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Medium-Term Impacts of Integrated Social Safety Nets

Cash Transfers, Information Meetings, and Home Visits for Child Development

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Abstract

Cash transfers are a cornerstone of social protection. This paper evaluates an integrated program in Burkina Faso that combines cash transfers with parenting interventions delivered through group meetings or home visits. In a randomized experiment across 225 villages, households received cash alone; cash plus information on child health and development; or cash, information, and home visits reinforcing the information. Fifteen months after treatment ended, households receiving all three components had fewer pregnancies, more medically assisted births, improved health behaviors, and better educational outcomes. Adding home visits is essential for enhancing child development. Cash alone or with information produces no lasting effects.

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Medium-Term Impacts of Integrated Social Safety Nets: Cash Transfers, Information Meetings, and Home Visits for Child Development*

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1. Introduction

For decades, government social safety nets have incorporated cash transfers to poor households to help children reach their full potential (see Fiszbein and Schady, 2009 and Bouguen, Huang, Kremer, and Miguel, 2019 for reviews of this literature). Numerous randomized controlled trials confirm that cash transfers effectively reduce poverty and improve children's education and health (Baird et al., 2014; Bastagli et al., 2019; Manley et al., 2022).[1] Yet, over 250 million children under age five in developing countries do not reach their development potential and are less likely than their peers to become healthy, productive, and socio-economically successful adults (Grantham-McGregor et al., 2007; Lu, Black, and Richter, 2016; Britto et al., 2017).[2] To address this gap, governments have sought complementary approaches to help children early in life (Draper et al., 2024; Nores et al., 2024). Given parents' critical role in the human capital production function of their children, there is a growing emphasis on parent-focused early childhood interventions (Doyle, 2020). However, we have limited evidence for whether combining components—such as parenting interventions and cash transfers—into an integrated social safety net is more effective than providing separate interventions, and which specific components drive that effectiveness.

This paper presents medium-term results from a randomized controlled trial of a government-run integrated social safety net intervention in Burkina Faso focusing on child development. Specifically, we seek to understand whether adding parenting-focused

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[1] In addition to relaxing budget constraints as an avenue for helping children, cash transfers can also improve parents' psychological well-being and reduce stress (Haushofer and Shapiro, 2016).

[2] A growing body of evidence from developed and developing countries shows that cognitive, non-cognitive, and physical health developments of young children are critical factors for health and socioeconomic well-being in adulthood (Heckman, 2006; Almond and Currie, 2011; Almond, Currie, Duque, 2018). These returns are both to individuals—who benefit from increased schooling, labor force participation, wages, and material and socio-emotional well-being—and to societies—that benefit from higher productivity leading to economic growth, lower inequality, and a more participatory citizenry (Cunha and Heckman, 2007; Heckman and Masterov, 2007; Walker et al., 2007; Alderman, 2011; Walker et al., 2011; Gertler et al., 2014).

interventions on top of a cash transfer program is effective and whether the delivery mode of the parenting intervention matters.[3, 4] The key components of our intervention include cash transfers, information meetings with small groups of mothers, and home visits. In this paper, we determine whether combining these components in an integrated social safety net improves child development and whether these beneficial effects last once the intervention ends.

Burkina Faso is a low-income environment with relatively weak administrative capacity but where rigorous impact evaluations of social protection programs, such as cash transfers or food transfers, have been conducted and shown to have impacts (Akresh, de Walque, and Kazianga, 2013, 2016b; Kazianga, de Walque, and Alderman, 2014). It is also a setting where child health and education outcomes are particularly poor. The UN Human Development Index ranks Burkina Faso 185 out of 193 countries (United Nations Development Program, 2024).

We conducted a randomized controlled trial in 225 rural villages where villages were randomly assigned to a control group or one of the following treatments: unconditional cash transfers only; unconditional cash transfers plus government-run information meetings focused

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[3] Evidence from interventions in Colombia combining conditional cash transfers and home visits (Attanasio et al., 2014), Bangladesh combining cash transfers, food transfers, and group-based information meetings (Ahmed, Hoddinott, and Roy, 2025), and programs combining cash transfers and group-based information meetings in Mexico (Fernald et al., 2017), Nepal (Levere, Acharya, and Bharadwaj, 2024), and Myanmar (Field and Maffioli, 2025) provide promising short-term evidence that combining parenting interventions with cash transfers can improve child development. An ongoing project in Tanzania combining unconditional cash transfers, group-based information meetings, and home visits will also yield further evidence (Almas et al., 2023). However, follow-up evaluations on the Colombia and Nepal interventions two years after the treatment ended showed that medium-term impacts were not sustained (Andrew et al., 2018; Levere, Acharya, and Bharadwaj, 2024).

[4] Parent-focused interventions try to improve child-parent interactions, parent knowledge, behaviors, and beliefs, and subsequently improve a child's outcomes (Britto et al., 2017; Arriagada et al., 2018). In developing countries, parent interventions often focus on child nutrition and health, stimulation, and hygiene. These interventions are typically delivered as community-based group meetings or during home visits to the parents. Evidence from Rwanda (Justino et al., 2023) and Chile (Carneiro et al., 2024) find group-based parenting programs lead to significant improvements in child development. Evidence from China (Sylvia et al., 2021) finds home visits increase children's cognitive skills, while evidence from Brazil shows no impacts on child development or health (Lopez Boo et al, forthcoming). However, there is little experimental evidence from the same setting confirming which delivery mechanism is more effective. One exception is a randomized control trial in India that compared the effectiveness of an early childhood intervention administered by a local non-governmental organization delivered through home visits or group sessions (Grantham-McGregor et al., 2020). They find similar impacts for home visits and group sessions on child cognition and language but no effect on motor skills.

on child health and psycho-social development; or unconditional cash transfers, information, and home visits reinforcing the information meetings. This framework allows us to estimate the value-added of including information meetings with a cash transfer program, the value-added of including home visits in addition to information meetings and cash, and whether parental interventions provide any additional benefit for child outcomes.

Households in treatment arms receive from the government a quarterly cash transfer of approximately $62 USD, which is around 10.7% of household food consumption and non-food expenditures. Monthly village-level information meetings for groups of 25-30 mothers were run by government-trained social workers, and these social workers did semi-monthly home visits to monitor progress and follow-up on the children's physical and cognitive development. The cash intervention lasted for 30 months, while the information and home visits lasted for 18 months.[5]

To measure the intervention's impact, we conducted a baseline survey prior to the treatment rollout and were scheduled to conduct an endline survey after the intervention ended. However, insecurity in Burkina Faso forced us to delay the endline survey 15 months, so all results should be interpreted as medium-term impacts after the intervention has ended.

Households in villages receiving the full integrated social safety net intervention (cash, information, and home visits) show lasting improvements across a range of outcomes, including fertility, health, education, and early childhood development. Mothers receiving the full intervention have fewer pregnancies and are older at each birth. Their most recent birth is more likely to have been assisted by a medical professional. They adopt healthier behaviors, including providing improved nutrition for young children, increased use for children of mosquito bed

[5] Cash transfers started immediately once the baseline survey was completed. Information meetings and home visits were delayed 12 months while the government hired and trained project facilitators to implement those components.

nets, more prenatal visits during the most recent pregnancy, and a higher likelihood of washing their hands after using the toilet and before meals. Child morbidity also declines. None of the fertility or health outcomes show lasting impacts for households that receive only cash, and only a limited subset of health behaviors improves when households receive cash and information.[6]

Older children in households receiving the full intervention have improved educational outcomes, including a higher likelihood of being enrolled in school, completing more years of school, ever attending school, and being educationally on track for their age. Similar medium-term effects are observed for households that receive only cash transfers.

We administered two early childhood development tests: the Strengths and Difficulties Questionnaire (SDQ) and the Denver Prescreening Developmental Questionnaire. Lasting improvements were seen on the SDQ prosocial scale—reflecting positive social behaviors like helpfulness, consideration, and sharing—when families received cash, information, and home visits. No effects were found on the SDQ difficulties scales (emotional, conduct, hyperactivity, and peer problems) or the Denver test. Cash and information alone do not improve these early childhood development outcomes, highlighting the importance of home visits in the intervention.

Given the effectiveness of the integrated social safety net of cash transfers, information meetings, and home visits in leading to lasting impacts on child development outcomes, we also conduct a cost effectiveness analysis showing that adding home visits to the intervention does not cost that much but yields substantial value-added above providing only cash and information.

This paper makes three key contributions to the literature. First, this is the first paper to disentangle the roles of cash transfers, information, and home visits in improving child

[6] There are no lasting impacts on the child's anthropometrics index, but we do observe improvements in arm circumference-for-age Z-scores in villages that received only cash or cash plus information plus home visits.

development in a combined intervention. While existing evidence suggests that each component—cash, information, and home visits—individually can enhance child development, it remains unclear where the binding constraints lie and whether specific combinations of these treatments yield larger impacts.[7] As home visits become a popular strategy to support child development, understanding their contribution—and whether they are essential or if cash or information meetings achieve similar outcomes—is crucial for designing effective interventions.

