# Analysis of the Tablet Data

Laure Heidmann, Anirudh Sankar

January 16, 2019

## 1 Introduction

All data was collected in the tablets from December 2016 to March 2018. To study the treatment effects on immunization, we select the following outcomes: the number of administrated vaccines, the number of newly fully immunized children, the number of children that visited the center, and the number of shots delivered from Penta 1 to Measles 1.

We study each one of the three treatments at the assignment level: SC level for *incentives* and *reminders* and village level for *communication*. Since there are fluctuations of SC visits depending on time of the year, we rather study at the month level. However, for *communication* treatment, studying at the village level, instead of village-month level, allows to use the outcomes in log so that it is easier to interpret them.

For the *communication* treatment, we restrict the sample to villages surveyed during the Baseline Survey. Indeed, the seeds were selected in every village of the Baseline thanks to the data collected during the survey, therefore the treatment is only implemented in these villages.

For the *reminders* treatment, we restrict the sample to eligible children, that means to children that came the first time for one of the first four vaccines - BCG and Penta 1 to 3. Therefore, we loose observations for Measles 1 and can not express the outcome in log. To study the spillovers effects, we run two different methods. First, we remove the individually treated children in the SCs of the treatment group, weight the outcomes of these SCs to approximate the outcomes as a whole SC, and then run the regression at the SC level. The second method runs the regression at the child level, including interaction effects with the individual reminders treatment.

1	Intr	oduction	1
<b>2</b>	Ince	ntives Experiments 3	3
	2.1		3
	2.2	SC Level	3
3	Cor	munications Experiments	7
	3.1	Village-Month Level Restricted to Seeds Risk Set	7
	3.2	Village-Month Level Restricted to Other Sets	9
	3.3	Village Level Restricted to Seeds Risk Set	4
	3.4	Village Level Restricted to Other Sets 16	3
4	Tar	geted Reminders Experiments 19	9
	4.1	Global Effect	9
		4.1.1 SC-Month Level	9
		4.1.2 SC Level	1
	4.2	Spillover Effect	3
		4.2.1 SC-Month Level	3
		4.2.2 SC Level $\ldots \ldots 2^{2}$	4
		4.2.3 Child Level	3
	4.3	Individual Effect	7
		4.3.1 Child Level Restricted to Villages Eligible for Reminders 27	7
		4.3.2 Child Level Restricted to Other Sets	3

## 2 Incentives Experiments

## 2.1 SC-Month Level

We run the baseline specification at the SC-Month level. With 755 SC in our sample, we gather more than 10,000 observations to study the effect of *incentives* on immunization. We do not replace missing values, and for outcomes in log we previously transform 0 into 1.

Since control group and treatment group were first assigned at the PHC level, and then within a PHC in the treatment group, SCs were assigned to the different sub-treatments, we can not consider a PHC fixed effect. Therefore, we include district fixed effects, and time fixed effects. Moreover, as observations from a same SC during the year are strongly correlated and belong to the same treatment group, we compute clustered robust standard errors at the SC level, the level of assignment, to not underestimate them.

In the first tables, we do not take into account control variables from the other treatments. We show results with all sub-treatments and then with aggregated sub-treatments. The last table includes a full set of controls for *reminders* - we can not include *communication* since it is implemented at the village level.

				$Dependent \ v$	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
High Slope	$0.115^{**}$ (0.045)	$\begin{array}{c} 0.114^{**} \\ (0.053) \end{array}$	$0.087^{*}$ (0.046)	$0.115^{**}$ (0.047)	$0.094^{*}$ (0.049)	$0.101^{**}$ (0.050)	$\begin{array}{c} 0.131^{***} \\ (0.050) \end{array}$	3.369 (2.512)
High Flat	$0.015 \\ (0.059)$	-0.048 (0.068)	-0.009 (0.059)	$\begin{array}{c} 0.011 \\ (0.062) \end{array}$	-0.007 (0.062)	-0.014 (0.061)	-0.034 (0.063)	-2.324 (2.952)
Low Slope	$0.150^{***}$ (0.053)	$0.122^{**}$ (0.061)	$0.129^{**}$ (0.053)	$0.153^{***}$ (0.055)	$0.149^{***}$ (0.055)	$0.138^{**}$ (0.057)	$0.154^{***}$ (0.056)	$6.954^{*}$ (3.760)
Low Flat	-0.020 (0.061)	-0.085 (0.078)	-0.045 (0.063)	-0.021 (0.062)	-0.027 (0.065)	-0.003 (0.066)	-0.026 (0.066)	-2.177 (2.682)
Control Mean	43.56	7.59	44.91	10.68	9.97	9.19	8.6	44.91
Total Obs. Zeros Replaced	$\frac{10214}{2}$	$\begin{array}{c} 10220\\ 413 \end{array}$	$\begin{array}{c} 10220\\ 0\end{array}$	$\begin{array}{c} 10214 \\ 141 \end{array}$	$\begin{array}{c} 10214 \\ 138 \end{array}$	$\begin{array}{c} 10214 \\ 159 \end{array}$	$\begin{array}{c} 10214\\ 235\end{array}$	$\begin{array}{c} 10220\\ 0\end{array}$

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 1: SC-Month-Level Incentives Results

Note:

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

	Dependent variable:								
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Incentive	$0.082^{**}$ (0.035)	$0.050 \\ (0.040)$	$0.058^{*}$ (0.035)	$0.082^{**}$ (0.036)	$0.069^{*}$ (0.036)	$0.072^{*}$ (0.037)	$0.078^{**}$ (0.037)	$2.393 \\ (1.940)$	
Control Mean	43.56	7.59	44.91	10.68	9.97	9.19	8.6	44.91	
Total Obs.	10214	10220	10220	10214	10214	10214	10214	10220	
Zeros Replaced	2	413	0	141	138	159	235	0	
Note:						:	*p<0.1; **p<0.05;	***p<0	

Table 2: SC-Month-Level Incentives Results

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

### Table 3: SC-Month-Level Incentives Results

				$Dependent \ v$	ariable:			
	Log Vaccine Given (1)	Vaccine Given Fully Immunized C	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1 (7)	Children
			(3)	(4)	(5)	(6)		(8)
Slope	$\begin{array}{c} 0.132^{***} \\ (0.039) \end{array}$	$\begin{array}{c} 0.118^{***} \\ (0.045) \end{array}$	$\begin{array}{c} 0.108^{***} \\ (0.039) \end{array}$	$\begin{array}{c} 0.134^{***} \\ (0.041) \end{array}$	$\begin{array}{c} 0.121^{***} \\ (0.041) \end{array}$	$\begin{array}{c} 0.119^{***} \\ (0.042) \end{array}$	$\begin{array}{c} 0.142^{***} \\ (0.042) \end{array}$	$5.140^{**}$ (2.414)
Flat	-0.002 (0.046)	-0.066 (0.055)	-0.027 (0.046)	-0.005 (0.047)	-0.017 (0.048)	-0.009 (0.048)	-0.030 (0.049)	-2.253 (2.167)
Control Mean Total Obs.	$43.56 \\ 10214$	7.59 10220	44.91 10220	$\begin{array}{c} 10.68\\ 10214 \end{array}$	9.97 10214	$9.19 \\ 10214$	8.6 10214	44.91 10220
Zeros Replaced	2	413	0	141	138	159	235	0

Note:

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

### Table 4: SC-Month-Level Incentives Results

				Dependent v	ariable:			
	Log Vaccine Given (1)	Vaccine Given Fully Immunized	Log Children	Log Shot Penta1 (4)	Log Shot Penta2 (5)	Log Shot Penta3 (6)	Log Shot Measles1 (7)	Children (8)
			(3)					
High	$0.078^{**}$ (0.040)	$0.054 \\ (0.046)$	$\begin{array}{c} 0.051 \\ (0.040) \end{array}$	$0.076^{*}$ (0.041)	$0.056 \\ (0.042)$	$0.058 \\ (0.043)$	$0.070 \\ (0.043)$	1.258 (2.125)
Low	$0.087^{*}$ (0.044)	$0.045 \\ (0.053)$	$0.064 \\ (0.045)$	$0.088^{*}$ (0.046)	$0.083^{*}$ (0.047)	$0.086^{*}$ (0.047)	$0.087^{*}$ (0.048)	3.555 (2.743)
Control Mean Total Obs. Zeros Replaced	$43.56 \\ 10214 \\ 2$	7.59 10220 413	$44.91 \\ 10220 \\ 0$	$10.68 \\ 10214 \\ 141$	9.97 10214 138	$9.19 \\ 10214 \\ 159$	8.6 10214 235	$44.91 \\ 10220 \\ 0$

Note:

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

				Dependent v	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
High Slope	$0.115^{**}$ (0.045)	$0.114^{**}$ (0.053)	$0.086^{*}$ (0.046)	$0.114^{**} \\ (0.047)$	$0.092^{*}$ (0.048)	$0.100^{**}$ (0.049)	$0.130^{***}$ (0.050)	3.297 (2.492)
High Flat	$0.014 \\ (0.059)$	-0.049 (0.069)	-0.010 (0.059)	$\begin{array}{c} 0.010 \\ (0.062) \end{array}$	-0.009 (0.062)	-0.016 (0.060)	-0.036 (0.063)	-2.565 (2.926)
Low Slope	$\begin{array}{c} 0.151^{***} \\ (0.053) \end{array}$	$0.123^{**}$ (0.061)	$0.130^{**}$ (0.053)	$0.155^{***}$ (0.056)	$0.151^{***}$ (0.055)	$0.140^{**}$ (0.057)	$0.156^{***}$ (0.057)	$7.090^{*}$ (3.765)
Low Flat	-0.021 (0.061)	-0.087 (0.078)	-0.047 (0.062)	-0.022 (0.061)	-0.029 (0.064)	-0.005 (0.066)	-0.027 (0.066)	-2.307 (2.655)
Control Mean Total Obs. Zeros Replaced	$43.56 \\ 10214 \\ 2$	7.59 10220 413	44.91 10220 0	$10.68 \\ 10214 \\ 141$	9.97 10214 138	$9.19 \\ 10214 \\ 159$	$8.6 \\ 10214 \\ 235$	44.91 10220 0
Note:	2	410	0	141	130		<sup>255</sup> *p<0.1; **p<0.05;	

Table 5: SC-Month-Level Incentives Results

- All specifications include District-Time Fixed Effects

- All specifications include a full Set of Controls for Reminders

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

### Table 6: SC-Month-Level Incentives Results with Double Post Lasso selected controls

				Dependent var	iable:		
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
High Slope	$0.098^{***}$ (0.037)	$0.090^{**}$ (0.046)	$0.069^{*}$ (0.038)	$0.098^{**}$ (0.039)	$0.073^{*}$ (0.040)	$0.079^{*}$ (0.042)	$\begin{array}{c} 0.110^{***} \\ (0.042) \end{array}$
High Flat	0.001 (0.047)	-0.055 (0.055)	-0.020 (0.049)	-0.005 (0.051)	-0.018 (0.053)	-0.024 (0.050)	-0.045 (0.051)
Low Slope	$0.083^{**}$ (0.042)	$0.065 \\ (0.052)$	$0.066 \\ (0.043)$	$0.080^{*}$ (0.045)	$0.084^{*}$ (0.044)	$0.080^{*}$ (0.045)	$0.094^{**}$ (0.046)
Low Flat	-0.003 (0.053)	-0.066 (0.069)	-0.028 (0.054)	-0.003 (0.053)	-0.011 (0.055)	0.017 (0.058)	-0.007 (0.057)
Control Mean	44	8	45	11	10	9	9
Total Obs. Zeros Replaced	$\frac{10214}{2}$	$\begin{array}{c} 10220\\ 413 \end{array}$	$\begin{array}{c} 10220\\ 0\end{array}$	$\begin{array}{c} 10214 \\ 141 \end{array}$	$\begin{array}{c} 10214 \\ 138 \end{array}$	$\begin{array}{c} 10214 \\ 159 \end{array}$	$\begin{array}{c} 10214 \\ 235 \end{array}$

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- All specifications include District-Time fixed effects and BHC double post lasso selected village controls - For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

#### SC Level 2.2

We run the same baseline specification at the SC level, with district fixed effects.

