Online Appendix

Can a Trusted Messenger Change Behavior when Information is Plentiful? Evidence from the First Months of the COVID-19 Pandemic in West Bengal

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Data and code are available at https://doi.org/10.7910/DVN/AD79UA.

Appendix Tables and Figures

Appendix Table A1. Background Conversations Survey

	Mean	SD	N
Outgoing phone calls made	26.432	29.443	405
Social Distancing messages received	20.248	19.030	408
Mask usage messages received	17.176	17.135	408
Messages received on washing hands	16.863	16.359	408

Notes: Respondents were asked the total number of outgoing phone calls they had made, and the number of messages on social distancing, washing hands, and using masks they had heard or received in the last two days.

Appendix Table A2. Reports Received by ASHAs Within 2 Days of Message

VARIABLES	(1) Number of Fever Cases	(2) Number of Respiratory Cases	(3) Any Symptom Reported	(4) Total Number of Cases
TREATMENT	0.235	0.233	0.122	0.468
	(0.106)	(0.110)	(0.063)	(0.168)
	[0.028]	[0.034]	[0.055]	[0.006]
Observations	405	405	405	405
District FE	✓	✓	✓	✓
Total rounds FE	✓	✓	✓	✓
Smartphone FE	✓	✓	✓	✓
Date FE	✓	✓	✓	✓
Control Mean	0.264	0.189	0.245	0.453

Notes: All columns include cases reported over May 7-8. We control for district, total rounds, smartphone, and date fixed effects as well as the total number of households each ASHA supervises. *Any Symptom* (column 3) is binary for whether either fever or respiratory cases were reported, and *Total Number* (column 4) is the sum of both. Standard errors (clustered at PIN code level) are reported in parentheses and *p*-values are reported in brackets.

Appendix Table A3. Reports Received by ASHAs Within 3 Days of Message

VARIABLES	(1) Number of Fever Cases	(2) Number of Respiratory Cases	(3) Any Symptom Reported	(4) Total Number of Cases
TREATMENT	0.248	0.184	0.105	0.432
	(0.090)	(0.096)	(0.055)	(0.152)
	[0.006]	[0.055]	[0.058]	[0.005]
Observations	600	600	600	600
District FE	✓	✓	✓	✓
Total rounds FE	✓	✓	✓	✓
Smartphone FE	✓	✓	✓	✓
Date FE	✓	✓	✓	✓
Control Mean	0.271	0.214	0.271	0.486

Notes: All columns include cases reported over May 7-9. We control for district, total rounds, smartphone, and date fixed effects as well as the total number of households each ASHA supervises. *Any Symptom* (column 3) is binary for whether either fever or respiratory cases were reported, and *Total Number* (column 4) is the sum of both. Standard errors (clustered at PIN code level) are reported in parentheses and p-values are reported in brackets.

Appendix Table A4. Reports Received by ASHAs Over Time

VARIABLES	(1) Number of Fever Cases	(2) Number of Respiratory Cases	(3) Any Symptom Reported	(4) Total Number of Cases
Phase 1 Treatment Effect	0.228	0.176	0.080	0.404
(May 7-10)	(0.078)	(0.086)	(0.050)	(0.136)
	[0.004]	[0.042]	[0.113]	[0.003]
	{0.018}	{0.212}	{0.453}	{0.016}
Phase 2 Treatment Effect	0.152	0.030	0.032	0.181
(May 11-19)	(0.062)	(0.067)	(0.046)	(0.106)
	[0.014]	[0.657]	[0.483]	[0.087]
	{0.052}	{1.000}	{0.483}	{0.321}
Phase 3 Treatment Effect	0.174	0.000	0.030	0.174
(May 20 - Jul 5)	(0.078)	(0.054)	(0.031)	(0.108)
	[0.026]	[1.000]	[0.340]	[0.109]
	{0.052}	{1.000}	{0.483}	{0.321}
Phase 4 Treatment Effect	0.481	-0.090	0.098	0.390
(Aug 1-31)	(0.203)	(0.109)	(0.040)	(0.277)
	[0.018]	[0.407]	[0.014]	[0.160]
	{0.052}	{1.000}	{0.072}	{0.321}
Phase 5 Treatment Effect	-0.044	0.073	0.069	0.029
(Sep 1-15)	(0.259)	(0.106)	(0.048)	(0.313)
	[0.864]	[0.492]	[0.154]	[0.928]
	{0.864}	{1.000}	{0.463}	{0.928}
Observations	11,819	11,819	11,819	11,819
District FE	✓	✓	✓	✓
Total rounds FE	✓	✓	✓	✓
Smartphone FE	✓	✓	✓	✓
Date FE	✓	✓	✓	✓
Contr. Mean Phase 1	0.280	0.195	0.293	0.476
Contr. Mean Phase 2	0.220	0.215	0.247	0.435
Contr. Mean Phase 3	0.389	0.218	0.275	0.607
Contr. Mean Phase 4	1.107	0.496	0.443	1.603
Contr. Mean Phase 5	1.498	0.415	0.483	1.913

Notes: This table shows symptom reporting over time. *Any Symptom* (column 3) is binary for whether either fever or respiratory cases were reported and *Total Number* (column 4) is the sum of both. We include fixed effects for time, district,

survey round, and smartphone and control for the number of households each ASHAs supervise. Standard errors are clustered at the PIN code level and shown in parentheses. *p*-values are reported in brackets and *q*-values in curly braces.

Appendix Table A5. Reports Received Over Time by ASHA Who Never Attrit

VARIABLES	(1) Number of Fever Cases	(2) Number of Respiratory Cases	(3) Any Symptom Reported	(4) Total Number of Cases
Phase 1 Treatment Effect	0.218	0.196	0.075	0.414
(May 7-10)	(0.099)	(0.096)	(0.059)	(0.159)
	[0.029]	[0.042]	[0.208]	[0.010]
Phase 2 Treatment Effect	0.151	0.028	0.022	0.179
(May 11-19)	(0.074)	(0.081)	(0.054)	(0.127)
	[0.042]	[0.733]	[0.685]	[0.161]
Phase 3 Treatment Effect	0.192	-0.018	0.034	0.175
(May 20- Jul 5)	(0.088)	(0.062)	(0.036)	(0.123)
	[0.029]	[0.776]	[0.348]	[0.157]
Phase 4 Treatment Effect	0.559	-0.072	0.111	0.487
(Aug 1-31)	(0.220)	(0.107)	(0.042)	(0.286)
	[0.012]	[0.502]	[0.008]	[0.090]
Phase 5 Treatment Effect	-0.042	0.050	0.065	0.008
(Sep 1-15)	(0.279)	(0.118)	(0.049)	(0.339)
	[0.882]	[0.673]	[0.183]	[0.980]
Observations	10,661	10,661	10,661	10,661
District FE	✓	✓	✓	✓
Total rounds FE	✓	✓	✓	✓
Smartphone FE	✓	✓	✓	✓
Date FE	✓	✓	✓	✓
Contr. Mean Phase 1	0.281	0.188	0.297	0.469
Contr. Mean Phase 2	0.221	0.228	0.255	0.450
Contr. Mean Phase 3	0.378	0.226	0.273	0.605
Contr. Mean Phase 4	1.056	0.466	0.431	1.522
Contr. Mean Phase 5	1.465	0.419	0.485	1.884

Notes: This table shows robustness of the effects documented in Figure 1 and Appendix Table A5, subsetting on ASHAs who remained in the study until the end (September 15th). *Any Symptom* (column 3) is binary for whether either fever or respiratory cases were reported, and *Total Number* (column 4) is the sum of both. We include fixed effects for survey date, district, survey round, and smartphone and control for the number of households each ASHAs supervise.

Standard errors are clustered at the PIN code level and shown in parentheses. *p*-values are reported in brackets.

