

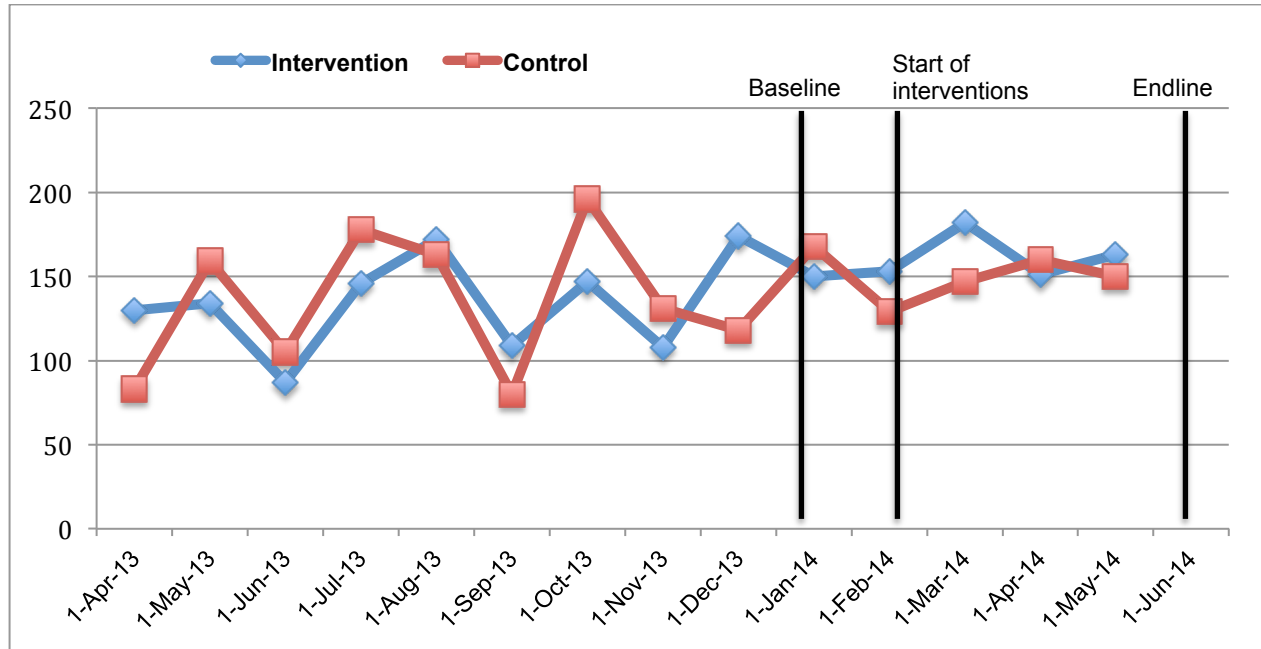
APPENDIX FOR THE STUDY: INTERVENTIONS TO INCREASE IMMUNISATION COVERAGE AMONG CHILDREN 12-23 MONTHS OF AGE IN INDIA THROUGH PARTICIPATORY LEARNING AND COMMUNITY MOBILISATION: PILOT STUDY FOR A CLUSTER RANDOMISED TRIAL (JOHRI ET AL., 2015)

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Secondary outcomes

Supplementary Figure 1. Total number of children vaccinated in intervention and control villages, April 1st, 2013 to May 1st, 2014¹



¹ A total of 12 villages participated in the pilot study, 6 villages in the intervention group and 6 in the control group

Supplementary Table 1: Full results of univariate regression models for selected indicators of immunisation intervention performance at end line versus baseline for 373 participating mothers, by dose and study group

General information about vaccination

Vaccination protects against how many diseases?	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	2.38	(1.60 - 3.58)	0.000	2.80	(1.72 - 4.56)	0.000
CG (end line vs. baseline)	1.29	(0.56 - 2.99)	0.545	1.36	(0.50 - 3.72)	0.543
Mother attended school				4.53	(3.01 - 6.81)	0.000
Quintile of wealth index						
Q1 (poorest)				Ref.		
Q2				1.03	(0.56 - 1.90)	0.924
Q3				0.95	(0.58 - 1.57)	0.853
Q4				1.53	(0.94 - 2.49)	0.085
Q5				2.14	(0.89 - 5.15)	0.091

Knowledge of the immunisation card

What is the child's date of birth? (Correct)	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	1.15	(0.95 - 1.40)	0.148	1.20	(0.94 - 1.53)	0.137
CG (end line vs. baseline)	1.16	(0.99 - 1.36)	0.075	1.21	(0.99 - 1.48)	0.061
Mother attended school				20.89	(8.35 - 52.28)	0.000
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				1.71	(0.66 - 4.46)	0.272
Q3				1.54	(0.71 - 3.33)	0.27
Q4				2.14	(0.93 - 4.91)	0.073
Q5				3.58	(1.66 - 7.72)	0.001

