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Information provision over the phone saves lives: An RCT to contain COVID-19 in rural Bangladesh at the pandemic's onset*

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Abstract

Lack of information about COVID-19 and its spread may have contributed to excess mortality at the pandemic's onset. In April and May 2020, we implemented a randomized controlled trial with more than 3,000 households in 150 Bangladeshi villages. Our one-to-one information campaign via phone stressed the importance of social distancing and hygiene measures, and illustrated the consequences of an exponential spread of COVID-19. We find that information provision improves knowledge about COVID-19 and induces significant behavioral changes. Information provision also yields considerably better health outcomes, most importantly by reducing the number of reported deaths by about 50% in treated villages.

JEL-codes: C93, D01, D91, I12

Keywords: Field experiment, COVID-19, Information intervention, Death rates

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1. Introduction

At the beginning of a pandemic like COVID-19, death tolls are typically high because the pathways of a disease are still unfamiliar to most people, resulting in a failure to engage quickly in preventative health behaviors. Since pharmaceutical interventions like the development of vaccines take considerable time, in particular until they can be provided on a global scale, non-pharmaceutical interventions are crucial in containing a pandemic at its onset. This raises the question which non-pharmaceutical interventions are feasible and politically acceptable, and in particular which ones are effective in helping people protect themselves against the disease (Haushofer and Metcalf, 2020).

Here we present a randomized controlled trial with more than 3,000 households in 150 villages in rural Bangladesh in order to study the behavioral and health effects of an information campaign about COVID-19 at the pandemic's onset in April 2020. In general, information provision to the general public plays a key role in the non-pharmaceutical combat against a pandemic. In the COVID-19-crisis, large mass media campaigns (on TV, radio or social media platforms) have been launched worldwide with the intention to prevent the further spread of the disease (e.g., Bursztyn et al., 2020; Debnath and Bardhan, 2020). On an aggregate level, the effects of such mass media campaigns on the number of infections and deaths have been shown to depend critically on the level of trust in national governments (Fetzer et al., 2022) and on the actual content and reliability of the information (Bursztyn et al., 2020). Less is known, however, whom these mass media campaigns actually reach, and if they are equally successful in addressing the most vulnerable populations, including the poor and illiterate. Moreover, the channels through which information provision affects aggregate health conditions and death rates are unknown to date, because such mass media campaigns make it difficult to identify changes in knowledge and behavior on an individual or household level.

Of course, it is generally well understood that human behavior is strongly influenced by the information available to people (Haaland et al., 2021) and that, for instance, health-related behavior is often responsive to information, even if it takes time (such as when fighting HIV through mass media information campaigns; Dupas, 2011; Banerjee et al., 2019). Yet, in a pandemic the speed of reaction to new information matters to break mounting waves of new infections. Therefore, it is important to study whether and how information can induce quick behavioral changes to protect one's health. Recent work has shown that correcting misperceptions about exponential growth increased support for social distancing measures

(Lammers et al., 2020).[1] COVID-19-related text messages (with a link to a video about the disease) to 25 million Indians led to increased awareness, less travel, and more reporting of symptoms to local health workers within a span of 5 days after receiving the messages (Banerjee et al., 2020). Personal phone calls to households in rural areas of Bangladesh and India improved the willingness to comply with public health guidelines a month after the phone calls (with the caveat of lacking a proper control condition; Siddique et al., 2022). However, whether or not these self-reported changes in behavior actually improved health and prevented casualties remains unclear from these earlier studies.

In this paper, we examine how information provision about COVID-19 at the onset of the pandemic can have a significant effect on (i) individuals' knowledge and attitudes about the pandemic, (ii) individuals' behavior to contain its spread, and (iii) the health conditions and death rates of treated households and villages. While knowledge and health conditions are self-reported, we enrich self-reported information about behavior with what a household's neighbors report, exploiting our unique design introduced below. Moreover, we also have information on whether any household member deceased since the beginning of the pandemic.

Our information campaign was run over telephone and thus in a personal, one-to-one setting which makes it different from typical mass media communication. The campaign focused on prevention measures, symptoms of COVID-19, and in addition on the consequences of an exponential spread of the disease within a village, using easy language, concrete measures and concentrating on the most important information only. Humans fare, on average, relatively poorly in their understanding of exponential growth processes, such as compound interest (Stango and Zinman, 2009), for which reason we put emphasis on this important aspect of the pandemic.

Contrary to the papers on interventions during the pandemic cited above that measured the effects of an intervention only once, we measured potential effects twice, namely 14 days as well as about 2.5 months after our campaign and we are able to link our interventions to individual- and household-level health outcomes. This double measurement at the level of a household allows for a better understanding of the pathways from information provision to health outcomes via potential changes in knowledge and behavior. Moreover, having two points of measurement reveals whether an information campaign can yield quick behavioral responses – which is crucial in a pandemic – and at the same time sustain positive medium-

[1] It is also the case that social preferences are indicative of preventative measures like social distancing or wearing face masks (see, e.g., Campos-Mercade et al., 2021b) and that the pandemic has influenced social preferences themselves (see, e.g., Cappelen et al., 2021).

term effects such that potential information provision effects do not wear out quickly. While it has been acknowledged that nudges may not form new and persistent habits (Brandon et al., 2017), the achieved response, even if only observed in the short-run, may be enough to break a wave of new COVID-19 infections and thus change a pandemic's dynamic and therefore save lives.

We do not only study the effects of information provision on knowledge, behavior, and health outcomes, because one half of the treated households were additionally offered an unconditional cash transfer worth about 2-3 days of labor. This unconditional transfer was motivated as an at least partial compensation for possibly forgone earnings as a consequence of adhering to social distancing rules and stay-at-home policies. This treatment allows us to study whether offering monetary incentives may amplify the effects of information provision. This is by no means clear since monetary incentives can have unintended side effects on human behavior, for example by crowding out intrinsic motivation for specific behavior (Gneezy and Rustichini, 2000a, 2000b; Bénabou and Tirole, 2003; Gneezy et al., 2011). The same problem may occur when using unconditional cash transfers as an incentive to improve cooperative behavior to contain the pandemic, a policy that has been adopted in many countries around the world with governments supporting poor households or small enterprises with unconditional transfers.[2]

The rest of the paper is organized as follows. Section 2 presents the experimental design and the field setting. Section 3 introduces the implementation and the methods for estimating treatment effects. Section 4 shows the results, and section 5 concludes.

2. Experimental Design and Field Setup

Our study comprised 3,081 households from 150 villages in four rural districts of Bangladesh (Chandpur, Gopalganj, Netrokona, and Sunamganj). Each of these households was assigned to one of the following three conditions (see below for details on the assignment procedure): Households in the control condition did not receive any intervention (with respect to information or monetary incentives), but they were surveyed at the same points in time as the treated households. Of the latter, all were exposed to an information provision intervention, and half of them, in addition, received monetary incentives. We will refer to the latter conditions as INFO-ONLY and INFO+MONEY.

[2] Early on, the International Monetary Fund has compiled a collection of policy responses around the world. See https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 (page last updated on 2 July 2021; accessed 22 November 2022).

The information campaign in both INFO-ONLY and INFO+MONEY was run over phone.[3] The calls were conducted by a professional, local survey firm which has been working already previously with these households (in pre-COVID-19 times also in personal encounters). The campaign (see the appendix for details and scripts) stressed the importance of social distancing and hygiene measures and illustrated the consequences of an exponential spread of COVID-19 within a village. In an interactive dialogue, enumerators conveyed the three most important prevention measures, the three most common symptoms, as well as three measures to take in case the respondent or someone else in the household suffered from the mentioned symptoms. After the phone call, the survey firm sent respondents a summary of the call as a text message.

Importantly, the information that we disseminated in our intervention was based on the government's information campaign and did not contain any additional information, except for the illustration of exponential growth. This means that, notwithstanding the latter exception, untreated households had, in principle, access to the same information through mass media campaigns of the government. Of course, our intervention of calling households and going through this information together with them made the information much more salient. Compared to the governmental mass media campaigns on television and radio, our campaign compressed the information, focused on the most important aspects, and suggested concrete measures to follow in a one-to-one interaction. A week after the first phone call, households received a reminder call (see the appendix for the wording), since reminders have been shown to support behavioral change in various health-related contexts (e.g., Calzolari and Nardotto, 2017; Dai et al., 2021).

For the households in the INFO+MONEY condition, we complemented the information campaign by additionally giving them an unconditional cash transfer of 1,000 Bangladeshi Taka (11.8 USD in May 2020) via mobile cash, worth 2-3 days of agricultural wages in rural areas of Bangladesh. This was motivated as a support for households to adhere to physical distancing and prevention measures. In rural contexts like ours, adhering to social distancing measures often means forgoing income, since people cannot sell their goods on the street or jointly work on a field or construction site, etc., if staying at home and avoiding social contact.

[3] Access to phones is almost universal in Bangladesh. At the beginning of the pandemic, while the country had 164.69 million population, it had more than 165 million mobile phone subscribers (Source: Bangladesh Telecommunication Regulatory Commission; see http://www.btrc.gov.bd/content/mobile-phone-subscribers-bangladesh-january-2020). In our sample, 99.77% households had their own phone or access to a phone via a neighbor who lives close by.

Note that households knew that the cash transfer was unconditional and that compliance with social distancing was not monitored by us.

The assignment to experimental conditions was done as follows. First, we allocated 60 villages to the control condition and 90 villages to one of the two treatment conditions, 45 to INFO-ONLY and 45 to INFO+MONEY. This assignment to conditions was done randomly, yet considering information from an initial village questionnaire (which was done with local elected leaders and key informants in the villages two weeks prior to our intervention, see the appendix for details) in order to ensure balance across all conditions. The three considered pieces of information elicited in the village questionnaire were: a) the number of returned migrants from cities and abroad (because they could carry COVID-19 with them), b) social events and restrictions on social gatherings (as this was likely to influence the spread of the virus), and c) COVID-19 incidences in the village (as an indicator for the overall situation in a village). We did the assignment using the re-randomization method by Schneider and Schlather (2017) as implemented in the R package 'minMSE' (Schneider and Baldini, 2019).

In all villages, we grouped geographically close households in pairs, using their geolocations and a nearest neighbor algorithm for matching (Lu et al., 2011; Beck et al., 2016). This meant that these pairs of households lived close to each other and were often direct neighbors. In the 90 villages with a treatment, we then randomly assigned one household in the pair to the treatment (either INFO-ONLY or INFO+MONEY) and the other household to a within-village control group. With this design, we created two types of control households: (i) those in villages with a treatment (either INFO-ONLY or INFO+MONEY), which allows studying spillovers from treated to untreated households in the treatment villages, and (ii) those in what we denote as CONTROL-villages where no household got any treatment.

Overall, we have data for 929 treated households (447 with INFO-ONLY in 45 villages, and 482 with INFO+MONEY in another 45 villages) and for 943 control households in the 90 treated villages. In addition, we have 1,209 households in the 60 CONTROL villages (where we also built pairs of households to be able to match neighbors' responses).

3. Implementation and methods

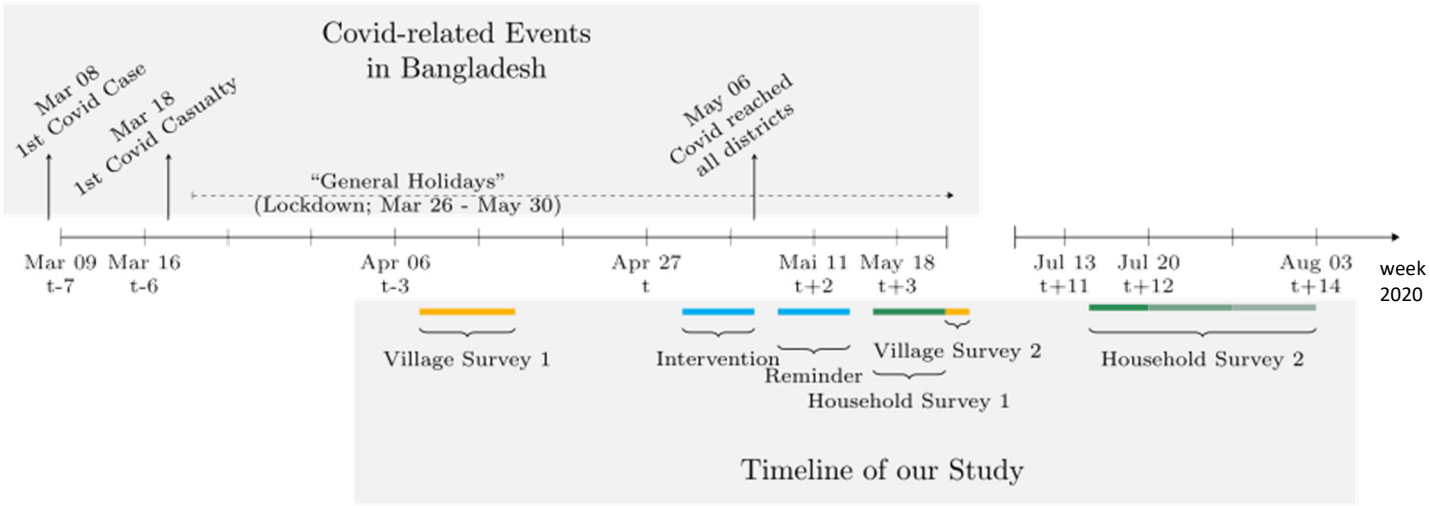
3.1 Procedures and measures

Our intervention was run between 30 April and 6 May 2020, less than two months after the first official COVID-19-cases had been confirmed in the country, and before the virus had reached the last of the 64 districts of Bangladesh. To evaluate the results of our randomized

controlled trial, we conducted two separate household surveys, two weeks and about 2,5 months after the intervention (see Figure 1 for the timeline of our field study).[4]

The surveys focus on three preregistered outcome scales: Knowledge and attitudes, behavior, and health. The scales consider various aspects of the outcomes they aim to capture, and are coded such that higher values reflect more positive outcomes. The measures of the different aspects are standardized and we then take the average over all items to construct an overall outcome scale (see below for details). For ease of interpretation of the reported treatment effects, we normalize the resulting measures by, first, subtracting the mean of the respective measure for households in the CONTROL villages, and then dividing that by the standard deviation of the respective measure of this group.