Appendix Table A6. Treatment Effects on Facebook Population Counts

	(1) Post Period	(2) Day 1-5	(3) Day 6-10	(4) Day 11-15	(5) Pre-Period
Treatment Intensity	0.0032	-0.0012	0.0065	0.0041	-0.0002
	(0.0018)	(0.0013)	(0.0022)	(0.0032)	(0.0016)
	[0.0736]	[0.3379]	[0.0034]	[0.1919]	[0.9016]
Observations	16030	5725	6870	5725	8015

Notes: Coefficients report treatment effects on log of reported Facebook population counts within a given Bing tile. All columns control for district and date fixed effects, as well as the average treatment intensity in Bing tile *j* across 500 potential counterfactual randomized treatment assignments (Borusyak & Hull 2020). We also control for the dependent variable averaged over the same day of the week as day *t*, during Facebook's baseline period of the 90 days prior to March 20, 2020, and the lagged average of the dependent variable over two weeks prior to the roll-out of the intervention (when testing the pre-period, we lag an additional two weeks from 30 to 15 days prior to the roll-out). Column 1 reports pooled effects from May 4-18, 2020. Column 2 reports pooled effects for May 4-8. Column 3 reports pooled effects for May 9-13. Column 4 reports pooled effects for May 14-18. Column 5 reports the effects before the treatment from April 27 to May 3. Standard errors (clustered at Bing tile level) are reported in parentheses and *p*-values are reported in brackets.

Appendix Table A7. Test for the Equality of Treatment Effect Across All Pairs of Message Content

	Panel A: Pooled		Panel B: Jio		Panel B: Non Jio	
Test	F-statistic	p-value	F-statistic	p-value	F-statistic	p-value
SD = Hyg	0.651	0.689	0.242	0.963	1.372	0.223
SD = Ext	0.895	0.497	0.581	0.745	1.463	0.188
SD = Int	0.372	0.897	0.576	0.750	0.351	0.910
SD = No	0.358	0.906	0.493	0.814	1.309	0.251
SD = Neut	0.513	0.799	0.588	0.740	1.742	0.108
Hyg = Ext	0.383	0.891	0.554	0.767	0.470	0.831
Hyg = Int	0.878	0.510	0.643	0.696	1.343	0.235
Hyg = No	0.495	0.812	0.586	0.742	1.759	0.105
Hyg = Neut	0.333	0.920	0.577	0.749	1.249	0.279
Ext = Int	0.523	0.791	0.948	0.459	0.561	0.762
Ext = No	0.549	0.771	1.279	0.264	1.480	0.182
Ext = Neut	0.260	0.955	0.529	0.787	0.860	0.524
Int = No	0.304	0.935	0.488	0.817	0.723	0.631
Int = Neut	0.563	0.760	1.302	0.253	1.265	0.271
No = Neut	0.279	0.947	0.912	0.486	2.110	0.050

Notes: This table presents F-statistics and p-values for the tests of equality between pairs of message content across all outcomes (travel, handwash, mask use total interactions, conversations, and knowledge index). SD – “Social Distancing”, Hyg - ”Hygiene”, Ext - ”Externality + Internality”, Int - ”Internality Only”, NO - ”No Ostracism”, and Neut - ”Neutral”.

Appendix Table A8. Effects by Content (Jio Sample)

	(1) Did you travel outside your village?	(2) No. of interactions with people within 2 arms length	(3) % time handwash upon returning home	(4) Did you use a mask?	(5) No. of COVID-19 related conversations	(6) COVID-19 Knowledge Index
SD	−0.055	0.597	0.015	0.023	0.037	0.221
	(0.045)	(1.615)	(0.032)	(0.014)	(1.717)	(0.154)
	[0.221]	[0.712]	[0.646]	[0.098]	[0.983]	[0.153]
Hyg	−0.066	0.263	0.009	0.024	−1.054	0.232
	(0.045)	(1.603)	(0.032)	(0.014)	(1.646)	(0.149)
	[0.146]	[0.870]	[0.766]	[0.086]	[0.522]	[0.120]
Ext	−0.075	0.265	−0.002	0.023	−0.220	0.280
	(0.044)	(1.611)	(0.032)	(0.014)	(1.649)	(0.150)
	[0.088]	[0.869]	[0.944]	[0.090]	[0.894]	[0.063]
Int	−0.044	0.600	0.028	0.024	−0.907	0.165
	(0.046)	(1.611)	(0.032)	(0.014)	(1.719)	(0.154)
	[0.339]	[0.710]	[0.381]	[0.088]	[0.598]	[0.283]
NO	−0.042	0.323	0.017	0.026	−0.741	0.207
	(0.046)	(1.618)	(0.031)	(0.014)	(1.656)	(0.151)
	[0.367]	[0.842]	[0.585]	[0.067]	[0.655]	[0.172]
Neut	−0.082	0.531	0.006	0.021	−0.311	0.249
	(0.043)	(1.596)	(0.032)	(0.014)	(1.714)	(0.152)
	[0.059]	[0.739]	[0.852]	[0.124]	[0.856]	[0.102]
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey Day FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1082	1076	1046	1082	1082	1082

Notes: All regressions include district and survey date fixed effects, as well as controls for age, gender, and smartphone access. We keep only the sample of respondents which had access to a Jio connection. Standard errors are clustered at the PIN code level and reported in parentheses while *p*-values are reported in brackets. *p*-values for pairwise tests of equality of treatment arms are also reported. SD - “Social Distancing", Hyg - “Hygiene", Ext - “Externality", Int - “Internality", NO - “No Ostracism", and Neut - “Neutral". Externality here implies both "Internality and Externality" were in the message.

Appendix Table A9. Effects by Content (Non-Jio Sample)

	(1) Did you travel outside your village?	(2) No. of interactions with people within 2 arms length	(3) % time handwash upon returning home	(4) Did you use a mask?	(5) No. of COVID-19 related conversations	(6) COVID-19 Knowledge Index
SD	−0.086	−2.708	0.083	0.009	−4.391	−0.109
	(0.060)	(2.167)	(0.037)	(0.012)	(2.195)	(0.206)
	[0.152]	[0.212]	[0.026]	[0.451]	[0.046]	[0.599]
Hyg	−0.102	−5.025	0.094	0.013	−3.193	−0.046
	(0.060)	(2.117)	(0.038)	(0.012)	(2.193)	(0.213)
	[0.087]	[0.018]	[0.015]	[0.280]	[0.146]	[0.830]
Ext	−0.083	−4.336	0.092	0.011	−3.726	−0.102
	(0.060)	(2.121)	(0.037)	(0.012)	(2.187)	(0.206)
	[0.163]	[0.042]	[0.013]	[0.386]	[0.089]	[0.621]
Int	−0.109	−3.227	0.084	0.011	−3.887	−0.043
	(0.060)	(2.171)	(0.038)	(0.012)	(2.222)	(0.214)
	[0.070]	[0.138]	[0.030]	[0.328]	[0.081]	[0.840]
NO	−0.139	−3.841	0.090	0.006	−3.817	−0.153
	(0.059)	(2.152)	(0.038)	(0.012)	(2.250)	(0.210)
	[0.018]	[0.075]	[0.018]	[0.601]	[0.091]	[0.467]
Neut	−0.053	−3.895	0.087	0.015	−3.773	−0.007
	(0.060)	(2.127)	(0.037)	(0.011)	(2.158)	(0.209)
	[0.378]	[0.068]	[0.021]	[0.185]	[0.081]	[0.974]
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey Day FE	Yes	Yes	Yes	Yes	Yes	Yes
N	801	799	775	801	799	801

Notes: All regressions include district and survey date fixed effects, as well as controls for age, gender, and smartphone access. We keep only the sample of respondents which *did not* have access to a Jio connection. Standard errors are clustered at the PIN code level and reported in parentheses while *p*-values are reported in brackets. *P*-values for pairwise tests of equality of treatment arms are also reported. SD – "Social Distancing", Hyg – "Hygiene", Ext – "Externality", Int – "Internality", NO – "No Ostracism", and Neut - "Neutral". Externality here implies both "Internality and Externality" were in the message.