	Dependent variable:								
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
High Slope	$0.064 \\ (0.060)$	$0.082 \\ (0.062)$	0.064 (0.054)	$0.054 \\ (0.063)$	$0.039 \\ (0.063)$	$0.040 \\ (0.064)$	$0.090 \\ (0.057)$	$21.731 \\ (16.379)$	
High Flat	-0.024 (0.065)	-0.076 (0.078)	-0.0005 (0.059)	-0.025 (0.067)	-0.049 (0.067)	-0.054 (0.064)	-0.073 (0.069)	-7.450 (18.515)	
Low Slope	$0.120^{**}$ (0.056)	$0.084 \\ (0.068)$	$0.134^{**}$ (0.052)	$0.115^{**}$ (0.058)	$0.121^{**}$ (0.056)	$0.107^{*}$ (0.058)	$0.104^{*}$ (0.061)	$\begin{array}{c} 49.814^{**} \\ (23.556) \end{array}$	
Low Flat	-0.009 (0.061)	-0.104 (0.089)	-0.016 (0.059)	-0.017 (0.062)	-0.021 (0.063)	-0.001 (0.065)	-0.023 (0.065)	-7.819 (16.214)	
Control Mean	589.81	102.85	273.82	144.61	135.05	124.45	116.47	273.82	
Total Obs. Zeros Replaced	755	755	755	755	755 1	755 1	755	755	

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Note:

- All specifications include District Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

## **3** Communications Experiments

## 3.1 Village-Month Level Restricted to Seeds Risk Set

We run the baseline specification at the Village-Month level. We restrict the sample to the 903 villages of the Baseline Survey, that provide more than 11,500 observations to study the effect of *communication* on immunization.

The control mean for each shot is low - around 4 shots per village per month - and nearly one third of data on shots is zero at this level of observation. Therefore, we decide to study the shots outcomes in level, as well as the fully immunized variable. We do not replace missing values, and for outcomes in log we previously transform 0 into 1.

We include PHC-time fixed effects and run once the regression with only district-time fixed effects for the last table. Moreover, we always compute clustered robust standard errors at the village level, the level of assignment, to not underestimate them.

We take into account control variables from the *incentives* treatment, and also add *reminders* treatment as a control in Table 9. We show results with all sub-treatments and then with aggregated sub-treatments.

				Dependent u	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	-0.013 (0.076)	-0.306 (0.524)	-0.025 (0.076)	$\begin{array}{c} 0.033 \\ (0.665) \end{array}$	-0.141 (0.625)	-0.272 (0.605)	-0.237 (0.551)	-0.852 (2.863)
Gossip	$0.168^{**}$ (0.068)	$1.321^{***}$ (0.468)	$0.171^{**}$ (0.069)	$1.448^{**}$ (0.626)	$1.258^{**}$ (0.579)	$1.220^{**}$ (0.532)	$\begin{array}{c} 1.373^{***} \\ (0.510) \end{array}$	$5.965^{**}$ (2.569)
Trusted	-0.031 (0.070)	-0.278 (0.449)	-0.031 (0.071)	-0.638 (0.715)	-0.584 (0.590)	-0.376 (0.557)	-0.431 (0.558)	-2.584 (2.934)
Trusted Gossip	0.083 (0.070)	-0.081 (0.422)	$0.082 \\ (0.071)$	$\begin{array}{c} 0.213 \\ (0.570) \end{array}$	$\begin{array}{c} 0.061 \\ (0.526) \end{array}$	-0.034 (0.502)	-0.005 (0.471)	$\begin{array}{c} 0.215 \\ (2.351) \end{array}$
Control Mean Total Obs. Zeros Replaced	18.75 11539 13	$3.42 \\ 11567 \\ 0$	$19.52 \\ 11567 \\ 0$	$4.52 \\ 11539 \\ 0$	$4.32 \\ 11539 \\ 0$	$\begin{array}{c} 4.07\\11539\\0\end{array}$	$3.9 \\ 11539 \\ 0$	$19.52 \\ 11567 \\ 0$

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 8: Village-Month-Level Communication Results Restricted to Seeds Risk Set

Note:

- All specifications include PHC-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

Table 9: Village-Month-Level Communication Results Restricted to Seeds Risk Set

				Dependent u	variable:			
	Log Vaccine Given (1)	- Hully Immunized	Log Children	Shot Pental	1 Shot Penta2 (5)	Shot Penta3 (6)	Shot Measles1 (7)	Children (8)
		(2)	(3)	(4)				
Random	-0.018 (0.076)	-0.363 (0.526)	-0.031 (0.076)	-0.031 (0.670)	-0.199 (0.629)	-0.326 (0.608)	-0.297 (0.554)	-1.126 (2.878)
Nominated Seed	$0.071 \\ (0.048)$	$0.310 \\ (0.309)$	0.071 (0.049)	0.318 (0.450)	$0.226 \\ (0.394)$	0.257 (0.371)	0.297 (0.362)	1.116 (1.872)
Control Mean Total Obs. Zeros Replaced	$18.75 \\ 11539 \\ 13$	$\begin{array}{c} 3.42\\11567\\0\end{array}$	$19.52 \\ 11567 \\ 0$	$4.52 \\ 11539 \\ 0$	$4.32 \\ 11539 \\ 0$	$\begin{array}{c} 4.07\\11539\\0\end{array}$	$3.9 \\ 11539 \\ 0$	$19.52 \\ 11567 \\ 0$

- All specifications include PHC-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

				Dependent u	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	-0.012 (0.075)	-0.297 (0.518)	-0.024 (0.075)	$0.046 \\ (0.657)$	-0.128 (0.617)	-0.260 (0.596)	-0.227 (0.544)	-0.800 (2.823)
Gossip	$0.177^{***}$ (0.068)	$1.392^{***} \\ (0.465)$	$0.180^{***}$ (0.069)	$1.544^{**}$ (0.624)	$1.352^{**}$ (0.576)	$1.312^{**}$ (0.529)	$\frac{1.452^{***}}{(0.507)}$	$6.377^{**}$ (2.549)
Trusted	-0.026 (0.070)	-0.237 (0.447)	-0.025 (0.071)	-0.566 (0.706)	-0.512 (0.582)	-0.310 (0.550)	-0.389 (0.552)	-2.302 (2.895)
Trusted Gossip	$\begin{array}{c} 0.078 \\ (0.070) \end{array}$	-0.130 (0.414)	$0.076 \\ (0.071)$	$0.160 \\ (0.557)$	$\begin{array}{c} 0.012 \\ (0.513) \end{array}$	-0.086 (0.490)	-0.057 (0.463)	-0.039 (2.307)
Control Mean Total Obs.	18.75 11539	$3.42 \\ 11567$	$19.52 \\ 11567$	4.52 11539	4.32 11539	4.07 11539	$3.9 \\11539$	$19.52 \\ 11567$
Zeros Replaced	13	0	0	0	0	0	0	0

## Table 10: Village-Month-Level Communication Results Restricted to Seeds Risk Set

Note:

- All specifications include PHC-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives and Reminders

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

		Dependent variable:											
	Log Vaccine Given	Fully Immunized	Log Children		Shot Penta2	Shot Penta3	Shot Measles1	Children					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Random	-0.069 (0.096)	-0.556 (0.789)	-0.082 (0.095)	-0.367 (1.019)	-0.421 (0.945)	-0.571 (0.901)	-0.516 (0.839)	-2.563 (4.292)					
Gossip	$0.238^{**}$ (0.098)	$\frac{1.612^{**}}{(0.737)}$	$0.228^{**}$ (0.099)	$1.888^{**}$ (0.958)	$1.676^{*}$ (0.916)	$1.517^{*}$ (0.855)	$1.705^{**}$ (0.807)	$7.236^{*}$ (4.036)					
Trusted	0.059 (0.090)	$0.395 \\ (0.540)$	$0.049 \\ (0.091)$	$0.304 \\ (0.757)$	$0.230 \\ (0.690)$	$\begin{array}{c} 0.320 \\ (0.656) \end{array}$	0.351 (0.606)	1.073 (3.132)					
Trusted Gossip	$0.148^{*}$ (0.090)	$0.135 \\ (0.542)$	0.144 (0.090)	0.613 (0.810)	0.462 (0.707)	$0.343 \\ (0.655)$	$0.265 \\ (0.627)$	1.783 (3.221)					
Control Mean Total Obs. Zeros Replaced	$18.75 \\ 11539 \\ 13$	$\begin{array}{c} 3.42\\11567\\0\end{array}$	$19.52 \\ 11567 \\ 0$	$4.52 \\ 11539 \\ 0$	$4.32 \\ 11539 \\ 0$	$\begin{array}{c} 4.07\\11539\\0\end{array}$	$3.9 \\ 11539 \\ 0$	$19.52 \\ 11567 \\ 0$					
Note:							*p<0.1; **p<0.05	;***p<0.01					

Table 11: Village-Month-Level Communication Results Restricted to Seeds Risk Set

- All specifications include District-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

Table 12: Village-Month-Level	Communication	Results	Restricted	to S	Seeds	Risk S	Set	with	Double
Post Lasso selected controls									

		Dependent variable:										
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)					
Random	-0.083 (0.067)	-0.373 (0.254)	-0.080 (0.067)	-0.236 (0.344)	-0.253 (0.318)	-0.344 (0.294)	-0.371 (0.284)					
Gossip	$0.065 \\ (0.079)$	$0.619 \\ (0.378)$	$0.057 \\ (0.079)$	$0.820 \\ (0.501)$	$0.662 \\ (0.466)$	$0.574 \\ (0.432)$	$0.649 \\ (0.413)$					
Trusted	$0.052 \\ (0.075)$	0.285 (0.312)	$0.048 \\ (0.076)$	$0.320 \\ (0.410)$	$0.255 \\ (0.381)$	$0.294 \\ (0.361)$	$0.245 \\ (0.342)$					
Trusted Gossip	$0.115 \\ (0.074)$	0.215 (0.283)	0.117 (0.074)	0.474 (0.395)	0.400 (0.357)	$\begin{array}{c} 0.316 \ (0.335) \end{array}$	$0.264 \\ (0.314)$					
Control Mean	19	3	20	5	4	4	4					
Total Obs. Zeros Replaced	$\begin{array}{c} 11539 \\ 13 \end{array}$	$\begin{array}{c}11567\\0\end{array}$	$\begin{array}{c} 11567 \\ 0 \end{array}$	$\begin{array}{c}11539\\0\end{array}$	$\begin{array}{c} 11539 \\ 0 \end{array}$	$ \begin{array}{c} 11539\\ 0 \end{array} $	$\begin{array}{c} 11539 \\ 0 \end{array}$					

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- All specifications include District-Time fixed effects and BHC double post lasso selected village controls

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

#### 3.2Village-Month Level Restricted to Other Sets

In this part, we study *communication* effects on different sets. First, we restrict the sample to the villages that have a seed, and compare the three nominated seed sub-treatments, gossip, trusted and *trusted gossip* to the *random* group. Next, we restrict the sample to villages in different sets of sub-treatments for *incentives*. In the first place, we compare to the *communication* control group and afterwards we compare to the *random* sub-treatment group - excluding the *communication* control group of the regression.

