

Table 1: Marginal effects for ordered probit models of the importance of vaccination. Results for subjects not vaccinated at houses with flu clinics.

	Not Very Important	Somewhat Important	Important	Very Important
	<i>Without Effect of Flu</i>			
Share of Friends in Treated Houses	-0.5430** (0.2075)	0.0778 (0.0495)	0.2685* (0.1078)	0.1966* (0.0868)
Observations	160			
Log Likelihood	-196.2			
Pseudo- $R^2$	0.0159			
	<i>With Effect of Flu</i>			
Share of Friends in Treated Houses × Not Recent Flu Victim	-0.7520** (0.2642)	0.0872 (0.0816)	0.3670** (0.1285)	0.2978* (0.1284)
Share of Friends in Treated Houses × Recent Flu Victim	-0.2515 (0.3303)	0.0443 (0.0632)	0.1268 (0.1664)	0.0804 (0.1091)
Recent Flu Victim	-0.0872 (0.1060)	0.0279 (0.0353)	0.0402 (0.0489)	0.0191 (0.0239)
Observations	160			
Log Likelihood	-195.4			
Pseudo- $R^2$	0.0197			

Note: In the upper panel, the marginal effects represent the changes in the percent probabilities of an individual selecting the given ratings when an extra 1 percent of her friends move to houses with clinics. In the lower panel, the marginal effects are calculated so as to have the following interpretations. When an additional 1 percent of one's friends move to treated houses, the percent probabilities of a healthy person and a flu victim choosing the given ratings change by the marginal effects in the first and second pairs of rows. If a healthy person with no friends in treated houses becomes a flu victim, then the percent probabilities of her selecting the given ratings change by the marginal effects in the third pair of rows. Standard errors in parentheses. \* Significant at 5 percent level. \*\* Significant at 1 percent level.

Table 2: OLS estimates of social effects on beliefs about the influenza virus and the flu vaccine. Results for subjects not vaccinated at houses with flu clinics.

	Probability of Flu if Unvaccinated	Probability of Flu if Vaccinated	Cost of Having Flu	Effect of Vaccine in Preventing Flu	Valuation for Health Benefits of Vaccine
Share of Friends in Treated Houses	0.2150 (0.1310)	0.4238* (0.1763)	14.41 (52.37)	0.2885* (0.1153)	50.52* (20.10)
Share of Friends in Treated Houses × Recent Flu Victim	-0.4680# (0.2653)	-0.1157 (0.1406)	-231.5* (105.5)	-0.3524 (0.2312)	-110.1** (39.97)
Recent Flu Victim	0.0842 (0.0602)	0.0920** (0.0319)	42.41# (24.00)	-0.0078 (0.0524)	11.77 (9.095)
Constant	0.3820** (0.0301)	0.1638** (0.0164)	49.55** (12.05)	0.2182** (0.0265)	6.764 (4.624)
Observations	160	160	159	160	159
R <sup>2</sup>	0.0168	0.0361	0.0005	0.0381	0.0387

Note: Standard errors in parentheses. # Significant at 10 percent level. \* Significant at 5 percent level. \*\* Significant at 1 percent level.

Table 3: Probit estimates by gender for effects of male and female friends on vaccination decisions.

Vaccinated at Non-Residential Clinic				
	<i>With Overflow Dormitories</i>		<i>Without Overflow Dormitories</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
Share of Male Friends in Treated Houses	0.9104** (0.3460) [0.2370]	-0.0932 (0.2754) [-0.0253]	1.0155** (0.3757) [0.2646]	-0.0684 (0.2813) [-0.0187]
Share of Female Friends in Treated Houses	-0.0187 (0.2961) [-0.0049]	0.2627 (0.3425) [0.0712]	0.2328 (0.3164) [0.0607]	0.2214 (0.3520) [0.0604]
Constant	-1.0566** (0.1302)	-0.9056** (0.1105)	-1.1211** (0.1419)	-0.8966** (0.1155)
Observations	274	331	238	302
Log-likelihood	-128.26	-160.77	-111.36	-147.52
Pseudo- $R^2$	0.0260	0.0021	0.0350	0.0015

Note: Only students with both female and male friends are included. Standard errors in parentheses. Marginal effects in brackets. \*\* Significant at 1 percent level.

Table 4: Probit estimates for effects of first- and second-order links on vaccination decisions.

Vaccinated at Non-Residential Clinic				
	<i>With Overflow Dormitories</i>		<i>Without Overflow Dormitories</i>	
Share of First-Order Links in Treated Houses	0.3692 (0.3622) [0.0997]	0.5592 (0.3741) [0.1541]	0.5738 (0.3826) [0.1546]	0.7753* (0.3959) [0.2123]
Share of Second-Order Links in Treated Houses	0.0523 (0.5219) [0.0141]	-0.1027 (0.5374) [-0.0283]	-0.1290 (0.5516) [-0.0348]	-0.2739 (0.5690) [-0.0750]
Male Gender		-0.1023 (0.1079) [-0.0280]		-0.1405 (0.1153) [-0.0381]
Constant	-0.9653** (0.1207)	-0.8892** (0.1329)	-0.9565** (0.1288)	-0.8735** (0.1412)
Observations	776	737	692	658
Log-likelihood	-375.61	-363.41	-334.17	-322.54
Pseudo- $R^2$	0.0028	0.0056	0.0048	0.0095

Note: Standard errors in parentheses. Marginal effects in brackets. \* Significant at 5 percent level. \*\* Significant at 1 percent level.

