
q9_2	PHQ9 = 2 at index visit	0.6%	1.1%	x		0.2%	0.5%	x	x
q9_3	PHQ9 = 3 at index visit	0.4%	0.8%	x		0.1%	0.3%	x	x

^aThese show which predictors were selected (either as a main effect or within an interaction term) for final inclusion in the published models. Note: These are the candidate predictors (interactions not shown) that were included in variable selection models during development of the previously published models.