Why does the immunisation card have multiple boxes? (Correct)	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value

IG (end line vs. baseline)	1.02	(0.54 - 1.92)	0.948	1.02	(0.52 - 2.03)	0.948
CG (end line vs. baseline)	0.38	(0.14 - 1.07)	0.066	0.34	(0.11 - 1.04)	0.059
Mother attended school				2.38	(1.89 - 3.01)	0.000
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				0.67	(0.47 - 0.95)	0.024
Q3				0.87	(0.51 - 1.51)	0.632
Q4				1.07	(0.65 - 1.74)	0.799
Q5				1.78	(1.08 - 2.94)	0.024

How many doses has the child received? (Correct)	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	0.49	(0.26 - 0.94)	0.031	0.43	(0.21 - 0.88)	0.02
CG (end line vs. baseline)	0.85	(0.66 - 1.09)	0.193	0.82	(0.61 - 1.11)	0.206
Mother attended school				24.73	(8.90 - 68.73)	0.000
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				1.19	(0.47 - 3.01)	0.716
Q3				1.52	(0.50 - 4.60)	0.457
Q4				1.28	(0.48 - 3.44)	0.618
Q5				3.11	(1.49 - 6.49)	0.002

Which vaccine has the child received? (Correct)	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	0.79	(0.47 - 1.30)	0.349	0.75	(0.41 - 1.38)	0.357
CG (end line vs. baseline)	0.86	(0.67 - 1.10)	0.229	0.84	(0.62 - 1.12)	0.233
Mother attended school				8.76	(3.97 - 19.36)	0.000
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				1.43	(0.61 - 3.36)	0.416

Q3	1.62	(0.78 - 3.32)	0.193
Q4	1.36	(0.48 - 3.84)	0.558
Q5	4.00	(1.60 - 10.00)	0.003

Knowledge of the immunisation schedule (by dose)

Birth Dose	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	5.23	(0.57 - 48.29)	0.145	5.52	(0.53 - 57.38)	0.152
CG (end line vs. baseline)	4.17	(1.51 - 11.57)	0.006	4.34	(1.62 - 11.61)	0.003
Mother attended school				1.37	(0.79 - 2.36)	0.258
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				0.45	(0.19 - 1.10)	0.080
Q3				0.48	(0.18 - 1.25)	0.131
Q4				0.36	(0.12 - 1.03)	0.057
Q5				0.63	(0.16 - 2.59)	0.527

Dose at 1.5 months	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	7.55	(3.25 - 17.29)	0.000	10.01	(3.51 - 28.58)	0.000
CG (end line vs. baseline)	1.45	(0.49 - 4.37)	0.500	1.35	(0.42 - 4.41)	0.614
Mother attended school				2.74	(1.66 - 4.53)	0.000
Quintile of wealth index						
Q1 (poorest)	ref					
Q2				0.69	(0.36 - 1.33)	0.270
Q3				0.59	(0.24 - 1.46)	0.257
Q4				0.53	(0.25 - 1.12)	0.096
Q5				0.83	(0.46 - 1.52)	0.553

Dose at 2.5 months	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	14.11	(5.90 - 33.78)	0.000	18.56	(8.08 - 42.65)	0.000
CG (end line vs. baseline)	0.76	(0.27 - 2.11)	0.598	0.70	(0.21 - 2.29)	0.558

Mother attended school			2.26	(1.12 - 4.53)	0.022
Quintile of wealth index					
	Q1 (poorest)	ref			
	Q2		0.81	(0.47 - 1.39)	0.436
	Q3		1.02	(0.47 - 2.22)	0.964
	Q4		0.48	(0.22 - 1.07)	0.073
	Q5		0.89	(0.44 - 1.82)	0.756

Dose at 3.5 months	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	18.25	(7.43 - 44.83)	0.000	25.04	(8.79 - 71.3)	0.000
CG (end line vs. baseline)	0.43	(0.13 - 1.44)	0.170	0.38	(0.08 - 1.73)	0.209
Mother attended school				2.17	(0.93 - 5.06)	0.074
Quintile of wealth index						
	Q1 (poorest)	ref				
	Q2			0.69	(0.34 - 1.42)	0.316
	Q3			0.75	(0.33 - 1.70)	0.491
	Q4			0.42	(0.17 - 1.03)	0.058
	Q5			1.01	(0.27 - 3.86)	0.983