Table 5: Probit estimates for effects of in- and out-links on vaccination decisions.

Vaccinated at Non-Residential Clinic				
	<i>With Overflow Dormitories</i>		<i>Without Overflow Dormitories</i>	
Share of In-Links in Treated Houses	0.1707 (0.2535) [0.0464]	0.1537 (0.2602) [0.0426]	0.2364 (0.2629) [0.0646]	0.2293 (0.2708) [0.0637]
Share of Out-Links in Treated Houses	0.1838 (0.2711) [0.0500]	0.3094 (0.2784) [0.0858]	0.1929 (0.2839) [0.0528]	0.3238 (0.2924) [0.0900]
Male Gender		-0.0955 (0.1095) [-0.0263]		-0.1346 (0.1167) [-0.0371]
Constant	-0.9407** (0.0732)	-0.8942** (0.0857)	-0.9477** (0.0777)	-0.8924** (0.0900)
Observations	747	710	666	634
Log-likelihood	-363.83	-352.11	-326.12	-315.10
Pseudo- $R^2$	0.0025	0.0050	0.0038	0.0077

Note: Only students with both in- and out-links are included. Standard errors in parentheses. Marginal effects in brackets. \*\* Significant at 1 percent level.

Table 6: Probit estimates by past vaccination behavior of social effects on vaccination decisions.

Vaccinated at Non-Residential Clinic				
	<i>With Overflow Dormitories</i>		<i>Without Overflow Dormitories</i>	
	<i>Vaccinated in Freshman Year</i>			
Share of Friends in Treated Houses	1.0233* (0.4382) [0.3541]	1.2195** (0.4537) [0.4186]	0.8934# (0.4576) [0.3154]	1.0922* (0.4734) [0.3802]
Male Gender		-0.4199* (0.1724) [-0.1441]		-0.4322* (0.1819) [-0.1501]
Constant	-0.7038** (0.1226)	-0.5236** (0.1404)	-0.6448** (0.1285)	-0.4749** (0.1469)
Observations	255	245	227	220
Log-likelihood	-155.11	-147.91	-140.67	-134.54
Pseudo- $R^2$	0.0172	0.0397	0.0133	0.0377
	<i>Unvaccinated in Freshman Year</i>			
Share of Friends in Treated Houses	0.0888 (0.3884) [0.0181]	0.1671 (0.4017) [0.0343]	0.3504 (0.4115) [0.0696]	0.4561 (0.4253) [0.0911]
Male Gender		0.2187 (0.1562) [0.0459]		0.1320 (0.1688) [0.0268]
Constant	-1.1736** (0.1050)	-1.2736** (0.1275)	-1.2469** (0.1146)	-1.3145** (0.1363)
Observations	453	429	403	381
Log-likelihood	-169.43	-161.26	-146.79	-139.43
Pseudo- $R^2$	0.0002	0.0068	0.0024	0.0066

Note: No information is available on the vaccination decisions of seniors during freshman year. Standard errors in parentheses. Marginal effects in brackets. # Significant at 10 percent level. \* Significant at 5 percent level. \*\* Significant at 1 percent level.

Table 7: Probit estimates for effects of more and less popular or central friends on vaccination decisions.

Vaccinated at Non-Residential Clinic				
	<i>With Overflow Dormitories</i>		<i>Without Overflow Dormitories</i>	
	<i>Higher and Lower Popularity</i>			
Share of More Popular Friends in Treated Houses	-0.1849 (0.2520) [-0.0497]	-0.0750 (0.2589) [-0.0206]	-0.2630 (0.2696) [-0.0703]	-0.1286 (0.2769) [-0.0350]
Share of Less Popular Friends in Treated Houses	0.5681* (0.2409) [0.1527]	0.5707* (0.2488) [0.1568]	0.7451** (0.2561) [0.1991]	0.7369** (0.2630) [0.2007]
Male Gender		-0.0963 (0.1079) [-0.0263]		-0.1317 (0.1154) [-0.0355]
Constant	-0.9600** (0.0733)	-0.9136** (0.0857)	-0.9828** (0.0785)	-0.9287** (0.0911)
Observations	776	737	692	658
Log-likelihood	-373.88	-362.23	-331.54	-320.87
Pseudo- $R^2$	0.0074	0.0088	0.0126	0.0146
	<i>Higher and Lower Centrality</i>			
Share of More Central Friends in Treated Houses	0.0597 (0.2181) [0.0161]	0.1335 (0.2216) [0.0368]	0.0919 (0.2326) [0.0248]	0.1718 (0.2370) [0.0471]
Share of Less Central Friends in Treated Houses	0.2614 (0.2276) [0.0706]	0.3050 (0.2313) [0.0841]	0.3503 (0.2402) [0.0944]	0.4008 (0.2444) [0.1099]
Male Gender		-0.0969 (0.1077) [-0.0266]		-0.1319 (0.1151) [-0.0358]
Constant	-0.9416** (0.0736)	-0.8962** (0.0857)	-0.9657** (0.0788)	-0.9126** (0.0914)
Observations	776	737	692	658
Log-likelihood	-375.82	-363.76	-334.39	-323.00
Pseudo- $R^2$	0.0023	0.0046	0.0041	0.0081

Note: Standard errors in parentheses. Marginal effects in brackets. \* Significant at 5 percent level. \*\* Significant at 1 percent level.