Appendix Table A10. Effects by Content Scaled by Control Standard Deviation (Pooled Sample)

	(1) Did you travel outside your village?	(2) No. of interactions with people within 2 arms length	(3) % time handwash upon returning home	(4) Did you use a mask?	(5) No. of COVID-19 related conversations	(6) COVID-19 Knowledge Index
SD	−0.141	−0.048	0.142	0.122	−0.116	0.053
	(0.073)	(0.077)	(0.074)	(0.065)	(0.078)	(0.077)
	[0.053]	[0.527]	[0.056]	[0.063]	[0.137]	[0.496]
Hyg	−0.164	−0.130	0.145	0.137	−0.123	0.063
	(0.072)	(0.075)	(0.075)	(0.064)	(0.077)	(0.080)
	[0.024]	[0.084]	[0.052]	[0.032]	[0.109]	[0.428]
Ext	−0.158	−0.108	0.126	0.129	−0.105	0.067
	(0.072)	(0.074)	(0.074)	(0.064)	(0.077)	(0.078)
	[0.028]	[0.146]	[0.092]	[0.046]	[0.174]	[0.390]
Int	−0.147	−0.070	0.166	0.131	−0.138	0.047
	(0.073)	(0.078)	(0.075)	(0.064)	(0.077)	(0.079)
	[0.045]	[0.372]	[0.027]	[0.043]	[0.074]	[0.557]
NO	−0.166	−0.098	0.155	0.126	−0.125	0.037
	(0.073)	(0.077)	(0.075)	(0.066)	(0.077)	(0.079)
	[0.023]	[0.202]	[0.038]	[0.056]	[0.105]	[0.639]
Neut	−0.139	−0.084	0.132	0.135	−0.114	0.080
	(0.071)	(0.075)	(0.074)	(0.063)	(0.077)	(0.079)
	[0.051]	[0.264]	[0.077]	[0.034]	[0.141]	[0.306]
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Survey Day	Yes	Yes	Yes	Yes	Yes	Yes
Jio FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1883	1875	1821	1883	1881	1883

Notes: All regressions include district, Jio and survey date fixed effects, as well as controls for age, gender, and smartphone access. Coefficients are scaled by the control outcome standard deviation. Standard errors are clustered at the PIN code level and reported in parentheses while *p*-values are reported in brackets. *p*-values for pairwise tests of equality of treatment arms are also reported. SD - “Social Distancing", Hyg - “Hygiene", Ext - “Externality", Int - “Internality", NO - “No Ostracism", and Neut - “Neutral". Externality here implies both "Internality and Externality" were in the message.

Appendix Table A11. Differences in Treatment Effects by Message Content (Pooled Sample)

Test	Travel				Interactions				Handwash			
	Estimate	lower bound	upper bound	p	Estimate	lower bound	upper bound	p	Estimate	lower bound	upper bound	p
SD - Hyg	0.023	-0.055	0.101	0.624	0.081	0.003	0.159	0.086	-0.003	-0.073	0.067	0.941
SD - Ext	0.017	-0.035	0.069	0.595	0.060	0.001	0.118	0.094	0.016	-0.032	0.065	0.578
SD - Int	0.006	-0.054	0.066	0.862	0.021	-0.034	0.076	0.526	-0.024	-0.077	0.029	0.460
SD - No	0.025	-0.031	0.082	0.462	0.049	-0.011	0.109	0.176	-0.013	-0.064	0.038	0.679
SD - Neut	-0.002	-0.055	0.052	0.955	0.035	-0.017	0.088	0.266	0.010	-0.040	0.060	0.737
Hyg - Ext	-0.006	-0.058	0.045	0.838	-0.022	-0.068	0.025	0.444	0.020	-0.026	0.066	0.484
Hyg - Int	-0.017	-0.072	0.038	0.615	-0.060	-0.123	0.003	0.117	-0.021	-0.073	0.031	0.511
Hyg - No	0.002	-0.048	0.052	0.943	-0.032	-0.081	0.017	0.287	-0.010	-0.057	0.037	0.734
Hyg - Neut	-0.025	-0.081	0.031	0.459	-0.046	-0.104	0.013	0.198	0.013	-0.037	0.064	0.664
Ext - Int	-0.010	-0.087	0.066	0.823	-0.038	-0.118	0.041	0.428	-0.040	-0.111	0.030	0.347
Ext - No	0.009	-0.042	0.059	0.781	-0.010	-0.063	0.042	0.746	-0.029	-0.080	0.021	0.341
Ext - Neut	-0.019	-0.069	0.032	0.544	-0.024	-0.077	0.029	0.451	-0.006	-0.050	0.038	0.816
Int - No	0.019	-0.036	0.074	0.569	0.028	-0.029	0.086	0.422	0.011	-0.035	0.057	0.696
Int - Neut	-0.008	-0.067	0.050	0.817	0.014	-0.046	0.075	0.701	0.034	-0.024	0.092	0.334
No - Neut	-0.027	-0.102	0.047	0.549	-0.014	-0.092	0.064	0.768	0.023	-0.047	0.093	0.589

Test	Mask Usage				Conversations				Knowledge			
	Estimate	lower bound	upper bound	p	Estimate	lower bound	upper bound	p	Estimate	lower bound	upper bound	p
SD - Hyg	-0.015	-0.049	0.018	0.454	0.007	-0.061	0.075	0.864	-0.011	-0.093	0.072	0.835
SD - Ext	-0.007	-0.035	0.021	0.677	-0.011	-0.053	0.031	0.668	-0.015	-0.074	0.044	0.682
SD - Int	-0.009	-0.025	0.007	0.341	0.022	-0.035	0.079	0.524	0.006	-0.056	0.068	0.875
SD - No	-0.004	-0.024	0.016	0.759	0.009	-0.037	0.056	0.741	0.016	-0.043	0.074	0.660
SD - Neut	-0.013	-0.039	0.014	0.437	-0.002	-0.054	0.049	0.941	-0.028	-0.090	0.035	0.463
Hyg - Ext	0.008	-0.006	0.022	0.325	-0.018	-0.067	0.030	0.540	-0.004	-0.058	0.049	0.897
Hyg - Int	0.006	-0.023	0.036	0.733	0.015	-0.029	0.059	0.581	0.016	-0.047	0.080	0.668
Hyg - No	0.012	-0.013	0.036	0.440	0.002	-0.046	0.050	0.937	0.026	-0.032	0.084	0.460
Hyg - Neut	0.003	-0.017	0.022	0.815	-0.009	-0.056	0.037	0.736	-0.017	-0.075	0.040	0.618
Ext - Int	-0.002	-0.033	0.029	0.911	0.033	-0.034	0.100	0.421	0.021	-0.065	0.106	0.690
Ext - No	0.003	-0.018	0.025	0.792	0.020	-0.023	0.064	0.438	0.030	-0.028	0.088	0.388
Ext - Neut	-0.006	-0.026	0.015	0.651	0.009	-0.039	0.056	0.765	-0.013	-0.069	0.043	0.697
Int - No	0.005	-0.016	0.027	0.678	-0.013	-0.064	0.039	0.688	0.010	-0.051	0.070	0.793
Int - Neut	-0.003	-0.028	0.021	0.817	-0.024	-0.074	0.025	0.419	-0.034	-0.100	0.032	0.401
No - Neut	-0.009	-0.040	0.022	0.634	-0.012	-0.080	0.056	0.776	-0.044	-0.128	0.041	0.396

Notes: This table reports the difference in the treatment effects for each treatment. In the first column of each arm, we report the estimated difference in point estimates, scaled by standard deviation of the control group. The second and third column are the 90% confidence interval for that difference, and *p*-value for the test of the difference equal to zero are shown in the last column. These reflect the difference in effect sizes that we can reject with 90% confidence.

Appendix Table A12. Fever and Respiratory Symptoms Experienced by ASHAs

VARIABLES	(1) Fever Cases	(2) Respiratory Cases
Phase 1 Treatment Effect	-0.005	0.000
(May 7-10)	(0.014)	(0.014)
	[0.724]	[0.993]
Phase 2 Treatment Effect	-0.017	-0.013
(May 11-19)	(0.011)	(0.015)
	[0.130]	[0.398]
Phase 3 Treatment Effect	0.002	-0.000
(May 20 - Jul 5)	(0.003)	(0.004)
	[0.576]	[0.897]
Phase 4 Treatment Effect	-0.001	-0.001
(Aug 1-31)	(0.007)	(0.006)
	[0.841]	[0.832]
Phase 5 Treatment Effect	0.007	0.006
(Sep 1-15)	(0.008)	(0.007)
	[0.391]	[0.360]
Observations	11,819	11,819
District FE	✓	✓
Total rounds FE	✓	✓
Smartphone FE	✓	✓
Date FE	✓	✓
Contr. Mean Phase 1	0.012	0.012
Contr. Mean Phase 2	0.022	0.022
Contr. Mean Phase 3	0.005	0.006
Contr. Mean Phase 4	0.016	0.011
Contr. Mean Phase 5	0.014	0.005

Notes: This table shows the occurrence of symptoms *experienced by* ASHAs over time. Fever and Respiratory Cases correspond to the counts of ASHAs that reported experiencing fever or respiratory symptoms themselves. District, date, smartphone, and survey round fixed effects are included, and we control for the number of households each ASHA supervises. Standard errors are clustered at the PIN code level and reported in parentheses. *p*-values are shown in brackets.