Figure 1: Timeline of randomized controlled trial in the year 2020



Notes: The upper part of this figure displays the timeline of COVID-19 related events in Bangladesh, ranging from the first confirmed case on 8 March 2020 to the end of the general lockdown on 30 May. The lower part of the figure presents the timeline of our study. In yellow, we indicate periods during which we conducted village surveys with local elected leaders and key informants in the villages. The first village survey was used to ensure balance across our treatment conditions with respect to village characteristics. The intervention period – indicated in blue – was from 30 April to 6 May 2020. A week later, we made a reminder phone call (also shown in blue). In green, we show the timing of the household surveys. The first survey was run two weeks after the intervention. The second survey was stretched out between 14 July and 3 August 2020, with more households being surveyed earlier in this period (indicated by darker green). The average time between intervention and second household survey for the treated households was 77 days (minimum: 69 days, maximum: 89 days, median: 76 days).

[4] We had pre-registered to conduct the second household survey once the pandemic was over, or after three months. In light of Eid approaching (Eid is the biggest festival in the Muslim calendar) and an observable flattening of the curve of new incidents around the beginning of July 2020, we decided to slightly change the schedule such that all interviews could be completed before Eid.

To assess *knowledge and attitudes*, we proceed as follows. First, to measure *attitudes*, participants were asked to which degree they believed they could make a difference in fighting the pandemic, and whether they believed that everybody in society could make a difference. Second, to measure *knowledge*, we read a list of 12 possible measures to fight the pandemic, and asked for each possible measure whether it would be of any help or not (e.g., eating garlic, keeping a distance of at least three feet, wearing a mask or scarf that covers nose and mouth, or using one's elbow when sneezing and coughing; in total we listed five effective and seven ineffective measures). We then compute an overall measure of knowledge as the sum of correct answers to all 12 items. Finally, after standardization, we take the average of the three considered aspects (two for attitudes and one for knowledge).

To assess *behavior*, we asked for the extent of adherence to different preventative measures (such as, e.g., washing hands with soap) and of compliance to physical distancing measures, both for the past day and the last seven days. Because we have matched pairs of households that live close to each other (often direct neighbors), our design allows us to complement self-reported data on interaction with neighbors with responses from these neighbors to the corresponding questions (see the appendix for details how that information enters the scale). The situations referred to in the surveys include meeting one's neighbor at the well, on the way to school or to do grocery-shopping, etc. We use the weights from a principal component analysis (PCA) to account for potentially varying relevance of situations in which preventative measures are applied, physical distancing measures are practiced, or interaction with neighbors takes place. These aspects are then aggregated to the behavior scale as described above, analogously to the knowledge and attitudes scale.

Health was measured on the individual and on the household level. We asked a list of possible symptoms. We ask whether anybody in the household had suffered from these symptoms and thus concentrate on physical symptoms and disregard any mental health issues that the pandemic has also created (Giuntella et al., 2021; Fetzer et al., 2022). We count the number of symptoms, and use an indicator for high-risk individuals. Additionally, we inquired whether any household member had deceased since the onset of the pandemic.[5] These aspects

[5] Originally, we had planned to include data on diagnosis (or based on diagnosis, such as COVID-19-related deaths) and quarantine in this health scale as well. However, in praxis, testing was mostly done close to the capital region (but not in the rural areas of our field study), and the testing regime changed during our study (by shifting from free testing to costly testing in early May). Moreover, we believe that the results allow for a cleaner interpretation when excluding diagnosis and quarantine because they are arguably a function of individuals' own decisions, which might be affected by our treatment, for instance just by being more aware of possible symptoms; an effect that, e.g., Banerjee et al. (2020) report.

are then aggregated in analogy to the other two scales (see the appendix for details) into a health scale and a further variable that captures *casualties* only.

3.2 Methods

We estimate the effects of our treatment conditions on the outcome scales using the following linear model (OLS regression):

$$Y_i = \alpha + \beta_1 \cdot \{\text{INFO-ONLY}\}_i + \beta_2 \cdot \{\text{INFO+MONEY}\}_i + \gamma X_i + \varepsilon_i,$$

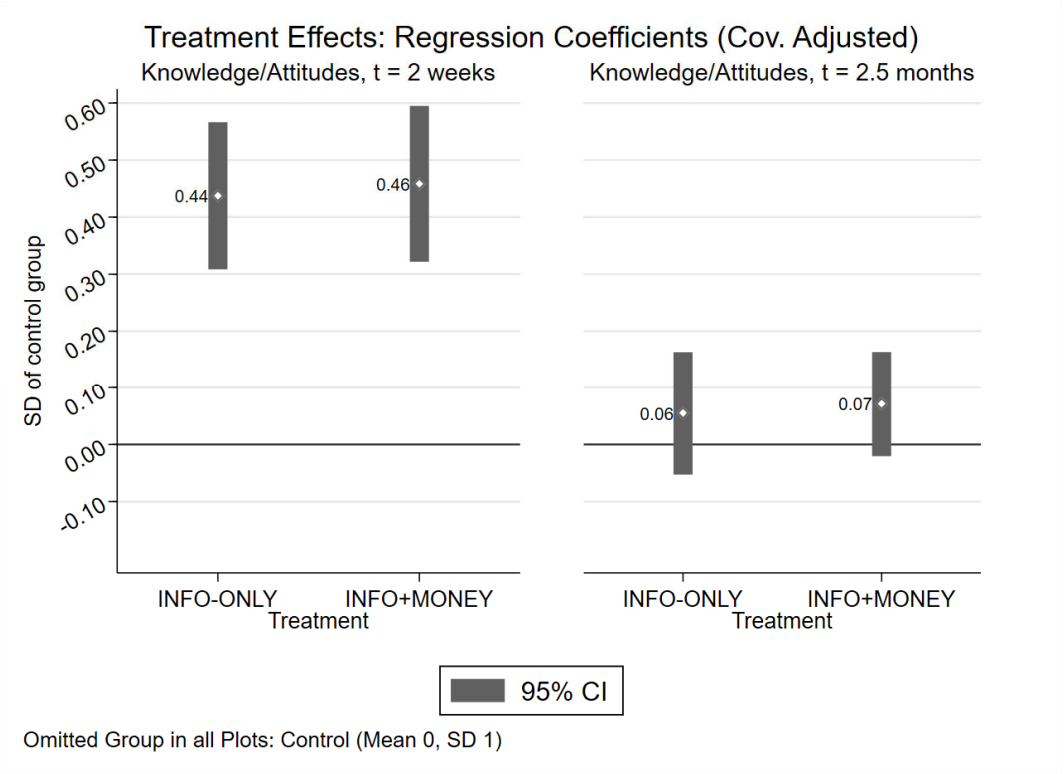
where Y_i is the outcome of interest for individual i either 14 days or about 2.5 months after the intervention, α is a constant term, X_i is a vector of village level information as used for assignment of villages to treatment groups, and ε_i is an error term. The coefficients of interest are β_1 and β_2 that relate to the two treatment dummies. The first measures how the INFO-ONLY condition affects the outcome of interest, and the second how INFO+MONEY changes the outcome. For the analysis of our main outcome scales, the omitted category are control households in pure CONTROL villages. Control households in treatment villages are excluded from these analyses. Regarding death rates, we pool all households in treatment villages to estimate the joint direct and spillover effects of the interventions in these analyses, the omitted category are households in pure CONTROL villages. We cluster standard errors at the village level. Our following results are robust to randomization inference that is independent of distributional or asymptotic assumptions (see Tables A7 to A10 in the appendix).

4. Results

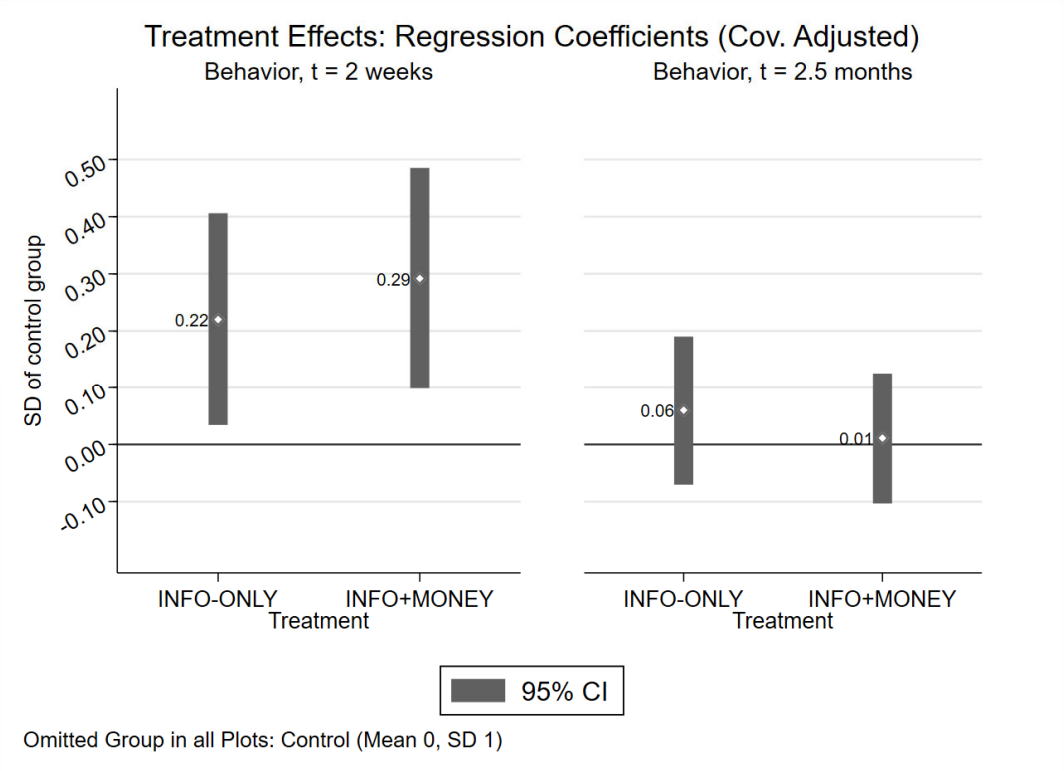
Figure 2 presents our first main result by showing the estimated coefficients for our two treatments when looking at our three pre-registered outcome scales. In this figure, households in the CONTROL-villages are the omitted reference group and scales are normalized such that they have a mean of zero and a standard deviation of one for the households in the CONTROL-villages. Positive coefficients for INFO-ONLY and for INFO+MONEY therefore indicate improvements in the respective scale, negative coefficients a deterioration compared to the control group.

Figure 2: Treatment effects on pre-registered outcome scales: Regression coefficients

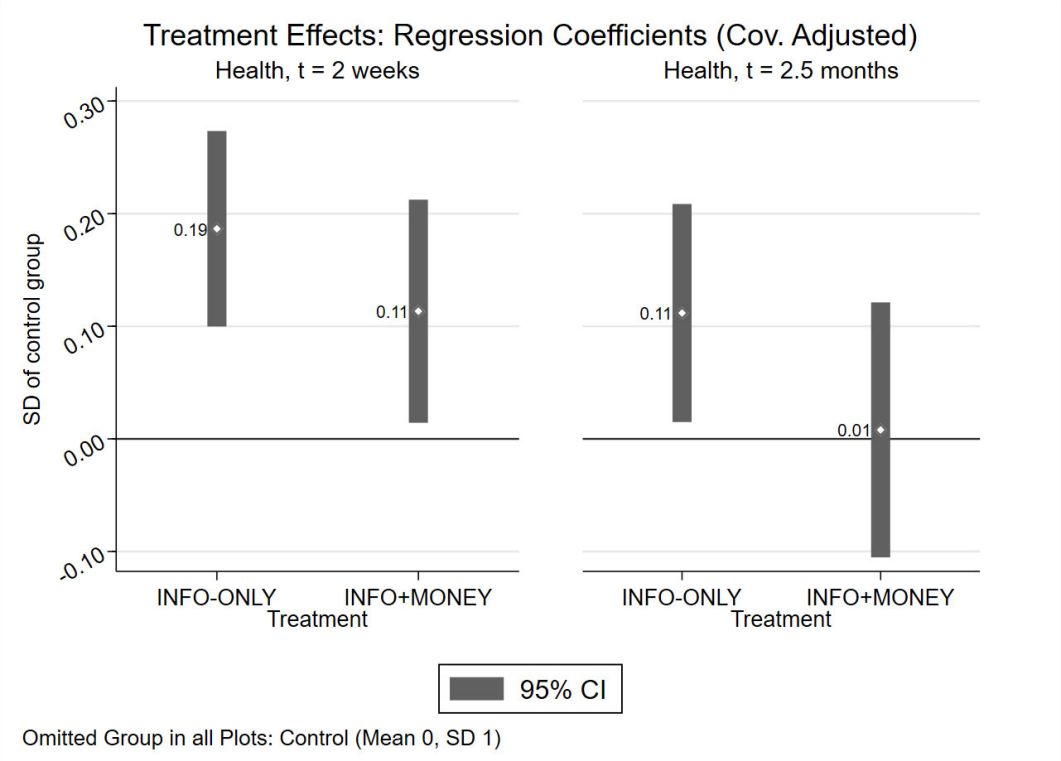
(a) Treatment Effects on Knowledge and Attitudes



(b) Treatment Effects on Behavior



(c) Treatment Effects on Health



Notes: The three panels show the effects of our two treatments (INFO-ONLY and INFO+MONEY) on the three pre-registered outcome scales. On the left hand-side of each panel, we show the effects at the time of the first household survey (2 weeks after the intervention) and on the right-hand side the effects at the time of the second household survey (about 2.5 months after the intervention). The bars show 95%-confidence intervals of the estimated coefficients for treatment dummies, the white diamonds with adjacent numbers the size of the treatment effect (see Table A1 in the appendix for regression details). The effects are expressed as a fraction of a standard deviation (SD) of the control group in the CONTROL-villages, i.e., for each scale, we have subtracted the mean of the households in the CONTROL-villages, and divided the result by their SD. The control group's scales thus always have a mean of zero and a standard deviation of one. Positive values in the graphs indicate better outcomes. The three panels show the effects for knowledge and attitudes in panel (a), for preventative behaviors in panel (b), and for health outcomes in panel (c).

