

## Updated Analysis of DESE Data from Massachusetts on 3 versus 6 feet of Physical Distancing for COVID-19 in School Settings

This short note updates results in the published paper, *Effectiveness of 3 Versus 6 ft of Physical Distancing for Controlling Spread of Coronavirus Disease 2019 Among Primary and Secondary Students and Staff: A Retrospective, Statewide Cohort Study* (van den Berg, Schechter-Perkins, & Jack et al., 2021). The original paper uses data from Massachusetts to study the relationship between choice about physical distancing in schools and COVID-19 case rates during part of the 2020-21 school year. The conclusion of the paper was that choice of 3 versus 6 feet of distance did not significantly impact COVID-19 rates in students or staff.

Subsequent to publication, we received updated data on student enrollment by mode for 3 of the biweekly periods. The original data for these periods had contained an error affecting a subset of districts. (We are grateful to Brennan Klein for calling this to our attention). The change in the data affects approximately 5% of district-weeks in the analysis; 9 of the original 3625 district weeks are excluded due to in-person enrollments below our cutoff.

Below, we present updated versions of the figures and tables in the paper. The changes are minor and the overall conclusions of the paper remain unchanged. Full replication code and updated data are available [here](#).

**Table 1. COVID-19 Daily Incidence Among Students and School Staff Participating in In-Person Instruction in Massachusetts as Reported to the Department of Elementary and Secondary Education**

Week End Date	Daily Student Cases per 100,000; $\geq 6$ feet of physical distancing	Daily Student Cases per 100,000; $\geq 3$ feet of physical distancing	Daily Staff Cases per 100,000; $\geq 6$ feet of physical distancing	Daily Staff Cases per 100,000; $\geq 3$ feet of physical distancing
Sep 30, 2020	1.38	2.17	2.09	3.23
Oct 7, 2020	2.90	3.26	6.26	2.42
Oct 14, 2020	2.61	2.95	6.89	4.03
Oct 21, 2020	3.59	4.32	5.19	6.47
Oct 28, 2020	5.86	6.21	9.29	7.91
Nov 4, 2020	4.81	4.67	12.85	13.47
Nov 11, 2020	4.54	7.96	17.13	8.98
Nov 18, 2020	10.12	16.12	25.06	39.86
Nov 25, 2020	7.56	7.59	24.84	22.36
Dec 2, 2020	7.54	12.46	31.73	24.62
Dec 9, 2020	16.25	11.28	54.30	44.31
Dec 16, 2020	17.58	17.64	48.03	53.78
Dec 23, 2020	14.92	16.19	46.32	53.36
Jan 13, 2021	15.65	16.48	48.10	44.59
Jan 20, 2021	17.49	11.46	45.90	42.65
Jan 27, 2021	18.01	17.63	38.14	43.64

**Table 2. Distribution of Infection Control Interventions Implemented in Massachusetts Public Schools with Any In-Person Instruction**

Infection Control Intervention	Districts	Students			Staff		
		Total N	≥6 Feet	≥3 Feet	Total N	≥6 Feet	≥3 Feet
<b>School Model<sup>a</sup></b>							
High on-campus enrollment	90	186,587	122,925	55,289	27,415	18,880	8,123
Lower on-campus enrollment	161	329,413	260,544	62,375	71,975	58,160	11,740
Entire school district using the same model	188	434,679	319,728	101,667	82,907	64,118	16,823
<b>Universal Masking<sup>b</sup></b>							
Among all staff	251	516,000	383,469	117,665	99,390	77,040	19,863
Among all students	251	516,000	383,469	117,665	99,390	77,040	19,863
<b>Physical Distancing</b>							
≥6 Feet	194	383,469	383,469	--	77,040	77,040	--
≥3 Feet	48	117,665	--	117,665	19,863	--	19,863
Other (4-5 feet)	9	14,866	--	--	2,487	--	--
<b>Enhanced Cleaning Protocol<sup>c</sup></b>	218	426,686	335,351	76,469	78,290	62,521	13,282
<b>Cohorting (Any)</b>	214	464,208	348,973	100,751	88,264	69,486	16,605
<b>Mandatory Symptom Screens Prior to Entering School Buildings</b>	223	470,887	359,517	99,670	91,428	72,832	16,533
<b>Ventilation Interventions<sup>d</sup></b>	205	415,989	325,921	75,331	76,539	60,891	13,189
<b>Surveillance Testing</b>	5	6,908	6,180	728	2,307	2,181	126
<b>Universal Vaccination Policy<sup>e</sup></b>	251	516,000	383,469	117,665	99,390	77,040	19,863
<b>District Demographic Variables<sup>f</sup></b>							
Children ages 5-17 in poverty (%)		10.47	10.24	12.13	--	--	--
White (%)		65.26	65.10	64.09	--	--	--
Black (%)		6.97	7.36	5.76	--	--	--
Asian (%)		7.58	7.91	6.34	--	--	--
Other (%)		4.23	4.32	3.909	--	--	--
Hispanic (%)		15.99	15.33	19.93	--	--	--

