

**Appendix 2: Two random effects logistic models describing the association between characteristics of patients and physicians being unvaccinated, within the top 10% group, the other 90%\***

		Top 10th Percentile N=1,890,098				Rest 90% N=7,786,837			
Variable	Label	Odds Ratio	95% CI Lower	95% CI Upper	P	Odds Ratio	95% CI Lower	95% CI Upper	P
Patient age group	a. 12-17	1.982	1.951	2.014	<.0001	2.455	2.433	2.479	<.0001
	b. 18-36	1.965	1.940	1.989	<.0001	2.603	2.585	2.621	<.0001
	c. 37-65	1.319	1.304	1.335	<.0001	1.613	1.602	1.624	<.0001
	d. 66+	1.000	.	.	.	1.000	.	.	.
Patient sex	a. Female	0.993	0.985	1.000	0.0556	0.953	0.949	0.957	<.0001
	b. Male	1.000	.	.	.	1.000	.	.	.
Patient Income quintile	a. [1] Lowest	1.662	1.639	1.685	<.0001	1.736	1.723	1.749	<.0001
	b. [2]	1.382	1.363	1.400	<.0001	1.426	1.416	1.436	<.0001
	c. [3]	1.240	1.224	1.257	<.0001	1.265	1.257	1.274	<.0001
	d. [4]	1.120	1.105	1.135	<.0001	1.143	1.135	1.151	<.0001
	e. [5] Highest	1.000	.	.	.	1.000	.	.	.
Patient Ethnic Diversity Quintile	a. [1] Lowest	1.000	.	.	.	1.000	.	.	.
	b. [2]	1.046	1.030	1.062	<.0001	1.006	0.999	1.014	0.1056
	c. [3]	1.077	1.059	1.095	<.0001	0.988	0.980	0.996	0.0035
	d. [4]	1.096	1.077	1.115	<.0001	1.020	1.011	1.029	<.0001
	e. [5] Highest	1.021	1.003	1.040	0.0230	1.025	1.016	1.035	<.0001
Patient Comorbidity (ACG)	a. No/low comorbidity	2.040	2.012	2.070	<.0001	1.783	1.768	1.797	<.0001
	b. Moderate comorbidity	1.088	1.072	1.104	<.0001	1.054	1.045	1.063	<.0001
	c. High comorbidity	1.000	.	.	.	1.000	.	.	.
RIO Score Group - Patient	a. Urban	1.000	.	.	.	1.000	.	.	.

	b. Small town	1.237	1.218	1.256	<.0001	1.261	1.251	1.271	<.0001
	c. Rural	1.511	1.469	1.554	<.0001	1.480	1.462	1.499	<.0001
Immigrated in last 10 years	a. Yes	0.966	0.952	0.979	<.0001	1.003	0.992	1.014	0.5767
	b. No	1.000	.	.	.	1.000	.	.	.
Physician age group	a. <45	1.000	.	.	.	1.000	.	.	.
	b. 45-64	1.080	1.007	1.158	0.0308	1.078	1.058	1.098	<.0001
	c. 65-74	1.131	1.032	1.240	0.0084	1.126	1.094	1.158	<.0001
	d. 75+	1.457	1.115	1.904	0.0058	1.419	1.348	1.495	<.0001
Physician sex	a. Female	0.952	0.899	1.008	0.0930	0.909	0.894	0.925	<.0001
	b. Male	1.000	.	.	.	1.000	.	.	.
Enrolment model	a. CAP	1.000	.	.	.	1.000	.	.	.
	b. FHT	0.899	0.830	0.973	0.0086	0.974	0.955	0.994	0.0102
	c. OGP	0.687	0.488	0.966	0.0309	0.947	0.873	1.028	0.1920
	d. EFS	1.018	0.954	1.086	0.5880	1.195	1.170	1.221	<.0001

ACG= Adjusted clinical group

\*3 separate models “10<sup>th</sup> percentile”, “Rest 90<sup>th</sup>”, and “Total” were conducted for assessing the variables associated with unvaccinated patients adjusted for all the other variables