

## Supplementary Material

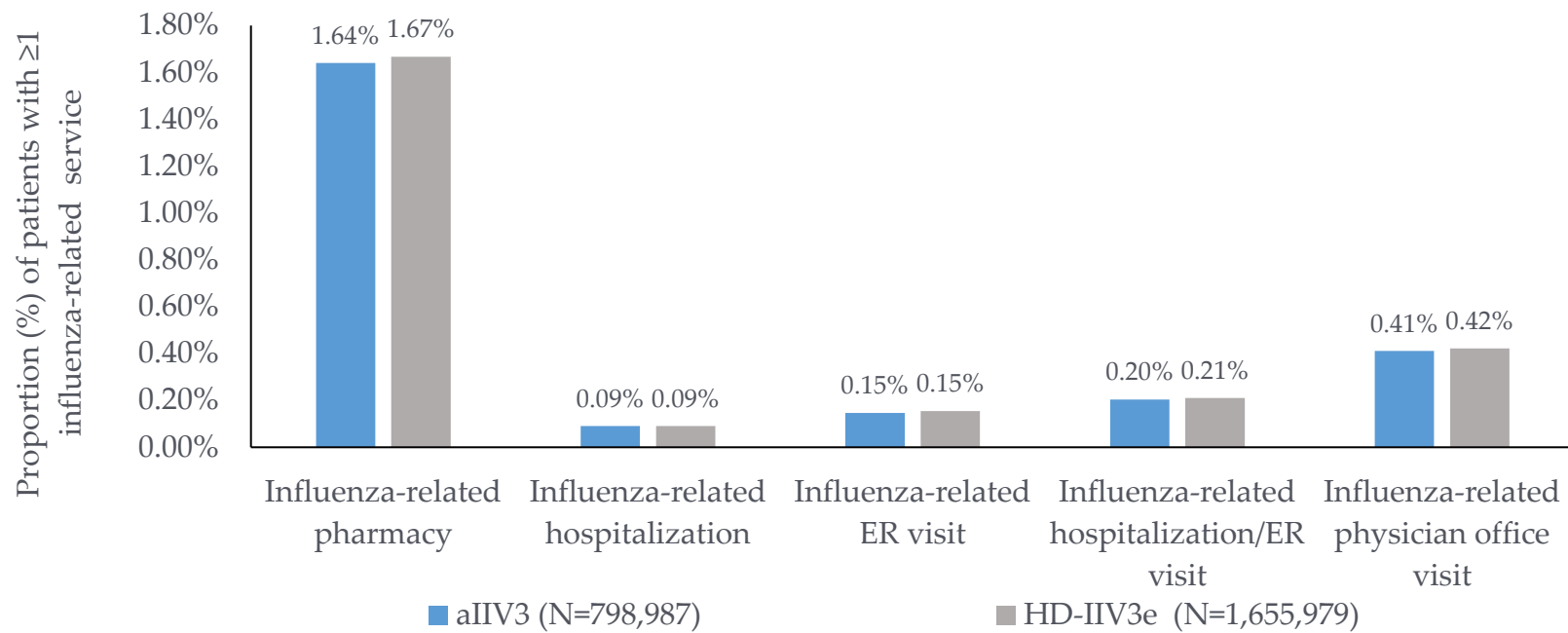
**Table S1. Adjusted rVE (95% CI) – post-IPTW and Poisson regression – aIIV3 vs. HD-IIV3e**