		Dependent variable:											
	Log Vaccine Given	Fully Immunized	Log Children	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1	Children					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Gossip	$0.193^{**}$ (0.088)	$1.624^{**} \\ (0.634)$	$0.205^{**}$ (0.088)	$1.319 \\ (0.831)$	$1.476^{*}$ (0.779)	$1.531^{**}$ (0.749)	$1.601^{**}$ (0.679)	$6.580^{*}$ (3.497)					
Trusted	0.073 (0.094)	0.749 (0.536)	$0.085 \\ (0.094)$	$\begin{array}{c} 0.396 \\ (0.704) \end{array}$	$0.459 \\ (0.651)$	$0.744 \\ (0.614)$	$0.690 \\ (0.588)$	2.797 (2.965)					
Trusted Gossip	0.107 (0.088)	$0.327 \\ (0.495)$	$0.119 \\ (0.088)$	$\begin{array}{c} 0.411 \\ (0.670) \end{array}$	$0.465 \\ (0.618)$	$\begin{array}{c} 0.378 \\ (0.591) \end{array}$	$\begin{array}{c} 0.333 \\ (0.544) \end{array}$	1.854 (2.782)					
Control Mean	17.48	3.07	18.11	4.31	4.06	3.71	3.53	18.11					
Total Obs. Zeros Replaced	$\begin{array}{c} 6697 \\ 10 \end{array}$	$\begin{array}{c} 6712 \\ 0 \end{array}$	6712 0	$\begin{array}{c} 6697 \\ 0 \end{array}$	$\begin{array}{c} 6697 \\ 0 \end{array}$	$\begin{array}{c} 6697 \\ 0 \end{array}$	6697 0	$\begin{array}{c} 6712\\ 0\end{array}$					

Table 13: Village-Month-Level Communication Results Restricted to Any Seed Set

Note:

- All specifications include PHC-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

Table 14: Village-Month-Level	Communication Resul	ts Restricted to no Incentive Set

				Dependent u	variable:					
	Log Vaccine Given	Bully Immunized Shot Pental Shot Penta? Shot Penta3 Shot Measles								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
Random	-0.044 (0.114)	$0.223 \\ (0.875)$	-0.038 (0.113)	0.650 (1.077)	0.472 (1.018)	$0.343 \\ (1.001)$	$0.285 \\ (0.896)$	2.575 (4.724)		
Gossip	$0.290^{***}$ (0.095)	$\frac{1.817^{**}}{(0.731)}$	$0.297^{***}$ (0.097)	$2.607^{***} \\ (0.970)$	$2.468^{***} \\ (0.909)$	$2.236^{***}$ (0.824)	$1.899^{**}$ (0.786)	$10.391^{***} \\ (4.006)$		
Trusted	-0.085 (0.105)	-0.174 (0.706)	-0.072 (0.107)	-0.389 (0.855)	-0.420 (0.808)	-0.127 (0.760)	-0.194 (0.785)	-1.033 (3.677)		
Trusted Gossip	$0.169^{*}$ (0.100)	0.834 (0.603)	$0.188^{*}$ (0.101)	$1.596^{**}$ (0.807)	$1.273^{*}$ (0.719)	$1.035 \\ (0.699)$	$0.953 \\ (0.673)$	$5.748^{*}$ (3.327)		
Control Mean	17.37	3.31	18.41	4.17	4.03	3.83	3.72	18.41		
Total Obs. Zeros Replaced	$5930 \\ 4$	$\begin{array}{c} 5943 \\ 0 \end{array}$	$\begin{array}{c} 5943 \\ 0 \end{array}$	5930 0	$\begin{array}{c} 5930 \\ 0 \end{array}$	$\begin{array}{c} 5930\\ 0\end{array}$	$\begin{array}{c} 5930\\ 0\end{array}$	$\begin{array}{c} 5943 \\ 0 \end{array}$		

Note:

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 15: Village-Month-Level Communication Results Restricted to Incentive Set

	Dependent variable:											
Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
$0.032 \\ (0.098)$	-0.736 (0.526)	$\begin{array}{c} 0.0002 \\ (0.099) \end{array}$	-0.505 (0.718)	-0.682 (0.668)	-0.776 (0.620)	-0.647 (0.588)	-3.872 (2.931)					
0.026 (0.099)	0.852 (0.587)	$0.023 \\ (0.101)$	$0.142 \\ (0.761)$	-0.112 (0.675)	$\begin{array}{c} 0.134 \\ (0.638) \end{array}$	0.870 (0.653)	$1.254 \\ (3.078)$					
-0.001 (0.095)	-0.465 (0.590)	-0.012 (0.095)	-0.999 (1.125)	-0.836 (0.854)	-0.680 (0.814)	-0.755 (0.810)	-4.519 (4.540)					
-0.038 (0.104)	$-1.144^{*}$ (0.615)	-0.062 (0.106)	$-1.411^{*}$ (0.830)	$-1.387^{*}$ (0.805)	$-1.320^{*}$ (0.757)	-1.132 (0.689)	$-6.251^{*}$ (3.440)					
20.22 5609 9	$\begin{array}{c} 3.55\\ 5624\\ 0\end{array}$	$20.69 \\ 5624 \\ 0$	$\begin{array}{c} 4.91 \\ 5609 \\ 0 \end{array}$	$\begin{array}{c} 4.64 \\ 5609 \\ 0 \end{array}$	$\begin{array}{c} 4.33\\5609\\0\end{array}$	$\begin{array}{c} 4.08\\ 5609\\ 0\end{array}$	$20.69 \\ 5624 \\ 0$					
-	Vaccine Given (1) 0.032 (0.098) 0.026 (0.099) -0.001 (0.095) -0.038 (0.104) 20.22 5609	Vaccine Given         Fully Immunized           (1)         (2)           0.032         -0.736           (0.098)         (0.526)           0.026         0.852           (0.099)         (0.587)           -0.001         -0.465           (0.095)         (0.590)           -0.038         -1.144*           (0.104)         (0.615)           20.22         3.55           5609         5624	Vaccine GivenFully ImmunizedChildren(1)(2)(3) $0.032$ $-0.736$ $0.0002$ $(0.098)$ $(0.526)$ $(0.099)$ $0.026$ $0.852$ $0.023$ $(0.099)$ $(0.587)$ $(0.101)$ $-0.001$ $-0.465$ $-0.012$ $(0.095)$ $(0.590)$ $(0.095)$ $-0.038$ $-1.144^*$ $-0.062$ $(0.104)$ $(0.615)$ $(0.106)$ $20.22$ $3.55$ $20.69$ $5609$ $5624$ $5624$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $					

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

		Dependent variable:											
	Log Vaccine Given	Eully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Random	-0.041 (0.125)	-0.633 (0.627)	-0.056 (0.125)	-0.304 (0.891)	-0.620 (0.794)	-0.872 (0.737)	-0.694 (0.705)	-3.918 (3.561)					
Gossip	0.088 (0.103)	$\frac{1.492^{**}}{(0.605)}$	$0.076 \\ (0.100)$	$0.749 \\ (0.804)$	$0.462 \\ (0.705)$	$0.671 \\ (0.678)$	$1.550^{**}$ (0.661)	3.364 (3.207)					
Trusted	0.021 (0.129)	-0.573 (0.863)	0.010 (0.129)	-0.890 (1.627)	-0.649 (1.218)	-0.744 (1.172)	-0.968 (1.172)	-4.549 (6.503)					
Trusted Gossip	-0.093 (0.112)	$-1.182^{*}$ (0.607)	-0.106 (0.110)	$-1.669^{**}$ (0.821)	$-1.350^{*}$ (0.716)	$-1.439^{**}$ (0.716)	$-1.389^{**}$ (0.696)	$-7.296^{**}$ (3.389)					
Control Mean Total Obs. Zeros Replaced	20.65 $3681$ $6$	3.59 3690 0	$\begin{array}{c} 21.16\\ 3690\\ 0\end{array}$	5.03 $3681$ $0$	$\begin{array}{c} 4.69\\ 3681\\ 0\end{array}$	$\begin{array}{c} 4.38\\ 3681\\ 0\end{array}$	$\begin{array}{c} 4.17\\ 3681\\ 0\end{array}$	$\begin{array}{c} 21.16\\ 3690\\ 0\end{array}$					

Table 16: Village-Month-Level Communication Results Restricted to Slope Incentive Set

Note:

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

		Dependent variable:											
	Log Vaccine Given	Bully Immunized	Log Children	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1	Children					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Random	$0.085 \\ (0.168)$	-0.506 (0.787)	$0.076 \\ (0.167)$	-0.413 (0.976)	-0.418 (0.976)	-0.602 (0.872)	-0.281 (0.873)	-0.974 (4.046)					
Gossip	-0.217 (0.210)	-1.443 (1.142)	-0.199 (0.220)	$-3.059^{*}$ (1.583)	$-2.915^{**}$ (1.451)	$-2.689^{**}$ (1.241)	-1.729 (1.219)	-10.063 (6.191)					
Trusted	$0.257 \\ (0.161)$	0.651 (0.839)	$0.225 \\ (0.157)$	$0.226 \\ (1.079)$	0.038 (1.057)	0.583 (1.027)	$0.826 \\ (0.942)$	$2.594 \\ (4.378)$					
Trusted Gossip	-0.024 (0.244)	-2.100 (1.664)	-0.067 (0.262)	-2.785 (2.178)	-3.275 (2.291)	-2.875 (2.112)	-1.942 (1.838)	-11.095 (9.257)					
Control Mean	19.38	3.47	19.77	4.67	4.54	4.25	3.92	19.77					
Total Obs. Zeros Replaced	$\frac{1928}{3}$	$\begin{array}{c} 1934 \\ 0 \end{array}$	1934 0	1928 0	1928 0	1928 0	1928 0	$\begin{array}{c} 1934 \\ 0 \end{array}$					

Table 17: Village-Month-Level Communication Results Restricted to Flat Incentive Set