Panel (a) of Figure 2 illustrates on the left-hand side the effects after two weeks, showing that both treatments improve knowledge about COVID-19 and attitudes (with respect to making a difference in fighting the pandemic) by almost half of a standard deviation ($p < 0.001$; OLS regression controlling for a set of 29 background variables; see Table A1 in the appendix). Handing out unconditional cash transfers on top of informing households does not make a significant difference. Looking at the right-hand side of panel (a) we note that after about 2.5 months the difference between CONTROL-villages and treated households has shrunk drastically and is no longer significant (although treated households still have higher values on average). This intertemporal waning of the treatment effect is due to treated households slightly deteriorating on the scale, but also to households in CONTROL-villages improving their outcomes over time. The latter does not seem surprising, given that the

pandemic dominated the public discourse and was still covered extensively in mass media, probably supporting improvements in public knowledge about the disease. Yet, even after about 2.5 months, treated households still have significantly higher scores on this scale[6] than households in CONTROL-villages after two weeks (pooled effect (covariate adjusted) of +.25 SD in terms of the control group; $p < 0.001$), which implies some persistence of knowledge gains through the information campaign.

Panel (b) of Figure 2 shows treatment effects on preventative behavior, yielding a similar pattern as in panel (a). Both in INFO-ONLY and in INFO+MONEY we note an improvement of this scale by about a quarter of a standard deviation ($p < 0.022$ and $p < 0.004$, respectively; see Table A1 in the appendix) at our first measurement after two weeks. Again, there is no significant difference between the two treatments. Over the course of 2.5 months (see right hand side of panel (b) of Figure 2), the differences to the CONTROL-villages vanish almost completely, and they are no longer statistically significant. This is mainly driven by treated households reducing preventative behavior, rather than households in CONTROL-villages catching up in prevention over the course of about 2.5 months.

With respect to health, our intervention was successful both after two weeks and after about 2.5 months, as panel (c) of Figure 2 shows. Two weeks after the intervention, the health score improves by 19 percent, respectively 11 percent, of a standard deviation in our two treatment conditions ($p < 0.001$ and $p < 0.026$, respectively; see Table A1 in the appendix). After about 2.5 months, there is still an improvement of 11 percent of a standard deviation in INFO-ONLY, while INFO+MONEY has practically no further improvement over the CONTROL-villages ($p < 0.025$ and $p > 0.88$, respectively; see Table A1).

The latter may seem surprising at first sight. Yet, previous work (Gneezy and Rustichini 2000a, 2000b; Gneezy et al., 2011) suggests that monetary incentives may crowd out intrinsic motivation for cooperative behavior, which may also apply in our case. Giving money may also decrease subjects' motivation to pay attention to information. In fact, we find that the treatment effect on knowledge alone (i.e., without including attitudes) two weeks after the intervention is only about two thirds as big for the INFO+MONEY treatment as for the INFO-ONLY treatment (INFO-ONLY: 0.65 SD, INFO+MONEY: 0.43 SD; $p(\text{difference} \neq 0) < 0.038$; see Table A5 in the appendix). This may have an impact because knowledge after two weeks is significantly related to the health scale after about 2.5 months when looking at all

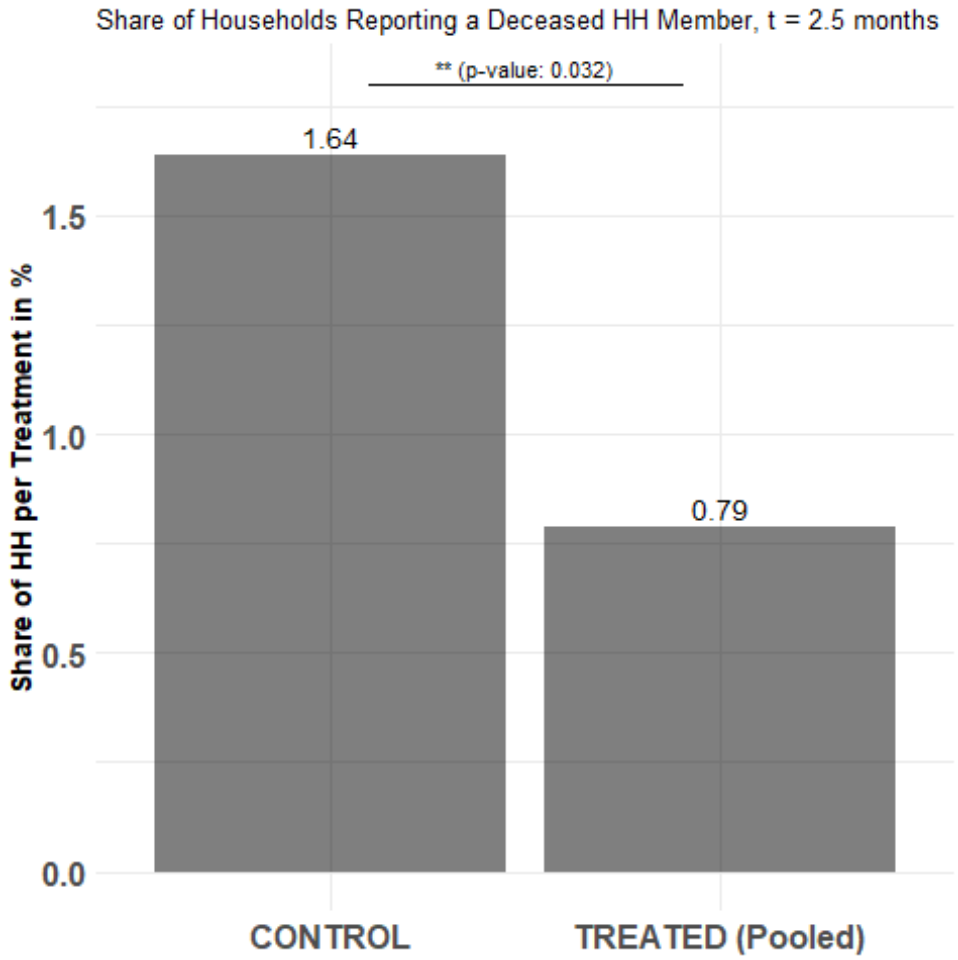
[6] For comparison reasons, we use a slightly modified scale here: Single aspects are not standardized before addition, as the variation (i.e., a variable's standard deviation) might differ in the first and second household survey.

households in our sample (OLS model, $p < 0.023$; see Table A6 in the appendix). Hence, the observed treatment difference in knowledge after two weeks could explain a part of the difference in the health score after 2.5 months. Despite this latter difference, overall we see from Figure 2 hardly any complementary effect of an unconditional cash transfer beyond the effect of the information provision through phone calls, implying that the information – that is given to all treated households – makes the difference.

Casualties within households are arguably not only the most dramatic health consequence of Covid-19, but probably also the most objectively measurable health outcome. This brings us to our second main result. In Figure 3, we compare all households (i.e. treated and untreated) in the treated villages to all households in the CONTROL-villages in order to provide the most comprehensive perspective on casualties. It displays the fraction of households reporting (in the second household survey) a deceased household member since the start of the pandemic: in CONTROL-villages, 1.64 percent of households report a deceased member. This is more than twice the fraction of households in treatment villages where 0.79 percent report a casualty. This difference is significant in a simple difference-in-mean comparison using OLS ($p < 0.033$, see Table A4 in the appendix), but also when applying more sophisticated approaches to model the death rate ($p < 0.03$; Poisson regression; see Table A4).

It is important to stress that the fraction of households reporting a casualty in the treated villages is almost identical for treated and untreated households in these villages (0.79 and 0.78 percent of households with a casualty among the treated and untreated households). This is an indication of positive spillovers among neighbors in treated villages with respect to casualties. In contrast, we do not find any evidence for positive spillover effects from treated to untreated households within treated villages regarding the scales on knowledge and attitudes and on preventative behaviors. Yet, there is a positive spillover effect on the health scale of untreated households in INFO-ONLY for the short time horizon ($p < 0.073$; see Table A2 in the appendix). Overall, these findings suggest that the reduction in casualties in untreated households in treated villages is likely to reflect fewer infections due to lower incidence levels in treated villages. This means that the changes in behavior and knowledge of treated households seem to protect the health of untreated households by containing the contagion of the disease.

Figure 3: Share of households reporting a deceased member since onset of pandemic, separately for treated villages (including treated and untreated households there) and CONTROL-villages.



Notes: The bars show the fraction of households (in percent) that reported a deceased household member since the beginning of the pandemic at the time of the second household survey. The left bar refers to all households in the CONTROL-villages that had not received information or money. The right bar refers to all households in the treated villages, thus including both treated households (either INFO-ONLY or INFO+MONEY) and untreated households in these villages. P-values result from a group comparison using OLS regression and a pooled treatment indicator variable (see Table A4 in the appendix for regression details). The fraction of households with a deceased member does not differ between treated households (0.79%) and untreated households (0.78%) in treated villages, which indicates positive spillovers from treated households on untreated households in these villages.

These results have an important implication: Providing a one-to-one information campaign to only some fraction of local households is able to reduce overall local casualties, amplifying the effects of an information campaign beyond directly treated households. Extrapolating the reduction of death rates among households in treated villages in comparison to CONTROL-villages also suggests that within the first year of the pandemic (from March 2020 to February 2021) about one half of casualties, i.e., about 5,500 lives, could have been

saved in Bangladesh through a timely and reliable information campaign over the phone. The costs of our intervention amount to less than 1,500 US Dollar per death averted. Considering the World Health Organization's (2003) threshold for defining highly cost-efficient interventions as the average GDP per capita in a country (about 2,000 US Dollars in Bangladesh in 2020) per QALY (quality adjusted life year) gained, our intervention can be considered as highly cost-efficient even if all the deceased persons would have had a life expectancy (in good health) of only 9 more months.

5. Conclusion

We have shown that an information intervention at the pandemic's onset in rural Bangladesh has not only improved knowledge, preventative behavior, and self-reported health symptoms (i.e., the lack thereof), but has also reduced deaths by about 50% in comparison to control villages. The costs of our intervention can be considered low, qualifying for what the WHO denotes as a highly cost-efficient intervention. In fact, providing information via the phone to remote locations is not only cost-efficient, but also looks like a scalable solution to efficiently contain pandemics early on and thus save lives, even when most of the information is already being broadcast using different mass media channels. Our salient information over the phone changed knowledge, behavior, and health outcomes of treated households in comparison to households in control villages that had only access to mass media information. Importantly, the change in behavior of treated households also had noticeable positive spillovers on death rates of control households in treated villages. The latter benefit from the better prevention behavior of treated households and thus also face lower death rates, even though we have seen no statistically significant spillovers on the knowledge and behavior of control households in treated villages. It seems that informing many households in a village can be sufficient to protect also the uninformed households in these villages.

Adding an unconditional cash transfer (of about 2-3 days wages) has not produced further improvements. Thus, our randomized controlled trial confirms that monetary incentives need not shift human behavior in desired directions (Gneezy et al., 2011). They can even sometimes be detrimental for motivation to show a particular behavior (Gneezy and Rustichini, 2000a). Later in the pandemic, financial incentives have been found to be able to improve the take-up of vaccines (Campos-Mercade et al., 2021a; Schneider et al., 2022). Yet, at the pandemic's onset, when vaccines were not yet available, it seems that information about how to prevent the exposure to and the spread of the virus has been of major importance,

independent of additional monetary incentives. This leads us to summarize our findings in a way that might also become relevant for further waves of the current or new waves of a next pandemic after COVID-19: Quick and reliable one-to-one information at the onset of a pandemic can save lives.