Measure	Adjusted rVE			
	rVE	LCL	UCL	p-value
<b>MAIN ANALYSIS</b>				
Influenza-related hospitalizations/ER visits	3.1%	-2.8%	8.6%	0.2978
All-cause hospitalizations	-0.7%	-1.6%	0.3%	0.1848
Any CRD-related hospitalization/ER visit	0.9%	0.0%	1.7%	0.0483
Pneumonia hospitalizations/ER visit	1.7%	-0.4%	3.7%	0.1153
Asthma/COPD/bronchial hospitalizations/ER visits	0.9%	-0.9%	2.6%	0.3308
Coronary artery hospitalizations/ER visits	-1.7%	-3.5%	0.1%	0.0625
MI hospitalizations/ER visits	-4.5%	-9.0%	-0.2%	0.0396
Congestive heart failure hospitalizations/ER visits	-0.1%	-2.0%	1.8%	0.9364
Cerebrovascular hospitalizations/ER visits	2.0%	-0.7%	4.5%	0.1393
Stroke hospitalizations/ER visits	2.0%	-0.7%	4.6%	0.1385
UTI hospitalizations	2.3%	-1.1%	5.6%	0.1846
<b>AGE GROUP 65 - 74</b>				
Influenza-related hospitalization/ER visit	4.5%	-4.0%	12.4%	0.2854
Any CRD-related hospitalizations/ER visits	1.4%	0.0%	2.7%	0.0435
<b>AGE GROUP 75 - 84</b>				
Influenza-related hospitalization/ER visit	6.6%	-3.2%	15.6%	0.1803
Any CRD-related hospitalizations/ER visits	0.6%	-0.8%	2.0%	0.3916
<b>AGE GROUP ≥85</b>				
Influenza-related hospitalization/ER visit	-8.8%	-25.0%	5.3%	0.2348
Any CRD-related hospitalizations/ER visits	-0.1%	-1.9%	1.7%	0.9568
<b>HIAP</b>				
Influenza-related hospitalization/ER visit	3.6%	-2.4%	9.3%	0.2359
Any CRD-related hospitalizations/ER visits	1.5%	0.5%	2.5%	0.0026
<b>SHORTENED INFLUENZA PERIOD</b>				
Influenza-related hospitalization/ER visit	2.8%	-4.2%	9.4%	0.4261
Any CRD-related hospitalizations/ER visits	0.8%	-0.2%	1.7%	0.1007

DOUBLY ROBUST				
Any CRD-related hospitalization/ER visit	3.0%	-2.9%	8.5%	0.3109
Influenza-related hospitalizations/ER visits	0.7%	-0.1%	1.6%	0.0942

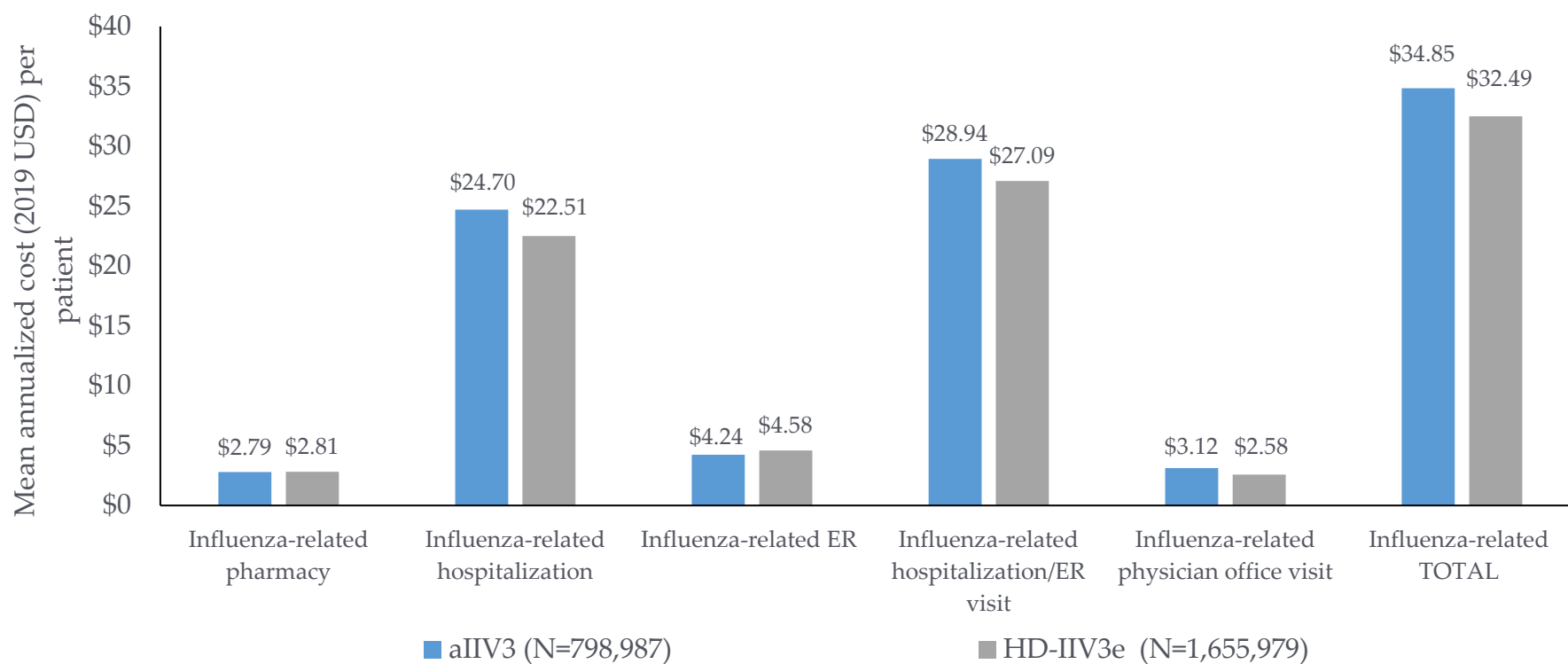
aIIV3 = adjuvanted trivalent influenza vaccine; CRD = cardio-respiratory disease; ER = emergency room; HD-IIV3e = high-dose trivalent influenza vaccine;  
rVE = relative vaccine effectiveness; UTI = urinary tract infection

