Supplemental digital content for Dyrbye LN, Wittlin NM, Hardeman RR, Yeazel M, Herrin J, Dovidio JF, Burke SE, Cunningham B, Phelan SM, Shanafelt TD, van Ryn M. A Prognostic Index to Identify the Risk of Developing Depression Symptoms Among U.S. Medical Students Derived From A National, Four-Year Longitudinal Study. Acad Med.

## Supplemental Digital Table 1

Factors (Excluding Baseline Symptoms of Depression) Independently Associated With End of Year 4 Depression Symptoms on Multivariate Logistic Analysis Using Bootstrap Methods and Risk Scores Based on 2,455 U.S. Medical Students in the Discovery Cohort

Characteristic and associated factors	Odds ratio <sup>a</sup>	P value	Risk score
Non-white (vs White)	1.42(1.14-1.75)	.002	1
Not Hispanic or Latino (vs. Hispanic or	1.72 (1.12 – 2.64)	.01	1
Latino)			
Born outside US (vs. US-born)	1.39 (1.06 – 1.82)	.02	1
High stress (vs not) <sup>b</sup>	2.33 (1.91 – 2.85)	< .0001	2
High negative coping (vs not) <sup>c</sup>	1.98 (1.63 – 2.41)	< .0001	1
Low social support (vs not)d	1.76 (1.43 – 2.17)	< .0001	1
Middle tertile tuition cost (vs low)	1.26 (1.03 – 1.54)	0.02	1

 $<sup>^{</sup>a}$ Odds ratio > 1 indicates increased risk of depressive symptoms (as determined by a score of  $\geq 8$  on the Patient-Reported Outcome Measurement Information System [PROMIS] depression short form 4a).

<sup>&</sup>lt;sup>b</sup>High stress defined by having a score  $\geq \frac{1}{2}$  standard deviation (SD) above the mean on the 4-item Perceived Stress Scale.

<sup>&</sup>lt;sup>c</sup>High negative coping defined by having a score  $\geq \frac{1}{2}$  SD above the mean on the negative coping sub-scale of a the Brief COPE Inventory.

<sup>&</sup>lt;sup>d</sup>Low social support defined as having a score  $\geq \frac{1}{2}$  SD deviation below the mean on the Medical Outcomes Study Social Support Measure.

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## Supplemental Digital Table 2

## Prevalence of End of Y4 Depression by Baseline Depression Prognostic Index Score (Excluding Baseline Depression Symptoms) in the Discovery and Replication Cohort<sup>a</sup>

		Depression <sup>b</sup> at	No depression at			
Discovery	Students	end of Y4	end of Y4		OR	
cohort	(n = 2,455)	(n = 773)	(n = 1,682)	P value	(95% CI)	P value
Depression				<.0001		
Prognostic						
Index Score						
Low risk	1,031 (42.0%)	208 (20.2%)	823 (79.8%)		Referent	
(0,1)						
Intermediate	906 (36.9%)	286 (31.6%)	620 (68.4%)		1.83(1.48 - 2.25)	< .0001
risk (2,3)						
High risk	289 (11.8%)	135 (46.7%)	154 (53.3%)		3.47(2.63 - 4.57)	< .0001
(4)						
Very high	229 (9.3%)	144 (62.9%)	85 (37.1%)		6.70(4.92 - 9.12)	< .0001
risk (5+)					, ,	
			No			
		Depression <sup>b</sup> at	depression at			
Replication	Students	end of Y4	the end of Y4		OR	
cohort	(n = 1,288)	(n = 394)	(n = 894)	P value	(95% CI)	P value
Depression				< .0001		
Prognostic						
Index Score						
Low risk	565 (43.9%)	100 (17.7%)	465 (82.3%)		Referent	
(0,1)						
Intermediate	466 (36.2%)	156 (33.5%)	310 (66.5%)		2.34(1.75 - 3.13)	< .0001
risk (2,3)						
High risk	151 (11.7%)	76 (50.3%)	75 (49.7%)		4.71 (3.21 – 6.93)	< .0001
(4)						
Very high	106 (8.2%)	62 (58.5%)	44 (41.5%)		6.55(4.21 - 10.20)	< .0001
risk (5+)						

Abbreviations: Y4 indicates Year 4; OR, odds ratio; CI, confidence interval.

<sup>&</sup>lt;sup>a</sup>Percentages in the *Students* column indicate percentage of students in the Discovery or Replication Cohort; percentages in the *Depression at end of Y4* and *No depression at end of Y4* columns indicate percentage of students in each cohort at each level of risk.

bThe authors used a score of  $\geq$  8 on the Patient-Reported Outcome Measurement Information System (PROMIS) depression short form 4a to identify depression symptoms.