Testing that treatment effect for Respiratory - treatment effect for Fever is strictly negative yields the following *p*-values: 0.602 (phase 1), 0.625 (phase 2), 0.293 (phase 3), 0.515 (phase 4), and 0.460 (phase 5).

Appendix Table A13. Characteristics of Gram Panchayat Members Across Jio and Non-Jio Users

Variable	(1) Non-Jio N	(1) Non-Jio Mean/SE	(2) Jio N	(2) Jio Mean/SE	T-test P-value (1)-(2)
Respondent Age	801	45.775	1082	44.318	0.003
		(0.383)		(0.316)	
Respondent Gender	801	0.215	1082	0.143	0.000
		(0.015)		(0.011)	
Has a Smartphone?	801	0.615	1082	0.811	0.000
		(0.017)		(0.012)	
Are you currently a Gram Panchayat member?	722	0.180	969	0.203	0.231
		(0.014)		(0.013)	

Notes: The value displayed for t-tests are p-values.

Appendix Table A14. Balance Table for Gram Panchayat Members Surveyed from May 8-19

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	T-test P-value (1)-(2)
Respondent Age	230	44.961	1653	44.935	0.972
		(0.684)		(0.262)	
Respondent Gender	230	0.209	1653	0.169	0.135
		(0.027)		(0.009)	
Respondent or at least someone in family has a Jio connection	230	0.543	1653	0.579	0.308
		(0.033)		(0.012)	
Has a Smartphone?	230	0.743	1653	0.725	0.563
		(0.029)		(0.011)	
Are you currently a Gram Panchayat member?	204	0.196	1487	0.193	0.917
		(0.028)		(0.010)	

Notes: The value displayed for t-tests are p-values.

Appendix Table A15. Balance Table for Gram Panchayat Members Over Time

	9 May, 2020					10 May, 2020					11 May, 2020					12 May, 2020				
		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value
Variable	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)
Respondent Age	33	44.485	233	44.773	0.890	24	46.125	194	45.072	0.657	32	46.375	233	45.253	0.556	33	44.697	249	45.193	0.798
		(2.141)		(0.722)			(2.114)		(0.790)			(1.843)		(0.658)			(2.065)		(0.649)	
Respondent Gender Female	33	0.424	233	0.150	0.000	24	0.208	194	0.180	0.740	32	0.156	233	0.236	0.314	33	0.212	249	0.173	0.579
		(0.087)		(0.023)			(0.085)		(0.028)			(0.065)		(0.028)			(0.072)		(0.024)	
Respondent or at least someone in family has a Jio connection	32	0.406	218	0.601	0.038	23	0.261	176	0.591	0.003	28	0.750	214	0.617	0.171	31	0.516	236	0.538	0.818
		(0.088)		(0.033)			(0.094)		(0.037)			(0.083)		(0.033)			(0.091)		(0.033)	
Has a Smartphone?	33	0.727	233	0.725	0.981	24	0.792	194	0.768	0.796	32	0.781	233	0.717	0.446	33	0.727	249	0.759	0.691
		(0.079)		(0.029)			(0.085)		(0.030)			(0.074)		(0.030)			(0.079)		(0.027)	
Are you currently a Gram Panchayat member?	33	0.273	233	0.185	0.233	24	0.250	194	0.186	0.453	32	0.250	233	0.197	0.491	33	0.152	249	0.189	0.606
		(0.079)		(0.025)			(0.090)		(0.028)			(0.078)		(0.026)			(0.063)		(0.025)	

	13 May, 2020					15 May, 2020					18 May, 2020					19 May, 2020				
		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value		(1) Control		(2) Treatment	t-test p-value
Variable	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)	N	Mean/SE	N	Mean/SE	(1)-(2)
Respondent Age	39	44.026	216	44.681	0.723	25	46.040	172	44.407	0.466	20	43.300	170	43.988	0.788	8	46.125	106	43.858	0.566
		(1.360)		(0.743)			(2.060)		(0.797)			(2.550)		(0.823)			(4.215)		(1.034)	
Respondent Gender Female	39	0.179	216	0.171	0.901	25	0.200	172	0.145	0.480	20	0.150	170	0.129	0.798	8	0.000	106	0.142	0.257
		(0.062)		(0.026)			(0.082)		(0.027)			(0.082)		(0.026)			(0.000)		(0.034)	
Respondent or at least someone in family has a Jio connection	37	0.649	205	0.541	0.229	25	0.640	162	0.549	0.398	20	0.500	170	0.588	0.452	8	0.375	106	0.623	0.170
		(0.080)		(0.035)			(0.098)		(0.039)			(0.115)		(0.038)			(0.183)		(0.047)	
Has a Smartphone?	39	0.718	216	0.750	0.674	25	0.640	172	0.698	0.562	20	0.800	170	0.676	0.261	8	0.875	106	0.764	0.476
		(0.073)		(0.030)			(0.098)		(0.035)			(0.092)		(0.036)			(0.125)		(0.041)	
Are you currently a Gram Panchayat member?	39	0.205	216	0.190	0.824	25	0.160	172	0.250	0.326	20	0.050	170	0.194	0.113	8	0.125	106	0.189	0.658
		(0.066)		(0.027)			(0.075)		(0.033)			(0.050)		(0.030)			(0.125)		(0.038)	

Notes: The value displayed for t-tests are p-values.

Appendix Table A16. Balance Table for ASHAs Surveyed from May 7-10

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	T-test P-value (1)-(2)
Households Under ASHA	82	290.305 (12.296)	593	340.049 (16.479)	0.265
No Access to Smartphone	82	0.622 (0.054)	593	0.577 (0.020)	0.437
Access to Smartphone through Family Member	82	0.134 (0.038)	593	0.145 (0.014)	0.793
Own Smartphone	82	0.244 (0.048)	593	0.278 (0.018)	0.514
WhatsApp Access	82	0.244 (0.048)	593	0.304 (0.019)	0.268
Years of Schooling	82	13.110 (0.213)	593	13.078 (0.078)	0.885

Notes: The value displayed for t-tests are p-values.

Appendix Table A17. Balance Table for ASHAs Sample

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	T-test P-value (1)-(2)
Households Under ASHA	97	296.990 (13.770)	662	339.411 (14.939)	0.282
No Access to Smartphone	97	0.608 (0.050)	662	0.563 (0.019)	0.406
Access to Smartphone through Family Member	97	0.144 (0.036)	662	0.154 (0.014)	0.804
Own Smartphone	97	0.247 (0.044)	662	0.282 (0.018)	0.472
WhatsApp Access	97	0.258 (0.045)	662	0.314 (0.018)	0.261
Years of Schooling	97	13.093 (0.191)	662	13.077 (0.073)	0.939

Notes: The value displayed for t-tests are p-values.

Appendix Table A18. Balance Table for ASHAs by Survey Cohort

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	t-test p-value (1)-(2)
Probability of being sampled in 21st April to 06th May	97	0.804	662	0.832	0.492
		(0.041)		(0.015)	
Probability of being sampled in 7th May to 10th May	97	0.196	662	0.168	0.492
		(0.041)		(0.015)	

Notes: The value displayed for t-tests are p-values.