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

## Table 18: Village-Month-Level Communication Results Restricted to no Incentive and Seed Set

		Dependent variable:											
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Gossip	$\begin{array}{c} 0.332^{***} \\ (0.118) \end{array}$	1.401 (0.962)	$\begin{array}{c} 0.330^{***} \\ (0.120) \end{array}$	1.772 (1.344)	1.974 (1.252)	1.788 (1.189)	$1.426 \\ (1.017)$	6.874 (5.606)					
Trusted	0.072 (0.134)	0.335 (0.832)	$\begin{array}{c} 0.076 \\ (0.134) \end{array}$	-0.147 (1.057)	-0.002 (0.994)	$0.324 \\ (0.949)$	$0.286 \\ (0.901)$	$\begin{array}{c} 0.324 \\ (4.544) \end{array}$					
Trusted Gossip	$0.198 \\ (0.127)$	0.461 (0.784)	$0.211^{*}$ (0.128)	0.983 (1.052)	$0.920 \\ (0.961)$	$0.647 \\ (0.941)$	$0.530 \\ (0.849)$	3.215 (4.402)					
Control Mean	16.55	2.95	17.3	4.04	3.81	3.46	3.35	17.3					
Total Obs. Zeros Replaced	$\frac{3434}{3}$	$\begin{array}{c} 3442 \\ 0 \end{array}$	$\begin{array}{c} 3442 \\ 0 \end{array}$	$\begin{array}{c} 3434 \\ 0 \end{array}$	$\begin{array}{c} 3434 \\ 0 \end{array}$	$\begin{array}{c} 3434 \\ 0 \end{array}$	$\begin{array}{c} 3434 \\ 0 \end{array}$	$\begin{array}{c} 3442 \\ 0 \end{array}$					

Note:

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

$Dependent\ variable:$											
Log Fully Immunized Log Shot Penta1 Shot Penta2 Shot Penta3 Shot Measles1											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
0.021 (0.139)	$1.852^{**}$ (0.836)	$\begin{array}{c} 0.053 \\ (0.140) \end{array}$	$\begin{array}{c} 0.703 \\ (0.992) \end{array}$	0.811 (0.935)	$1.161 \\ (0.911)$	$1.733^{*}$ (0.913)	5.928 (4.208)				
$0.035 \\ (0.131)$	$0.909 \\ (0.627)$	$0.058 \\ (0.131)$	$0.667 \\ (0.879)$	$\begin{array}{c} 0.709 \\ (0.791) \end{array}$	$0.945 \\ (0.729)$	$0.830 \\ (0.703)$	4.217 (3.565)				
-0.053 (0.128)	-0.165 (0.628)	-0.040 (0.127)	-0.581 (0.872)	-0.345 (0.807)	-0.284 (0.746)	-0.256 (0.708)	-1.217 (3.527)				
18.45 3263	3.19 3270	$18.95 \\ 3270 \\ 0$	4.6 $3263$	4.32 3263	3.98 3263	3.72 3263	$18.95 \\ 3270 \\ 0$				
	Vaccine Given (1) 0.021 (0.139) 0.035 (0.131) -0.053 (0.128) 18.45	Vaccine Given         Fully Immunized           (1)         (2)           0.021         1.852**           (0.139)         (0.836)           0.035         0.909           (0.131)         (0.627)           -0.053         -0.165           (0.128)         (0.628)           18.45         3.19           3263         3270	Vaccine GivenFully ImmunizedChildren(1)(2)(3) $0.021$ $1.852^{**}$ $0.053$ $(0.139)$ $(0.836)$ $(0.140)$ $0.035$ $0.909$ $0.058$ $(0.131)$ $(0.627)$ $(0.131)$ $-0.053$ $-0.165$ $-0.040$ $(0.128)$ $(0.628)$ $(0.127)$ $18.45$ $3.19$ $18.95$ $3263$ $3270$ $3270$	Vaccine GivenFully Immunized (1)ChildrenShot Pental(1)(2)(3)(4) $0.021$ $1.852^{**}$ $0.053$ $0.703$ $(0.139)$ $(0.836)$ $(0.140)$ $(0.992)$ $0.035$ $0.909$ $0.058$ $0.667$ $(0.131)$ $(0.627)$ $(0.131)$ $(0.879)$ $-0.053$ $-0.165$ $-0.040$ $-0.581$ $(0.128)$ $(0.628)$ $(0.127)$ $(0.872)$ $18.45$ $3.19$ $18.95$ $4.6$ $3263$ $3270$ $3270$ $3263$	Vaccine GivenFully Immunized (1)ChildrenShot PentalShot Pental(1)(2)(3)(4)(5) $0.021$ $1.852^{**}$ $0.053$ $0.703$ $0.811$ (0.139)(0.836)(0.140)(0.992)(0.935) $0.035$ $0.909$ $0.058$ $0.667$ $0.709$ (0.131)(0.627)(0.131)(0.879)(0.791) $-0.053$ $-0.165$ $-0.040$ $-0.581$ $-0.345$ (0.128)(0.628)(0.127)(0.872)(0.807) $18.45$ $3.19$ $18.95$ $4.6$ $4.32$ $3263$ $3270$ $3270$ $3263$ $3263$	Vaccine GivenFully Immunized (1)ChildrenShot PentalShot PentalShot PentalShot Pental(1)(2)(3)(4)(5)(6) $0.021$ $1.852^{**}$ $0.053$ $0.703$ $0.811$ $1.161$ $(0.139)$ $(0.836)$ $(0.140)$ $(0.992)$ $(0.935)$ $(0.911)$ $0.035$ $0.909$ $0.058$ $0.667$ $0.709$ $0.945$ $(0.131)$ $(0.627)$ $(0.131)$ $(0.879)$ $(0.791)$ $(0.729)$ $-0.053$ $-0.165$ $-0.040$ $-0.581$ $-0.345$ $-0.284$ $(0.128)$ $(0.628)$ $(0.127)$ $(0.872)$ $(0.807)$ $(0.746)$ $18.45$ $3.19$ $18.95$ $4.6$ $4.32$ $3.98$ $3263$ $3270$ $3270$ $3263$ $3263$ $3263$	Vaccine GivenFully Immunized ChildrenShot PentalShot Penta				

Table 19: Village-Month-Level Communication Results Restricted to Incentive and Seed Set

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

Table 20: Village-Month-Level Communication Results Restricted to Slope Incentive and Seed Set

				Dependent u	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gossip	$0.205 \\ (0.167)$	$2.991^{***}$ (0.873)	$\begin{array}{c} 0.189 \\ (0.164) \end{array}$	$1.770^{*}$ (1.074)	$1.997^{**} \\ (0.979)$	$2.496^{***}$ (0.914)	$3.110^{***}$ (0.933)	$10.455^{**}$ (4.318)
Trusted	$0.316^{*}$ (0.182)	$2.052^{**}$ (0.869)	$0.313^{*}$ (0.179)	$2.206^{*}$ (1.324)	$2.345^{**}$ (1.118)	$2.557^{***}$ (0.985)	$2.263^{**}$ (0.971)	$11.165^{**}$ (5.051)
Trusted Gossip	$\begin{array}{c} 0.061 \\ (0.156) \end{array}$	$0.025 \\ (0.772)$	$0.045 \\ (0.153)$	-0.447 (1.011)	$0.103 \\ (0.909)$	$0.146 \\ (0.857)$	$\begin{array}{c} 0.007 \\ (0.843) \end{array}$	-0.257 (3.969)
Control Mean Total Obs.	18.52 2132	$3.25 \\ 2136$	$18.94 \\ 2136$	4.65 2132	4.3 $2132$	3.9 $2132$	3.77 2132	$18.94 \\ 2136$
Zeros Replaced	6	0	0	0	0	0	0	0

Note:

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

				Dependent v	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gossip	$-0.437^{**}$ (0.202)	-0.808 (1.199)	$-0.403^{**}$ (0.205)	$-2.587^{**}$ (1.103)	$-2.377^{**}$ (1.020)	$-2.097^{**}$ (0.933)	-1.303 (1.230)	$-8.638^{*}$ (5.104)
Trusted	-0.074 (0.205)	$0.526 \\ (0.962)$	-0.038 (0.197)	$0.158 \\ (1.021)$	-0.457 (1.007)	$0.167 \\ (0.953)$	$0.286 \\ (1.051)$	$0.983 \\ (4.487)$
Trusted Gossip	-0.281 (0.209)	-0.617 (1.021)	-0.242 (0.198)	-1.635 (1.214)	$-2.418^{**}$ (1.141)	$-1.857^{*}$ (1.044)	-0.939 (1.097)	-6.725 (4.956)
Control Mean Total Obs. Zeros Replaced	18.32     1131     1	$\begin{array}{c} 3.08\\1134\\0\end{array}$	$\begin{array}{c} 18.98\\1134\\0\end{array}$	$\begin{array}{c} 4.49\\1131\\0\end{array}$	$\begin{array}{c} 4.35\\1131\\0\end{array}$	$\begin{array}{c} 4.14\\1131\\0\end{array}$	$3.63 \\ 1131 \\ 0$	$18.98 \\ 1134 \\ 0$
Note:	1	0	0	0	0		*p<0.1; **p<0.05	

Table 21: Village-Month-Level Communication Results Restricted to Flat Incentive and Seed Set

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

#### Village Level Restricted to Seeds Risk Set 3.3

We run the same specifications at the Village level. We keep only the 903 villages of the Baseline Survey. Now, we can study all outcomes in log, transforming the few zeros into 1. We do not replace missing values.

				Dependent v	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	$0.059 \\ (0.087)$	$0.009 \\ (0.097)$	$\begin{array}{c} 0.052\\ (0.087) \end{array}$	$0.080 \\ (0.088)$	$0.068 \\ (0.087)$	0.044 (0.090)	0.033 (0.088)	-2.355 (16.550)
Gossip	$\begin{array}{c} 0.257^{***} \\ (0.077) \end{array}$	$0.240^{***}$ (0.088)	$\begin{array}{c} 0.228^{***} \\ (0.074) \end{array}$	$\begin{array}{c} 0.273^{***} \\ (0.079) \end{array}$	$\begin{array}{c} 0.236^{***} \\ (0.080) \end{array}$	$\begin{array}{c} 0.236^{***} \\ (0.080) \end{array}$	$0.246^{***}$ (0.081)	$38.791^{**}$ (15.650)
Trusted	$0.017 \\ (0.074)$	0.024 (0.082)	-0.004 (0.073)	0.013 (0.076)	$\begin{array}{c} 0.001 \\ (0.075) \end{array}$	$\begin{array}{c} 0.035 \\ (0.075) \end{array}$	$0.022 \\ (0.078)$	-21.626 (19.744)
Trusted Gossip	0.144 (0.092)	0.061 (0.112)	$0.129 \\ (0.087)$	$0.160^{*}$ (0.094)	$0.145 \\ (0.099)$	0.124 (0.100)	0.103 (0.097)	6.037 (15.343)
Control Mean Total Obs. Zeros Replaced	$237.65 \\ 903 \\ 0$	$43.52 \\ 903 \\ 7$	$     \begin{array}{r}       111.88 \\       903 \\       0     \end{array} $	57.35 903 1	$54.78 \\ 903 \\ 1$	$51.6\\903\\5$	$\begin{array}{c} 49.4\\903\\3\end{array}$	111.88 903 0

Table 22: Village-Level Communication Results Restricted to Seeds Risk Set

Note:

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

				Dependent v	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	$0.054 \\ (0.087)$	$0.004 \\ (0.097)$	$\begin{array}{c} 0.047 \\ (0.087) \end{array}$	$0.075 \\ (0.088)$	$0.063 \\ (0.087)$	0.040 (0.090)	$0.028 \\ (0.088)$	-3.564 (16.622)
Nominated Seed	$0.138^{**}$ (0.059)	$0.108 \\ (0.069)$	$0.116^{**}$ (0.056)	$0.147^{**}$ (0.061)	$0.126^{**}$ (0.063)	$0.130^{**}$ (0.063)	$0.123^{**}$ (0.061)	7.370 (12.319)
Control Mean	237.65	43.52	111.88	57.35	54.78	51.6	49.4	111.88
Total Obs. Zeros Replaced	903 0	$903 \\ 7$	$\begin{array}{c} 903 \\ 0 \end{array}$	$903 \\ 1$	$903 \\ 1$	903	$903 \\ 3$	903 0

Table 23: Village-Level Communication Results Restricted to Seeds Risk Set

All specifications include PHC Fixed EffectsFor outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

Table 24: Village-Level Communication Results Restricted to Seeds Risk Set	
--	--

				Dependent v	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	$0.052 \\ (0.088)$	-0.003 (0.098)	$0.047 \\ (0.088)$	0.073 (0.089)	$0.062 \\ (0.088)$	$0.036 \\ (0.091)$	$0.022 \\ (0.089)$	-3.239 (16.602)
Gossip	$0.267^{***}$ (0.076)	$0.245^{***}$ (0.086)	$\begin{array}{c} 0.238^{***} \\ (0.073) \end{array}$	$0.285^{***}$ (0.079)	$0.249^{***}$ (0.079)	$\begin{array}{c} 0.247^{***} \\ (0.079) \end{array}$	$0.254^{***} \\ (0.078)$	$\begin{array}{c} 40.664^{***} \\ (15.413) \end{array}$
Trusted	$0.028 \\ (0.074)$	$0.039 \\ (0.082)$	$0.006 \\ (0.073)$	$0.026 \\ (0.076)$	0.014 (0.075)	$0.048 \\ (0.076)$	0.033 (0.078)	-18.384 (19.047)
Trusted Gossip	$0.154^{*}$ (0.090)	$0.078 \\ (0.106)$	0.137 (0.085)	$\begin{array}{c} 0.170^{*} \\ (0.092) \end{array}$	$0.158^{*}$ (0.095)	$0.137 \\ (0.096)$	$0.116 \\ (0.093)$	6.616 (14.867)
Control Mean Total Obs. Zeros Replaced	$\begin{array}{c} 237.65\\903\\0\end{array}$	$\begin{array}{c} 43.52\\903\\7\end{array}$	$     \begin{array}{r}       111.88 \\       903 \\       0     \end{array} $	$57.35 \\ 903 \\ 1$	$54.78 \\ 903 \\ 1$	$51.6\\903\\5$	49.4 903 3	$     \begin{array}{r}       111.88 \\       903 \\       0     \end{array} $

Note:

All specifications include PHC Fixed EffectsAll specifications include a full Set of Controls for Incentives and Reminders

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

				Dependent v	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	-0.006 (0.101)	-0.049 (0.106)	-0.021 (0.097)	$0.018 \\ (0.105)$	0.017 (0.103)	-0.016 (0.103)	-0.028 (0.100)	-14.167 (24.826)
Gossip	$\begin{array}{c} 0.317^{***} \\ (0.105) \end{array}$	$\begin{array}{c} 0.319^{***} \\ (0.119) \end{array}$	$\begin{array}{c} 0.294^{***} \\ (0.103) \end{array}$	$\begin{array}{c} 0.344^{***} \\ (0.105) \end{array}$	$0.310^{***}$ (0.109)	$\begin{array}{c} 0.297^{***} \\ (0.111) \end{array}$	$0.316^{***}$ (0.111)	$49.139^{**} \\ (24.213)$
Trusted	$0.130 \\ (0.103)$	0.155 (0.108)	$0.129 \\ (0.098)$	$0.129 \\ (0.107)$	0.113 (0.106)	$0.137 \\ (0.106)$	$0.133 \\ (0.102)$	11.240 (20.159)
Trusted Gossip	$0.164 \\ (0.104)$	0.081 (0.122)	$0.140 \\ (0.099)$	$0.180^{*}$ (0.106)	0.168 (0.107)	$0.150 \\ (0.108)$	$0.121 \\ (0.107)$	6.907 (21.047)
Control Mean Total Obs. Zeros Replaced	$237.65 \\ 903 \\ 0$	$43.52 \\ 903 \\ 7$	$     \begin{array}{r}       111.88 \\       903 \\       0     \end{array} $	$57.35 \\ 903 \\ 1$	$54.78 \\ 903 \\ 1$	$51.6\\903\\5$	49.4 903 3	$     \begin{array}{r}       111.88 \\       903 \\       0     \end{array} $

Table 25: Village-Level Communication Results Restricted to Seeds Risk Set

- All specifications include District Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

## 3.4 Village Level Restricted to Other Sets

In this part, we study *communication* effects on different sets. First, we restrict the sample to the villages that have a seed, and compare the three nominated seed sub-treatments, *gossip*, *trusted* and *trusted gossip* to the *random* group. Then, we restrict the sample to villages in different sets of sub-treatments for *incentives*.

Table 26: Village-Level Communication Results Restricted to Any Seed Set

				Dependent v	ariable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Gossip	$0.183^{*}$ (0.094)	$0.255^{**}$ (0.106)	$0.170^{*}$ (0.092)	$0.165^{*}$ (0.095)	$0.155^{*}$ (0.092)	$0.184^{*}$ (0.095)	$0.211^{**}$ (0.098)	$40.476^{**}$ (20.556)
Trusted	$0.046 \\ (0.095)$	$0.103 \\ (0.107)$	$0.047 \\ (0.094)$	$\begin{array}{c} 0.030 \\ (0.097) \end{array}$	$\begin{array}{c} 0.019 \\ (0.094) \end{array}$	$\begin{array}{c} 0.071 \\ (0.095) \end{array}$	0.079 (0.102)	9.638 (16.808)
Trusted Gossip	0.014 (0.094)	0.029 (0.105)	0.017 (0.092)	-0.0001 (0.097)	$\begin{array}{c} 0.013 \\ (0.094) \end{array}$	$0.008 \\ (0.095)$	0.014 (0.099)	5.334 (16.486)
Control Mean Total Obs.	$226.49 \\ 521$	39.84 521	$105.98 \\ 521$	55.84 521	52.57 521	48.11 521	45.75 521	$105.98 \\ 521$
Zeros Replaced	0	3	0	0	0	0	2	0

Note:

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

				Dependent v	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	-0.004	-0.044	0.005	-0.013	0.001	-0.021	-0.021	16.293
	(0.117)	(0.132)	(0.113)	(0.118)	(0.117)	(0.118)	(0.119)	(26.409)
Gossip	$0.373^{***}$	0.383***	0.353***	0.376***	$0.385^{***}$	$0.387^{***}$	$0.358^{***}$	65.532***
	(0.099)	(0.116)	(0.097)	(0.097)	(0.102)	(0.105)	(0.103)	(22.964)
Trusted	-0.057	-0.064	-0.062	-0.073	-0.071	-0.042	-0.051	-9.175
	(0.107)	(0.120)	(0.106)	(0.107)	(0.110)	(0.110)	(0.117)	(20.861)
Trusted Gossip	$0.299^{**}$	$0.301^{**}$	0.283**	0.310**	0.333**	0.300**	$0.277^{**}$	48.411**
1	(0.131)	(0.148)	(0.126)	(0.128)	(0.137)	(0.139)	(0.139)	(22.318)
Control Mean	218.96	41.78	102.98	52.52	50.76	48.22	46.93	102.98
Total Obs.	463	463	463	463	463	463	463	463
Zeros Replaced	0	2	0	0	0	3	0	0

Table 27: Village-Level Communication Results Restricted to no Incentive Set

Note:

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

				Dependent i	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	$0.118 \\ (0.130)$	$0.055 \\ (0.143)$	$0.096 \\ (0.134)$	$0.168 \\ (0.132)$	$0.130 \\ (0.129)$	$0.105 \\ (0.136)$	$0.081 \\ (0.130)$	-20.867 (19.585)
Gossip	$0.115 \\ (0.119)$	$0.062 \\ (0.135)$	0.077 (0.112)	$0.143 \\ (0.128)$	$0.055 \\ (0.124)$	0.053 (0.122)	$0.107 \\ (0.126)$	8.711 (20.358)
Trusted	$0.075 \\ (0.101)$	0.093 (0.113)	$0.042 \\ (0.101)$	0.082 (0.106)	0.056 (0.100)	$0.095 \\ (0.103)$	0.079 (0.105)	-33.715 (32.051)
Trusted Gossip	-0.015 (0.127)	-0.181 (0.163)	-0.029 (0.118)	$\begin{array}{c} 0.007 \\ (0.136) \end{array}$	-0.048 (0.139)	-0.058 (0.141)	-0.073 (0.133)	$-36.699^{*}$ (20.261)
Control Mean Total Obs. Zeros Replaced	$\begin{array}{c} 257.77\\ 440\\ 0\end{array}$	$45.4\\440\\5$	$\begin{array}{c}121.46\\440\\0\end{array}$	$62.54 \\ 440 \\ 1$	$59.1 \\ 440 \\ 1$	55.24 $440$ $2$	52.05 $440$ $3$	$\begin{array}{c}121.46\\440\\0\end{array}$

Table 28: Village-Level Communication Results Restricted to Incentive Set

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

			Dependent	variable:			
Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$0.169 \\ (0.188)$	$0.160 \\ (0.204)$	$0.141 \\ (0.200)$	$0.229 \\ (0.184)$	0.177 (0.186)	$0.149 \\ (0.198)$	$0.136 \\ (0.189)$	-10.441 (24.809)
0.201 (0.139)	0.186 (0.125)	$0.176 \\ (0.126)$	0.243 (0.156)	$0.174 \\ (0.146)$	$0.159 \\ (0.142)$	$0.194 \\ (0.124)$	28.540 (21.138)
$0.139 \\ (0.141)$	0.193 (0.157)	$0.077 \\ (0.146)$	$0.152 \\ (0.149)$	$\begin{array}{c} 0.133 \\ (0.134) \end{array}$	$0.160 \\ (0.137)$	$0.116 \\ (0.146)$	-35.423 (45.894)
-0.125 (0.146)	-0.122 (0.147)	-0.144 (0.138)	-0.107 (0.164)	-0.102 (0.148)	-0.125 (0.150)	-0.135 (0.145)	$-50.871^{**}$ (23.114)
$\begin{array}{c} 264.31 \\ 288 \\ 0 \end{array}$	$\begin{array}{c} 46.09\\ 288\\ 4\end{array}$	124.05 288 0	64.34 288 1	60 288 1	56.01 $288$ $2$	53.36 288 2	$     \begin{array}{r}       124.05 \\       288 \\       0     \end{array} $
	Vaccine Given (1) 0.169 (0.188) 0.201 (0.139) 0.139 (0.141) -0.125 (0.146) 264.31 288	Vaccine Given         Fully Immunized           (1)         (2)           0.169         0.160           (0.188)         (0.204)           0.201         0.186           (0.139)         (0.125)           0.139         0.193           (0.141)         (0.157)           -0.125         -0.122           (0.146)         (0.147)           264.31         46.09           288         288	Vaccine GivenFully ImmunizedChildren(1)(2)(3) $0.169$ $0.160$ $0.141$ $(0.188)$ $(0.204)$ $(0.200)$ $0.201$ $0.186$ $0.176$ $(0.139)$ $(0.125)$ $(0.126)$ $0.139$ $0.193$ $0.077$ $(0.141)$ $(0.157)$ $(0.146)$ $-0.125$ $-0.122$ $-0.144$ $(0.146)$ $264.31$ $46.09$ $124.05$ $288$ $288$ $288$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Vaccine GivenFully ImmunizedChildrenShot Penta1Shot Penta2(1)(2)(3)(4)(5) $0.169$ $0.160$ $0.141$ $0.229$ $0.177$ $(0.188)$ $(0.204)$ $(0.200)$ $(0.184)$ $(0.186)$ $0.201$ $0.186$ $0.176$ $0.243$ $0.174$ $(0.139)$ $(0.125)$ $(0.126)$ $(0.156)$ $(0.146)$ $0.139$ $0.193$ $0.077$ $0.152$ $0.133$ $(0.141)$ $(0.157)$ $(0.146)$ $(0.149)$ $(0.134)$ $-0.125$ $-0.122$ $-0.144$ $-0.107$ $-0.102$ $(0.146)$ $(0.147)$ $(0.138)$ $(0.164)$ $(0.148)$ $264.31$ $46.09$ $124.05$ $64.34$ $60$ $288$ $288$ $288$ $288$ $288$ $288$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Table 29: Village-Level Communication Results Restricted to Slope Incentive Set