**Table 3. Regression Analysis**

	IRR <sup>a</sup> , Students (unadjusted for community incidence)	IRR, Students (adjusted for community incidence) <sup>b</sup>	IRR Staff (unadjusted for community incidence)	IRR Staff (adjusted for community incidence)
≥6 Feet of Physical Distancing, all Districts (N=3,616) <sup>c,d</sup>	0.846 (0.575 – 1.324)	0.842 (0.603 – 1.317)	0.989 (0.733 – 1.335)	1.015 (0.755-1.366)
≥6 Feet of Physical Distancing, adjusted for district demographics (N=3,603) <sup>e</sup>	0.691 (0.465 - 1.02)	0.709 (0.487 - 1.01)	0.901 (0.663-1.226)	0.915 (0.669-1.252)
≥6 Feet of Physical Distancing, excluding districts with surveillance testing (N=3,545) <sup>d</sup>	0.832 (0.568 – 1.22)	0.827 (0.594 -1.15)	0.971 (0.721 – 1.307)	0.997 (0.743-1.338)
≥6 Feet of Physical Distancing versus < 6 feet of distancing (N=3,754) <sup>f</sup>	0.932 (0.644 – 1.34)	0.904 (0.662 -1.23)	1.096 (0.818 – 1.468)	1.104 (0.830-1.468)

Figure 1 Legend. Incidence of COVID-19 Cases Among Students and School Staff, by Physical Distancing, Reported to DESE During the First 16 Weeks of the 2020-21 Academic Year

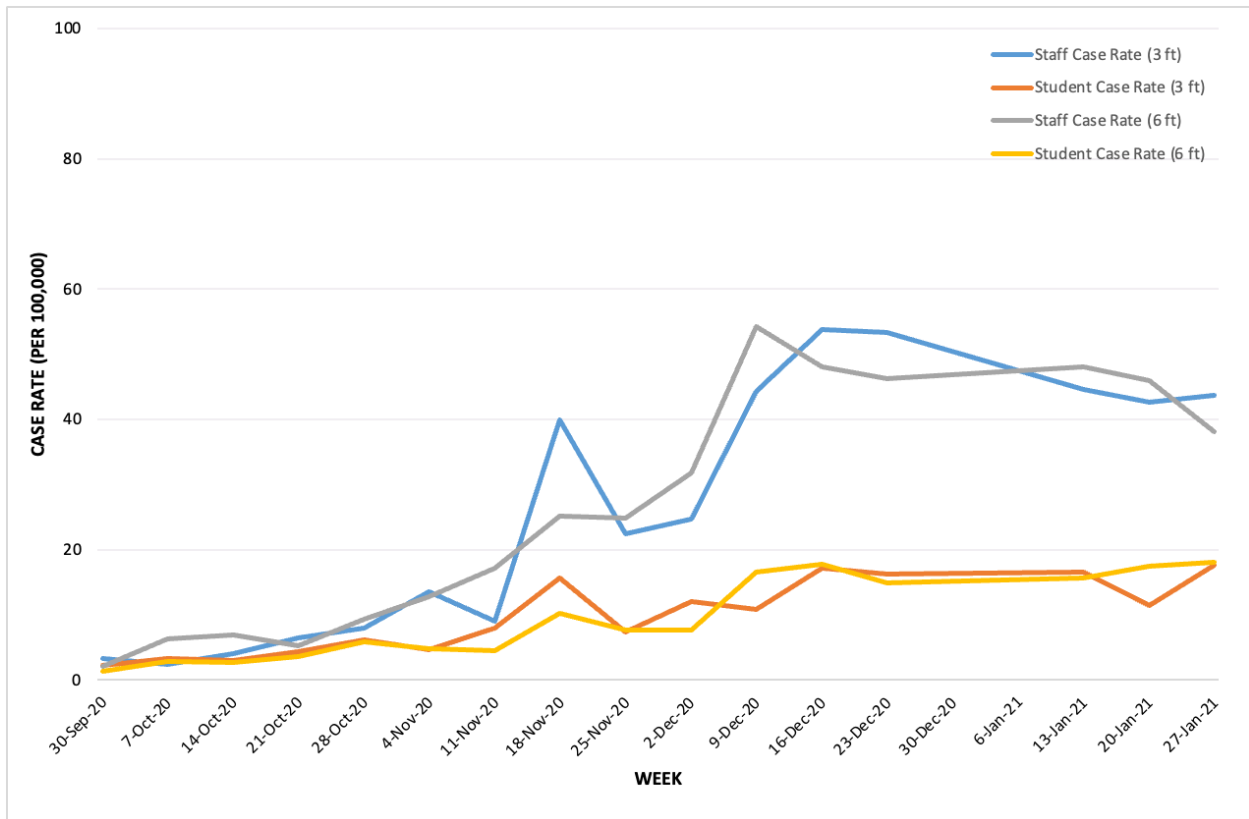


Figure 2 Legend. Incidence of COVID-19 cases Among Students and School Staff Reported to DESE During the First 16 Weeks of the 2020-21 Academic Year