Second, this paper contributes to the literature evaluating government-run programs operated at scale and integrating early childhood development programs into existing infrastructure. The evidence on short and medium-term impacts of at-scale parenting programs is scarce. Small-scale programs supervised by researchers or run by non-governmental organizations often yield different impacts than those run by the government.[8] Evidence from high-income countries includes Bitler et al. (2014) for Head Start and Hjort et al. (2017) for a Danish home visit program. Yousafzai et al. (2014) find improvements in early childhood outcomes from a parenting intervention integrated in a community-based health program in Pakistan. Araujo et al. (2021) evaluate a scaled-up government-run home visit program in Peru and find significant impacts on child development. Research in Colombia provides evidence on the effectiveness of a scalable early childhood stimulation intervention integrated within an

[7] Carneiro et al. (2021) and Premand and Barry (2022) are the two most closely related papers to ours. Carneiro et al. (2021) evaluate a combined intervention in Nigeria that includes cash, information sessions, and home visits aimed at improving child development, allowing them to estimate the joint effect of all three components. Since our project includes treated households that only receive cash transfers and treated households that only receive cash transfers and group-based information meetings, we can determine how much of the impacts we observe are due to cash, how much are due to information, and how much are due to home visits. Premand and Barry (2022) evaluate a similar cash, information, and home visit intervention focused on child development in Niger. Their project can compare two treatment arms, one that receives only cash transfers and one that receives a combination of cash, information, and home visits. However, their design does not allow for separate identification of the effects of group-based information meetings versus home visits. Additionally, we can measure the medium-term impacts of our treatments, allowing us to establish whether these effects last after the intervention ends.

[8] See Bold et al. (2018) for evidence from Kenya showing teachers hired by an international non-governmental organization improved student test scores, while teachers hired by the government showed no impact.

existing government-run parenting program (Attanasio et al., 2022). However, Blimpo et al. (2024) find only limited effects in The Gambia of a government-run home visit and information program. Understanding how government-run programs operate at scale improves the policy relevance of the findings and highlights the implementation challenges.

Third, insecurity in parts of Burkina Faso delayed the endline survey by approximately 15 months after the intervention ended. There are few randomized evaluations of home visit programs that examine impacts beyond the program's end.[9] Seminal work evaluating a home visit intervention in Jamaica showed short-term improvements in child development (Grantham-McGregor et al., 1991) and large impacts on adult outcomes decades later (Gertler et al., 2014). Yet, most long-term evaluations of home visit interventions find that once treatment stops, impacts are reduced (Yousafzai et al., 2016) or completely fade out (Andrew et al., 2018). Since previous literature finds child development impacts fade out, it is promising that we observe positive impacts of the full treatment intervention 15 months after the program ended.

The remainder of the paper is organized as follows. Section 2 describes the context of our experiment and the design of the cash transfer, information, and home visit program. In Section 3, we discuss our empirical identification strategy. Section 4 presents the main results for child welfare outcomes. Section 5 discusses the intervention's cost effectiveness. Section 6 concludes.

[9] Even for other types of interventions not including home visits, the long-term evidence of impacts from randomized evaluations is scarce (Bouguen et al., 2019). Exceptions include a Guatemalan nutrition experiment with lasting gains in education and cognition after 35 years (Maluccio et al., 2009), and deworming in Kenya that improved education and labor market outcomes a decade later (Baird et al., 2016). Conditional cash transfers also show persistent effects: in Nicaragua, labor market improvements ten years later (Barham et al., 2024), in Colombia higher tertiary enrollment 8-12 years later (Barrera-Osorio et al., 2019), and in Honduras, more schooling and migration after five years (Millan et al., 2020). In Indonesia, CCTs continued to affect health and education six years on (Cahyadi et al., 2020). By contrast, long-run impacts of unconditional cash transfers and entrepreneurial grants often fade after nine years (Blattman et al., 2020), though a multifaceted Bangladeshi program sustained poverty reductions after seven years (Bandiera et al., 2017). Historical US evidence also links cash transfers to higher longevity, education, and income (Aizer et al., 2016).

2. Context and Experimental Design

2.1 Context

Burkina Faso offers an important setting for exploring the effects of cash transfers and early childhood development programs on children's education, health outcomes, and fertility. Child education and health outcomes in Burkina Faso are among the weakest in Africa. In 2021, the net attendance ratio for primary school in rural Burkina Faso was 60.9, and the gross attendance ratio was 82.1 (INSD, 2023).[10, 11] Health outcomes among children in Burkina Faso are similarly poor. In 2020, 35 percent of children in Burkina Faso under age five were stunted and 18 percent were underweight (Ministère de la Santé, 2020).[12] In 2021, the nationwide average height-for-age Z-score was -1.1, and the average weight-for-age Z-score was also -1.1, compared to a global reference population of children in the same age range (INSD, 2023). In 2021, only 65 percent of children had received all recommended vaccinations for their age group (Cooper et al., 2023). The fertility rate in Burkina Faso is high, an average of five children per woman (UN Children's Fund, 2018). While 94% of women in rural areas have their birth assisted by a medical professional, very few women make at least four antenatal care visits, only 31% in rural areas overall and 24% for the poorest households (UN Children's Fund, 2018).

Given the status of education, health, and fertility in Burkina Faso, there is scope for interventions to improve these outcomes. Regarding education, in principle, children can attend

[10] The primary school net attendance ratio is the percentage of children attending primary school who are of the official school age. The primary school gross attendance ratio is the number of primary school students, irrespective of age, as a percentage of the official primary school age population. If there is a significant number of underage or overage students in primary school, the gross attendance ratio will be higher than the net attendance ratio.
[11] Formal education in Burkina Faso consists of six years of primary school, four years of lower secondary school, three years of upper secondary school, and then tertiary education. A national law officially makes school mandatory until age 16. However, this law is not enforced because the government lacks resources to provide education to all school-aged children.
[12] Stunting is defined as children being below minus two standard deviations from the median height-for-age of a reference population. Underweight is defined as children being below minus two standard deviations the median weight-for-age of a reference population.

public primary school free of charge, but parents still must pay for various required school fees and supplies. These expenses must be paid in cash, with most being paid at the start of the academic year, thus presenting a significant constraint for cash-strapped households. Cash transfers could reduce this constraint in addition to compensating for the opportunity cost of child time (Akresh et al., 2013 and 2016a). Regarding health, the fact that the number of prenatal visits is low, and many children are stunted or underweight suggests that lack of information or high opportunity costs of mothers' time may play a role in poor health outcomes. Lastly, lack of information and poverty may play a role in leading to high fertility rates.

We implement the randomized evaluation in 225 villages in the Centre-Est and Est regions in Burkina Faso, located 250-350 kilometers from the capital, Ouagadougou. These regions were chosen by the government due to the overall prevalence of food insecurity, chronic poverty, and malnutrition.[13] Villages in these two regions were randomly selected from a sampling frame of all villages in the region that had between 90 and 400 households.[14] These 225 villages have an average at baseline of just under 200 households per village.[15] Households in these regions are predominantly subsistence farmers growing millet, sorghum, and peanuts.

2.2 Experimental Design: Burkina Faso Social Safety Net Pilot Project Overview (SSNPP)

The 225 selected villages in the Est and Centre-Est regions were randomly allocated into five groups, stratified at the commune level. These groups are shown in Figure 1 and consist of: (1) households receiving unconditional cash transfers; (2) households receiving unconditional cash

[13] Note that the government also selected the North region to implement the intervention as it satisfied these criteria, but we did not evaluate it there because the cash transfers in that region started before we could conduct a baseline.
[14] We restrict the village sampling frame to villages that had more than 90 households to ensure there would be at least 21 beneficiary households to survey in each village and to villages that had fewer than 400 households to avoid situations where households are spread over areas that are too large to survey.
[15] The Centre-Est region's population is approximately 1.1 million people. 53% are female. 48% are under age 15, 47% are ages 15-64, and 4% are over 65. In the Est region, the population is approximately 1.2 million individuals. 51% are female. 51% are under age 15, 46% are ages 15-64, and 3% are over 65 (Burkina Faso INSD, 2016).

transfers and information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers); (3) households receiving unconditional cash transfers, information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers), and home visits twice a month focused on nutrition and health; (4) households receiving unconditional cash transfers, information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers), and home visits twice a month focused on both health issues and improving parenting and early childhood development; and (5) a control group.[16] Randomization took place at the village level, resulting in 45 villages in each arm at the baseline, and only households with children age five and under or women who were pregnant at the time of the baseline were eligible to receive the intervention.

In each village, we conduct an initial census to enumerate all households eligible for the program.[17] We use a Proxy Means Test (PMT) targeting method to determine eligibility. A questionnaire was administered to all households during the census asking about household size and composition, assets, the household head's education level, and if the household has livestock, a tin roof, or cement walls. We use the data to calculate a PMT score for each household, and around 40% of the poorest households in each village were eligible for the program.[18] In each village, 21 households were randomly selected from the eligible population.

[16] Note that the government also provided home visits to extremely vulnerable households who were in treatment arm 2, which received cash and information meetings.
[17] In treatment villages, the census was conducted by the government implementing agency with support from Innovations for Poverty Action (IPA). In control villages, IPA conducted the same census to determine households that would have been eligible for the program.
[18] In treatment villages, the PMT method was complemented by a community validation method. A village meeting was organized, and the assembly could amend the list of eligible households by deciding that a household ranked as poor under the PMT was not poor enough to be in the program or that a household ranked as not poor under the PMT was poor enough to be in the program. This method ensures acceptability of the selection among treatment villagers.