**Figure S1. Proportion of patients with influenza-related HCRU over the variable follow-up period (post-IPTW)**



aIIV3 = adjuvanted trivalent influenza vaccine; ER = emergency room; HD-IIV3e = high-dose trivalent influenza vaccine

**Figure S2. Mean annualized influenza-related healthcare costs over the variable follow-up period (Post-IPTW)**



TOTAL = pharmacy + hospitalization + ER + outpatient office visit

Inpatient cost identified from CDM only

aIIV3 = adjuvanted trivalent influenza vaccine; ER = emergency room; HD-IIV3e = high-dose trivalent influenza vaccine

Table S2: All-cause HCRU and annualized cost during the post-index period - post-IPTW

<i>Vaccine Cohort</i>	aIIV3 (N=798,987)					HD-IIV3e (N=1,655,979)					
Outcome (by visit type)	n	%	Mean	SD	Median	n	%	Mean	SD	Median	p-value <sup>1</sup>
<b><u>Pharmacy</u></b>											
Patients with ≥1 pharmacy claim (n, %)	774,138	96.9%				1,611,321	97.3%				<.0001
Number of pharmacy claims per patient (mean, SD, median)			13.3	11.9	10			13.5	11.6	11	<.0001
<b><u>Inpatient hospitalization</u></b>											
Patients with ≥1 hospitalization (n, %)	16,034	2.0%				33,972	2.1%				0.0204
Number of hospitalizations per patient (mean, SD, median)			0.0	0.2	0			0.0	0.2	0	0.0796
<b><u>ER</u></b>											
Patients with ≥1 ER visit (n, %) (in either Dx or CDM based on service dates)	99,499	12.5%				207,433	12.5%				0.1045
Number of ER visits per patient (mean, SD, median)			0.2	0.6	0			0.2	0.6	0	0.3450
<b><u>Physician office visits</u></b>											
Patients with ≥1 physician office visit (n, %)	614,623	76.9%				1,264,841	76.4%				<.0001
Number of physician office visits per patient (mean, SD, median)			3.5	4.9	2			3.4	4.7	2	<.0001
<b><u>Total annualized Costs</u></b>											
Total annualized cost per patient	798,987	100%	\$14,944	\$64,666	\$3,917	1,655,979	100%	\$14,902	\$49,619	\$3,980	0.5730
Total annualized inpatient cost per patient	798,987	100%	\$2,020	\$25,805	\$0	1,655,979	100%	\$2,060	\$25,402	\$0	0.2486
Total annualized ER cost per patient	798,987	100%	\$427	\$2,629	\$0	1,655,979	100%	\$430	\$2,614	\$0	0.3992
Total annualized outpatient cost per patient	798,987	100%	\$8,183	\$53,942	\$1,045	1,655,979	100%	\$8,014	\$34,334	\$1,017	0.0030
Total annualized pharmacy cost per patient	798,987	100%	\$4,313	\$13,649	\$1,028	1,655,979	100%	\$4,397	\$13,417	\$1,083	<.0001

<sup>1</sup>Pair-wise comparisons conducted using weighted t-tests (mean) for continuous variables and weighted chi-square tests for categorical variables

Variable follow-up period: (index date + 14) to end of influenza season

aIIV3 = adjuvanted trivalent influenza vaccine; ER = emergency room; HD-IIV3e = high-dose trivalent influenza vaccine