Note:

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the Village Level

				Dependent	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Random	-0.080 (0.197)	-0.197 (0.220)	-0.088 (0.201)	-0.022 (0.207)	-0.045 (0.194)	-0.160 (0.217)	-0.081 (0.182)	-33.513 (26.361)
Gossip	-0.324 (0.245)	-0.392 (0.350)	-0.325 (0.226)	-0.299 (0.245)	-0.415 (0.268)	$-0.480^{*}$ (0.272)	-0.349 (0.295)	$-81.665^{**}$ (40.309)
Trusted	$0.131 \\ (0.166)$	$0.094 \\ (0.211)$	$0.129 \\ (0.159)$	$0.149 \\ (0.171)$	$0.058 \\ (0.178)$	0.097 (0.184)	0.159 (0.182)	-1.100 (26.167)
Trusted Gossip	$0.035 \\ (0.236)$	-0.268 (0.511)	0.077 (0.212)	$\begin{array}{c} 0.065 \ (0.224) \end{array}$	-0.153 (0.299)	-0.187 (0.309)	-0.092 (0.338)	-49.530 (46.265)
Control Mean Total Obs. Zeros Replaced	$\begin{array}{c} 245.19\\ 152\\ 0\end{array}$	$\begin{array}{c} 44.06\\ 152\\ 1\end{array}$	$\begin{array}{c}116.49\\152\\0\end{array}$	59.1 $152$ $0$	57.38 $152$ $0$	53.78 $152$ $0$	$49.56 \\ 152 \\ 1$	$\begin{array}{c} 116.49\\ 152\\ 0\end{array}$

Table 30: Village-Level Communication Results Restricted to Flat Incentive Set

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

## 4 Targeted Reminders Experiments

## 4.1 Global Effect

## 4.1.1 SC-Month Level

We run the baseline specification at the SC-Month level. We restrict the sample to the first implementation of the *reminders* treatment, that means that we drop all observations that happened after November 2017. With 754 SCs in the sample, we gather more than 6,000 observations to study the effect of *reminders* on immunization.

The control mean for Measles first shot is low - around 4 shots per SC per month - and nearly one third of data on shots is zero at this level of observation. Indeed, we drop every child that come first time for Measles vaccine. Therefore, we decide to study this shot outcome in level, as well as the fully immunized variable. We do not replace missing values, and for outcomes in log we previously transform 0 into 1.

We include district-time fixed effects and run once the regression with only PHC-time fixed effects for the last table. Moreover, we always compute clustered robust standard errors at the SC level, the level of assignment.

We first do not take into account control variables from the *incentives* treatment, and then add it in Table 30.

		Dependent variable:							
	Log Vaccine Given (1)	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children	
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	
33% First Impl.	$0.052 \\ (0.044)$	$0.489^{**}$ (0.228)	$\begin{array}{c} 0.056 \\ (0.044) \end{array}$	$0.058 \\ (0.045)$	$0.072 \\ (0.047)$	$0.068 \\ (0.048)$	$0.574^{**}$ (0.247)	$4.930^{**}$ (1.955)	
66% First Impl.	$0.037 \\ (0.044)$	0.174 (0.218)	$0.040 \\ (0.044)$	$0.049 \\ (0.045)$	$0.062 \\ (0.046)$	$0.048 \\ (0.048)$	0.200 (0.237)	2.659 (1.754)	
Control Mean Total Obs.	$37.07 \\ 6515$	$3.34 \\ 6517$	$36.02 \\ 6517$	$10.3 \\ 6515$	$9.05 \\ 6515$	$8.45 \\ 6515$	$3.73 \\ 6515$	$36.02 \\ 6517$	
Zeros Replaced	0	0	0	95	93	117	0	0	

Table 31: SC-Month-Level Reminders Results

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Note:

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

		Dependent variable:							
	Log Vaccine Given (1)	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children	
		(2)	(3)	(4)	(5)	(6)	(7)	(8)	
33% First Impl.	$0.055 \\ (0.044)$	$0.511^{**}$ (0.229)	$0.059 \\ (0.044)$	$0.062 \\ (0.045)$	$0.076 \\ (0.046)$	$0.071 \\ (0.047)$	$0.596^{**}$ (0.248)	$5.117^{***} \\ (1.975)$	
66% First Impl.	$0.038 \\ (0.043)$	$0.160 \\ (0.217)$	0.041 (0.044)	$\begin{array}{c} 0.049 \\ (0.044) \end{array}$	$\begin{array}{c} 0.062\\ (0.046) \end{array}$	0.048 (0.047)	$\begin{array}{c} 0.184 \\ (0.236) \end{array}$	2.645 (1.749)	
Control Mean	37.07	3.34	36.02	10.3	9.05	8.45	3.73	36.02	
Total Obs. Zeros Replaced	$\begin{array}{c} 6515\\ 0\end{array}$	$\begin{array}{c} 6517 \\ 0 \end{array}$	$\begin{array}{c} 6517 \\ 0 \end{array}$	$6515 \\ 95$	$6515 \\ 93$	$6515 \\ 117$	$\begin{array}{c} 6515 \\ 0 \end{array}$	$\begin{array}{c} 6517 \\ 0 \end{array}$	
Note:						*.	p<0.1; **p<0.05;	***p<0.01	

## Table 32: SC-Month-Level Reminders Results

- All specifications include District-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

		Dependent variable:							
	Log Vaccine Given	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
33% First Impl.	$0.023 \\ (0.042)$	$0.331 \\ (0.214)$	$\begin{array}{c} 0.027 \\ (0.043) \end{array}$	$0.026 \\ (0.042)$	$0.051 \\ (0.044)$	$0.048 \\ (0.045)$	$0.432^{*}$ (0.236)	$3.107^{*}$ (1.718)	
66% First Impl.	$0.028 \\ (0.041)$	$0.216 \\ (0.206)$	$0.030 \\ (0.042)$	$\begin{array}{c} 0.032 \\ (0.042) \end{array}$	$\begin{array}{c} 0.045 \\ (0.043) \end{array}$	0.041 (0.044)	$\begin{array}{c} 0.323 \ (0.222) \end{array}$	$2.824^{*}$ (1.615)	
Control Mean	37.07	3.34	36.02	10.3	9.05	8.45	3.73	36.02	
Total Obs.	6515	6517	6517	6515	6515	6515	6515	6517	
Zeros Replaced	0	0	0	95	93	117	0	0	
Note:						*]	p<0.1; **p<0.05;	***p<0.01	

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

		Dependent variable:							
	Log Vaccine Given	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
33% First Impl.	-0.004 (0.038)	$0.174 \\ (0.219)$	-0.005 (0.039)	0.00000 (0.039)	0.018 (0.040)	$0.008 \\ (0.041)$	$0.219 \\ (0.240)$		
66% First Impl.	-0.001 (0.037)	0.016 (0.222)	$0.004 \\ (0.038)$	$0.008 \\ (0.037)$	$0.025 \\ (0.039)$	$0.017 \\ (0.040)$	$0.072 \\ (0.236)$		
Control Mean	40	4	41	11	10	9	5		
Total Obs. Zeros Replaced	$\begin{array}{c} 10206 \\ 0 \end{array}$	$\begin{array}{c}10212\\0\end{array}$	$\begin{array}{c} 10212 \\ 0 \end{array}$	$10206 \\ 134$	$10206 \\ 132$	$10206 \\ 159$	$\begin{array}{c} 10206 \\ 0 \end{array}$		

Table 34: SC-Month-Level Reminders Results with Double Post Lasso selected controls

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

- All specifications include District-Time fixed effects and BHC double post lasso selected village controls

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

#### SC Level 4.1.2

We run the same specifications at the SC level, restricted to the first implementation of the reminders treatment. All outcomes can be studied in log, after replacing 0 with 1.

|--|

		Dependent variable:							
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
33% First Impl.	$0.048 \\ (0.046)$	$0.030 \\ (0.070)$	$\begin{array}{c} 0.047 \\ (0.043) \end{array}$	0.041 (0.046)	0.061 (0.047)	$0.062 \\ (0.049)$	$0.069 \\ (0.066)$	$20.759^{**}$ (8.585)	
66% First Impl.	$0.030 \\ (0.045)$	-0.004 (0.071)	$0.029 \\ (0.043)$	$\begin{array}{c} 0.027 \\ (0.046) \end{array}$	$\begin{array}{c} 0.047 \\ (0.046) \end{array}$	$\begin{array}{c} 0.050 \\ (0.048) \end{array}$	$0.039 \\ (0.067)$	10.702 (7.567)	
Control Mean	320.3	28.92	156.89	89.01	78.22	72.99	32.26	156.89	
Total Obs. Zeros Replaced	$\begin{array}{c} 754 \\ 0 \end{array}$	754 7	$\begin{array}{c} 754 \\ 0 \end{array}$	754 $5$	$\begin{array}{c} 754 \\ 0 \end{array}$				
Note:							*p<0.1; **p<0.05;	***p<0.01	

- All specifications include District Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