Dose at 9 months	Model 1			Model 2		
	OR	(95%CI)	P_value	OR	(95%CI)	P_value
IG (end line vs. baseline)	11.30	(3.42 - 37.31)	0.000	15.37	(5.12 - 46.17)	0.000
CG (end line vs. baseline)	0.60	(0.34 - 1.05)	0.073	0.53	(0.27 - 1.03)	0.061
Mother attended school				2.41	(1.03 - 5.62)	0.041
Quintile of wealth index						
	Q1 (poorest)	ref				
	Q2			0.67	(0.22 - 2.08)	0.488
	Q3			0.58	(0.17 - 2.01)	0.386
	Q4			0.93	(0.33 - 2.60)	0.891
	Q5			0.90	(0.22 - 3.63)	0.886

Model 1 adjusted for village-level clustering.

Model 2 adjusted for village-level clustering, mother's education (mother attended school yes/ no), and wealth quintile.

Analysis of loss to follow up (Supplementary Tables 2 – 4)

Supplementary Table 2: Household characteristics of 59 women lost to follow up (A) with 373 women who participated in the pilot study (B)

Characteristics of household	Baseline survey only (A)		Baseline & Endline surveys (B)		T test (B-A)
	n	mean(sd)	n	mean(sd)	
Number of people living in the household (mean (sd))	59	6.2 (2.7)	373	6.9 (2.9)	0.1280
Number of rooms in the house (mean (sd))	59	1.9(1.4)	373	1.8 (1.5)	0.7595
Type of family	n	%	n	%	P-value
Nuclear	29	49.2	187	50.1	0.889
Joint	30	50.8	186	49.9	
Religion of head of household					
Hindu	49	83.0	330	88.5	0.238
Muslim	10	17.0	43	11.5	
Education level of father (years)					
None(0)	11	18.6	99	26.5	0.573
Some Primary (1 to 5)	13	22.0	81	21.7	
Some upper primary (6 to 8)	2	3.4	8	2.1	
Some secondary (9 to 12)	33	55.9	185	49.6	
Father's employment status					
Daily wages	21	35.6	155	41.5	0.211
Work on own land	15	25.4	111	29.8	
Fixed Income	13	22.0	41	11.0	
Self employed	8	13.6	50	13.4	
Unemployed	2	3.4	16	4.3	
Type of Dwelling					
Natural (kachcha)	10	17.0	80	21.5	0.594
Intermediate (Semi pucca)	39	66.1	244	65.4	
Solid (Pucca)	10	16.9	49	13.1	
Type of flooring					
Sand/dung	50	84.7	328	87.9	0.762
Cement/stone/brick	5	8.5	23	6.2	
Other	4	6.8	22	5.9	
Wealth index of household					
Poorest (quintile 1)	8	13.6	80	21.4	0.733
Second	14	23.7	81	21.7	
Middle	12	20.3	65	17.4	
Fourth	13	22.0	75	20.1	
Richest (quintile 5)	12	20.3	72	19.3	
Possess child's immunisation card?					
No	38	64.4	409	54.8	0.154
Yes	21	35.6	337	45.2	

Vaccine coverage (0 to 8 doses)

None (0)	4	6.8	22	5.9	0.965
Partially vaccinated (1 to 7)	46	78.0	293	78.5	
Fully vaccinated (8)	9	15.2	58	15.5	

Supplementary Table 3: Characteristics of 59 women lost to follow up (A) and 373 women who participated in the pilot study (B)

Participant Characteristics	Baseline survey only (A)		Baseline & Endline (B)		p- value
	n	Mean (sd)	n	Mean (sd)	
Mother's age (mean (sd))	59	26.0 (3.6)	371	26.1(4.5)	0.8164
Education level of mother (years)	n	%	n	%	0.255
None (0)	24	40.7	179	48.0	
Some Primary (1 to 5)	3	5.1	39	10.5	
Some upper primary (6 to 8)	2	3.4	8	2.1	
Some secondary (9 to 12)	30	50.8	147	39.4	
Mother's employment status					0.052
Daily wages	1	1.7	0	0.0	
Work on own land	0	0.0	2	0.5	
Self employed	0	0.0	3	0.8	
Housewife	58	98.3	368	98.5	
Place of delivery of child					0.895
Government hospital	36	61.0	205	55.0	
Private hospital	2	3.4	18	4.8	
At home	21	35.6	148	39.7	
On the way to hospital	0	0.0	1	0.3	
Other	0	0.0	1	0.2	

Supplementary Table 4: Comparison of number of correct responses to selected questions for 59 women lost to follow up (A) and 373 women who participated in the pilot study (B)