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Information provision over the phone saves lives: An RCT to contain COVID-19 in rural Bangladesh at the pandemic's onset

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A1 Tables

A1.1 Tables supporting Figures 2 and 3 in the main text

A1.1.1 Treatment Effects on Main Outcomes Scales: OLS Regression Coefficients

Table A1: Treatment Effect: Treated Households vs. Households in Control Villages

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.437***	0.055	0.220**	0.060	0.187***	0.112**
	(0.000)	(0.314)	(0.021)	(0.365)	(0.000)	(0.024)
INFO + MONEY	0.458***	0.071	0.292***	0.011	0.113**	0.008
	(0.000)	(0.127)	(0.003)	(0.848)	(0.025)	(0.890)
Village Level Characteristics: Migration (Pre-intervention)						
Returned migrants from abroad[a] (♯)	0.007	-0.019	0.055**	0.033*	−0.005	0.027
	(0.825)	(0.241)	(0.029)	(0.073)	(0.813)	(0.311)
Returned migrants from cities [past 14 days] (♯)	0.001	0.000	0.001	-0.000	−0.002*	-0.003***
	(0.678)	(0.981)	(0.347)	(0.909)	(0.052)	(0.001)
Village Level Characteristics: Migration (Post-intervention)						
Returned migrants from abroad [past 14 days] (♯)	−0.039	0.002	−0.057	-0.021	0.018	-0.020
	(0.175)	(0.930)	(0.149)	(0.484)	(0.369)	(0.249)
Returned migrants from abroad [since 04/20] (♯)	0.058	0.105***	−0.141**	-0.023	−0.074	-0.019
	(0.360)	(0.003)	(0.022)	(0.643)	(0.220)	(0.596)
Returned migrants from cities [past 14 days] (♯)	−0.002	-0.003	−0.002	0.006**	−0.001	-0.002
	(0.455)	(0.212)	(0.441)	(0.035)	(0.489)	(0.411)
Village Level Characteristics: Social Events/Restrictions of Social Life (Pre-intervention)						
Attendees of big event [past 14 days] (♯)	−0.001	0.003***	−0.002	-0.002*	−0.001	-0.002*
	(0.641)	(0.003)	(0.163)	(0.087)	(0.370)	(0.090)
Reduction in attendance of big events[b] (♯)	0.000	-0.000	−0.000	-0.000*	0.000	0.000*
	(0.241)	(0.632)	(0.810)	(0.057)	(0.405)	(0.052)
Attendees of last Friday prayer (♯)	0.001	-0.002*	−0.000	0.000	0.001	-0.001
	(0.301)	(0.076)	(0.740)	(0.747)	(0.221)	(0.181)
Reduction in Friday prayer attendance[c] (♯)	−0.000	-0.000	−0.001	-0.000	−0.000	-0.000
	(0.864)	(0.900)	(0.101)	(0.410)	(0.118)	(0.115)
Social gatherings restricted (=1)	0.210***	0.205***	0.104	0.068	0.084*	-0.046
	(0.005)	(0.001)	(0.278)	(0.354)	(0.082)	(0.415)
Social gatherings banned (=1)	−0.044	0.078	0.017	0.169*	−0.167***	0.031
	(0.606)	(0.243)	(0.879)	(0.052)	(0.002)	(0.574)
Social distancing promoted (=1)	−0.498***	-0.061	−0.156	-0.087	−0.054	-0.058
	(0.000)	(0.480)	(0.444)	(0.395)	(0.395)	(0.552)
Shops closed (=1)	−0.171**	-0.024	−0.092	0.031	−0.004	0.052
	(0.015)	(0.678)	(0.302)	(0.625)	(0.923)	(0.283)
Tea stalls shut down (=1)	−0.000	0.097	0.080	-0.138*	0.020	-0.137***
	(1.000)	(0.124)	(0.450)	(0.061)	(0.743)	(0.003)
Village Level Characteristics: Social Events/Restrictions of Social Life (Post-intervention)						
Attendees of big event [past 14 days] (♯)	−0.000	-0.000	−0.000	-0.001	0.001*	0.000
	(0.846)	(0.474)	(0.716)	(0.195)	(0.093)	(0.615)
Reduction in attendance of big events[b] (♯)	0.001	0.001	0.001	0.000	−0.001**	-0.000
	(0.254)	(0.330)	(0.588)	(0.558)	(0.021)	(0.868)
Attendees of last Friday prayer (♯)	−0.001	0.000	0.001**	-0.001*	0.000	0.001
	(0.237)	(0.541)	(0.014)	(0.096)	(0.897)	(0.104)
Reduction in Friday prayer attendance[c] (♯)	−0.000	-0.001*	−0.000	-0.001	−0.001**	-0.000
	(0.812)	(0.076)	(0.651)	(0.216)	(0.023)	(0.159)
Social gatherings restricted (=1)	−0.052	0.021	−0.050	0.021	−0.009	-0.138***
	(0.437)	(0.699)	(0.526)	(0.734)	(0.855)	(0.004)

Social gatherings banned (=1)	0.036	0.108	−0.106	0.055	0.049	0.063
	(0.664)	(0.161)	(0.308)	(0.546)	(0.478)	(0.390)
Social distancing promoted (=1)	−0.095	0.152	−0.144	-0.160	−0.025	-0.042
	(0.336)	(0.161)	(0.523)	(0.364)	(0.773)	(0.642)
Shops closed (=1)	−0.057	0.042	0.195	-0.044	−0.025	-0.021
	(0.386)	(0.536)	(0.104)	(0.620)	(0.689)	(0.726)
Tea stalls shut down (=1)	0.138*	-0.054	−0.142	0.111	0.008	0.048
	(0.066)	(0.490)	(0.222)	(0.173)	(0.910)	(0.467)
Village Level Characteristics: COVID-19 incidences in the village (Pre-intervention)						
HHs currently in quarantine (♯)	−0.004	0.018	0.004	0.011	−0.013	0.010
	(0.714)	(0.116)	(0.837)	(0.475)	(0.231)	(0.231)
Any HH in quarantine [since 02/20] (=1)	−0.049	-0.028	−0.110	0.048	0.021	-0.128
	(0.633)	(0.732)	(0.376)	(0.583)	(0.780)	(0.150)
Covid incidences or Covid-related deaths[d] (♯)	0.158***	0.073**	0.182***	-0.027	0.000	0.111***
	(0.004)	(0.026)	(0.001)	(0.494)	(0.993)	(0.007)
Health care situation						
Dist. to closest union health facility (mins)	0.001	0.004	−0.005	-0.001	−0.003	0.001
	(0.726)	(0.171)	(0.352)	(0.829)	(0.217)	(0.685)
Dist. to closest upazilla health facility (mins)	−0.001	-0.000	0.003	0.000	0.000	0.001
	(0.489)	(0.881)	(0.212)	(0.985)	(0.989)	(0.598)
Dist. to closest district health facility (mins)	−0.000	-0.001	−0.001	-0.000	0.000	-0.000
	(0.650)	(0.327)	(0.288)	(0.839)	(0.845)	(0.674)
Constant	0.499***	-0.448***	0.318	0.140	0.255*	0.281*
	(0.009)	(0.007)	(0.357)	(0.564)	(0.077)	(0.079)
Difference between INFO + MONEY and INFO ONLY	0.021	0.016	0.072	-0.049	−0.073	-0.104
	(0.818)	(0.785)	(0.567)	(0.499)	(0.203)	(0.104)
Village Level Controls	29	29	29	29	29	29
R^2	0.09	0.03	0.06	0.03	0.02	0.02
Observations	2138	2041	2134	2041	2138	2041

Notes: OLS regressions of our main outcome scales on treatment indicator variables. Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages. P-values in parentheses (standard errors have been clustered at the village level). See Table A7a for randomization inference. [a] Due to the low number of migrants returning from abroad (see Table A11), for use as control variable, we sum the number of migrants that came back two weeks prior to the first village questionnare and those that came back before (since February 2020). [b] To reduce collinearity in control variables, we use the reduction in attendance of big events due to Covid instead of the number of attendees of big events in the two weeks prior to the first village questionnaire and the same number from before that time. [c] As for the number of attendees of big events, we compute and use the reduction in attendance of Friday prayer in our regressions. [d] Due to the low number of persons showing Covid-related symptoms, persons being diagnosed with Covid, and deaths in the villages (see Table A11), for use as control variable, we sum these numbers.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A2: Spillover Effects: Untreated Households in Treatment Villages vs. Households in Control Villages

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	−0.071	-0.023	0.044	-0.015	0.088*	-0.023
	(0.231)	(0.668)	(0.464)	(0.803)	(0.072)	(0.690)
INFO + MONEY	0.051	-0.001	0.009	0.018	−0.046	-0.006
	(0.339)	(0.984)	(0.883)	(0.743)	(0.432)	(0.920)
Village Level Characteristics: Migration (Pre-intervention)						
Returned migrants from abroad[a] (♯)	−0.025	0.032*	0.032*	0.017	−0.034	0.016
	(0.224)	(0.051)	(0.092)	(0.370)	(0.210)	(0.337)
Returned migrants from cities [past 14 days] (♯)	0.000	0.003***	0.001	-0.001	−0.000	-0.001
	(0.852)	(0.004)	(0.462)	(0.593)	(0.786)	(0.661)
Village Level Characteristics: Migration (Post-intervention)						
Returned migrants from abroad [past 14 days] (♯)	−0.041	0.007	−0.057*	-0.055**	0.028	0.012
	(0.109)	(0.783)	(0.085)	(0.025)	(0.131)	(0.495)
Returned migrants from abroad [since 04/20] (♯)	0.058	0.035	−0.022	0.039	−0.079**	-0.023
	(0.172)	(0.455)	(0.610)	(0.395)	(0.036)	(0.514)
Returned migrants from cities [past 14 days] (♯)	−0.002	0.002	−0.000	0.008***	0.001	0.001
	(0.362)	(0.332)	(0.916)	(0.001)	(0.506)	(0.779)
Village Level Characteristics: Social Events/Restrictions of Social Life (Pre-intervention)						
Attendees of big event [past 14 days] (♯)	0.002	0.001	−0.000	-0.002	0.000	-0.000
	(0.202)	(0.558)	(0.770)	(0.140)	(0.784)	(0.709)
Reduction in attendance of big events[b] (♯)	0.000	0.000	−0.000	-0.000	0.000	0.000
	(0.646)	(0.363)	(0.206)	(0.244)	(0.788)	(0.849)
Attendees of last Friday prayer (♯)	−0.001	0.000	−0.000	-0.000	0.001	0.000
	(0.428)	(0.509)	(0.895)	(0.793)	(0.228)	(0.485)
Reduction in Friday prayer attendance[c] (♯)	−0.000	0.000	−0.000	-0.000	0.000	-0.000
	(0.874)	(0.787)	(0.478)	(0.622)	(0.826)	(0.935)
Social gatherings restricted (=1)	0.059	0.146**	−0.004	0.003	0.025	0.009
	(0.426)	(0.015)	(0.955)	(0.963)	(0.724)	(0.894)
Social gatherings banned (=1)	0.070	0.116*	−0.017	0.113	−0.081	-0.098
	(0.329)	(0.086)	(0.819)	(0.116)	(0.276)	(0.158)
Social distancing promoted (=1)	−0.328***	-0.080	−0.199	-0.137	−0.014	-0.053
	(0.000)	(0.499)	(0.346)	(0.125)	(0.887)	(0.504)
Shops closed (=1)	−0.143**	-0.092*	−0.099	0.003	−0.032	0.087
	(0.026)	(0.092)	(0.161)	(0.965)	(0.542)	(0.147)
Tea stalls shut down (=1)	0.030	0.064	0.279***	-0.019	0.030	-0.148***
	(0.655)	(0.262)	(0.001)	(0.773)	(0.670)	(0.007)
Village Level Characteristics: Social Events/Restrictions of Social Life (Post-intervention)						
Attendees of big event [past 14 days] (♯)	0.000	-0.001**	−0.001**	-0.001	−0.001*	0.000
	(0.484)	(0.017)	(0.015)	(0.528)	(0.063)	(0.626)
Reduction in attendance of big events[b] (♯)	0.002*	0.002***	−0.001*	0.001	−0.002*	0.001
	(0.058)	(0.000)	(0.075)	(0.201)	(0.052)	(0.262)
Attendees of last Friday prayer (♯)	−0.000	0.001*	0.001**	-0.000	0.000	0.000
	(0.951)	(0.060)	(0.016)	(0.384)	(0.971)	(0.372)
Reduction in Friday prayer attendance[c] (♯)	0.000	-0.000	0.001	-0.001***	−0.001	-0.000
	(0.438)	(0.305)	(0.316)	(0.001)	(0.170)	(0.976)
Social gatherings restricted (=1)	−0.034	-0.028	−0.042	0.093	−0.026	-0.080
	(0.577)	(0.599)	(0.501)	(0.106)	(0.625)	(0.110)
Social gatherings banned (=1)	0.076	0.111	−0.035	0.092	0.061	0.106
	(0.370)	(0.137)	(0.597)	(0.301)	(0.383)	(0.139)
Social distancing promoted (=1)	0.011	0.114	−0.220	-0.097	−0.160	0.047
	(0.916)	(0.314)	(0.169)	(0.412)	(0.113)	(0.565)
Shops closed (=1)	−0.038	0.087	0.014	-0.067	0.032	-0.089

	(0.562)	(0.161)	(0.835)	(0.442)	(0.656)	(0.168)
Tea stalls shut down (=1)	0.101	-0.025	−0.073	0.123	−0.056	0.125*
	(0.172)	(0.730)	(0.309)	(0.105)	(0.440)	(0.096)
Village Level Characteristics: COVID-19 incidences in the village (Pre-intervention)						
HHs currently in quarantine (♯)	0.022*	0.010	0.000	0.019	−0.013	0.005
	(0.078)	(0.409)	(0.979)	(0.155)	(0.183)	(0.587)
Any HH in quarantine [since 02/20] (=1)	−0.143	-0.086	−0.060	0.084	−0.063	-0.091
	(0.140)	(0.357)	(0.489)	(0.336)	(0.375)	(0.384)
Covid incidences or Covid-related deaths[d] (♯)	0.123**	0.091**	0.216***	-0.049	0.102***	-0.037
	(0.017)	(0.041)	(0.000)	(0.289)	(0.002)	(0.611)
Health care situation						
Dist. to closest union health facility (mins)	0.003	0.001	−0.006	0.001	−0.000	0.004
	(0.261)	(0.813)	(0.115)	(0.680)	(0.995)	(0.214)
Dist. to closest upazilla health facility (mins)	0.001	0.003*	0.005***	-0.000	−0.004*	0.003
	(0.712)	(0.084)	(0.006)	(0.889)	(0.056)	(0.123)
Dist. to closest district health facility (mins)	−0.000	-0.000	−0.001**	-0.001	−0.000	-0.001
	(0.465)	(0.854)	(0.047)	(0.411)	(0.874)	(0.255)
Constant	0.093	-0.588***	0.301	0.098	0.357**	0.003
	(0.555)	(0.005)	(0.307)	(0.624)	(0.024)	(0.987)
Difference between INFO + MONEY and INFO ONLY	0.122*	0.022	−0.035	0.034	−0.134**	0.018
	(0.068)	(0.730)	(0.627)	(0.612)	(0.047)	(0.791)
Village Level Controls	29	29	29	29	29	29
R^2	0.02	0.03	0.03	0.03	0.02	0.02
Observations	2152	2056	2149	2056	2152	2056