Table 8: Probit estimates of social effects on the vaccination decisions of students with and without recent flu experience. Results for subjects not vaccinated at houses with flu clinics.

	Have Vaccine		Want Vaccine	
Share of Friends in Treated Houses × Not Recent Flu Victim	2.0620* (1.0077) [0.4973]	2.2529* (1.0122) [0.5034]	1.6027# (0.9297) [0.6196]	1.6379# (0.9317) [0.6285]
Share of Friends in Treated Houses × Recent Flu Victim	0.4092 (1.2179) [0.1012]	0.1985 (1.2416) [0.0457]	0.3449 (0.9959) [0.1374]	0.2563 (0.9939) [0.1012]
Recent Flu Victim	0.3469 (0.3818) [0.0664]	0.3915 (0.3923) [0.0707]	0.2853 (0.3070) [0.1109]	0.2964 (0.3079) [0.1144]
Parent Has MD		0.7844** (0.2590) [0.2135]		0.3015 (0.2317) [0.1178]
Constant	-1.3870** (0.2824)	-1.6672** (0.3083)	-0.3539 (0.2259)	-0.4318# (0.2345)
Observations	160	160	160	160
Log-likelihood	-70.43	-65.86	-109.2	-108.4
Pseudo- $R^2$	0.0303	0.0931	0.0145	0.0222

Note: The marginal effects are calculated so as to have the following interpretations. When an additional 1 percent of one's friends move to treated houses, the percent probabilities of a healthy person and a flu victim getting vaccinated change by the marginal effects in the first and second groups of rows. If a healthy person with no friends in treated houses becomes a flu victim, then the percent probability of being immunized changes by the marginal effects in the third group of rows. The marginal effects in the fourth group of rows represent the effect of having a parent with a medical degree on the probability of receiving a flu shot. Standard errors in parentheses. Marginal effects in brackets. # Significant at 10 percent level. \* Significant at 5 percent level. \*\* Significant at 1 percent level.



Table 9: IV probit estimates for the effects of friends in houses with clinics on the believed health benefits of vaccination and on other costs and benefits of immunization. Results for subjects not vaccinated at houses with flu clinics.

		Have Vaccine	Want Vaccine		
		Value of Health Benefits			
$\beta_H$	Share of Friends in Treated Houses	96.08** (26.26)	96.19** (26.27)	96.08** (26.26)	96.19** (26.27)
$\delta_H$	Share of Friends in Treated Houses × Recent Flu Victim	-110.12** (39.47)	-110.55** (39.55)	-110.12** (39.47)	-110.55** (39.55)
$\gamma_H$	Recent Flu Victim	11.77 (8.98)	11.81 (8.98)	11.77 (8.98)	11.81 (8.98)
$\theta_H$	Parent Has MD		1.11 (6.78)		1.11 (6.78)
$\alpha_H$	Constant	1.37 (6.56)	1.08 (6.79)	1.37 (6.56)	1.08 (6.79)
$\sigma_H$		36.99** (2.07)	36.98** (2.07)	36.99** (2.07)	36.98** (2.07)
		Other Benefits and Costs			
$\beta_O$	Share of Friends in Treated Houses	43.30 (89.17)	28.69 (63.66)	28.69 (64.00)	22.86 (55.54)
$\gamma_O$	Recent Flu Victim	10.49 (14.32)	8.64 (11.73)	7.92 (11.44)	7.12 (10.52)
$\theta_O$	Parent Has MD		35.80 (26.91)		15.36 (15.71)
$\alpha_O$	Constant	-83.71 (62.82)	-79.80# (47.97)	-23.72# (14.35)	-26.05# (14.49)
$\sigma_O$		57.63 (41.98)	46.70# (24.01)	55.83 (37.20)	51.53# (30.63)
$\rho$		-0.2483 (0.5122)	-0.3583 (0.4712)	-0.2190 (0.4421)	-0.2560 (0.4312)
$\beta_H + \beta_O$		139.37 (93.72)	124.88# (69.46)	124.77# (69.61)	119.06# (61.76)

Note: The third through sixth columns provide estimates for the parameters in the first column. The upper and lower panels show the respective effects of the variables in the second column on the perceived health benefits of vaccination and on other costs and benefits of immunization. In the third and fourth columns, vaccinated individuals are those who obtained a flu shot before participating in the HE. In the fifth and sixth columns, this group also includes subjects planning to get immunized later in the season. Standard errors in parentheses. # Significant at 10 percent level. \*\* Significant at 1 percent level.