In the treatment villages, all eligible households receive quarterly unconditional cash transfers: 30,000 FCFA (approximately $52 USD) for households with up to four children, and 40,000 FCFA (approximately $70 USD) for households with five children or more.[19] The quarterly village information meetings in treatment arms 2, 3, and 4 could be attended by any household in the village, while the additional monthly meetings with groups of 25-30 mothers were only for eligible households based on the PMT cutoff. Home visits were only provided to households that were surveyed as part of our study.[20] A list of the topics covered in the information sessions and home visits is in Appendix Table A1. The health topics broadly cover food and nutrition for the younger children, diet during pregnancy, prevention of malaria and anemia, management of child illnesses, personal hygiene, and family planning. The child development topics include giving affection to children, protecting them from dangerous objects, providing a recreational environment for them, and teaching them to share with others.

Regarding the timeline of the intervention (Figure 2), we conducted the baseline survey in spring 2018, cash transfers started in June 2018, and information and home visits began in June 2019. All the interventions ended in December 2020. The COVID-19 pandemic, which occurred during the intervention, only impacted the implementation of information sessions and home visits for a brief time. We conducted the endline survey in early 2022, gathering information on the status of households at least 15 months after the end of the intervention.

[19] The average exchange rate during the intervention was $1 USD = 575 FCFA. Cash transfers were originally delivered in person. However, in late 2018, the transfers were switched over to electronic delivery, so households were provided a cell phone they could use to receive the cash. In Section 4.8, we exploit the difference in transfer amounts to explore the heterogeneous impacts between small and large households.

[20] The individuals conducting the information meetings and home visits are formally trained social workers, most of whom were women. Their recruitment was at the regional level, mostly from the regional capitals. These individuals did not come from the local treatment villages. The social workers had at least three to five years of vocational training education and had completed the prerequisites in the fields of Health and Early Childhood Development as well as possessed understanding of the different techniques of community mobilization and group facilitation.

Additionally, between baseline and endline data collection, the Burkina Faso security situation deteriorated, particularly in the Est region. Insecurity affected the implementation of the endline survey, as many villages included in the impact evaluation were unsafe for surveyors to access. As a result, out of 225 villages at baseline, we were able to return to 74 villages at endline, with 51 villages in the Centre-Est and 23 villages in the Est region.[21]

Table 1 (Panel A) shows baseline statistics for the 74 villages in the endline sample. On average, there are 198 households in each village. Ninety-one percent of the villages have a primary school; 20 percent have a secondary school. Fifteen percent of the villages have a health clinic; the average distance to the nearest one is five kilometers. The nearest paved road is 22 kilometers. Roads are impassable due to weather for 3.5 months out of the year. Panel B shows baseline statistics for the 1500 households in the 74 villages in our endline sample. Eighty percent of the household heads are male with an average age of 46. Only 9 percent of household heads ever attended school. There are 9.25 members in each household, including five children under age 15. Forty-six percent of the households are in monogamous unions, with a similar percentage in polygamous ones.

3. Empirical Strategy

To understand how cash, information, and home visits impact children's development, we evaluate the impacts of the interventions on a set of household-level and child-level outcomes. This section explains our identification strategy, describes the data, shows baseline balance, and provides details on our approach for dealing with the large number of outcomes.

[21] Because of the high levels of village attrition due to insecurity, we perform several tests for differential attrition across treatment arms and find no evidence that attrition rates varied significantly by treatment status. See Section 4.9 for additional details.

3.1 Empirical Identification Strategy

The key question we address is whether cash, information, and home visits improve children's human capital and development in the recipient households. The randomized experimental design provides strong causal identification that allows us to attribute differences in outcomes between treatment and control groups to the impact of the program. To evaluate the intervention, we use endline survey data and compare across treatment and control arms, relying on our randomization to produce a causal estimate. We have a total of 74 villages and 1,500 households in our endline sample. We estimate the following ANCOVA regression:

$$Y_{ihvc,1} = \alpha + \beta_0 Y_{ihvc,0} + \beta_1 T1_{vc} + \beta_2 T2_{vc} + \beta_3 T3T4_{vc} + \gamma_c + \delta \boldsymbol{X}_{ihvc} + \epsilon_{ihvc} \qquad (1)$$

where $Y_{ihvc,1}$ is an outcome for child i in household h in village v in commune c in the endline survey, $T1_{vc}$ is an indicator for village v in commune c being randomized into receiving cash, $T2_{vc}$ is an indicator for receiving cash and information, $T3T4_{vc}$ is an indicator for receiving cash, information, and home visits, $Y_{ihvc,0}$ is the baseline value of the outcome variable, γ_c is a strata fixed effect (at the commune level), $\boldsymbol{X}_{ihvc}$ is a vector of household, village, and individual-level controls, including household head age, child age and gender, an indicator for whether the baseline value of the outcome variable is missing, and other LASSO-selected controls (specific to each regression and described in more detail below).[22] Robust standard errors are used in all regressions and are clustered at the unit of randomization, which is the village.[23] In this

[22] Because many of the survey questions are only asked for children within a limited age range, when controlling for the baseline values of the outcome variables in our main specification, the baseline value is either (1) the value of the outcome if the child has a value at baseline or (2) zero if the child's baseline value is missing. We also include an indicator for whether the child has a baseline value included in the regression (McKenzie, 2015). Including only children that have a baseline value would require us to drop a large fraction of the children in our sample, since many of the children surveyed at endline were not yet born at the time of the baseline survey, and many of the children in the baseline survey had aged out of the respective survey sections by the time of the endline survey.

[23] Note that in our final sample of 74 villages, we have around 15 clusters per treatment arm. In all the regressions, we restrict the sample to households that are not missing any baseline covariates used in the LASSO, a total of 1500 households at endline.

specification, treatment arms (3) and (4) are pooled to provide additional power and because we cannot verify whether the information provided in the two types of home visits was substantially different as originally designed.[24] For robustness, we also estimate an endline-only specification where we do not control for any of the baseline values of the outcomes.

Some regressions are run at the individual level (for child-specific outcomes) and others at the household level (for outcomes that affect all household members). For individual-level regressions, we include child age and gender as control variables. For the household-level regressions of child outcomes, we include average child age and gender ratio in the household as control variables. For all regressions, we control for the age of the household head. We use a LASSO procedure to select additional covariates from 81 potential variables at the village and household level, which allows us to control for potential differences in baseline values of these covariates across treatment arms (Belloni, Chernozhukov and Hansen, 2014). Appendix Table A2 lists these variables. The LASSO procedure selects the covariates that are important for improving precision in the regression for each outcome, and these optimal controls can be different in each regression. For robustness, we also estimate the regressions without controls.

To understand how the impacts of information and home visits add to the effects of cash on the outcomes, we also analyze the value-added effects of the stacked interventions. This allows us to see the additional effect of information on top of receiving cash and the additional effect of home visits on top of receiving both information and cash.[25] This requires the assumption that the effects of the various components of the intervention are additive. The regression equation for this specification is as follows:

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[24] Results using the main indexes in each table (discussed in Section 3.3) are consistent when impacts are estimated on treatment arms (3) and (4) separately.

[25] This value-added specification is equivalent to testing for the differences between the coefficient estimates in Equation 1, but we use the regression for simplicity of interpretation.

$$Y_{ihvc,1} = \alpha + \beta_0 Y_{ihvc,0} + \beta_1 Cash_{vc} + \beta_2 Info_{vc} + \beta_3 HomeVisits_{vc} + \gamma_c + \delta \boldsymbol{X}_{ihvc} + \epsilon_{ihvc} \quad (2)$$

where $Cash_{vc}$ is an indicator for receiving cash (this occurs in all four treatment arms), $Info_{vc}$ is an indicator for receiving information (in treatment arms 2, 3, and 4), $HomeVisits_{vc}$ is an indicator for receiving home visits (in treatment arms 3 and 4), and the other variables are as defined in Equation 1. Robust standard errors are clustered at the village level. Note that, because all treatment arms receive cash, we cannot identify the effects of information alone or home visits alone. Thus, β_2 can be interpreted as the additional effect of receiving information, conditional on receiving cash, and β_3 can be interpreted as the additional effect of home visits, conditional on receiving both cash and information.

3.2. Sample and Baseline Balance

The baseline and endline surveys both measure household demographics and characteristics, child outcomes related to early childhood development and health, parenting behaviors, and fertility-related outcomes. For all mothers with a child under five years old at the endline, we have information in the endline survey on their birth histories and total number of pregnancies. These women are asked their age at the time of each childbirth (up to ten births) as well as more detailed information about their most recent birth, including whether a medical professional assisted delivery. Mothers are also asked about prenatal and child health outcomes. For each recent pregnancy, mothers are asked about the number of prenatal visits completed, whether they took vitamin A and iron, and whether the child received any doses of vitamin A or iron in the past 12 months. Additionally, mothers are asked which vaccines their children have received, allowing us to determine whether each child is fully vaccinated, and whether the child has been ill in the past month. We also know whether the child sleeps under a mosquito bednet and have information on dietary diversity. Finally, mothers are asked about their handwashing habits, specifically whether they wash their hands after using the toilet and before preparing meals.

For each child below age five, we have anthropometric measures for height, arm circumference, and weight. We use these measures to calculate Z-scores for each of the three outcomes, where the Z-score is defined as the difference between the child's anthropometric measure and the mean of the measure for the same-aged international reference population divided by the reference population's standard deviation (World Health Organization, 1995).

For older children ages 6-15, we know whether they are enrolled in school, the number of years of schooling they have completed, and what grade they are in. We calculate grade progression as actual grade divided by expected grade, where expected grade is based on the child's age at the time of the survey and on the assumption that they start school at age seven.