Appendix Table A19. Balance in ASHA Survey Attrition Rates

Supplementary Table S8: Balance in ASHA Survey Attrition Rates

VARIABLES	(1) Total Interview Rounds	(2) Never Attrited	(3) Interview Round	(4) Exit Phase
TREATMENT	0.424	0.034		
	(0.685)	(0.045)		
	[0.536]	[0.443]		
Phase 1 Treatment Effect			-0.079	-0.000
			(0.087)	(0.015)
			[0.363]	[0.998]
Phase 2 Treatment Effect			-0.045	0.013
			(0.123)	(0.006)
			[0.715]	[0.046]
Phase 3 Treatment Effect			0.085	-0.005
			(0.152)	(0.006)
			[0.577]	[0.387]
Phase 4 Treatment Effect			0.172	-0.001
			(0.280)	(0.004)
			[0.539]	[0.863]
Phase 5 Treatment Effect			0.142	-0.015
			(0.311)	(0.012)
			[0.648]	[0.202]
Observations	759	759	11,822	11,822
District FE			✓	✓
Smartphone FE			✓	✓
Date FE			✓	✓

Notes: This table shows balance across treatment and control over four measures of attrition: *Total Interview Rounds* is the total number of survey rounds each of the 759 unique ASHAs went through, *Never Attrited* measures whether an ASHA ever dropped out from the sample, *Interview Round* is the survey round in which each ASHA was interviewed, and *Exit Phase* is binary for whether a given ASHA dropped out of the study in a given phase. In columns (3) and (4), treatment is interacted with survey phases. We also include district, smartphone, and date fixed effects and control for the number of households each ASHA supervises. Standard errors are clustered at the PIN code level and reported in parentheses, while *p*-values are shown in square brackets.

Appendix Table A20. Balance Table for ASHAs Who Never Attrit

Variable	(1) Control N	(1) Control Mean/SE	(2) Treatment N	(2) Treatment Mean/SE	T-test P-value (1)-(2)
Households Under ASHA	73	291.918 (13.502)	521	332.896 (17.703)	0.390
No Access to Smartphone	73	0.603 (0.058)	521	0.562 (0.022)	0.515
Access to Smartphone through Family Member	73	0.137 (0.041)	521	0.159 (0.016)	0.624
Own Smartphone	73	0.260 (0.052)	521	0.278 (0.020)	0.747
WhatsApp Access	73	0.274 (0.053)	521	0.305 (0.020)	0.587
Years of Schooling	73	13.151 (0.230)	521	13.077 (0.083)	0.756

Notes: This balance table is on the subset of ASHA workers who remained in the study until the end (September 15th). The values displayed for the *t*-test are *p*-values.

Appendix Table A21. Attrition for the Gram Panchayat Survey by Treatment Arm

	Call Completed
Hyg + Ext + NO	0.016
	(0.018)
	[0.353]
SD + Ext + NO	0.008
	(0.019)
	[0.668]
Hyg + Int + NO	0.035
	(0.019)
	[0.063]
SD + Int + NO	0.029
	(0.019)
	[0.140]
Hyg + Ext + Neut	0.019
	(0.018)
	[0.285]
SD + Ext + Neut	−0.019
	(0.021)
	[0.379]
Hyg + Int + Neut	0.012
	(0.019)
	[0.514]
SD + Int + Neut	−0.009
	(0.018)
	[0.612]
pval F-test	0.212
N	9167

Notes: This table shows balance of call responses for the Gram Panchayat survey across the different treatment arms. Observations are matched to treatments based on geocoding, and a successful call is marked as "Call Completed." Inference uses heteroskedasticity robust standard errors because PIN code data is

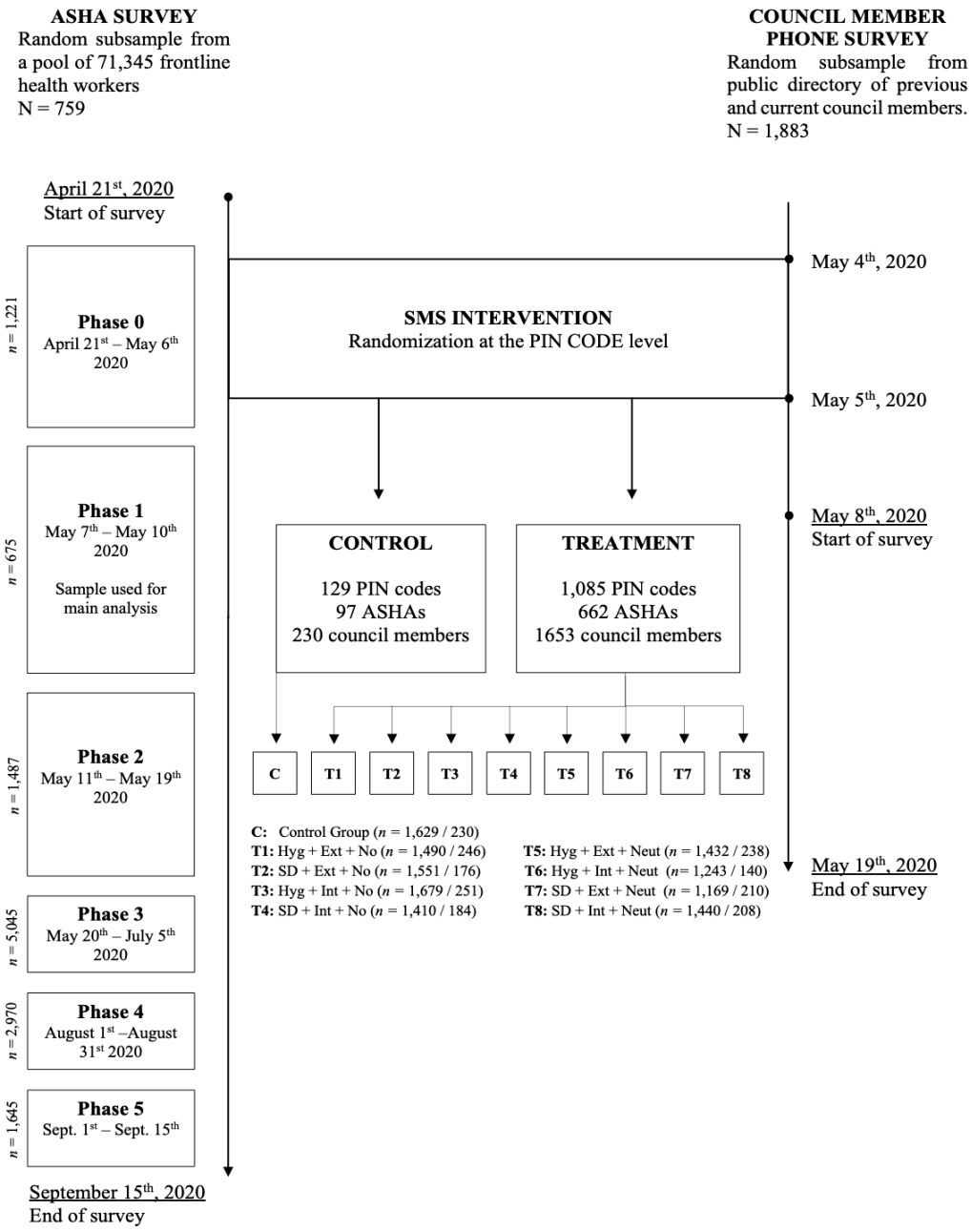
unavailable for those who did not pick up the phone. Standard errors are reported in parentheses, while *p*-values are shown in square brackets. The joint test of significance is reported at the bottom of the table.

Appendix Table A22. Share of Gram Panchayat Members and PIN Codes Across Treatments/Control

Type	PIN code count	PIN code share	GP count	GP share
Control	129	0.106	230	0.122
Hyg + Ext + NO	135	0.111	246	0.131
SD + Ext + NO	145	0.119	176	0.093
Hyg + Int + NO	136	0.112	251	0.133
SD+ Int + NO	132	0.109	184	0.098
Hyg + Ext + Neut	136	0.112	238	0.126
SD + Ext + Neut	129	0.106	140	0.074
Hyg + Int + Neut	135	0.111	210	0.112
SD + Int + Neut	137	0.113	208	0.110