		Dependent variable:							
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
33% First Impl.	0.053 (0.046)	$0.038 \\ (0.070)$	$\begin{array}{c} 0.052 \\ (0.043) \end{array}$	$0.046 \\ (0.046)$	$0.067 \\ (0.047)$	$0.067 \\ (0.049)$	$0.076 \\ (0.066)$	$21.841^{**} \\ (8.716)$	
66% First Impl.	$0.030 \\ (0.045)$	-0.006 (0.071)	$0.029 \\ (0.042)$	$\begin{array}{c} 0.027 \\ (0.046) \end{array}$	$\begin{array}{c} 0.047 \\ (0.046) \end{array}$	$0.049 \\ (0.047)$	$0.036 \\ (0.067)$	10.748 (7.545)	
Control Mean	320.3	28.92	156.89	89.01	78.22	72.99	32.26	156.89	
Total Obs. Zeros Replaced	$\begin{array}{c} 754 \\ 0 \end{array}$	754 7	$\begin{array}{c} 754 \\ 0 \end{array}$	$\begin{array}{c} 754 \\ 0 \end{array}$	$\begin{array}{c} 754 \\ 0 \end{array}$	$\begin{array}{c} 754 \\ 0 \end{array}$	$\begin{array}{c} 754 \\ 5 \end{array}$	$\begin{array}{c} 754 \\ 0 \end{array}$	
Note:							*p<0.1; **p<0.05;	***p<0.01	

Table 36:	SC–Level	Reminders	Results
<b>T</b> able <b>50</b> .	DO LOVOI	roundors	resures

- All specifications include District Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 37:	SC–Level	Reminders	Results
<b>T</b> able 01.	DO LOVOI	rounnaoib	reoburos

		Dependent variable:								
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
33% First Impl.	$0.025 \\ (0.041)$	0.043 (0.072)	$0.009 \\ (0.039)$	$0.016 \\ (0.042)$	$0.035 \\ (0.043)$	$0.047 \\ (0.044)$	$0.074 \\ (0.067)$	$11.165 \\ (7.019)$		
66% First Impl.	$\begin{array}{c} 0.030 \\ (0.042) \end{array}$	$0.006 \\ (0.067)$	$0.017 \\ (0.040)$	$\begin{array}{c} 0.015 \\ (0.043) \end{array}$	$\begin{array}{c} 0.032 \\ (0.043) \end{array}$	$0.046 \\ (0.044)$	$0.045 \\ (0.062)$	9.810 (6.627)		
Control Mean	320.3	28.92	156.89	89.01	78.22	72.99	32.26	156.89		
Total Obs. Zeros Replaced	$\begin{array}{c} 754 \\ 0 \end{array}$	$\frac{754}{7}$	754	7540	$\begin{array}{c} 754 \\ 0 \end{array}$	$\begin{array}{c} 754 \\ 0 \end{array}$	7545	754		

Note:

- All specifications include PHC Fixed Effects

For outcomes expressed in logs, -Inf replaced with 0
Control mean shown in levels

- Standard Errors Clustered at the SC Level

#### 4.2**Spillover Effect**

#### 4.2.1SC-Month Level

We run the same specifications as before at the SC-Month level. We restrict the sample to the first implementation of the *reminders* treatment, and we transform the observations to drop the individually treated children from the data. In order to be able to compare the SCs of the control group and the SCs of the treatment group, that were amputated of 33% or 66% of their children, we weight the outcomes of the SCs in the treatment group accordingly. Therefore, the outcomes of the treatment group are approximations. Still, we can observe the same effect that we get with the whole population.

Table 38: SC-Month-Level Reminders Results Spillover E	Effects
--	---------

				Dependent	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
33% First Impl.	$0.047 \\ (0.044)$	$\begin{array}{c} 0.444^{**} \\ (0.226) \end{array}$	$0.460^{***}$ (0.044)	$0.041 \\ (0.045)$	$0.050 \\ (0.047)$	$0.041 \\ (0.048)$	$0.528^{**}$ (0.246)	$26.224^{***}$ (2.951)
66% First Impl.	$0.023 \\ (0.044)$	0.181 (0.227)	$\frac{1.145^{***}}{(0.044)}$	-0.021 (0.046)	-0.014 (0.047)	-0.039 (0.048)	$\begin{array}{c} 0.193 \\ (0.248) \end{array}$	$\begin{array}{c} 82.854^{***} \\ (4.548) \end{array}$
Control Mean	36.88	3.32	35.8	10.25	9.02	8.41	3.71	35.8
Total Obs. Zeros Replaced	$\begin{array}{c} 6491 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$		$\begin{array}{c} 6491 \\ 368 \end{array}$		$\begin{array}{c} 6491 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$
Note:							*p<0.1; **p<0.05	; ***p<0.01

```
*p<0.1; **p<0.05; ***p<0.01
```

- All specifications include District-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 39: SC-Month-Level Remin	ders Results Spillover Effects
--------------------------------	--------------------------------

			Dependent a	variable:			
Log Vaccine Given	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$0.050 \\ (0.044)$	$0.464^{**}$ (0.226)	$\begin{array}{c} 0.464^{***} \\ (0.044) \end{array}$	$0.045 \\ (0.045)$	$0.055 \\ (0.047)$	$0.045 \\ (0.047)$	$0.550^{**}$ (0.246)	$26.637^{***} \\ (2.997)$
0.023 (0.044)	0.160 (0.226)	$\frac{1.145^{***}}{(0.044)}$	-0.021 (0.045)	-0.014 (0.046)	-0.040 (0.048)	$0.171 \\ (0.247)$	$82.832^{***}$ (4.528)
36.88	3.32	35.8	10.25	9.02	8.41	3.71	35.8
$\begin{smallmatrix} 6491 \\ 0 \end{smallmatrix}$	$\begin{array}{c} 6492 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$		$\begin{array}{c} 6491 \\ 368 \end{array}$	$\begin{array}{c} 6491 \\ 398 \end{array}$	$\begin{array}{c} 6491 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$
	Vaccine Given (1) 0.050 (0.044) 0.023 (0.044) 36.88 6491	Vaccine Given         Fully Immunized           (1)         (2)           0.050         0.464**           (0.044)         (0.226)           0.023         0.160           (0.044)         (0.226)           36.88         3.32           6491         6492	Vaccine GivenFully ImmunizedChildren $(1)$ $(2)$ $(3)$ $0.050$ $0.464^{**}$ $0.464^{***}$ $(0.044)$ $(0.226)$ $(0.044)$ $0.023$ $0.160$ $1.145^{***}$ $(0.044)$ $(0.226)$ $(0.044)$ $36.88$ $3.32$ $35.8$ $6491$ $6492$ $6492$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Vaccine GivenFully ImmunizedChildrenShot Penta1Shot Penta2(1)(2)(3)(4)(5) $0.050$ $0.464^{***}$ $0.464^{***}$ $0.045$ $0.055$ $(0.044)$ $(0.226)$ $(0.044)$ $(0.045)$ $(0.047)$ $0.023$ $0.160$ $1.145^{***}$ $-0.021$ $-0.014$ $(0.044)$ $(0.226)$ $(0.044)$ $(0.045)$ $(0.046)$ $36.88$ $3.32$ $35.8$ $10.25$ $9.02$ $6491$ $6492$ $6491$ $6491$ $6491$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

- All specifications include District-Time Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

				Dependent	variable:			
	Log Vaccine Given	Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
33% First Impl.	$0.021 \\ (0.042)$	$0.267 \\ (0.216)$	$\begin{array}{c} 0.436^{***} \\ (0.043) \end{array}$	$0.023 \\ (0.042)$	$0.029 \\ (0.045)$	$0.020 \\ (0.046)$	$0.379 \\ (0.238)$	$22.516^{***} \\ (3.386)$
66% First Impl.	$0.022 \\ (0.041)$	0.233 (0.217)	$\frac{1.145^{***}}{(0.041)}$	-0.021 (0.041)	-0.032 (0.044)	-0.038 (0.044)	$\begin{array}{c} 0.320 \ (0.232) \end{array}$	$\begin{array}{c} 82.997^{***} \\ (4.522) \end{array}$
Control Mean	36.88	3.32	35.8	10.25	9.02	8.41	3.71	35.8
Total Obs. Zeros Replaced	$\begin{array}{c} 6491 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$		$\begin{array}{c} 6491 \\ 368 \end{array}$		$\begin{array}{c} 6491 \\ 0 \end{array}$	$\begin{array}{c} 6492 \\ 0 \end{array}$
Note:							*p<0.1; **p<0.05	; ***p<0.01

Table 40: SC-Month-Level Reminders Results Spillover Effects

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

#### SC Level 4.2.2

We run the same specifications at the SC level.

	Table 41:	SC-Level	Reminders	Results	Spillover Effect	$\mathbf{s}$
--	-----------	----------	-----------	---------	------------------	--------------

				Dependent	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
33% First Impl.	$0.055 \\ (0.046)$	0.042 (0.069)	$\begin{array}{c} 0.475^{***} \\ (0.043) \end{array}$	$0.046 \\ (0.047)$	$0.066 \\ (0.048)$	$0.068 \\ (0.049)$	0.071 (0.066)	$\begin{array}{c} 119.161^{***} \\ (13.942) \end{array}$
66% First Impl.	$0.026 \\ (0.047)$	-0.086 (0.076)	$\frac{1.153^{***}}{(0.044)}$	$0.026 \\ (0.047)$	$0.039 \\ (0.049)$	$0.038 \\ (0.049)$	-0.048 (0.073)	$359.890^{***}$ (20.688)
Control Mean Total Obs.	$318.64 \\ 754$	28.7 754	$155.89 \\ 754$	$88.52 \\ 754$	$77.89 \\ 754$	72.64 $754$	$32.09 \\ 754$	$155.89 \\ 754$
Zeros Replaced	0	17	0	0	1	0	11	0

Note:

- All specifications include District Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

		Dependent variable:								
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
33% First Impl.	$0.060 \\ (0.046)$	$0.050 \\ (0.069)$	$0.480^{***}$ (0.043)	$0.051 \\ (0.047)$	0.073 (0.048)	0.073 (0.049)	$0.079 \\ (0.066)$	$\begin{array}{c} 121.684^{***} \\ (14.217) \end{array}$		
66% First Impl.	$0.026 \\ (0.046)$	-0.091 (0.076)	$\frac{1.154^{***}}{(0.044)}$	$0.026 \\ (0.047)$	$\begin{array}{c} 0.040 \\ (0.049) \end{array}$	$\begin{array}{c} 0.037 \\ (0.048) \end{array}$	-0.052 (0.072)	$360.069^{***}$ (20.596)		
Control Mean	318.64	28.7	155.89	88.52	77.89	72.64	32.09	155.89		
Total Obs.	754	754	754	754	754	754	754	754		
Zeros Replaced	0	17	0	0	1	0	11	0		

 Table 42: SC-Level Reminders Results Spillover Effects

- All specifications include District Fixed Effects

- All specifications include a full Set of Controls for Incentives

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 43: SC-Level Reminders Results Spillover Effects	Table 43:	SC-Level	Reminders	Results	Spillover	Effects
--	-----------	----------	-----------	---------	-----------	---------

				Dependent	variable:			
	Log Vaccine Given	Log Fully Immunized	Log Children	Log Shot Penta1	Log Shot Penta2	Log Shot Penta3	Log Shot Measles1	Children
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
33% First Impl.	$0.030 \\ (0.041)$	$0.059 \\ (0.073)$	$\begin{array}{c} 0.428^{***} \\ (0.039) \end{array}$	0.027 (0.042)	$0.032 \\ (0.044)$	$0.045 \\ (0.045)$	$0.080 \\ (0.069)$	$96.459^{***}$ (14.972)
66% First Impl.	$0.058 \\ (0.041)$	-0.021 (0.067)	$\begin{array}{c} 1.173^{***} \\ (0.039) \end{array}$	$\begin{array}{c} 0.052\\ (0.042) \end{array}$	0.048 (0.043)	$0.062 \\ (0.044)$	-0.011 (0.065)	$366.898^{***}$ (21.113)
Control Mean Total Obs. Zeros Replaced	$\begin{array}{c} 318.64 \\ 754 \\ 0 \end{array}$	28.7 754 17	$155.89 \\ 754 \\ 0$	$88.52 \\ 754 \\ 0$	77.89 754	72.64 $754$ $0$	32.09 754 11	$155.89 \\ 754 \\ 0$

Note:

- All specifications include PHC-Time Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

#### 4.2.3Child Level

We compute another method to evaluate spillover effects. This time, we keep every child and add the variable *individual treatment* to distinguish the effects on children in the treatment group that were selected to receive reminders and children in the treatment group that were not selected. We first run a regression with district fixed effects, and then a regression with PHC fixed effect. No outcome can be expressed in log.