We measure early childhood development using the Denver Prescreening Developmental Questionnaire for children ages 0 to 72 months and the Strengths and Difficulties Questionnaire for children ages 24 to 72 months.[26] The Denver questionnaire was developed to assist health providers in detecting developmental problems in infants and young children. It has been used in more than 54 countries and is designed for children from birth to age six (Frankenburg et al., 1992). The Denver questionnaire has subsections in Language, Fine Motor, Gross Motor, and Personal Social and consists of a series of items related to childhood development. The child's score is the number of items correctly completed divided by the number of items that 90 percent of children of a given age group are expected to complete (Frankenburg et al., 1967). This percentage score allows for comparisons across age groups.

[26] Note that these ECD modules were pretested by IPA to ensure they are culturally appropriate and correctly translated for the local environment.

The Strengths and Difficulties Questionnaire (SDQ) comprises 25 items across five different scales (emotional problems, conduct problems, hyperactivity problems, peer problems, and prosocial). The 25 items include statements related to the child's strengths and difficulties, and parents answer whether each statement is true for their child. For four of the five scales, a lower score is more desirable. The exception is the prosocial section, where a higher score is more desirable. The SDQ is widely used and recognized as a measure of child mental health (Goodman, 2006; Goodman & Goodman, 2009). For SDQ scores, we calculate a total difficulties score that aggregates the emotional, conduct, hyperactivity, and peer problems scales. We calculate a separate score for the prosocial scale.[27]

Since treatment assignment was randomized, we expect villages in the control arm and each of the treatment arms to be similar at baseline. In Table 2, we use baseline data to confirm that village, household, and child characteristics are balanced across treatment and control groups for all 225 villages before the intervention starts.[28] The variable means for each of the treatment groups and the control group measured at baseline are shown separately in columns 1, 2, 4, and 6, with p-values for tests of equality between the control group and each treatment group in columns 3, 5, and 7. Column 8 shows the p-value of a joint F-test of equality across all four groups, in most cases indicating that we cannot reject equality across all arms. In the joint

[27] We follow the official SDQ scoring guide that is based on children in the UK to generate an indicator for whether the child was in the "average" range for both the total difficulties and prosocial scores (Goodman & *Youthinmind*, 2015). As an additional set of outcomes, we also create Z-scores for the total difficulties and prosocial scores, using the baseline mean and standard deviations for children of the same age and gender in our sample to standardize. For the total difficulties score, we create an indicator for Z-scores below -0.5, indicating low total difficulties. For the prosocial score, we create an indicator for Z-scores above 0.5, indicating high prosocial scores. Both of these indicate children who have better mental health outcomes than their local peers.

[28] For baseline balance across the 74 villages used in our analysis, see Appendix Table A3. The patterns are similar across the two tables.

test across all four groups, out of 55 tests, we find only two significant outcomes (age of the household head and household size), showing that the treatment arms are balanced at baseline.[29]

3.3. Strategies to Address the Large Number of Outcomes and Small Number of Clusters

To address the large number of outcomes and avoid overemphasizing any single significant result, we create indexes for each family of outcomes following Kling, Liebman, and Katz (2007). To construct the indexes, we define each outcome so that higher values correspond with better outcomes, standardize each outcome into a Z-score by subtracting the mean and dividing by the standard deviation in the baseline period, and average all the Z-scores. We then estimate the effect of each treatment arm on these standardized outcome indexes.

In settings like ours with small samples and few clusters, cluster-robust standard errors might not be reliable, so we also use the randomization inference-based tests proposed by Young (2019) to address these potential issues. In the main regression tables, in addition to showing the coefficients and clustered standard errors, we report randomization inference p-values that are based on exact p-values for the sharp null hypothesis of no treatment effect for each treatment arm. Differences between exact randomization p-values for individual significance tests and the estimates from the clustered standard errors are small, and the same conclusions (and levels of significance) are obtained.

4. Empirical Results

4.1. Program Impacts

This section discusses the impacts of cash, information, and home visits on fertility, health behaviors, child anthropometrics, child education, and early childhood development. Figure 3

[29] To account for these differences, we include age of the household head in all regressions and include household size in the possible LASSO-selected variables.

presents the treatment impacts on six different indexes that summarize these outcomes. Overall, we see large positive impacts 15 months after treatment ended of the full integrated treatment of cash, information, and home visits on many of these indexes. A limited subset of outcomes shows lasting impacts from cash only, but there are no statistically significant impacts in the treatment arm with only cash and information meetings. In the subsequent tables, we report the detailed results of the impact evaluation, which includes all the sub-components of these indexes.[30] Each table shows the results separately for each treatment arm, following Equation 1. The coefficient on the variable "Cash Arm" can be interpreted as the impact of the cash only arm, the coefficient on "Cash + Info Arm" is the impact of the cash and information arm, and the coefficient on "Cash + Info + Home Visits Arm" is the impact of the cash, information, and home visits arms. In each table, randomization inference p-values are shown in brackets.[31]

4.2. Impacts on Fertility and Pregnancy

Table 3 presents results of the effects of the intervention at the household level on pregnancy, birth spacing, and whether a medical professional assisted the last birth. There are no effects of the cash or cash plus information treatments. However, the full integrated treatment of cash, information, and home visits reduces the number of times a mother has been pregnant by 6.3 percent of the control group mean. This aligns with the columns 2-6 results, showing later ages at each pregnancy, ranging from a statistically insignificant increase of 0.30 years for the first

[30] For household-level outcomes, we take the individual-level outcomes for the relevant demographic group and collapse them to the household level by taking the average for all individuals with non-missing outcome values.
[31] Results of regressions estimating Equation 2 with the value-added specification are included in the appendix. In those regressions, the coefficient on the variable "Cash" can be interpreted as the impact of cash transfers, the coefficient on the variable "+ Info" can be interpreted as the additional effect of information (conditional on receiving cash), and the coefficient on the variable "+ Home Visits" can be interpreted as the additional effect of home visits (conditional on receiving cash and information). The p-value for "Cash + Info + HV" indicates whether the combined total effect of all three components is statistically different from zero.

pregnancy to a statistically significant increase of 1.04 years for the fifth pregnancy.[32] The full intervention reduces fertility, but cash and information alone do not yield these effects, suggesting home visits are a crucial component of the integrated social safety net package.

Additionally, women in households in the cash, information, and home visits arm are 3.6 percentage points more likely to have had their last birth assisted by a medical professional (column 7). Again, this improvement is only achieved in the treatment arm that includes home visits and not the treatment arms that provide cash or information.

In column (8), the effect on the Kling *et al.* (2007) index across pregnancy outcomes is also significant and positive for households receiving the full integrated treatment of cash, information, and home visits. This indicates improved overall outcomes related to pregnancy, birth spacing, and assisted deliveries, with an effect that lasted 15 months after the intervention ended. There are no effects of the cash only or cash plus information arms. Randomization inference p-values in square brackets below the coefficients for the fully integrated treatment provide the same levels of significance as the clustered p-values for all the outcomes in the pregnancy table. Additionally, for most outcomes and for the pregnancy index, we can reject that the effect sizes in the cash only treatment arm and the cash plus information treatment arm are the same as those for households in the cash plus information plus home visits arm, indicating that the full intervention is the only one that improves pregnancy-related outcomes.

In Appendix Table A4, we present results from estimating the value-added specification in Equation 2 for these pregnancy outcomes. We find no effects of adding information to cash transfers but find statistically significant effects of adding home visits in reducing the number of

[32] Individuals were also asked about their sixth through tenth pregnancies, but the sample size is much smaller for those pregnancies. Effects on age at pregnancy follow a similar pattern for those later pregnancies. The average number of pregnancies in our sample is 4.6, and the fertility rate in Burkina Faso is five.

pregnancies, raising the age at each pregnancy, and increasing the probability that a medical professional assisted the last birth. Note the home visit effects are conditional on receiving cash and information, since we do not have a treatment arm that receives only home visits.

4.3. Impacts on Household Health Behaviors

Next, in Table 4, we investigate the impacts on health behaviors most closely linked with the health information topics covered in the information meetings and home visits, listed in Appendix Table A1. As in Table 3, the outcomes are calculated as averages at the household level across all in the relevant age range in that household. Again, we see that the cash only and cash plus information treatment arms generally do not lead to improvements in prenatal and child health outcomes, as highlighted in the overall health behavior index.

However, the integrated treatment of cash, information meetings, and home visits does result in lasting improvements in a wide range of health behaviors that were the focus of the intervention. The integrated treatment arm led to an increase of 15.3 percent in the probability that children in the household receive vitamin A relative to the control group mean (column 1), and an increase of 18.5 percent in the probability that each child sleeps under a mosquito net (column 6). Column 7 shows an increase in nutritional diversity for young children, measured through a Kling *et al.* (2007) index across different food group categories.[33] Furthermore, we see decreases in the number of pregnancies (column 8), increases in the number of prenatal visits during the last birth (column 9), and improvements in children not having diarrhea during the last month (column 11) for households receiving the full integrated treatment arm. Effect sizes of the integrated treatment for these outcomes range from 4.3 to 14.6 percent relative to the control

[33] While the information topics for food diversity and nutrition focused on younger children, note that the treatment effects on the food group index are similar for regressions with all children ages 0-71 months instead of only children ages 6-23 months.

group mean. There is also an increase of 3.2 percentage points in the probability of mothers of young children reporting washing their hands after using the toilet (column 13) and 5.0 percentage points for washing their hands before feeding the children (column 14).