Indicator	Baseline only (A)		Baseline & Endline (B)		p- value
	n	%	n	%	
Vaccination protects against how many diseases?	36	61.0	192	51.5	0.172
What kind of water to prepare ORS?	47	79.7	298	80.5	0.874
What is first step in preparing ORS?	49	83.0	293	79.2	0.493
What is the child's date of birth?	12	20.3	74	20.1	0.960
Why does the immunisation card have multiple boxes?	37	62.7	199	53.8	0.200
How many doses has the child received?	10	17.0	61	16.5	0.929
Which vaccine has the child received?	10	17.0	60	16.2	0.887

**Analysis of additional community participants who joined the end line survey
(Supplementary Tables 5-7; Figure 2)**

Supplementary Table 5: Comparison of correct responses to selected questions on the end line survey for 373 women who participated in the pilot study (A) and 139 additional community participants who volunteered to take the end line survey (B), by study group (n (%))

	Main analysis: 373 mothers present at baseline and end line						Secondary Analysis: 139 participants					
	Control n=178		Intervention n=195		Total N=373		Control n=43		Intervention n=96		Total N=139	
	n	%	n	%	n	%	n	%	n	%	n	%
Vaccination protects against how many diseases?	113	63.5	131	67.2	244	65.4	32	74.4	79	82.3	111	79.9
What kind of water to prepare ORS?	164	92.1	163	84.0	327	87.9	40	95.2	85	89.5	125	91.2
What is first step in preparing ORS?	162	91.0	168	86.6	330	88.7	40	93.0	80	84.2	120	87.0
What is the child's date of birth?	47	26.4	36	18.6	83	22.3	17	39.5	37	38.9	54	39.1
Why does the immunisation card have multiple boxes?	72	40.5	86	44.3	158	42.5	24	55.8	52	54.2	76	54.7
How many doses has the child received?	27	15.2	16	8.3	43	11.6	10	23.3	18	18.8	28	20.1
Which vaccine has the child received?	30	16.9	21	10.8	51	13.7	13	30.3	29	30.2	42	30.2
Do you know the immunization schedule of your child? ¹	111	62.4	182	93.3	293	78.5	19	44.2	68	70.8	87	62.6

¹ As declared by the respondent (not necessarily correct)

Supplementary Table 6: Comparison of correct responses to selected questions on the end line survey for 373 women who participated in the pilot study (A) and 139 additional community participants who volunteered to take the end line survey (B), by study group¹

	Community, N=139		Mothers, N=373		P- value (B-A)
	n	%	n	%	
Vaccination protects against how many diseases?	111	79.9	244	65.4	0.002
What kind of water to prepare ORS?	125	91.2	327	87.9	0.290
What is first step in preparing ORS?	120	87.0	330	88.7	0.585
What is the child's date of birth?	54	39.1	83	22.3	0.000
Why does the immunisation card have multiple boxes?	76	54.7	158	42.5	0.014
How many doses has the child received?	28	20.1	43	11.6	0.013
Which vaccine has the child received?	42	30.2	51	13.7	0.000
Do you know the immunization schedule of your child? ²	87	62.6	293	78.5	0.000

¹ We used the χ^2 test to compare results between groups

² As declared by the respondent (not necessarily correct)

Supplementary Table 7: Comparison of correct responses to selected questions on the end line survey for 373 women who participated in the pilot study (A) and 139 additional community participants who volunteered to take the end line survey (B), by type of participant

	Total additional community participants (B), N=139		Father of child, N=35		Grand mother of child, N=39		Other , N=65		Mother of child (A), N=373	
	n	%	n	%	n	%	n	%	n	%
	Vaccination protects against how many diseases?	111	79.9	30	85.7	26	66.7	55	84.6	244
What kind of water to prepare ORS?	125	91.2	29	85.3	37	94.9	59	92.2	327	87.9
What is first step in preparing ORS?	120	87.0	29	82.9	33	84.6	58	90.6	330	88.7
What is the child's date of birth?	54	39.1	22	64.7	5	12.8	27	41.5	83	22.3
Why does the immunisation card have multiple boxes?	76	54.7	23	65.7	15	38.5	38	58.5	158	42.5
How many doses has the child received?	28	20.1	11	31.4	5	12.8	12	18.5	43	11.6
Which vaccine has the child received?	42	30.2	17	48.6	5	12.8	20	30.8	51	13.7
Do you know the immunization schedule of your child? ¹	87	62.6	13	37.1	28	71.8	46	70.8	293	78.5

¹ As declared by the respondent (not necessarily correct)

Supplementary Figure 2: Comparison of correct responses to selected questions on the end line survey for 373 women who participated in the pilot study (A) and 139 additional community participants who volunteered to take the end line survey (B), by type of participant