				Dependent var	riable:	
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1
	(1)	(2)	(3)	(4)	(5)	(6)
33% First Impl.	-0.008	-0.017	-0.011	0.001	0.001	-0.016
	(0.029)	(0.017)	(0.008)	(0.010)	(0.013)	(0.018)
66% First Impl.	-0.014	-0.018	-0.006	0.001	-0.010	-0.017
	(0.029)	(0.019)	(0.008)	(0.011)	(0.015)	(0.021)
33% * Ind.Treat.	0.0003	$0.013^{*}$	-0.003	-0.007	$0.009^{*}$	0.015**
	(0.010)	(0.007)	(0.005)	(0.005)	(0.005)	(0.007)
66% * Ind.Treat.	-0.001	0.003	-0.002	-0.005	-0.0004	0.002
	(0.011)	(0.008)	(0.005)	(0.005)	(0.005)	(0.008)
Control Mean	2.09	0.41	0.6	0.56	0.57	0.47
Total Obs.	121026	55229	117875	111155	101498	55229
Zeros Replaced	0	0	0	0	0	0
Note:						*p<0.1; **p<0.05; ***p<0.01

Table 44: Child-Level Reminders Results Spillover Effects

- All specifications include District Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 45: (	Child-Level	Reminders	Results	Spillover	Effects
-------------	-------------	-----------	---------	-----------	---------

				Dependent var	riable:	
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1
	(1)	(2)	(3)	(4)	(5)	(6)
33% First Impl.	$0.023 \\ (0.032)$	-0.0004 (0.018)	$0.004 \\ (0.007)$	$0.010 \\ (0.012)$	0.010 (0.015)	$0.006 \\ (0.019)$
66% First Impl.	$0.030 \\ (0.030)$	-0.004 (0.018)	$0.005 \\ (0.007)$	0.012 (0.011)	$0.005 \\ (0.015)$	0.007 (0.019)
33% * Ind. Treat.	-0.001 (0.010)	$0.012^{*}$ (0.007)	-0.003 (0.005)	-0.007 (0.005)	$0.008 \\ (0.005)$	$0.013^{**}$ (0.007)
66% * Ind. Treat.	0.001 (0.011)	$0.005 \\ (0.008)$	-0.002 (0.005)	-0.005 (0.005)	0.0001 (0.005)	$0.003 \\ (0.008)$
Control Mean Total Obs. Zeros Replaced	$\begin{array}{c} 2.09\\121026\\0\end{array}$	$\begin{array}{c} 0.41 \\ 55229 \\ 0 \end{array}$	$\begin{array}{c} 0.6\\117875\\0\end{array}$	$\begin{array}{c} 0.56\\111155\\0\end{array}$	$\begin{array}{c} 0.57\\ 101498\\ 0\end{array}$	$\begin{array}{c} 0.47\\ 55229\\ 0\end{array}$

Note:

- All specifications include PHC Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

## 4.3 Individual Effect

## 4.3.1 Child Level Restricted to Villages Eligible for Reminders

To evaluate the individual effect of *reminders* on immunization, we restrict the sample to SCs in the treatment group. We study the effect of *individual treatment* to compare the children that were selected to receive reminders and children that were not selected. We compute regressions with village fixed effect to increase accuracy of the standard errors. We first run a regression with no controls from other treatment, and then a regression with a set of controls for *incentives* and *communication*.

Table 46: Child-Level Reminders Results Individual Effects

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	-0.0003 (0.008)	$0.008 \\ (0.005)$	-0.002 (0.004)	-0.006 (0.004)	$0.005 \\ (0.004)$	$0.008 \\ (0.005)$				
Control Mean Total Obs. Zeros Replaced	2.1 $85767$ $0$	$0.41 \\ 39350 \\ 0$	$0.59 \\ 83628 \\ 0$	$0.57 \\ 78986 \\ 0$	$0.58 \\ 72163 \\ 0$	$\begin{array}{c} 0.47\\ 39350\\ 0\end{array}$				

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	-0.00003 (0.011)	$0.002 \\ (0.008)$	-0.001 (0.005)	-0.005 (0.006)	$0.006 \\ (0.006)$	$0.002 \\ (0.008)$				
Control Mean Total Obs.	$\begin{array}{c} 2.1\\ 85767\end{array}$	$\begin{array}{c} 0.41\\ 39350\end{array}$	$0.59 \\ 83628$	0.57 78986	$0.58 \\ 72163$	$\begin{array}{c} 0.47\\ 39350\end{array}$				
Zeros Replaced	0	0	0	0	0	0				

### Table 47: Child-Level Reminders Results Individual Effects

Note:

Note:

- All specifications include Village Fixed Effects

- All specifications include a full Set of Controls for Incentives and Communication

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

27

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

p<0.1; p<0.05; p<0.05; p<0.01

#### 4.3.2Child Level Restricted to Other Sets

While we still take into account only children from SCs in the treatment group, we restrict the sample to different sets of sub-treatments for incentives, communication and reminders.

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	$0.016 \\ (0.010)$	$0.008 \\ (0.007)$	0.0003 (0.005)	-0.0004 (0.005)	$0.011^{**}$ (0.004)	$0.008 \\ (0.007)$				
Control Mean	2.09	0.41	0.59	0.56	0.57	0.46				
Total Obs.	40544	18739	39506	37321	34103	18739				
Zeros Replaced	0	0	0	0	0	0				

### Table 48: Child-Level Reminders Results Individual Effects to no Incentive Set

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with  $\boldsymbol{0}$ 

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

### Table 49: Child-Level Reminders Results Individual Effects to Incentive Set

		Dependent variable:								
	Vaccine Given	Fully Immunized	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	-0.015 (0.011)	$0.007 \\ (0.007)$	-0.005 (0.005)	$-0.010^{*}$ (0.006)	-0.001 (0.006)	$0.007 \\ (0.007)$				
Control Mean	2.11	0.4	0.59	0.57	0.58	0.47				
Total Obs.	45223	20611	44122	41665	38060	20611				
Zeros Replaced	0	0	0	0	0	0				

Note:

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

### Table 50: Child-Level Reminders Results Individual Effects to no Communication Set

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	-0.011 (0.015)	0.003 (0.012)	-0.005 (0.008)	-0.007 (0.008)	0.007 (0.009)	0.001 (0.012)				
Control Mean Total Obs.	$2.12 \\ 15615$	$\begin{array}{c} 0.43 \\ 6973 \end{array}$	$0.58 \\ 15288$	$\begin{array}{c} 0.58\\ 14497\end{array}$	$0.61 \\ 13228$	$\begin{array}{c} 0.5 \\ 6973 \end{array}$				
Zeros Replaced	0	0	0	0	0	0				

Note:

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

	Dependent variable:								
	Vaccine Given	Fully Immunized	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1			
	(1)	(2)	(3)	(4)	(5)	(6)			
Individual Treat.	$0.008 \\ (0.015)$	$0.002 \\ (0.010)$	$0.002 \\ (0.007)$	-0.004 (0.008)	$0.006 \\ (0.007)$	$0.002 \\ (0.011)$			
Control Mean	2.13	0.44	0.59	0.59	0.62	0.5			
Total Obs.	22413	9684	21865	20617	18773	9684			
Zeros Replaced	0	0	0	0	0	0			

Table 51: Child-Level Reminders Results Individual Effects to Communication Set

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 52: Child	l-Level Reminders	s Results Individual	l Effects to	Gossip Comm. Set	
-----------------	-------------------	----------------------	--------------	------------------	--

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Pental	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	$0.028 \\ (0.025)$	$0.027^{*}$ (0.016)	$0.009 \\ (0.012)$	$0.007 \\ (0.013)$	$0.005 \\ (0.012)$	$0.027 \\ (0.020)$				
Control Mean Total Obs.	$2.13 \\ 7008$	$\begin{array}{c} 0.46 \\ 2922 \end{array}$	$0.61 \\ 6825$	$\begin{array}{c} 0.6 \\ 6401 \end{array}$	0.64	0.52 2922				
Zeros Replaced	0	2922	0825	0	$\begin{array}{c} 5819 \\ 0 \end{array}$	2922				

Note:

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 53: Child-Level Reminders Results Individual Effects to Trusted Comm. Set

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	$0.019 \\ (0.037)$	$0.004 \\ (0.022)$	-0.013 (0.013)	-0.006 (0.019)	$0.023 \\ (0.015)$	0.011 (0.022)				
Control Mean	2.17	0.45	0.61	0.59	0.6	0.5				
Total Obs.	5571	2464	5441	5160	4727	2464				
Zeros Replaced	0	0	0	0	0	0				

Note:

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

	Dependent variable:									
	Vaccine Given	Fully Immunized	Shot Penta1	Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	-0.001 (0.011)	0.009 (0.006)	-0.003 (0.005)	-0.007 (0.005)	$0.008^{*}$ (0.005)	$0.011^{*}$ (0.006)				
Control Mean	2.11	0.41	0.59	0.57	0.59	0.47				
Total Obs.	43952	20371	42869	40466	37006	20371				
Zeros Replaced	0	0	0	0	0	0				

## Table 54: Child-Level Reminders Results Individual Effects to 33% Reminders Set

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

- Control mean shown in levels

- Standard Errors Clustered at the SC Level

Table 55: Child-Level Reminders Results Individual Effects to 66% Reminders Set	Table 55:	Child-Level	Reminders	Results	Individual	Effects t	o 66%	Reminders Set
---	-----------	-------------	-----------	---------	------------	-----------	-------	---------------

	Dependent variable:									
	Vaccine Given	cine Given Fully Immunized		Shot Penta2	Shot Penta3	Shot Measles1				
	(1)	(2)	(3)	(4)	(5)	(6)				
Individual Treat.	$0.0004 \\ (0.011)$	$0.006 \\ (0.008)$	-0.002 (0.005)	-0.005 (0.006)	$0.001 \\ (0.005)$	$0.004 \\ (0.008)$				
Control Mean Total Obs.	$2.08 \\ 41815$	0.4 18979	$0.59 \\ 40759$	0.56 38520	$0.56 \\ 35157$	$0.45 \\ 18979$				
Zeros Replaced	41815	0	40755 0	0	0	0				

Note:

- All specifications include Village Fixed Effects

- For outcomes expressed in logs, -Inf replaced with 0

Control mean shown in levels
Standard Errors Clustered at the SC Level