While we present the results in this table for every health theme covered during the information meetings and home visits, the treatment intervention did not lead to lasting medium-term impacts for all of them. We do not see statistically significant effects on the probability that children receive iron (column 2), the probability that mothers receive vitamin A (column 3) or iron (column 4) during pregnancy, or the probability that children are fully vaccinated (column 5). We find no effects on breastfeeding for the last birth (column 10), although the control group mean indicates that 99 percent of women breastfeed their children.[34] We also find no effects of the treatment on using oral rehydration solutions (column 12).

Given the large number of health themes covered during the intervention, focusing on the Kling *et al.* (2007) index (column 15) that aggregates all the outcomes is important, so we are not only focused on the statistically significant outcomes.[35] The health behaviors index shows a statistically significant increase for the integrated cash, information, and home visits treatment. These results further suggest that the home visits are a crucial component of the integrated social safety net package, as we can reject the equality of the coefficients on the cash only treatment arm and the cash and information treatment versus the integrated social safety net.[36] Results

[34] We also try alternate specifications for effects on breastfeeding, including whether children were breastfed for at least 6 months. In all cases, there are no statistically significant effects of the full integrated treatment on the outcome (results available upon request).

[35] The number of pregnancies outcome (column 8) is included in the health behavior index, even though it is also in Table 3, because family planning was a health theme covered during the information meetings and home visits.

[36] Since health behaviors could also depend on the availability of services and supplies in local health clinics and be affected by supply-side constraints, we estimate the regression separately for villages with and without a health clinic. We cannot reject that the treatment effects on the health behaviors index are the same in villages with and without a health clinic. However, this is potentially a power issue, since very few villages have a health clinic.

show a consistent pattern of statistical significance for all of the outcomes in the health table when using the randomization inference p-values.

In Appendix Table A5, we estimate the value-added specification from Equation 2. Again, we generally find no effects of cash, and the additional effect of information is marginally statistically significant in the health behavior index (column 15). On the other hand, we see large, statistically significant additional beneficial impacts of home visits (conditional on receiving both cash and information) on children receiving vitamin A, nutritional diversity, number of pregnancies, diarrhea reductions, maternal handwashing, and the overall health behavior index.

4.4. Impacts on Child Welfare (Anthropometrics and Education)

Table 5 shows the impacts of the intervention on child anthropometrics. All outcomes are Z-scores, calculated using the World Health Organization reference population for the relevant age and gender. The regressions are estimated at the child level, and all children under 60 months of age at the endline survey are included. Statistically significant lasting effects of the treatment are only seen for arm circumference (column 2), with an improvement of 0.26 standard deviations for households in the cash only treatment arm and improvements of 0.14 standard deviations for households receiving the full treatment intervention of cash, information meetings, and home visits. There are no statistically significant medium-term effects on weight-for-age or height-for-age Z-scores from any of the treatment arms, and the anthropometrics index (column 4) shows no overall significant effects of any of the treatments. Focusing on the value-added specification from Equation 2, in Appendix Table A6, we find that adding information to the treatment reduces arm circumference, while adding home visits (conditional on receiving both cash and information) improves both arm circumference and the overall anthropometrics index.

In Table 6, we examine the treatment effects on education for children ages 6-15. These regressions are run at the individual level. All three treatment arms show statistically significant positive effects on the education index (column 5) 15 months after the intervention ended, with effect sizes ranging from 0.10 to 0.20 standard deviations. The integrated treatment arm of cash, information, and home visits shows statistically significant improvements in enrollment, years of school completed, the probability of ever attending school, and grade progression. The probability of being enrolled in school increases by 8.1 percentage points (17.6 percent of the control group mean), children complete an additional 0.27 years of school (12.3 percent of the control group mean), the likelihood of completing any schooling increases by 7.7 percentage points (13.5 percent of the control group mean), and grade progression (calculated as completed grade divided by expected grade) increases by 0.06 (11.3 percent of the control group mean). All results are robust to the use of randomization inference p-values. Similar magnitude effects are observed for the cash only treatment arm. Cash improves education outcomes, increasing the probability of being enrolled in school by 11.1 percentage points and increasing the probability of completing any schooling by 10.1 percentage points. Cash plus information meetings show statistically significant increases in any schooling completed. For the education index, the treatment that includes home visits is not statistically different from the other treatment arms, suggesting that home visits are not essential to improving children's education.

Results from the value-added specification in Equation 2 are presented in Appendix Table A7 for the education outcomes. Cash has positive effects on enrollment, any school completed, and the education index. However, adding information meetings to the treatment reduces the likelihood of those outcomes, consistent with the unintended consequences found in an education information intervention in Ghana (Wolf et al., 2018; Aurino and Wolf, 2024).

Home visits, conditional on receiving cash and information, increase the years of school completed but do not have an impact on the overall education index. This aligns with our finding that home visits are less critical for education outcomes.

4.5. Impacts on Early Childhood Development

While these lasting improvements in health, anthropometrics, and education are important, we also want to evaluate the impacts on early childhood development, as improvements in this area were one of the goals of the project. Table 7 shows the impacts on Denver test scores at the individual level for children ages 0-71 months at the time of the survey. The first column shows the impacts on the total Denver score, and columns 2-5 examine the individual components of the test: language, fine motor, gross motor, and personal social skills. The intervention did not have any medium-term positive effects on the total Denver score or any of the sub-components 15 months after the cash, information meetings, and home visits ended. When we test for differences between the treatment arms, we can reject that the effects are the same when comparing the cash plus information and the full integrated treatment.

In Appendix Table A8, we show the results for the Denver test using the value-added specification from Equation 2. Adding information meetings to the cash treatment does not lead to lasting improvements in early childhood development. However, this specification shows that the additional effect of receiving home visits, conditional on receiving both cash and information, is positive for the total Denver score, as well as the language, gross motor, and personal social sub-components. The additional effect of home visits is 11.5 percent of the control mean for the total score (column 1), 14.5 percent for the language score (column 2), 13.3 percent for the gross motor score (column 4), and 10.8 percent for the personal social score (column 5). While we cannot separately identify the effect of home visits on the Denver test, since everyone who received home visits also received cash and information, these results are suggestive that home visits may be important for improving early childhood development.

As an additional measure of early childhood development related to child mental health, we investigate the impacts on the Strengths and Difficulties test in Table 8. There are no lasting impacts of any treatment on whether the total difficulties score that aggregates the emotional, conduct, hyperactivity, and peer problem scales falls in the average range (column 1). Likewise, standardizing the total difficulties score with scores from local peers of the same age and gender yields similar insignificant results (column 2). In column 3, cash improves the probability of the prosocial score being in the average range by 4.2 percentage points, and the full integrated treatment improves that likelihood by 5.9 percentage points. The full integrated treatment increases the likelihood of having a high prosocial score relative to local peers by 6.1 percentage points (column 4). The cash and the cash, information, and home visit treatments both lead to lasting and statistically significant improvements in the strengths and difficulties index (column 5). There are no lasting effects of cash plus information. We can reject that the effect of cash and information is equal to that of cash, information, and home visits for the prosocial outcomes, again highlighting the importance of home visits in an integrated social safety net package.

Focusing on the value-added specification for the Strengths and Difficulties outcomes in Appendix Table A9, information does not have an additional effect on outcomes. However, the additional effect of home visits on prosocial scores, conditional on receiving cash and information, is positive and statistically significant. Adding home visits raises the likelihood of having a good prosocial score by 33.5 (column 4) to 61.7 (column 3) percent relative to the control group mean. This table provides further evidence that home visits are important for improving children's prosocial scores.[37]

It is important to consider why we do not see stronger lasting impacts of the intervention on other early childhood development outcomes besides the prosocial measures. First, the cash transfers may have increased the opportunity cost of parenting, so that parents did not have the time to enact all these new parenting behaviors. Second, the endline survey was conducted 15 months after the program ended. It is possible that, even if there were short-run early childhood development effects of the program, they faded out after 15 months.

4.6 Potential Mechanisms

In this section, we examine several hypotheses for why the integrated social safety net program of cash, information, and home visits is so effective for improving these childhood outcomes even after the intervention ended. While we do not have direct survey data to confirm these hypotheses, this discussion is based on related research and discussions with the Burkina Faso government and individuals living in these regions.

First, the effectiveness of the integrated social safety net program might be due to the salience of the government sending social workers to visit these families in their houses and the trust they build up (Schaaf et al., 2020; Tibbels et al. 2022). The treatment locations were remote rural villages hundreds of kilometers from the capital city that were inaccessible by car for

[37] The information meetings and home visits also focused directly on improving early childhood development. Topics covered included providing a recreational environment for the child, protecting the child from dangerous situations, registering a child's birth, giving affection to the child, and teaching the child to share with others (see Appendix Table A1 for the list of childhood development themes). Appendix Table A10 shows the effects of the treatment on these specific outcomes. We see very few statistically significant effects. Column 1 is reproduced from Table 8, where there is a positive and statistically significant effect of cash and the full integrated treatment on the probability that the prosocial score of the strengths and difficulties test is in the average range. Cash has a negative effect on the parent interactions index, and we do not see any other effects on the outcomes related to the child development information provided. This is also true in the value-added specification (results not shown). Overall, the impacts on childhood development themes targeted by information meetings and home visits did not see any statistically significant improvements 15 months after the end of the intervention.

several months of the year on average. Parents informally told enumerators that they could not believe that the government cared this much about their children to send these social workers to visit them every month. If parents feel like the government cares about them and their children, they might be more willing to adopt the government's health and parenting recommendations (Rounseville, Oviedo, and Jibaja, 2019). This hypothesis is also supported by the fact that treatment effects for the home visits focused only on health and those focused on health and early childhood development are similar, highlighting that the information content of the home visit was not the only driving force behind the impacts.

