

Appendix to *Evaluation of a city-wide school-located influenza vaccination program in Oakland, California with respect to vaccination coverage, school absences, and laboratory-confirmed influenza: a matched cohort study*

S5 Table. School absence rate per 100 days and difference-in-differences in absence rate during influenza season

		School absence rate per 100 days during flu season		During flu season		During peak week of flu season (95% CI)	
Season	Student-days during flu season	Intervention	Comparison	Difference-in-difference (95% CI)	p-value	Difference-in-difference (95% CI)	p-value
Illness-specific absences							
2011-13 (Pre intervention)	-	2.84	2.81	-	-	-	-
2014-15	8,545,199	3.34	3.45	-0.16 (-0.54, 0.23)	0.425	-0.61 (-1.18, -0.04)	0.036
2015-16	7,355,539	3.06	3.36	-0.34 (-0.78, 0.10)	0.130	-0.27 (-0.81, 0.27)	0.335
2016-17	7,255,361	3.4	4.03	-0.63 (-1.14, -0.13)	0.014	-0.84 (-1.52, -0.15)	0.017
2017-18	7,971,492	3.29	4.06	-0.80 (-1.28, -0.31)	0.001	-2.13 (-2.87, -1.38)	<0.001
All-cause absences							
2011-13 (Pre intervention)	-	4.85	5.84	-	-	-	-
2014-15	8,545,199	5.56	6.36	0.15 (-0.15, 0.46)	0.326	-0.01 (-0.62, 0.60)	0.976
2015-16	7,355,539	5.24	5.97	0.24 (-0.14, 0.63)	0.216	0.31 (-0.24, 0.86)	0.264

2016-17	7,255,361	5.94	7.47	-0.47 (-0.98, 0.03)	0.067	-0.40 (-1.09, 0.28)	0.249
2017-18	7,971,492	5.77	6.74	0.04 (-0.38, 0.46)	0.842	-1.58 (-2.48, -0.68)	0.001

Each difference-in-difference estimate compares the difference in absence rates in each district in a program year compared to the three pre-program years (2011-2013), which removes any time-invariant differences between groups (measured or unmeasured). Parameters were estimated using a generalized linear model and were adjusted for month, student race, and grade. Standard errors and 95% confidence intervals account for clustering at the school level.

Note: in 2011-12, 2016-17, and 2017-18, the peak week of the percentage of influenza-like illness visits in California were the last week of December, which coincided with school breaks, so for the absentee analysis we shifted the peak week definition to closest week with the next highest percentage of influenza-like illness visits when both school districts were in session.