Notes: OLS regressions of our main outcome scales on treatment indicator variables. Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare untreated households in treatment villages with households in control villages. P-values in parentheses (standard errors have been clustered at the village level). See Table A7b for randomization inference. [a] Due to the low number of migrants returning from abroad (see Table A11), for use as control variable, we sum the number of migrants that came back two weeks prior to the first village questionnare and those that came back before (since February 2020). [b] To reduce collinearity in control variables, we use the reduction in attendance of big events due to Covid instead of the number of attendees of big events in the two weeks prior to the first village questionnaire and the same number from before that time. [c] As for the number of attendees of big events, we compute and use the reduction in attendance of Friday prayer in our regressions. [d] Due to the low number of persons showing Covid-related symptoms, persons being diagnosed with Covid, and deaths in the villages (see Table A11), for use as control variable, we sum these numbers.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A3: Treatment Effects on Main Outcomes Scales: OLS Regression Coefficients (w/o Covariate Adjustment)

(a) Treatment Effect: Treated Households vs. Households in Control Villages

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.410***	0.038	0.171*	-0.006	0.190***	0.090*
	(0.000)	(0.524)	(0.078)	(0.923)	(0.000)	(0.065)
INFO + MONEY	0.504***	0.088*	0.294***	-0.011	0.094	0.035
	(0.000)	(0.100)	(0.004)	(0.861)	(0.104)	(0.558)
Difference between INFO + MONEY and INFO ONLY	0.094	0.050	0.123	-0.005	−0.096*	-0.054
	(0.291)	(0.430)	(0.338)	(0.949)	(0.097)	(0.408)
Village Level Controls	0	0	0	0	0	0
R^2	0.06	0.00	0.02	0.00	0.01	0.00
Observations	2138	2041	2134	2041	2138	2041

(b) Spillover Effects: Untreated Households in Treatment Villages vs. Households in Control Villages

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	−0.075	-0.053	−0.001	-0.076	0.076	0.012
	(0.231)	(0.355)	(0.991)	(0.231)	(0.144)	(0.840)
INFO + MONEY	0.096*	0.028	0.009	0.005	−0.054	0.029
	(0.093)	(0.659)	(0.899)	(0.942)	(0.378)	(0.597)
Difference between INFO + MONEY and INFO ONLY	0.171**	0.082	0.009	0.080	−0.130*	0.018
	(0.013)	(0.253)	(0.906)	(0.238)	(0.059)	(0.793)
Village Level Controls	0	0	0	0	0	0
R^2	0.00	0.00	0.00	0.00	0.00	0.00
Observations	2152	2056	2149	2056	2152	2056

Notes: OLS regressions of our main outcome scales on treatment indicator variables without village level controls. Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages (Table A3a) and untreated households in treatment villages with households in control villages (Table A3b). P-values in parentheses (standard errors have been clustered at the village level). See Table A8 for randomization inference and Tables A1 and A2 for covariate adjusted results.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

A1.1.2 Treatment Effect on Reporting a Deceased Household Member

Table A4: All Households in Treatment Villages vs. Households in Control Villages

	OLS		Poisson		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (Pooled)	−0.009**	-0.007*	−0.732**	-0.743**	−0.279**	-0.289**
	(0.032)	(0.053)	(0.028)	(0.028)	(0.026)	(0.025)
Village Level Characteristics: Migration (Pre-intervention)						
Returned migrants from abroad[a] (♯)		-0.000		-0.054		-0.023
		(0.842)		(0.759)		(0.709)
Returned migrants from cities [past 14 days] (♯)		0.000		0.006		0.002
		(0.701)		(0.466)		(0.550)
Village Level Characteristics: Migration (Post-intervention)						
Returned migrants from abroad [past 14 days] (♯)		0.004*		0.164		0.061
		(0.099)		(0.360)		(0.359)
Returned migrants from abroad [since 02/20] (♯)		-0.002		0.007		0.014
		(0.672)		(0.986)		(0.924)
Returned migrants from cities [past 14 days] (♯)		-0.000		-0.014		-0.006
		(0.642)		(0.458)		(0.417)
Village Level Characteristics: Social Events/Restrictions of Social Life (Pre-intervention)						
Attendees of big event [past 14 days] (♯)		0.000		0.007		0.003
		(0.699)		(0.291)		(0.348)
Reduction in attendance of big events[b] (♯)		-0.000*		-0.002		-0.001
		(0.096)		(0.226)		(0.175)
Attendees of last Friday prayer (♯)		0.000		0.002		0.001
		(0.489)		(0.637)		(0.631)
Reduction in Friday prayer attendance[c] (♯)		-0.000		-0.001		-0.000
		(0.447)		(0.517)		(0.586)
Social gatherings restricted (=1)		0.002		0.121		0.023
		(0.746)		(0.786)		(0.891)
Social gatherings banned (=1)		0.003		0.207		0.093
		(0.496)		(0.645)		(0.564)
Social distancing promoted (=1)		-0.011		-0.937*		-0.354*
		(0.195)		(0.059)		(0.074)
Shops closed (=1)		-0.008		-0.667		-0.263
		(0.116)		(0.121)		(0.101)
Tea stalls shut down (=1)		-0.003		-0.346		-0.145
		(0.492)		(0.354)		(0.331)
Village Level Characteristics: Social Events/Restrictions of Social Life (Post-intervention)						
Attendees of big event [past 14 days] (♯)		0.000		0.001		0.001
		(0.795)		(0.894)		(0.721)
Reduction in attendance of big events[b] (♯)		0.000		0.005		0.002
		(0.797)		(0.480)		(0.432)
Attendees of last Friday prayer (♯)		-0.000*		-0.005		-0.002
		(0.082)		(0.153)		(0.118)
Reduction in Friday prayer attendance[c] (♯)		-0.000		-0.003		-0.001
		(0.238)		(0.357)		(0.391)
Social gatherings restricted (=1)		0.005		0.437		0.183
		(0.264)		(0.290)		(0.229)
Social gatherings banned (=1)		-0.000		-0.313		-0.104
		(0.934)		(0.627)		(0.647)
Social distancing promoted (=1)		-0.007		-0.764		-0.312
		(0.497)		(0.365)		(0.304)
Shops closed (=1)		0.002		0.324		0.097

		(0.624)		(0.615)		(0.675)
Tea stalls shut down (=1)		0.009		1.039		0.437*
		(0.101)		(0.125)		(0.081)
Village Level Characteristics: COVID-19 incidences in the village (Pre-intervention)						
HHs currently in quarantine (♯)		-0.001		-0.068		-0.022
		(0.505)		(0.483)		(0.530)
Any HH in quarantine [since 02/20] (=1)		-0.000		-0.189		-0.043
		(0.981)		(0.788)		(0.869)
Covid incidences or Covid-related deaths[d] (♯)		0.006		0.447		0.169
		(0.185)		(0.161)		(0.156)
Health care situation						
Dist. to closest union health facility (mins)		-0.000		-0.019		-0.008
		(0.398)		(0.472)		(0.448)
Dist. to closest upazilla health facility (mins)		-0.000		-0.005		-0.002
		(0.695)		(0.728)		(0.684)
Dist. to closest district health facility (mins)		-0.000		-0.001		-0.001
		(0.656)		(0.800)		(0.761)
Village Level Controls	0	29	0	29	0	29
R^2	0.00	0.01				
Observations	2937	2937	2937	2937	2937	2937

Notes: GLM regressions of reporting a deceased household member on treatment indicator variables. Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare all households (treated and untreated) in treatment villages with households in control villages. P-values in parentheses (standard errors have been clustered at the village level). See Table A9a for randomization inference. [a] Due to the low number of migrants returning from abroad (see Table A11), for use as control variable, we sum the number of migrants that came back two weeks prior to the first village questionnare and those that came back before (since February 2020). [b] To reduce collinearity in control variables, we use the reduction in attendance of big events due to Covid instead of the number of attendees of big events in the two weeks prior to the first village questionnaire and the same number from before that time. [c] As for the number of attendees of big events, we compute and use the reduction in attendance of Friday prayer in our regressions. [d] Due to the low number of persons showing Covid-related symptoms, persons being diagnosed with Covid, and deaths in the villages (see Table A11), for use as control variable, we sum these numbers.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

A1.1.3 The Role of Knowledge

Table A5: Treatment Effects on the Knowledge Scale: OLS Regression Coefficients

	Knowledge (Main Effects)		Knowledge (Spillover Effects)	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.647***	0.178***	−0.138**	0.030
	(0.000)	(0.002)	(0.017)	(0.620)
INFO + MONEY	0.430***	0.093*	0.003	0.071
	(0.000)	(0.084)	(0.945)	(0.211)
Difference between INFO + MONEY and INFO ONLY	−0.218**	-0.086	0.142**	0.041
	(0.037)	(0.208)	(0.018)	(0.539)
Village Level Controls	29	29	29	29
R^2	0.11	0.03	0.03	0.02
Observations	2138	2041	2152	2056

Notes: OLS regressions of the Knowledge scale (without attitudes; 14 days and three months after the intervention) on treatment indicator variables. Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages. Village level controls are those used in Tables A1, A2 and A4. P-values in parentheses (standard errors have been clustered at the village level). See Table A10 for randomization inference.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A6: Knowledge and its Relation to Behavior and Health

	Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
Knowledge (at t = 14d, in SD)	0.111***	0.023	0.033*	0.037**
	(0.000)	(0.243)	(0.065)	(0.022)
Village Level Controls	29	29	29	29
R^2	0.05	0.01	0.02	0.02
Observations	3077	3081	2937	2937

Notes: OLS regressions of the Behavior Scale (14 days after the intervention) and the Health Scale (three months after the intervention). Unlike for Tables A1, A2, and A5 – where Knowledge is used as a dependent variable, and is thus normalized with respect to the control group for ease of interpretation – for this table, Knowledge is expressed in standard deviations. Village level controls are those used in Tables A1, A2 and A4. P-values in parentheses (standard errors have been clustered at the village level).

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

A1.2 Randomization Inference: Tables

Table A7: Treatment Effects on Main Outcomes Scales: OLS Regression Coefficients with Randomization Inference

(a) Treatment Effect: Treated Households (vs. Households in Control Villages)

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.437***	0.055	0.220***	0.060	0.187***	0.112**
	(0.000)	(0.148)	(0.006)	(0.210)	(0.000)	(0.034)
INFO + MONEY	0.458***	0.071	0.292***	0.011	0.113**	0.008
	(0.000)	(0.125)	(0.000)	(0.461)	(0.018)	(0.494)
Difference between INFO + MONEY and INFO ONLY	0.021	0.016	0.072	-0.049	−0.073	-0.104
	(0.813)	(0.808)	(0.448)	(0.545)	(0.283)	(0.134)
Village Level Controls	29	29	29	29	29	29
R^2	0.09	0.03	0.06	0.03	0.02	0.02
Observations	2138	2041	2134	2041	2138	2041

(b) Spillover Effects: Untreated Households in Treatment Villages (vs. Households in Control Villages)

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	−0.071	-0.023	0.044	-0.015	0.088*	-0.023
	(0.831)	(0.656)	(0.300)	(0.604)	(0.067)	(0.641)
INFO + MONEY	0.051	-0.001	0.009	0.018	−0.046	-0.006
	(0.216)	(0.495)	(0.449)	(0.397)	(0.781)	(0.552)
Difference between INFO + MONEY and INFO ONLY	0.122	0.022	−0.035	0.034	−0.134*	0.018
	(0.104)	(0.767)	(0.715)	(0.691)	(0.058)	(0.790)
Village Level Controls	29	29	29	29	29	29
R^2	0.02	0.03	0.03	0.03	0.02	0.02
Observations	2152	2056	2149	2056	2152	2056

Notes: OLS regressions of our main outcome scales using randomization inference to test for treatment effects (sharp null hypothesis; one-sided tests in line with preregistered hypotheses). Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages (Table A7a) and untreated households in treatment villages with households in control villages (Table A7b). Village level controls are those used in Tables A1, A2 and A4. P-values (resulting from randomization inference) in parentheses. See Tables A1 and A2 for conventional inference.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A8: Treatment Effects on Main Outcomes Scales: OLS Regression Coefficients with Randomization Inference (w/o Covariate Adjustment)

(a) Treatment Effect: Treated Households (vs. Households in Control Villages)

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.410***	0.038	0.171**	-0.006	0.190***	0.090**
	(0.000)	(0.249)	(0.017)	(0.562)	(0.000)	(0.044)
INFO + MONEY	0.504***	0.088*	0.294***	-0.011	0.094**	0.035
	(0.000)	(0.066)	(0.000)	(0.614)	(0.031)	(0.270)
Difference between INFO + MONEY and INFO ONLY	0.094	0.050	0.123	-0.005	−0.096	-0.054
	(0.259)	(0.468)	(0.172)	(0.957)	(0.145)	(0.398)
Village Level Controls	0	0	0	0	0	0
R^2	0.06	0.00	0.02	0.00	0.01	0.00
Observations	2138	2041	2134	2041	2138	2041