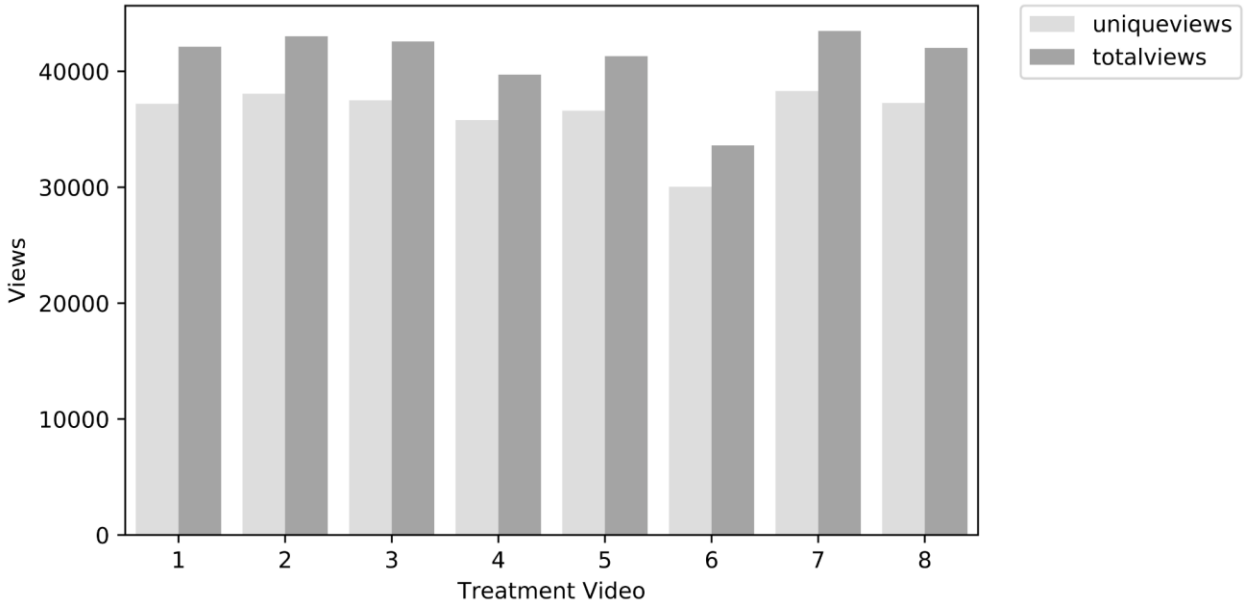
Notes: In the Treatment type column, SD - "Social Distancing", Hyg - "Hygiene", Ext - "Externality + Internality", Int - "Internality Only", NO - "No Ostracism", and Neut - "Neutral". PIN code count (PIN code share) column displays the number (share) of PIN codes in each treatment cell. GP count (GP share) column displays the number (share) of GP/ex-GP members surveyed in each treatment cell.

Appendix Figure A1. Experimental Design Flow



Notes: This diagram shows the timing of each survey and includes sample size descriptions by survey phase (for the ASHA survey) and treatment arm. Note that N is the number of unique respondents while *n* is the number of survey responses. Since ASHAs were interviewed on a rolling basis every 3-5 days, the number of survey responses varies by phase, which themselves vary in length. On the other hand, council members were interviewed once so the sum of survey responses in each treatment arm and the control group adds up to N = 1,883. In each treatment arm and the control group, the sample size description shows figures for the ASHA survey first and the Council Member Survey second. SD - ”Social Distancing”, Hyg - ”Hygiene”, Ext - ”Externality + Internality”, Int - ”Internality Only”, NO - ”No Ostracism”, and Neut - ”Neutral”.

Appendix Figure A2. YouTube View Counts



Notes: For each of the eight treatment videos we provide both “Unique viewers" and “Total views". The treatment numbers refer to the following video scripts: T1 = Hyg + Ext + No, T2 = SD + Ext + No, T3 = Hyg + Int + No, T4 = SD + Int + No, T5 = Hyg + Ext + Neut, T6 = Hyg + Int + Neut, T7 = SD + Ext + Neut, and T8 = SD + Int + Neut.

APPENDIX NOTES

Characteristics of Sampled Individuals

Jio users are younger and more likely to be male and own a smartphone; hence treatment effects across Jio and non-Jio users are not comparable (Appendix Table A13). Balance tables and attrition checks for the ASHA and Gram Panchayat surveys are presented in Appendix Tables A14-A22. We find no evidence for overall imbalance between the control and treatment group in either survey, and treatment status had no significant impact on the total number of ASHA interview rounds in which a respondent took part nor on an indicator for a respondent never attriting from the ASHA surveys ($p = 0.536$ and 0.443, $N = 759$, Appendix Table A19). The share of ASHAs remaining in the full sample for all periods is 78.2 percent. Demographic information was also collected from participants in both surveys, along with several secondary outcomes, as detailed below.

Health Workers. Accredited Social Health Activists (ASHAs) are community-level health workers that are generally responsible for serving the health needs of approximately 1,000 residents of a single village. Instituted by the government of India's Ministry of Health and Family Welfare (MoHFW) as a part of the National Rural Health Mission (NRHM) in 2005, ASHAs are selected from amongst the female members of the village, and are required to live in the same village they serve in. Their primary tasks include overseeing immunization of children, catering to the needs of pregnant and lactating women by providing basic pre- and post-natal care, spreading awareness on good health practices and sanitation, treating basic illnesses, keeping demographic records, and monitoring those suffering from non-communicable diseases. ASHA workers are meant to be

the link between the community and the public health system. At the onset of the COVID-19 pandemic, ASHAs were re-purposed to be the first point of contact for COVID-related concerns in villages. They were required to keep track of the incidence of COVID related symptoms by conducting house visits, referring suspected cases to higher hospitals, and keeping a check on the number of migrants returning from other parts of the country to the village.

Present and Former Village Council Members. India has a well-established system of local government with village councils (small clusters of villages with a common council, known as *Gram Panchayat*) at its core. The councils are composed of elected representatives from each administrative unit (known as ward) in the cluster of villages. The term of a village council member lasts for 5 years. They are charged with ensuring basic amenities in the cluster of villages, implementation of government schemes, as well as other functions related to planning and upkeep of welfare. Village councils derive legal authority from the 73rd Amendment to the Indian Constitution, passed in 1992. The amendment also mandated a quota-based affirmative action system wherein a fraction of council member seats is reserved on a rotating basis for historically disadvantaged groups of Scheduled Castes (SCs), Scheduled Tribes (STs), and women. The fraction of reserved seats for SCs and STs depends on each group's population share. At least one-third of all council member seats have to be reserved for women and this proportion is maintained even within the seats reserved for SCs and STs. Moreover, in 2010, the West Bengal government decided to increase the share of seats reserved for women from one-third to half, to be operational from the 2013 elections.

Appendix Methods

Treatment Video Scripts

Our treatment videos use the following script, delivered by 2019 Sveriges Riksbank Prize in Economic Sciences in memory of Alfred Nobel laureate and West Bengal native Abhijit Banerjee:

"This is Abhijit Banerjee. I am stuck very far away but my heart is with you in West Bengal. I am sending you a set of suggestions and requests from the government of West Bengal and myself. West Bengal, like the rest of the world, is fighting the spread of an unseen and unknown enemy. It won't be won in a few days, it's going to take some months at least. On the other hand, while it is very contagious, most people get better in a matter of days. We need to be careful, not petrified. Please forward this message to others on the phone via WhatsApp or text about it. Do not physically meet others to share it, you may pass the virus or get sick yourself.

- (Only in Hygiene-focused): *To prevent getting the virus, wash your hands frequently and well with soap and water, especially after going out of the house. Without soap the virus will still stay on your hand. Count 30 while washing. Avoid touching your face as far as possible.*
- (Only in Social Distancing-focused): *To prevent getting the virus avoid going to any crowded places—markets, hospitals, meetings, as far possible. Try to stay at least 2 meters from the nearest person when you are outside the house, even when you are doing allowed activities such as groceries, bank, work or even your next door neighbors.*

Also please do not spit. If you have to cough or sneeze, don't cough or sneeze into your hands. Use your elbow or your clothes or a handkerchief or a towel, but remember to boil them after use before hanging them to dry.

- (Only in Internality + Externality-focused): *By doing so you protect the community and especially the elderly and otherwise vulnerable people in your neighborhood.*
- (Only in No-Ostracism): *If you or your family members have a cough and fever, it does not have to be corona. No one has the right to ostracize you for having the disease. If that happens let the local ASHA know.*
- (Ostracism not mentioned): *If you or your family members have a cough and fever, it does not have to be corona. And/However if you or your family members have a cough and fever, just to be safe, please report it to the ASHA or on West Bengal government's Shondhane app so that the government can track the spread of the disease and try to control it. Be well, don't lose hope, and please accept my greetings."*

Scripts were crafted under the guidance of a physician co-author: Abhijit Chowdhury, also a member of West Bengal Government's Global Advisory Board — COVID-19 Response Policy.