Second, parents may not understand the information provided in the group information meetings or might understand it but plan to make behavioral changes later in the future. Additionally, parents might feel confused by the information or choose not to believe it if other mothers in the group meetings have persuaded them against adopting the changes. Home visits could address all these situations by providing opportunities to clarify the information provided, remind parents to make changes, and explain concepts in alternative ways. These visits can also reinforce the information's benefits from an outside source, which can be more persuasive than peer influence (Stang, 1975; Hintzman, 1976; Gunawardena et al, 2024).

Third, the accountability channel may also be important. The households develop a one-on-one relationship with the social worker, who is visiting the household repeatedly over 18 months (MacMahon, 2020). This personal relationship could be why the treatments including home visits were more effective than interactions with a social worker who is providing information to an entire group, further highlighting that the effects are less about the information content and more about the connection with the social worker.

4.7. Intervention Fidelity

When evaluating this program, it is important to know how the intervention was implemented in practice. We use two sources of data to better understand intervention fidelity. The first is a limited set of questions asked at the endline survey regarding if the household received the cash transfers. The second is random monitoring spot checks conducted by an outside organization. Since the program treatment was conducted by the government, we, as the researchers, did not have full control over the implementation. However, this means that the intervention was run in a way that more closely aligns with how such a policy would be implemented in the real world.

To understand the implementation and take-up of the intervention, we ask households at endline to report whether they received cash transfers and the amount. Table 9 (column 1) shows that, across all treatment arms that should have received cash transfers, households were 94-97 percentage points more likely than the control group to receive cash transfers. Additionally, the fraction of households in the control group who receive cash transfers is only one percent. The likelihood of receiving a cell phone, which was used to deliver the electronic cash transfer payments, increases by a similar amount. As reported by the household, the amount of the last transfer and the total amount received (columns 3 and 4) are also similar across the three treatment arms and are consistent with the level of cash transfers delivered.

In addition to these endline survey data on cash transfer receipt, Innovations for Poverty Action (IPA), an independent outside organization, conducted monitoring spot checks in January, March, June, September, and November 2020. For each check, IPA randomly selected nine villages across the four treatment arms and then randomly contacted seven treated households in each of those villages. This yields data for 315 households in 45 villages. IPA asked each household if the treatment components relevant for their village took place. Table 10 shows the results of these spot checks, which suggest that treatment fidelity was high, particularly in the first few checks (Innovations for Poverty Action, 2020). Through June 2020, 89 to 100 percent of the randomly spot-checked households confirmed receiving the cash transfers, and 93 to 100 percent of households in the cash and information arm confirmed having information meetings. Home visit fidelity was slightly lower, but still substantial, with 76 to 83 percent of the randomly spot-checked households in the full treatment arm reporting having received home visits. During the last two checks, the security situation deteriorated, and these spot checks were conducted by phone instead of in person. During the September 2020 spot check, fidelity dropped off with cash, information meetings, and home visits being confirmed by only 64 to 71 percent of households. Rates in the last spot check in November 2020 showed increases for cash and information meeting fidelity but dropped for home visits. Overall, both the household survey measures of cash transfer receipt and IPA's random spot checks confirm intervention fidelity was high across all treatment arms despite a deteriorating security situation.

4.8. Robustness and Heterogeneity

In this section, we focus on confirming that our main results are robust to various alternative specifications and investigating heterogeneity in those results. First, to ensure our results are not sensitive to model assumptions, we estimate alternate specifications with the Kling *et al.* (2007) index from each table as the outcome. Results are shown in Appendix Table A11. Panel A repeats the estimates from Tables 3-8 of the index for pregnancy, health behaviors, anthropometrics, education, Denver, and Strengths and Difficulties. Panel B shows the results for the same six outcomes without the LASSO-selected controls but still including controls for child age and gender. Overall, the point estimates are similar in magnitude and levels of statistical significance are consistent with those in Panel A.

Panel C shows the estimates from an endline-only specification, which is similar to the ANCOVA specification in Equation 1, except that we do not include the baseline value of the outcome variable in the regression.[38] The outcomes in columns 2-5 of Panel C show similar magnitude effects of the integrated treatment of cash, information, and home visits compared to the Panel A main specification, indicating our results are not driven by our specification. Panel D shows the results from a difference-in-differences specification that includes all baseline villages. Our variation comes from the timing of the survey (baseline versus endline) and the random assignment to treatment. In this specification, we compare outcomes in the 225 villages at baseline and the 74 villages at endline, across treatment arms. The coefficients of interest are those on the interaction terms between treatment arm and an indicator for the endline survey. Again, we do not have any baseline data on fertility-related questions, so we cannot run this specification for column 1. However, the results for the integrated treatment effects in columns 2-6 are similar in magnitude and levels of statistical significance to the main specification.

Given the deteriorating security situation in Burkina Faso during the intervention and the focus of the intervention on poor households, we investigate heterogeneity in our main results across those two dimensions. Appendix Table A12 shows heterogeneity for all the Kling *et al.* (2007) indexes broken down by whether the village was above or below the median distance from the nearest conflict incident.[39] For all outcomes except for the anthropometrics index, point

[38] Note that fertility-related questions (column 1) were not asked at the baseline, so the main Panel A results for the pregnancy index are already the endline-only specification. In addition, the results for the Strengths and Difficulties index (column 6) are the same as in Panel A (which are already the endline-only specification) because the ages of children who received this test at the endline meant they would have been too young to take the test at baseline.

[39] Conflict data comes from the Uppsala Conflict Data Program (Davies et al, 2023; Sundberg & Melander, 2013). We use GPS locations for conflict events from January 2018 to May 2022 and calculate the distance from each village to the nearest conflict event. Villages below the median distance to the nearest conflict event are considered close to the conflict; villages above the median distance are considered far from the conflict.

estimates for the full integrated treatment are larger for households closer to the conflict.[40] This suggests that households that are more vulnerable, measured as being closer to the conflict, are more likely to benefit from receiving the combined intervention of cash, information, and home visits.[41] Overall, we find suggestive evidence that households that are poorer and located closer to locations where conflict is occurring benefit more from integrated social safety nets.[42]

4.9. Attrition

While our main results are robust to various alternative specifications, the substantial village-level attrition caused by insecurity in Burkina Faso raises concerns that warrant additional checks. At baseline, 225 villages were surveyed and evenly distributed across the four treatment arms and the control group. However, due to local insecurity, many of these villages could not be revisited at endline, and the final survey covered only 74 villages. If attrition were systematically unbalanced across treatment arms, this could threaten identification. To address this, we conduct several tests for differential attrition and find no evidence that attrition is correlated with treatment assignment. Appendix Table A13 (Panel A) presents these first results. The first row reports the share of baseline villages in each arm that were resurveyed at endline, and the second

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[40] Despite the small sample sizes, when we estimate a fully interacted model, results confirm that for the pregnancy and education indexes, we can reject the equality of treatment effects for villages close to and far from the conflict.

[41] A similar, though less statistically robust pattern holds when examining impacts by household expenditures. We explore the heterogeneity of these same indexes based on whether the households had above or below median baseline expenditures (results available upon request). Note that all households receiving treatments are poor relative to village poverty levels, so this heterogeneity analysis compares poorer or less poor households. The effects for the integrated treatment of cash, information, and home visits in the poorest households are generally larger than in less poor households. This suggests that more vulnerable households are more responsive to receipt of a full integrated social safety net. The only exceptions are the health behavior index, where effects are larger in non-poor households, and in the Strengths and Difficulties index, where effect sizes are similar. In the fully interacted model, we are unable to reject equality between the poor and non-poor households, so these results are only suggestive.

[42] We also examine heterogeneity by gender and household size (results available upon request). We find that the effects of the integrated treatment do not show a consistent pattern across boys and girls. They are similar for boys and girls for two of the outcome indexes, are larger for girls in one outcome index, and are larger for boys in one outcome index. Likewise, for household size, we do not find a consistent pattern of the integrated treatment across small (fewer than 5 children) and large (5 or more children) households. Effect sizes are similar for two indexes, larger for small households for two indexes, and larger for big households in two indexes.

row provides the p-values from F-tests comparing each treatment arm to the control group. In all cases, we cannot reject that the attrition at the village level was the same across treatment arms. The remaining rows show the number of villages at baseline and endline.

Panel B reports household-level attrition among the 4,730 baseline households. The first row shows the share of households resurveyed at endline. The second row reports p-values from F-tests comparing attrition in each treatment arm with attrition in the control group. As with the village-level analysis, we find no evidence of differential attrition across arms. The remaining rows in Panel B show the number of households surveyed at baseline, the number of baseline households located in villages revisited at endline, and the actual number of households surveyed at endline. These numbers are similar across arms in both panels. Notably, conditional on returning to a village at endline, we lost only 2.7 percent of households--a remarkably low attrition rate over a four-year period.

Appendix Table A14 reports regressions testing if treatment status predicts whether a village (column 1) or household (column 2) was present at the endline survey. Column 1 shows that, across treatment arms (with arms 3 and 4 combined to match the main specification), there is no difference in the likelihood a village was resurveyed. Column 2 presents similar results for households. Together, these findings indicate that although insecurity led to substantial attrition due to the inability to revisit certain villages, this attrition is not correlated with treatment status.