(b) Spillover Effects: Untreated Households in Treatment Villages (vs. Households in Control Villages)

	Knowledge & Attitudes		Behavior		Health	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	−0.075	-0.053	−0.001	-0.076	0.076*	0.012
	(0.843)	(0.814)	(0.453)	(0.877)	(0.063)	(0.386)
INFO + MONEY	0.096*	0.028	0.009	0.005	−0.054	0.029
	(0.076)	(0.329)	(0.430)	(0.483)	(0.838)	(0.300)
Difference between INFO + MONEY and INFO ONLY	0.171**	0.082	0.009	0.080	−0.130**	0.018
	(0.032)	(0.233)	(0.915)	(0.267)	(0.045)	(0.814)
Village Level Controls	0	0	0	0	0	0
R^2	0.00	0.00	0.00	0.00	0.00	0.00
Observations	2152	2056	2149	2056	2152	2056

Notes: OLS regressions of our main outcome scales without village level controls using randomization inference to test for treatment effects (sharp null hypothesis; one-sided tests in line with preregistered hypotheses). Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages (Table A8a) and untreated households in treatment villages with households in control villages (Table A8b). P-values (resulting from randomization inference) in parentheses. See Tables A3a and A3b for conventional inference, and Tables A7a and A7b for covariate adjusted results using randomization inference.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A9: Pooled Treatment Effect on Reporting a Deceased Household Member: Regression Coefficients with Randomization Inference

(a) All Households in Treatment Villages vs. Households in Control Villages

	OLS		Poisson		Probit	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment (Pooled)	−0.009**	-0.007*	−0.732**	-0.742**	−0.279**	-0.289**
	(0.018)	(0.059)	(0.018)	(0.047)	(0.018)	(0.047)
Village Level Controls	0	29	0	29	0	29
R^2	0.00	0.01				
Observations	2937	2937	2937	2937	2937	2937

Notes: GLM regressions of reporting a deceased household member using randomization inference to test for treatment effects (sharp null hypothesis; one-sided tests in line with preregistered hypotheses). Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare all households (treated and untreated) in treatment villages with households in control villages. Village level controls are those used in Tables A1, A2 and A4. P-values (resulting from randomization inference) in parentheses. See Table A4 for conventional inference.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

Table A10: Treatment Effects on the Knowledge Scale: OLS Regression Coefficients with Randomization Inference

	Knowledge (Main Effects)		Knowledge (Spillover Effects)	
	$t = 14d$	$t = 2.5m$	$t = 14d$	$t = 2.5m$
INFO ONLY	0.647***	0.178***	−0.138	0.030
	(0.000)	(0.002)	(0.968)	(0.317)
INFO + MONEY	0.430***	0.093*	0.003	0.071
	(0.000)	(0.068)	(0.473)	(0.128)
Difference between INFO + MONEY and INFO ONLY	−0.218**	-0.086	0.142	0.041
	(0.016)	(0.243)	(0.103)	(0.585)
Village Level Controls	29	29	29	29
R^2	0.11	0.03	0.03	0.02
Observations	2138	2041	2152	2056

Notes: OLS regressions of the Knowledge scale (without attitudes; 14 days and three months after the intervention) on treatment indicator variables using randomization inference to test for treatment effects (sharp null hypothesis; one-sided tests in line with preregistered hypotheses). Omitted group consists of the households in control villages (mean 0, SD 1), such that coefficients express treatment effects in SD of the control group. Regressions compare treated households in treatment villages with households in control villages. Village level controls are those used in Tables A1, A2 and A4. P-values (resulting from randomization inference) in parentheses. See Table A5 for conventional inference.

*** Significant at the 1 percent level.
** Significant at the 5 percent level.
* Significant at the 10 percent level.

A2 Summary Statistics and Balance Accross Treatment Conditions

Table A11: Summary Statistics and Balance of Pre-Treatment Village Level Characteristics Accross Treatment Groups

	Group Means			Differences in Group Means		
	(1) CONTROL Mean/SD	(2) INFO-ONLY Mean/SD	(3) MONEY+INFO Mean/SD	(1) vs. (2) T/p	(1) vs. (3) T/p	(2) vs. (3) T/p
Village Level Characteristics: Migration						
Any migrants returned from abroad [past 14 days] (=1)	0.02	0.00	0.02	1.00	-0.20	-1.00
	(0.13)	(0.00)	(0.15)	(0.32)	(0.84)	(0.32)
Returned migrants from abroad [past 14 days] (♯)	0.03	0.00	0.02	1.00	0.28	-1.00
	(0.26)	(0.00)	(0.15)	(0.32)	(0.78)	(0.32)
Any migrants returned from abroad [since 02/20] (=1)	0.32	0.31	0.24	0.06	0.81	0.70
	(0.47)	(0.47)	(0.43)	(0.95)	(0.42)	(0.49)
Returned migrants from abroad [since 02/20] (♯)	0.55	0.53	0.67	0.07	-0.45	-0.45
	(0.98)	(1.29)	(1.54)	(0.94)	(0.66)	(0.66)
Returned migrants from cities [past 14 days] (♯)	13.83	16.47	14.47	-0.67	-0.21	0.48
	(14.80)	(23.26)	(15.68)	(0.51)	(0.83)	(0.63)
Village Level Characteristics: Social Events/Restrictions of Social Life						
Social gatherings restricted (=1)	0.78	0.80	0.76	-0.21	0.33	0.50
	(0.42)	(0.40)	(0.43)	(0.84)	(0.74)	(0.62)
Number of Attendees of Friday prayer restricted (=1)	0.95	0.96	0.96	-0.13	-0.13	0.00
	(0.22)	(0.21)	(0.21)	(0.90)	(0.90)	(1.00)
Social gatherings banned (=1)	0.83	0.73	0.78	1.21	0.70	-0.49
	(0.38)	(0.45)	(0.42)	(0.23)	(0.49)	(0.63)
Social distancing promoted (=1)	0.93	0.98	0.89	-1.13	0.77	1.70
	(0.25)	(0.15)	(0.32)	(0.26)	(0.44)	(0.09)
Shops closed (=1)	0.45	0.51	0.44	-0.62	0.06	0.63
	(0.50)	(0.51)	(0.50)	(0.54)	(0.96)	(0.53)
Tea stalls shut down (=1)	0.80	0.80	0.71	0.00	1.03	0.98
	(0.40)	(0.40)	(0.46)	(1.00)	(0.30)	(0.33)
Any big event in the village [past 14 days] (=1)	0.33	0.40	0.38	-0.69	-0.47	0.21
	(0.48)	(0.50)	(0.49)	(0.49)	(0.64)	(0.83)
Attendees of big event [past 14 days] (♯)	13.75	23.27	17.38	-1.60	-0.68	0.89
	(24.07)	(34.05)	(28.84)	(0.11)	(0.50)	(0.38)
Any big event in the village [since 02/20] (=1)	0.77	0.84	0.89	-1.00	-1.68	-0.61
	(0.43)	(0.37)	(0.32)	(0.32)	(0.10)	(0.54)
Attendees of big event [since 02/20] (♯)	293.52	206.89	173.84	0.42	0.57	0.37
	(1544.59)	(399.59)	(455.37)	(0.68)	(0.57)	(0.72)
Attendees of last Friday prayer (♯)	33.08	40.80	33.40	-0.72	-0.03	0.61
	(40.97)	(62.76)	(52.50)	(0.48)	(0.97)	(0.55)
Usual attendance of Friday prayer (♯)	128.75	141.67	147.89	-0.64	-0.87	-0.27
	(104.65)	(101.38)	(116.32)	(0.53)	(0.39)	(0.79)
Observations	60	45	45	105	105	90

Notes: This table shows village level characteristics elicited in our initial village questionnaire (see Section A4.1). In columns one, two and three, we print the mean value and standard deviation of each variable for the three treatment groups CONTROL, INFO-ONLY and INFO+MONEY, respectively. Columns four, five and six report results from t-tests (t-statistic and corresponding p-value) comparing group means. For example, in column four, the mean values of the CONTROL group are compared to the mean values for villages in the INFO-ONLY condition. In our regression analysis, whenever village level control variables are included, we control for all this information (using appropriate aggregations; see the notes of Tables A1 to A4).

Table A11: Balance of Pre-Treatment Village Level Characteristics Accross Treatment Groups *(continued)*

	Group Means			Differences in Group Means		
	(1) CONTROL	(2) INFO-ONLY	(3) MONEY+INFO	(1) vs. (2)	(1) vs. (3)	(2) vs. (3)
	Mean/SD	Mean/SD	Mean/SD	T/p	T/p	T/p
Village Level Characteristics: COVID-19 incidences in the village						
Any HH currently in quarantine (=1)	0.20	0.16	0.13	0.59	0.91	0.30
	(0.40)	(0.37)	(0.34)	(0.56)	(0.36)	(0.77)
HHs currently in quarantine (♯)	0.97	0.71	0.62	0.50	0.67	0.16
	(2.64)	(2.55)	(2.60)	(0.62)	(0.51)	(0.87)
Any HH in quarantine [since 02/20] (=1)	0.18	0.13	0.13	0.70	0.70	0.00
	(0.39)	(0.34)	(0.34)	(0.49)	(0.49)	(1.00)
Diagnosed Covid cases in village (=1)	0.05	0.02	0.04	0.77	0.13	-0.58
	(0.22)	(0.15)	(0.21)	(0.44)	(0.90)	(0.56)
Covid-diagnosed villagers (♯)	0.05	0.04	0.09	0.11	-0.52	-0.54
	(0.22)	(0.30)	(0.47)	(0.92)	(0.61)	(0.59)
Any villager with Covid symptoms (=1)	0.02	0.00	0.02	1.00	-0.20	-1.00
	(0.13)	(0.00)	(0.15)	(0.32)	(0.84)	(0.32)
Villagers showing Covid symptoms (♯)	0.02	0.00	0.02	1.03	-0.19	-1.01
	(0.13)	(0.00)	(0.15)	(0.31)	(0.85)	(0.32)
Any Covid-related death in village (=1)	0.00	0.00	0.02	.	-1.00	-1.00
	(0.00)	(0.00)	(0.15)	(.)	(0.32)	(0.32)
Covid-related deaths (♯)	0.00	0.00	0.02	.	-1.00	-1.00
	(0.00)	(0.00)	(0.15)	(.)	(0.32)	(0.32)
Health care situation						
Dist. to closest union health facility (mins)	13.22	15.60	13.42	-1.35	-0.12	1.14
	(8.08)	(9.58)	(8.57)	(0.18)	(0.90)	(0.26)
Dist. to closest upazilla health facility (mins)	32.75	33.40	31.51	-0.21	0.36	0.50
	(14.00)	(16.72)	(19.32)	(0.83)	(0.72)	(0.62)
Dist. to closest district health facility (mins)	77.42	76.22	74.56	0.14	0.33	0.18
	(45.40)	(43.80)	(43.99)	(0.89)	(0.75)	(0.86)
Observations	60	45	45	105	105	90

Notes: This table shows village level characteristics elicited in our initial village questionnaire (see Section A4.1). In columns one, two and three, we print the mean value and standard deviation of each variable for the three treatment groups CONTROL, INFO-ONLY and INFO+MONEY, respectively. Columns four, five and six report results from t-tests (t-statistic and corresponding p-value) comparing group means. For example, in column four, the mean values of the CONTROL group are compared to the mean values for villages in the INFO-ONLY condition. In our regression analysis, whenever village level control variables are included, we control for all this information (using appropriate aggregations; see the notes of Tables A1 to A4).

A2.1 Sample Size and Attrition

In total, 3,901 households were contacted for the study. 1,150 households were randomly selected in treatment villages to receive the intervention; 953 were treated, and 929 could then again be successfully contacted and agreed to participate the first household survey. Among the 1,194 households from treatment villages that were not selected to receive the intervention, 943 could be successfully contacted and agreed to participate in the first household survey. Of the 1,557 households from control villages, 1,209 could be successfully contacted and agreed to participate in the first household survey. Participation rates in the first household survey thus vary between 77.7% and 80.8%, are highest among the treated and lowest in the pure control group, but are independent of treatment (Chi-square test, $p = 0.141$).

Further attrition from first to second household survey was independent of treatment as well (Chi-square test, $p = 0.415$). The group with highest participation rate in the second household survey is again the treated group (881 households, 76.6%), followed by the untreated households in treatment villages (896 households, 75.0%) and the households in the pure control group (1,160, 74.50%).

A3 Intervention Material

A3.1 Intervention Script

[Introduction and Consent: READ TO RESPONDENT AT THE START OF THE PHONE CALL]
Good day, I am *[NAME]*. I am part of a team of enumerators from Evaluation and Consulting Services (ECONS) Ltd. conducting a research study on rural households in four districts of Bangladesh and their reaction to the outbreak of the Coronavirus. Am I talking to *[Name of household head]*? *[If household head is not available, ask for spouse and start the script again. If neither household head nor spouse are available, try to reach them later on the same day. If at second attempt, both are still unavailable, ask for an adult member of the household, starting with the oldest, and start the script from the beginning. Indicate in the survey software with whom you ended up conducting the treatment script.]*

We (ECONS) are conducting this research on behalf the Max Planck Institute for Research on Collective Goods, Germany. I will be asking you some detailed questions about your household and household members. This data will be combined with location data from your mobile phone, if you allow us to do so.[1] This location data is saved by your mobile phone provider irrespectively of our study, but if you allow us to, we could receive these data from the government (who needs to approve the transfer of the data from the phone provider to us) and then combine these data with your answers to my questions on your household. Apart from giving us these data in case of your approval, neither the government nor your mobile phone provider have anything to do with this study, and would thus not get any access to the data from our study. The mobile phone data contains information about your location at a given time. All the information I collect from you will be kept absolutely confidential, including location data, if we may use it, and will be used by researchers only for research purposes. No personally identifying information will be published or shared with anyone outside the project team. There are no risks to you or your family in answering these questions. Your participation is completely voluntary and you may stop participating at any time. If you have any questions about the study or the survey at a later date, you may contact either Dr. Sebastian Schneider at Max Planck Institute for Research on Collective Goods Bonn at +4922891416-169 or Alamgir Kabir, Director for ECONS in Bangladesh at 01712121221.