Primary Outcomes

In our Frontline health worker survey, our primary outcomes were the number of fevers, coughs, and shortness of breath (combined to form respiratory symptoms) observed over the previous three days.

In our survey of current and former village council members, primary outcomes were collected from respondents as follows:

1. <u>Travel outside village</u>

Respondents were asked the following question: “Including yesterday and the day before yesterday, where did you go outside your village? Think about the time when you went to the market which may have been outside of your village or when you went to a bank or a hospital outside your village or for any other reason whatsoever". Respondents were given the option of choosing if they went to another village, another town, another city, any combination of these three options, or they did not go out of their village in the last two days. If the respondent said they visited either another village, town, city, or any combination of these options, they were considered to have exited from the village in the last two days, for our purposes.

2. Interactions

In order to measure interactions, we asked respondents the number of people they came within two arms’ distance of, excluding members of their household, within their village, in the last two days. Enumerators related the following script to the respondents, to help them think about people they met intentionally, as well as those they came into contact with unintentionally.

“Think of both the people you purposefully met with as well as close contact that was unintentional. Like, if you went to a shop, count both the shopkeeper as well as other people who were there to buy things and were within two arms’ distance of you. Think about anybody you ate a meal or had tea with, anybody you stopped to talk to (be it at work, at the tea stalls, medicine shops or on way to buy ration etc.), anybody you socialized with (spent time with, outside your family-watching TV together, played games with), anybody you worked closely with, anybody who’s home you visited or anybody who visited your home."

Those who visited other villages, towns, or cities were also asked about the number of people they came within two arms' distance of, in each of these locations. Total interactions were measured by summing up the number of people respondents had interacted with, within their own village, as well as outside over the past two days.

3. Conversations about COVID-19

We asked respondents the following questions to assess levels of conversation and learning about COVID-19 in the community:

a. Whether they had given any information or advice to anyone in their village about COVID-19 over the phone, on WhatsApp, in person, or through any other means, over the last 2 days.
b. The number of people in their village they gave information or advice to, if they did, over the last two days.
c. Whether they had received any information or advice from anyone in their village about COVID-19 over the phone, on WhatsApp, in person, or through any other means, over the last two days.
d. The number of people in their village that they received advice from, if they did, over the last two days.

To calculate the total number of conversations, we summed the number of persons the respondent gave advice to, (point b. above) and the number they received advice from (point d. above). Conversations are measured over two days.

4. Frequency of washing hands

To measure the level of handwashing, respondents were asked to think about a typical person in their village. If this person went out 10 times a day, they were asked the number of times upon returning home a typical

person would wash their hands with soap, for over 20 seconds. Respondents were asked to think about a typical person in their community, in order to eliminate any demand effects that may arise as a result of asking them about their own handwashing behavior.

5. Mask usage

In order to measure mask usage, respondents were asked the following:

a. Out of 100 people in their village, how many are wearing masks.
b. Whether they themselves wear a mask or anything else such as a handkerchief to cover their face when they go out.
c. Whether they agree or disagree with the statement “If you wear a mask, you can meet and interact with people as you like". This was asked to only a subset of respondents (randomized to appear in the digital survey 25 percent of the time).
d. Whether they agree or disagree with the statement “If I wear a mask and go out in my location, I will not feel judged or people will not look at me differently". This was asked to only a subset of respondents (randomized to appear in the digital survey 25 percent of the time).

Items 4. and 5. were asked on a 5-point Likert scale, ranging from “Agree Strongly" to “Disagree Strongly", with a neutral midpoint. In the main text, we report on the respondent’s own mask usage (point b. from the list above).

6. Knowledge of symptoms and precautions

We asked respondents to list the symptoms of coronavirus, as well as the precautions that people could take to avoid contracting the virus. The

list of symptoms consisted of correct as well as incorrect symptoms, and the list of precautions consisted of correct as well as incorrect precautions.

- The correct symptoms included in the list were: cough, shortness of breath, sore throat, fever, loss of taste, loss of smell, diarrhea, body aches, headaches, rashes on one's feet or body, conjunctivitis, tiredness, and chest pain. We used the WHO list of symptoms to differentiate between correct and incorrect symptoms.
- The incorrect symptoms included in the list were: runny nose, vomiting, dizziness, itching, chills, and swelling in legs and feet.
- The correct precautions included in the list were: not going to work, wearing a mask, washing hands, using hand-sanitizer, social distancing, wearing clean clothes, not spitting, covering one's mouth when sneezing or coughing, wearing gloves, and not touching one's face.
- The incorrect precautions included in the list were: having herbs, drinking hot water, drinking chemical substances, drinking alcohol, taking antibiotics, taking anti-malarial medication, and eating hot food.

Respondents were first asked to enumerate the symptoms of coronavirus, to the best of their ability, without the enumerator reading out any options from the list. We then read out items from the list that the respondent had not mentioned previously and asked them if they believed it was a symptom of the virus or not. This was recorded in a separate variable. The same process was followed for precautions.

We then calculated the total correct symptoms listed by the respondent, by summing the number of correct symptoms they were able to tell us, without priming. The total correct precautions were also calculated in the same manner. Total incorrect symptoms were calculated by summing

the number of incorrect symptoms mentioned by the respondent, without priming. Total incorrect precautions were also calculated in the same manner.

We then created the “knowledge index" for each respondent that was used in the main analysis, using the following formula:

Knowledge index = (total number of correct symptoms - total number of incorrect symptoms) + (total number of correct precautions - total number of incorrect precautions).

Demographic and Secondary Outcome Questions

We collected demographic information and other variables from current and ex village council members as follows:

1. Demographic variables

   We collected basic demographic information on respondents including:

   a. Gender
   b. Age
   c. District: The name of the administrative division within the state of West Bengal, in which they lived.
   d. Subdistrict: The name of the administrative division within the district, in which they lived.
   e. Village: The name of the village, within the subdistrict, in which they lived.
   f. Gram Panchayat (Village Council): The name of the village council under which their village was governed.
   g. Location: Whether they live in a village, town, or city. For our purposes, a city was defined as a district headquarters or larger. A

town is a subdistrict headquarters. All locations smaller than a town were defined as villages.

h. PIN Code: The Postal Index Number (PIN) of the village in which they live. We used this information to then merge with the list of PIN Codes that Jio had delivered the different messages to, in order to obtain the treatment status of the respondent.
i. Village council membership: Whether they were currently holding office as a village council member.
j. Smartphone access: Whether they, or anyone in their household, possessed a smartphone.
k. Jio access: Whether they, or anyone in their household, possessed a Jio sim card.

2. Other secondary data
    a. Population: We asked respondents to estimate the population of their village.
    b. Probability of Travel: We asked respondents to estimate the number of people from their village that exited the village in the last two days. Specifically, we asked: “Think about your friends, relatives, or other people in your village you know, between yesterday and the day before yesterday how many people went out of the village?". Based on the answer they provided to the above question, we asked them to estimate the number of people who exited to go to another village (a), the number that exited to go to another town (b), and the number who exited to go to another city (c), out of the total that exited in the last two days (x).

The proportion of the village that exited (y) was calculated by dividing the total number of people that exited the village (x), by the total village population estimated by the respondent in 1.

Probabilities of traveling from the village to another village, town or city was estimated as per the below:

i. Probability of traveling from the village to another village = proportion of the village that exited (y) * the number that exited to go to another village (a) / the total number that exited (x)
ii. Probability of traveling from the village to another town = proportion of the village that exited (y) * the number that exited to go to another town (b) / the total number that exited (x)
iii. Probability of traveling from the village to another city = proportion of the village that exited (y) * the number that exited to go to another city (c) / the total number that exited (x)

c. Distances: We asked respondents to think of the last village that they or someone they know had visited, and to estimate the distance from their current village to that village. We similarly asked them to estimate the distance to the last town and the last city that they or someone they know had visited. Questions on distances were asked to only a subset of respondents (randomized to appear in the digital survey 25 percent of the time).
d. Migration: Respondents were asked the following questions on persons who had recently returned to their village from other places in the country:

i. Whether any members of their household who lived and worked outside the village had come back home since the beginning of March, and how many such household members had returned. This was asked to a subset of respondents (randomized to appear in the digital survey 25 percent of the time).

ii. Whether any other persons had visited/come to stay with them since the beginning of March, and how many such persons had done so. This included friends, relatives, new brides, etc., who stayed in their home for a night or longer. This was asked to a subset of respondents (randomized to appear in the digital survey 25 percent of the time).

iii. We also asked them to estimate the number of households in their village that had any new persons coming to stay with them since the beginning of March.

e. YouTube Views: All of our treatment videos were shared with respondents via a private YouTube link. We were able to capture the total number of views on each video, as well as the number of unique viewers, as per data provided by YouTube.