Finally, Appendix Table A15 compares baseline village and household characteristics, as well as child outcomes, between attritor and non-attritor villages by treatment arm. Within each arm, differences exist between attritor and non-attritor villages. Column 9 reports the p-value from tests of whether these within-arm differences are consistent across arms. Of the 55 variables examined, only four show significant differences. Overall, while attrition due to insecurity is not random, it does not appear to be differential across treatment arms.

Overall, these results suggest that although village attrition was high due to insecurity, it was orthogonal to treatment assignment. Attrition rates are balanced across treatment arms, endline villages remain balanced on baseline characteristics, and differences between attritor and non-attritor villages do not vary by treatment status.[43]

5. Cost-Benefit Analysis

Table 11 compares the benefits of the interventions with their costs, including administrative expenses. Cash transfers represent the largest share of program spending, with households receiving on average 142,880 FCFA per year ($248 USD). Information meetings cost 12,563 FCFA per year ($22 USD), while home visits cost 13,980 FCFA per year ($24 USD). The left panel (columns 1-3) presents cost-benefit estimates for each treatment individually, using results from Tables 3-8 (based on Equation 1). The right panel (columns 4-6) shows the marginal returns from adding information sessions to cash transfers, or home visits to cash transfers plus information sessions, based on the value-added specification in Appendix Tables A4-A9 (Equation 2). These marginal cost estimates reflect only the additional resources required to provide the incremental component (either information sessions or home visits). Across both panels, we restrict attention to regression point estimates that are statistically significant at the 10 percent level or better and in the expected economic direction.

[43] In addition to balanced village-level attrition and extremely low household attrition within revisited villages, we also find low non-response rates within surveyed households. For each outcome, we compare the expected number of respondents from the household roster with the actual number observed, and across all outcomes in the main tables, the average non-response rate is 8.0%.

5.1. Individual Treatment Effects

The left panel shows that cash transfers alone generate benefits on only five outcomes. For every $100 spent, we observe gains in arm circumference (0.06 standard deviations), current school enrollment (6.4 percentage points), and completion of any school (5.8 percentage points). We also observe improvements in the probability of the Strengths and Difficulties prosocial score being in the average range (0.8 percentage points) and reductions in child diarrhea (1.3 percentage points). However, there are no detectable returns on fertility or pregnancy, health behaviors, or early childhood development.

Providing cash transfers and information sessions also generates benefits on a limited number of outcomes. Spending $100 on this intervention increases the likelihood of a child sleeping under a bednet (1.5 percentage points), the mother washing her hands before feeding children (0.8 percentage points), and the number of prenatal visits (0.03). It also increases the likelihood of completing any school (2.8 percentage points). Importantly, information sessions do not amplify the positive effects observed from cash transfers alone.

The full social safety net intervention (cash, information, and home visits) generates broad and consistent improvements across key dimensions of well-being. Fertility outcomes improve with clear delays in pregnancy timing, ranging from 0.06 years at the second pregnancy to 0.16 years at the fifth per $100 spent, and there are overall reductions in the number of times a woman is pregnant (0.05). Health behaviors strengthen as well, with gains in assisted births (0.5 percentage points), the number of prenatal visits (0.03), vitamin A supplementation (1.0 percentage points), bednet usage (1.8 percentage points), dietary diversity (0.01 standard deviations), and hand washing after using the toilet and before feeding children (0.5 and 0.8 percentage points). There are also reductions in child diarrhea (1.2 percentage points). Education outcomes also improve, with increases in average years of schooling (0.13 years), current school enrollment (4.1 percentage points), grade progression (3.0 percentage points) and completion of any school (3.9 percentage points). While improvements in early childhood development are less evident, except for the Strengths and Difficulties prosocial score, the comprehensive treatment demonstrates meaningful, multi-sector benefits for health, fertility, and education, highlighting its value as a holistic social safety net intervention.

5.2. Value-added Treatment Effects

The value-added analysis highlights the powerful impact of adding home visits to existing cash transfer and information programs. In contrast, adding information sessions to cash transfers yields no marginal returns across all measured indicators, suggesting that information sessions provide little value beyond what cash transfers already achieve.

Including home visits for households already receiving cash and information has high marginal returns. Fertility outcomes respond strongly. For every $100 spent, age at first pregnancy rises by almost one year (0.94), with even larger increases at later pregnancies—1.45 years at the second, 1.84 at the third, and 2.30 years at the fourth. These shifts translate into almost one fewer pregnancy overall, underscoring a substantial effect on family planning and reproductive health. Health behaviors also improve markedly. Vitamin A supplementation for children increases by 23.4 percentage points, dietary diversity by 0.2 standard deviations, maternal handwashing after using the toilet by 11.6 percentage points, and assisted births by 11.4 percentage points per $100 spent. There are also large reductions in child diarrhea (22.4 percentage points). Anthropometric measures show large improvements as well, with arm circumference rising by 0.52 standard deviations.

The gains extend to education and early childhood development. Schooling outcomes strengthen significantly, with years of schooling completed increasing by 1.74 years. Denver developmental assessments, which were largely unaffected by other interventions, show consistent improvements per $100 spent, with the addition of home visits leading to increases of 24.5 percentage points in the total score, and 29.0, 31.2, and 23.6 percentage point increases, respectively, in the Language, Gross Motor, and Personal-social sub-components. Prosocial behaviors also improve, with increases of 11.8 to 18.3 percentage points.

5.3. Policy Implications

Taken together, the results suggest that cash transfers alone generate limited lasting benefits, and adding information meetings does not alter this conclusion. The value-added analysis highlights the pivotal role of home visits: when combined with cash and information, they deliver large and cost-effective improvements in fertility, health, education, and early childhood development. From a policy perspective, these findings underscore the importance of integrated social safety net programs rather than stand-alone components, with the combination of cash, information, and home visits offering the greatest potential to improve child and household well-being.

6. Conclusion

This paper evaluates a randomized controlled trial of an integrated social safety net program in Burkina Faso that combined cash transfers, information meetings, and home visits to improve children's human capital and development outcomes. Fifteen months after the intervention ended, the combined treatment produced substantial reductions in fertility and improvements in health behaviors and education. Specifically, households that received cash, information, and home visits experienced fewer pregnancies, higher maternal age, and greater likelihood of birth deliveries assisted by medical professionals. Household health behaviors also improved, including more prenatal visits, increased handwashing after using the toilet and before meals, fewer child illnesses, greater use of mosquito bednets for children, and improved dietary diversity. Education outcomes strengthened as well, with higher child enrollment, more years of schooling completed, and better grade progression. We also find suggestive evidence that home visits, layered on top of cash and information, enhanced early childhood development outcomes as measured by the Denver and Strengths and Difficulties tests.

By contrast, cash transfers alone—or combined with information sessions—did not yield sustained impacts after the program ended, underscoring that home visits are a critical element of effective, lasting intervention packages. Heterogeneity analyses further suggest that more vulnerable households, defined by lower expenditure levels or greater conflict exposure, may have benefited the most from the full integrated social safety net, raising the potential for targeted delivery to increase cost-effectiveness.

A unique feature of this study is that the intervention of cash transfers, information meetings, and home visits was government-run and implemented at scale across hundreds of villages. As such, the challenges encountered reflect the realities of large-scale policy delivery, while the impacts represent the outcomes that can be expected from real-world social safety net programs.

The findings highlight promising directions for future research. Further work could isolate the effects of home visits alone, vary the frequency of visits, or examine how impacts depend on the size of cash transfers, which in this study were large in the context of rural Burkina Faso. Finally, because our outcomes were measured 15 months after the program ended—due to insecurity that delayed the endline survey—additional studies could track longer-term effects to ascertain which impacts continue to be sustained.