[Ask if they want to participate, and start audiotape. If they don't want to participate, inquire for reasons. In case they object the use of their mobile phone data, they can still participate; in this case, leave out the indicated sentences in the declaration below.]

Consent for data protection

- I allow that the data of this study will be collected and saved in paper or electronic format at ECONS, Dhaka. [*(Leave out the following sentence in brackets in case they refused consent because of mobile phone data)* It will be complemented with location data as generated by mobile phones; however, no further information such as e.g., contact data will be used.] ECONS will hand over these data to the Max Planck Institute for Research on Collective Goods, Germany, for research purposes only in a way that no one else may obtain them. No personally identifying information will be published or shared with anyone outside the project team.

[1] Although planned, we couldn't obtain meaningful mobility data from mobile phone providers, which is why we cannot use this data for our analysis.

- I know that I can cancel my consent for collecting, saving and using my data for research purposes at any time. If I cancel my consent, my personal data will be deleted immediately.
- I allow my data to be saved for 10 years after the study has been completed. Thereafter, my personal data will be deleted, if that does not conflict with legal or contractual storage periods.

(First and given name)

I am willing to participate in the study "Information about COVID19 in Bangladesh" and to answer a questionnaire about our household. The study will be conducted by ECONS on behalf of the Max Planck Institute for Research on Collective Goods, Germany. [*(Leave out the following sentence in brackets in case they refused consent because of mobile phone data)* Location data generated by my mobile phone will be added to the collected information.] I have been informed that all collected information [*(Leave out the following addition in brackets in case they refused consent because of mobile phone data)* (including location data)] will be kept absolutely confidential, they will be saved and will be used by researchers only for research purposes. No personally identifying information will be published or shared with anyone outside the project team. My participation is completely voluntary and I may stop participating at any time. I know that I can only participate in the study if I declare my consent and agree to record this consent.

(Place, date, name and household id)

[Stop audiotape; make sure it includes the declaration above, place, date, name and household id; indicate in the survey software if use of mobile data was not permitted]

[Intervention for Treatment Group 1 and 2: Information Campaign of the Government] Thank you for participation. I will now discuss with you the information that the Government of Bangladesh is distributing about the novel Coronavirus. This virus is highly infectious and many people get seriously ill from it, need care in hospitals, and may even die. For this reason, and because Bangladesh is more affected than some of its neighbors, the government of Bangladesh has taken action to contain the further spread of the virus. We are grateful that you are participating in this and other surveys and therefore provide you with some extra information how to protect yourself, your family, friends and neighbors from Coronavirus.

Remember - if 10 other people are infected by you, and they also spread the virus among 10 other people, already more than 100 people are infected. If they also infect 10 others, the number exceeds a thousand infected people, which will be very bad for your village. Therefore: If you do your best in fighting the Coronavirus, you can make a change to keep yourself, your family, friends and the whole village safe!

First of all, it is most important to avoid contact with persons not living in your household to avoid getting infected or infecting them. Therefore, you should stay at home as much as possible and only leave your house if it is absolutely necessary (e.g., for buying groceries). Outside your house, you certainly have heard that it is important to avoid getting closer than 3 feet to anybody who is not living in your household.

Have you also heard what the three other most important things to do are in order to avoid infecting yourself and others around you, for example in your household? *[Depending if the answer was correct or not:]* Exactly/Not quite. *[Irrespective of the answer:]* First, you should thoroughly wash both your hands with soap for at least 20 seconds at least whenever you return home or have touched somebody who does not live in your household. Remember also to clean your fingertips, your thumb and the back of your hands. Second, refrain from touching nose, mouth and eyes. This is how the virus may enter your body, but also leave it. Third, use your folded arm or a tissue that you dispose afterwards in a clean way to cough, thereby covering your nose and mouth, and do not spit or expel wet cough or sputum.

Okay, can you repeat the list of most important things again? *[Give participant time if needed; correct/add if not complete. The list should be:]* Stay at home, keep 3 feet distance, wash hands, don't touch nose, mouth and eyes, and cough in your folded arm or in a tissue that you dispose afterwards. We will send you this list in an SMS after this call.

Alright, do you also know the three most frequent symptoms of the Coronavirus? *[Depending if the answer was correct or not:]* Exactly/Not quite. *[Irrespective of the answer:]* i) Fever, ii) Cough and iii) Breathlessness are the three most frequent symptoms of the novel Coronavirus.

Okay, can you repeat the list of the most frequent symptoms? *[Give participant time if needed; correct/add if not complete. The list should be:]* Fever, cough and breathlessness are the three most frequent symptoms of the novel Coronavirus. We will also send you this list in an SMS after this call.

Okay, and do you also know what to do if you or anyone you know experiences those symptoms? *[Depending if the answer was correct or not:]* Exactly/Not quite. *[Irrespective of the*

answer:] i) Maintain 3 feet distance from healthy persons, ii) Cover nose and mouth with a mask, or a scarf, if you don't have a mask, iii) Call on the Govt. hotline.

Okay, let's repeat this list. What should you do in case you experience the three most frequent symptoms? *[Give participant time if needed; correct/add if not complete. The list should be:]* You should maintain 3 feet distance from healthy persons, cover nose and mouth, and call the hotline at 333, 16263. We will also send this list as an SMS to you after the call – including the hotline number.

By the way – what are your personal measures to keep a distance to other people not living in your household? Ideas are i) avoiding public transportation, ii) staying at home, iii) working at home.

[Monetary Intervention: If participant is in Treatment Group 2, continue; otherwise skip to discharge of participant]
As the virus spreads over the continent, we have learned in other countries that it is of utmost importance to adhere to the just discussed measures suggested by the government of Bangladesh to prevent infections. To help you adhering to these rules, we offer you a payment of 1,000 Taka, to be transferred to you via mobile cash/mobile credit. Half of this payment would be transferred to you by tomorrow; the second half would be transferred after two a weeks. Would you accept this payment as a help for you to adhere to the measures suggested to prevent infections with the novel Coronavirus? *[If yes: collect information necessary for payment and take all necessary steps for payment]* Thank you very much! We will make sure that payments are successful. Although we will check everything the best we can, please contact Alamgir Kabir, Director for ECONS in Bangladesh at 01712121221 if you should not receive your payment by tomorrow. And remember, the most important measures to avoid infections with the novel Coronavirus are: Keeping a necessary distance of 3 feet to persons from outside your household which is easiest if you stay at home and avoid unnecessary trips, washing your hands often and carefully for at least 20 seconds with soap, covering your nose and mouth while coughing and sneezing, and avoid touching eyes, nose and mouth.

[Discharge of participant/End of interview]
Thank you very much. I will call you again in one and two weeks, to see how you have been doing, take care, stay safe, and goodbye!

A3.2 Reminder Script

Good day, I am *[NAME]*. I am part of a team of enumerators from Evaluation and Consulting Services (ECONS) Ltd. conducting a research study on rural households in four districts of Bangladesh and their reaction to the outbreak of the Coronavirus. We have called you last week to discuss measures to protect yourself, your family, friends and neighbors from the novel Coronavirus. Am I talking to *[Name of last week's respondent]*? *[If last week's respondent is not available, try to reach him or her later on the same day. If at second attempt, last week's respondent is still not available, ask for household head (if it was not last week's respondent) or spouse (if it was not last week's respondent) and start the script again. If none of the mentioned is available, ask for another adult member of the household, starting with the oldest, and start the script from the beginning. Indicate in the survey software with whom you ended up talking for this reminder script.]* Thanks again for participation in our study. I wanted to call again to see how you are and assist you a bit in remembering the important steps to protect you and everybody around you.

[Monetary Intervention: If participant is in Treatment Group 2, continue; otherwise skip this part and go to Intervention-Reminder]
Last week, we have offered you a payment of 1,000 Taka to help you adhering to measures to prevent the spread of the novel Coronavirus. Before we will discuss these measures again, let me quickly ask: Did you receive the first installment, that is, the first 500 Taka? *[If no: Apologize and collect information necessary for payment again; take steps to double check. If indeed there was an error, take necessary steps for payment.] [If yes:]* Great! *[Irrespective of the answer:]* Let us now come to the measures that you should adhere to in exchange for the payment offered.

[Intervention-Reminder for Treatment Group 1 and 2: Information Campaign of the Government]
You certainly remember that the Coronavirus is highly infectious and that many people get seriously ill from it; some even have to go to hospital, and some also die; in Bangladesh, more than 10,000 people have been diagnosed to be infected, and more than 100 have died. Very

likely, many more people have been infected without being diagnosed and more and more people will get infected in the upcoming weeks and months.

Probably you also still remember why it is important that really everybody does his or her best in fighting the Coronavirus: If 10 other people are infected by you, and they also spread the virus among 10 other people, already more than 100 people are infected. If they also infect 10 others, the number exceeds a thousand infected people, which will be very bad for your village. Therefore: You can make a change to keep yourself, your family, friends, neighbors and the whole village safe.

Now, do you remember how you can make a change? What are the most important measures to avoid infecting yourself and others around you, for example those in your household? We have discussed one main measure, and three other very important ones. We have sent you these measures in an SMS after our last phone call. Do you remember them? *[Correct answer is: Stay at home & keep 3 feet distance, wash hands, don't touch nose, mouth and eyes, and cough in your folded arm or in a tissue that you dispose afterwards.]*

- *[If answer is correct, i.e., all points have been mentioned:]* Very good! Keeping a distance of 3 feet to anybody who is not living in your household is the most important thing to do these days, and this is probably easiest achieved by staying at home as much as possible and leaving the house only if it is absolutely necessary (e.g., for buying groceries).
- *[If not all points have been mentioned, read out the following text:]* Good that you remember some of them.
- *[If answer not correct at all, read out the following text:]* Not quite.
- *[In both cases (answer partly or not correct) continue like this:]* Let me repeat the list: First of all, it is most important to avoid contact with persons not living in your household to avoid getting infected or infecting them. Therefore, you should stay at home as much as possible and only leave your house if it is absolutely necessary (e.g., for buying groceries). Outside your house, you certainly have heard that it is important to avoid getting closer than 3 feet to anybody who is not living in your household. Other than that, the three most important things to do are: First, you should thoroughly wash both your hands with soap for at least 20 seconds at least whenever you return home or have touched somebody who does not live in your household. Remember also to clean your fingertips, your thumb and the back of your hands. Second, refrain from touching nose, mouth and eyes. This is how the virus may enter your body, but also leave it. Third, use your folded arm or a tissue that you dispose afterwards in a clean way to cough, thereby covering your nose and mouth, and do not spit or expel wet cough or sputum.

Okay, let's talk about the symptoms: Do you still remember the three most frequent symptoms of the Coronavirus? We have also sent you this list in an SMS after our last call. *[Correct answer is: Fever, cough and breathlessness are the three most frequent symptoms of the novel Coronavirus.]*

- *[If answer is correct, i.e., all points have been mentioned:]* Exactly.
- *[If not all points have been mentioned:]* Great that you remember some of them.
- *[If answer not correct at all:]* Not quite.
- *[Irrespective of the answer, read out the following:]* Fever, cough and breathlessness are the three most frequent symptoms of the novel Coronavirus.

Now turning to measures in case someone, or even you, experiences those symptoms. Do you still remember what you should do? This we also have sent you in an SMS after our last call. Can you remember the measures you should take? *[Correct answer is: Maintain 3 feet distance from healthy persons, ii) Cover nose and mouth with a mask, or a scarf, if you don't have a mask, iii) Call on the Govt. hotline]*

- *[If answer is correct, i.e., all points have been mentioned:]* Exactly.
- *[If not all points have been mentioned:]* Great that you remember some of them.
- *[If answer not correct at all:]* Not quite.
- *[Irrespective of the answer, read out the following:]* Maintain 3 feet distance from healthy persons, ii) Cover nose and mouth with a mask, or a scarf, if you don't have a mask, iii) Call on the Govt. hotline at 333, 16263.

[Discharge of participant/End of interview]
That's it! Thank you very much. I will call you again in one week, to see how you have been doing, take care, stay safe, and goodbye!

A4 Questionnaires

A4.1 Village Questionnaires

As illustrated in Figure 1 and as described in the text, we administered a village questionnaire pre- and post-treatment with local elected leaders and key informants in the villages.