Analysis of Facebook Data

1. Data overview: Facebook made many types of data available to researchers studying the pandemic. We use Facebook's population data, which tracks Facebook users who have given Facebook access to their device's location data (Meta 2020). Specifically, the population counts measure the average number of users in each geographical region, during each of three eight-hour blocks over the course of the day. For an individual to be counted, their phone needs to be switched on and transmit location information to

Facebook. Thus, the population count gives a combined measure of a) the number of Facebook users located in a geographical area and b) the intensity of phone use. In the Indian context, individuals do not always keep their phones switched on, especially at night. So, it is conceivable that the intervention could have moved both margins.

An important question about the Facebook data is representativeness. Overall Facebook penetration in India is approximately 25 percent (Kemp 2017). Because users need to give permission to Facebook to be included in the population data, we would expect the population data to cover a smaller share of the overall population. We estimate that the total population count for West Bengal using the Facebook data is approximately 14 million people on the average day in the baseline period (the 90 days prior to March 20, 2020). Given that the total population of West Bengal is approximately 90 million (Director of Census Operations, West Bengal 2012), this translates into a coverage rate of around 15 percent.

Note that Facebook also releases data on mobility of Facebook users between geographical locations. Unfortunately, Facebook did not make this data available at a sufficiently precise level of resolution until August 2020, well after the completion of our intervention.

2. Matching of Facebook data to experimental treatments: Facebook population data is available at the unit of level-12 Bing tiles. Each tile corresponds to a geographical area that is approximately 10km by 10km. Recall that our unit of treatment is the pin code. For each tile, we first identify the set of pin codes that overlap with the tile's boundary. We then calculate tile-level treatment intensity as the share of the tile's area occupied by pin codes in one of the treatment conditions. This produces a continuous-valued measure of treatment intensity, bounded by 0 and 1.

3. Analysis: We estimate the following regression at the Bing tile–by–day level

   (A1) $y_{jt} = \beta \cdot Treat\ Intensity_j + \mathrm{q}_b y_{jt}^{b} + \mathrm{q}_{pre} y_j^{pre} + \mathrm{l} \cdot \overline{Treat\ Intensity}_j + \mathrm{h}_t + \epsilon_{jt}$

   Here *j* indexes the Bing tile and *t* indexes day. We only consider days in the 15-day period starting when the SMS messages were first deployed. y_{jt} is the log of the population count, averaged over each of the three 8-hour time periods for day *t*. y_{jt}^{b} is the value of the dependent variable averaged over the same day of the week as day *t*, during Facebook's baseline period of the 90 days prior to March 20, 2020. y_j^{pre} is the lagged average of the dependent variable over two weeks prior to the roll-out of the intervention (when testing the pre-period, we lag an additional two weeks from 30 to 15 days prior to the roll-out). $Treat\ Intensity_j$ is the key regressor of interest and is calculated as described above. $\overline{Treat\ Intensity}_j$ is the average treatment intensity in Bing tile *j* across 500 potential counterfactual randomized treatment assignments. We follow Borusyak and Hull (2020) in including this regressor, to capture the fact that, for example, some Bing tiles cover larger numbers of pin codes, and therefore are more likely to always have modest exposure to treatment. Including this regressor ensures that we are identifying β solely with variation induced by the treatment assignment realization induced by our randomization. h_t is a date fixed effect. Standard errors are clustered at the Bing tile level.

4. Results: We report estimates of supplement equation (A1) in Appendix Table A6. Column 1 reports pooled effects from May 4th, 2020 to May 18th, 2020. Column 2 reports pooled effect for May 4th to 8th. Column 3 reports pooled effect for May 9th to 13th. Column 4 reports pooled effect for May 14th to 18th. Column 5 reports the effect before the treatment for

April 27th to May 3rd and serves as a placebo. We find that tiles with higher treatment intensity experienced increases in log Facebook population of approximately 0.3% across the pooled 15-day post-period (column 1, p = 0.074, N=16030). Note that the intervention was implemented in days 1-2. The effects are strongest in Days 6-15, with a 0.6% increase between days 6-10 (column 3, p = 0.003, N = 6870). In column 5, we run the same specification as in Supplement Equation (1), but assume, counterfactually, that the treatment was implemented two weeks earlier and find no impact of treatment status on population in the two weeks prior to the actual roll-out. Figure 2 presents coefficients estimated day-by-day. The results are similar to those in Appendix Table A6, showing that the biggest impacts are detectable a few days after the SMS campaign was implemented.

The findings are consistent with the intervention changing behaviors of residents located in treated pin codes, either through reducing mobility, increasing phone usage, or both. For example, people may have used their phones more if they substituted texting or phone calls for in-person conversations in the village. The treatment may have also caused people to want to discuss COVID precautions more with one another, leading to more phone-based communication.

Sourcing and Geocoding of PIN Codes

The list of candidate PIN codes came from two sources: a dataset of PIN codes from the Indian government's Open Government Data Platform dated May 2019, and an unofficial repository of PIN codes mirrored from the "Pincode Search" tool on the official India Post website (Government of India 2019). We classified each PIN code as either a rural PIN code or an urban PIN code. We assigned treatment

at the PIN code level using stratified randomization at the district x urban PIN code level.

PIN codes do not have precise geographical boundaries, so we developed a geocoding procedure to identify city PIN codes. First, we queried the Google Maps API to locate the centroid of each PIN code as depicted on Google Maps. Then, we overlaid these centroids onto a shapefile of West Bengal and defined city PIN codes as those whose centroids fell inside a polygon with a population of at least 100,000. We excluded 50 PIN codes that we could not classify as city or non-city using this procedure, resulting in a sample of 1,214 PIN codes.

Health Worker Data Collection Procedures

Enumerators were randomly assigned 15 phone numbers to attempt each day. For making initial contact, health workers that did not receive the call were tried again the following day, after which they were dropped. For follow-up surveys, respondents were tried again for two more days, after they did not receive their follow-up call, and before being dropped from further data collection.

We did not contact ASHAs in eight cyclone-affected districts for ten days starting on May 26, 2020. There were also two breaks in data collection: first, from May 20-26, 2020, due to a cyclone in West Bengal that severely impacted network coverage and electricity; second, from July 6-August 4, 2020, due to a work-stoppage period provided to enumerators per labor guidelines.

Present and Former Village Council Member Data Collection Procedures

From May 8-19, 2020, we surveyed a random sample of 1,883 village council members, distinct from those used to sample ASHAs. Enumerators were randomly assigned approximately 50 phone numbers to attempt per day, stratifying on

treatment status. To obtain an appropriate number of observations each day for inference, numbers were attempted only once, and respondents that did not receive the call after a single attempt were tried again at the end of the day, and not contacted further at any point in the experiment if they did not pick up at the second attempt. If the respondent asked to be called again later, we did so. However, if in their second call they asked to be called later again, we did not call a third time. For the same reason, the survey was conducted with the person who received the call, provided they consented and were willing. We asked the respondent whether they currently held the post of a village council member.

Data Quality Assurance Procedures

The following procedures were taken to ensure data quality for the two surveys conducted:

- Data Checks. Incoming data was scrutinized on a daily basis for enumerator productivity, respondent refusal rates, successful call rates, total survey duration, section wise survey duration, the rate of responses that were coded as “Do Not Know", and outliers greater than 2 standard deviations from the mean. The above items were observed at an enumerator level as well as at an aggregate level. Unreasonable outliers were cross verified with the enumerator who had conducted the survey.
- Accompaniments. 10 percent of outcome surveys and 30 percent of health worker surveys were also observed by senior field staff. Senior enumerators were on the same phone call with the respondent, along with the enumerator conducting the survey. The senior field staff members were required to record responses, and submit a separate survey form, for all calls they observed. Responses from the senior enumerator’s form and the

enumerator's form were cross checked, to ensure minimal discrepancies across all members of the survey team.

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