1. Has anyone in your village returned from abroad in the past two weeks? [Yes/No]
   If yes, name of the countries returned from, and number of people returned.
2. Has anyone in your village returned from abroad since February[2] this year? [Yes/No]
   If yes, name of the countries returned from, and number of people returned.
3. Approximately how many workers/people from cities and towns have moved back to your village in the past two weeks?
4. Is there any restriction on social gatherings? [Yes/No]
   If yes, what is maximum number of people allowed to gather socially (families are exceptions)?
5. Was there any social gathering/big event in the village with more than 10 people in the past two weeks? [Yes/No]
   If yes, how many people approximately attended?
6. Was there any social gathering/big event in the village with more than 10 people since February[2] this year? [Yes/No]
   If yes, how many people approximately attended?
7. Has any restriction on the number of people for the Friday prayer put? [Yes/No]
   If yes, what is maximum number allowed?
8. How many people attended the last Friday prayer?
9. How many people usually attend the Friday prayer?
10. Is there any household or member in your village currently in self-isolation/home quarantine? [Yes/No/Don't know]
    If yes, how many household/members have been put in quarantine so far?
11. Was there any household or member in your village in self-isolation/home quarantine since February[2] this year? [Yes/No/Don't know]
12. Has anyone in your village been diagnosed with COVID-19/Coronavirus? [Yes/No/Don't know]
    If yes, number of people diagnosed so far:
13. Has anyone in your village have COVID-19/Coronavirus symptoms? [Yes/No/Don't know]
    If yes, approximately how many people have those sysmptom?
14. Has anyone in your village died after having shown typical COVID-19/Coronavirus symptoms? [Yes/No]
    If yes, number of people died so far:
15. (Only asked in the third village questionnaire) Has anyone in your village died in the past two weeks? [Yes/No] If yes, number of people that have did in the past two weeks?
16. (Only asked in the third village questionnaire) How many people have died in the village since our last call in mid-May this year?
17. What kind of restrictions have been put in the village so far? [read out list of restrictions, and tick all that apply]
    Social gatherings have been banned. [Yes/No]
    Social distancing is actively promoted. [Yes/No]
    Shops, except food related, have been shut down. [Yes/No]
    Tea stalls have been shut down. [Yes/No]
18. (Only asked in the first village questionnaire) Using the fastest available transportation, how long (in minutes) does it take to reach to the following public health facility from your village?
    Union Health Complex
    Upazilla Health Complex
    District Health Complex

[2]In the second village survey (administered in May after our first village survey), "February" was replaced with "mid-April *(Pohela Baishak)*" .

A4.2 Household Questionnaires

A4.2.1 Health

In the following, *Version a)* refers to the wording used in the first household survey; the questions focus on the last two weeks prior to the interview. To cover the full time period between the second household survey and the intervention, in the second household survey, we have included *Version b)*.

- Symptoms

  Have you experienced any of the following symptoms a) in the past 2 weeks? b) since our last call mid-May? *[READ OUT OPTIONS - SELECT ALL THAT APPLY]*

  - Fever
  - Dry cough
  - Wet cough or sputum/mucus production
  - Shortness of breath or difficulty breathing
  - Sore throat
  - Headache
  - Diarrhea
  - Fatigue or malaise
  - Body aches (muscle or joint pain)
  - Runny nose or nasal congestion
  - Loss of taste or smell
  - Shivering

  Following our pre-registration, we measure Symptoms by the number of symptoms from this list of 12 possible symptoms. Based on this list, we construct a binary classification of High Risk Symptoms: Those with [a] fever, cough, or shortness of breath, or [b] any other 2 symptoms combined are classified as individuals with high risk symptoms, in line with our pre-registration.

- Deaths

  [This question should be asked at the end of the survey]
  a) Has any household member passed away since in the past two weeks after being diagnosed with Covid-19, or showing fever, cough, or shortness of breath, or any other 2 symptoms combined? [yes, no]
  b) Has any household member passed away since our last call?[??] [yes, no]

  The variable Death measures whether or not the household reported a deceased household member.

To measure Health, we first standardize the above described measures of Symptoms, High Risk Symptoms and Deaths. We then build the average of these measures (with Deaths being included only for the Health scale 3 months after the intervention; see below). Finally, for use as a dependent variable, the resulting measure is normalized such that for the control group, the measure has a mean of 0 and a standard deviation of 1.

For the construction of the Health scale, we deviate slightly from the pre-registration: Originally, we had planned to include data on diagnosis (or based on diagnosis, such as COVID-19-related deaths) and quarantine in this health scale as well. However, in praxis, testing was mostly done close to the capital region (but not in the rural areas of our field study), and the testing regime changed during our study (by shifting from free testing to costly testing in early May). Moreover, we believe that the results allow for a cleaner interpretation when excluding these outcome variables (i.e., diagnosis and quarantine) because they are arguably a function of individuals' own decisions and subsequently own effort, which might be affected by our treatment just by being more aware of possible symptoms; an effect that, e.g., Banerjee et al. (2020) report.

A4.2.2 Knowledge and Attitudes

- Knowledge

  How can you make a difference in fighting the Coronavirus?
  [READ OUT OPTIONS - SELECT ALL THAT THE RESPONDENT SAID]

  - No need: Coronavirus (COVID-19) does not transmit in areas with hot and humid climate [yes, no]
  - Keep at least 3 feet distance to people from outside your household [yes, no]
  - Checking for infection by holding breath for 10 seconds to check for discomfort [yes, no]
  - Stay at home [yes, no]
  - Eating Thankuni leaves or Garlic [yes, no]
  - Praying [yes, no]
  - Getting a vaccine or taking antibiotics[a] [yes, no]
  - Wash your hands frequently with soap [yes, no]
  - No need: Coronavirus does not affect young people [yes, no]
  - Wear a mask or scarf that covers nose and mouth or use elbow when sneezing and coughing [yes, no]
  - Roam around and go into public exposure without a mask despite having flu-like symptoms [yes, no]
  - Avoid touching your face (eyes, mouth, nose) [yes, no]

  [a]Note that we conducted the survey at a time when no vaccination was yet available or expected to be available in a rather short time frame.

  This aspect – Knowledge – is measured as the number of correct answers, following our pre-registration.

- Attitudes I

  Who do you think can make a difference in successfully dealing with the Coronavirus?
  [READ OUT OPTIONS - SELECT ALL THAT THE RESPONDENT SAID]

  - The Government [yes, no]
  - God [yes, no]
  - Everybody in your society [yes, no]
  - Peer [yes, no]

  This aspect – Attitudes I – is measured by whether or not participants answer that "Everybody in your society" can make a difference, following our pre-registration.

- Attitudes II

  To which extent can you personally make a difference in fighting the Coronavirus [5 point scale ranging from 1 (not at all) to 5 (very strongly)]

  This aspect – Attitudes II – is measured by the answer to this question on a scale from 1 to 5, following our pre-registration.

To measure Knowledge and Attitudes, following our pre-registration, we first standardize the above described measures Knowledge, Attitudes I and Attitudes II. We then build the average of these measures. Finally, for use as a dependent variable, the resulting measure is normalized such that for the control group, the measure has a mean of 0 and a standard deviation of 1.

A4.2.3 Behavior

- Adherence to Preventative Measures

  In the past 7 days, on how many days did you

  - Stay at home all day, without going out at all and without receiving visitors [Number of days, 0-7]

- Attend mosque without keeping a distance of 3 feet to others? [Number of days, 0-7]
- Attend or organize social gatherings (e.g., visit or invite family and friends, drink tea at a stall etc.) [Number of days, 0-7]
- Keep a distance of at least 3 feet (two meters) to other people not living in your household? [Number of days, 0-7]
- Wash your hands more frequently with soap than you did last year[a]? [Number of days, 0-7]
- Touch your face less frequently than you did last year[a]? [Number of days, 0-7]
- Sneeze in your elbow instead of your hand more frequently than you did last year[a]? [Number of days, 0-7]
- Work at home or without any interaction with people who do not live in your household, e.g., on the field all day? [Number of days, 0-7]

[a]In the first household survey conducted around May, instead of "last year" we asked for "last month".

Adherence to Preventative Measures is measured by aggregation of the days on which participants self-reportedly adhered to the eight measures from this list. Aggregation is performed using a weighted average (accounting for reverse items), where weights result from the loadings on the first component resulting from a PCA analysis, following our pre-registration. We use PCA weights to allow for a varying relevance of the single items in the local context.

- Compliance to Physical Distancing Measures: Last Day
  - How many times did you leave your home yesterday? [Number of times house was left]
  - Besides the people you live with, how many other people came within three feet of you yesterday? [Number of people coming closer than three feet]
  - *Version first household survey, conducted during Ramadan*
    With how many people (excluding the people you live with) did you celebrate iftar with yesterday without keeping a distance of 3 feet? [Number of people celebrating iftar]
    Version second household survey, conducted after Ramadan
    Yesterday, with how many people from outside your household did you spend more than 15 minutes inside a room? [Number of other people inside a room for more than 15 minutes]

Compliance to Physical Distancing Measures: Last Day is measured by aggregation of the numbers participants state corresponding to the three physical distancing measures from this list. Aggregation is performed by using a weighted average, where weights result from the loadings on the first component resulting from a PCA analysis, following our pre-registration.

- Compliance to Physical Distancing Measures: Last Seven Days

In the past 7 days, on how many days were people from outside your household nearer than 3 feet to you in the following situations:

- Having tea or food, e.g., dinner at work, or with family members from outside your household or fast breaking (iftar)?[a] [Number of days, 0-7]
- Standing in a line, e.g., for a bus, a boat/ferry, or in front of a building like a shop or a community building like a hospital or a toilet? [Number of days, 0-7]
- Praying? [Number of days, 0-7]
- Doing sports? [Number of days, 0-7]
- Meeting to talk? [Number of days, 0-7]
- Washing clothes? [Number of days, 0-7]
- Making music? [Number of days, 0-7]
- Meeting while washing yourself? [Number of days, 0-7]
- Meeting at the/a village tube-well [Number of days, 0-7]

- Helping others, like family or friends, with a task like building something [Number of days, 0-7]
- Using a means of transport with less than 3 feet distance? [Number of days, 0-7]

[a] As fast breaking (iftar) is only relevant during Ramadan, this example was excluded in the second household survey that was conducted after Ramadan.

Compliance to Physical Distancing Measures (Last Seven Days) is measured by aggregation of the numbers participants state corresponding to the eleven physical distancing measures from this list. Aggregation is performed by using a weighted average, where weights result from the loadings on the first component resulting from a PCA analysis.

For the measurement of the aspect Compliance to Physical Distancing Measures (Last Seven Days), we deviate from the pre-registration: Originally, we had intended to ask: "In the past 7 days, how many people at most from outside your household were nearer than 3 feet to you in the following situations". For this version, we pre-registered aggregation using the maximum number of people that came closer than 3 feet in the past 7 days in any of these situations to capture exposure. During translation and implementation of the survey, however, the wording has changed (see above for the wording of the implemented survey). With that wording, the originally intended way of aggregation would eliminate a great share of the variation. As the wording is analoguously to the other aspects of the behavior scale, we perform aggregation analoguously by taking a weighted average.

- Interaction with Neighbors: Reduction of Social Contact and Close Social Contact

To every household in our sample, we matched the closest and second-closest household from our sample in terms of geographical distance using a nearest-neighbor algorithm (see main text). The matched households were often direct neighbors. We refer to them here as Neighbor1 and Neighbor2, respectively. In the questionnaire, we used the name of the household head, and included additional information such as a landmark close by to the household's house, since names are sometimes not unique in a village.

REPEAT THIS BLOCK FOR NEIGHBOR2

- Do you know your neighbor *Neighbor1*?
- During a usual week in Ramadan, how often would you have celebrated iftar with your neighbor Neighbor1 and / or his family?[a]
  And in the past 7 days, how often did you celebrate iftar with them?
  Did you keep a distance of 3 feet?
- During a usual week, how often do you meet your neighbor *Neighbor1* and / or his family in the mosque or generally to pray?
  And in the past 7 days, how often did you meet them in the mosque or to pray?
  Did you keep a distance of 3 feet?
- During a usual week, how often do you meet work related or to help your neighbor *Neighbor1* and / or his family, e.g. to build something?
  And in the past 7 days, how often did you meet them for work or to help?
  Did you keep a distance of 3 feet?
- During a usual week, how often do you see your neighbor *Neighbor1* and / or his family for joint activities, such as discussing local issues, having tea or smoke, watching TV, or sharing food?
  And in the past 7 days, how often did you see them for joint activities?
  Did you keep a distance of 3 feet?
- During a usual week, how often do you meet your neighbor *Neighbor1* and / or his family and stay with them for some time, e.g. at a common meeting point in the village like the well or in front of your house?
  And in the past 7 days, how often did you meet them and stayed with them for a while?
  Did you keep a distance of 3 feet?
- During a usual week, how often do other members in your household regularly meet without you, e.g. for a joint walk to school, or to wash clothes? Considering all these activities and all members in your household, how much interaction is there in a normal week between your household and the household of *Neighbor1*?

And in the past 7 days, how much interaction happened between other members of your households in these activities?
Did they keep a distance of 3 feet?

[a]As the second household survey was conducted after Ramadan, this question was only included in the first household survey.

To measure Reduction of Social Contact with Neighbors, we aggregate the self-reported (relative) reduction of social contact that participants state corresponding to six typical situations of social contact from the list above, but also by aggregating the corresponding reductions neighbors state (on average) about the respective household. To measure Avoidance of Close Social Contact with Neighbors, we aggregate whether or not a distance of three feet was maintained in the six typical situations of social contact from the list above in case of meetings; we use the information as stated by participants, but also as stated by their corresponding neighbors. For both measures, aggregation over the situations is performed by using a weighted average, where weights result from the loadings on the first component resulting from a PCA analysis, following our pre-registration. To include information about interaction with one or more neighbor, we take the average across neighbors for the self-reported measure and the measure as reported by neighbors.

To measure Behavior, following our pre-registration, we first standardize the above described measures of Adherence to Preventative Measures, Compliance to Physical Distancing Measures (Last Day), Compliance to Physical Distancing Measures (Last Seven Days), Reduction of Social Contact with Neighbors - Self-Reported, Avoidance of Close Social Contact with Neighbors - Self-Reported, Reduction of Social Contact with Neighbors - Reported by Neighbors and Avoidance of Close Social Contact with Neighbors - Reported by Neighbors. We then calculate the average of these measures. Finally, for use as a dependent variable, the resulting measure is normalized such that for the control group, the measure has a mean of 0 and a standard deviation of 1.