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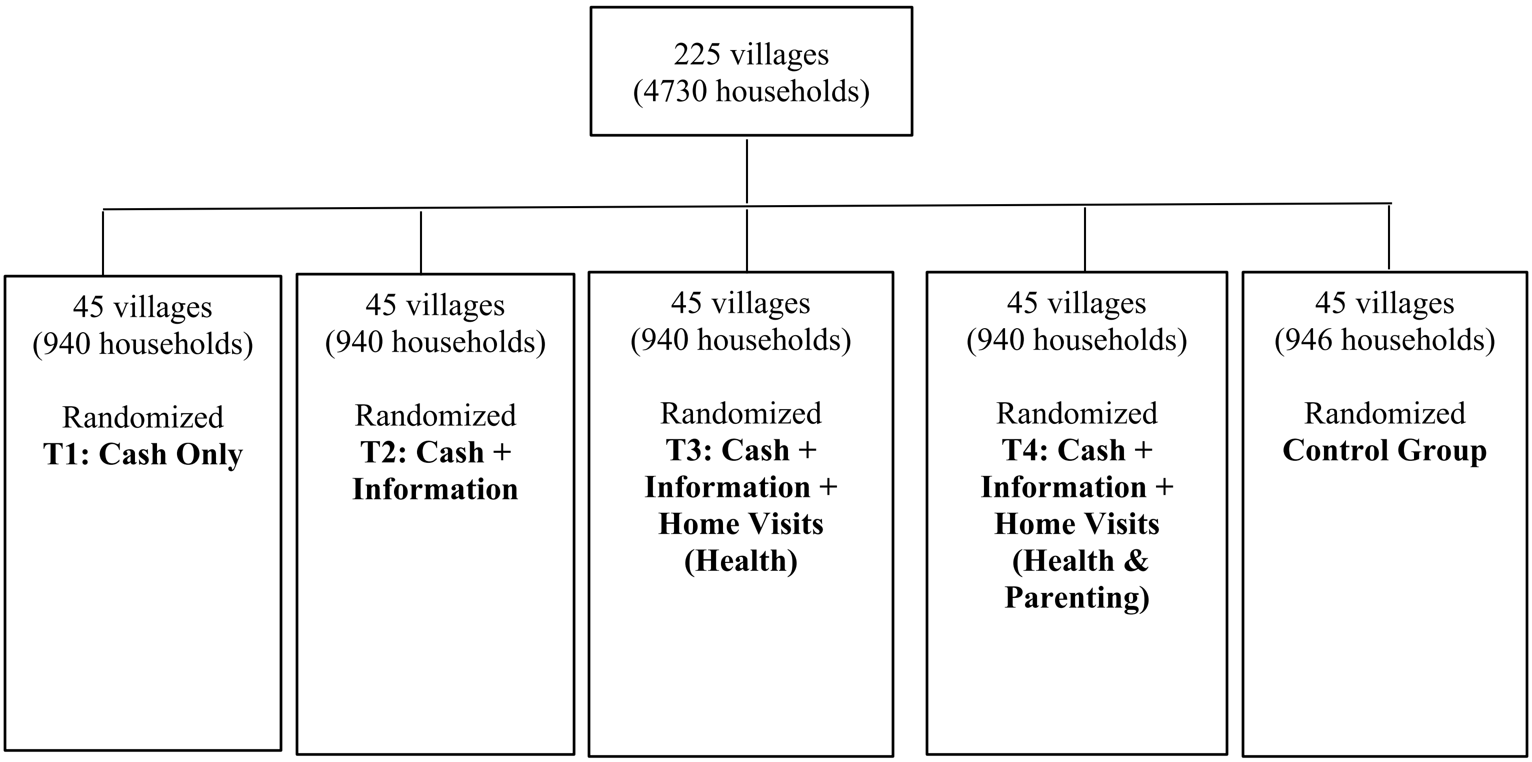
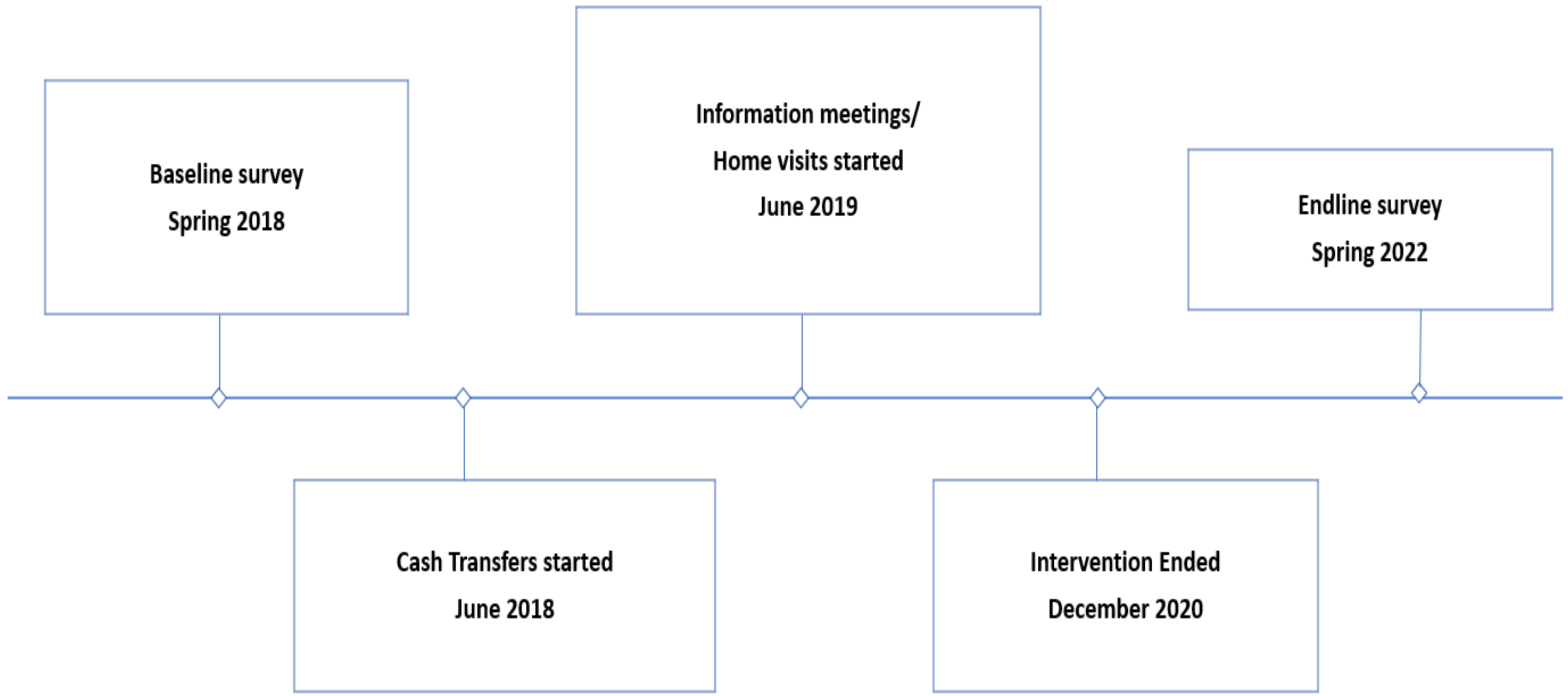
Figure 1: Summary of Treatment and Control Group Randomization Plan



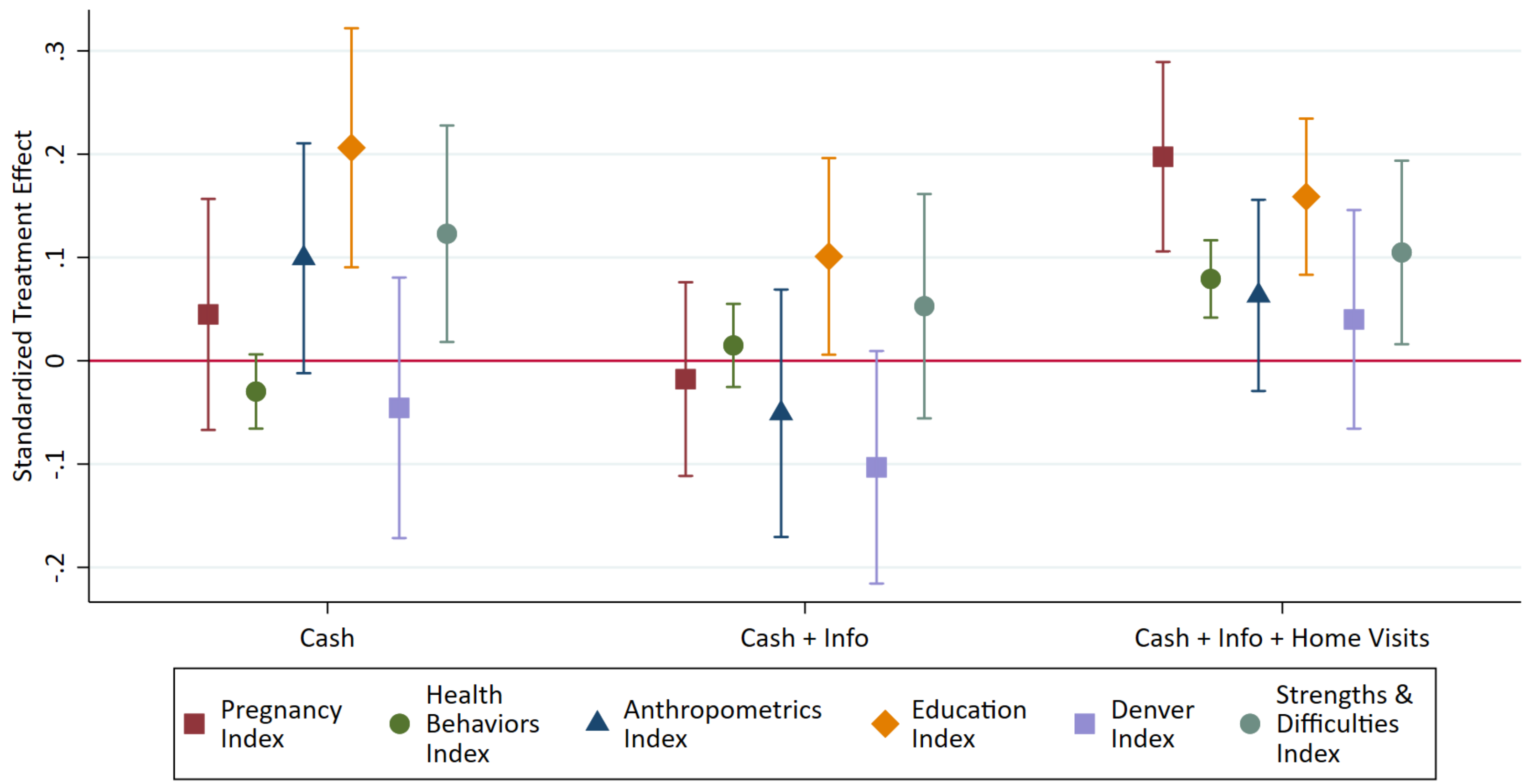
Notes: The 225 selected villages in the Est and Centre-Est regions were randomly allocated into five groups. These groups consist of: (1) households receiving unconditional cash transfers; (2) households receiving unconditional cash transfers and information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers); (3) households receiving unconditional cash transfers, information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers), and home visits twice a month focused on nutrition and health; (4) households receiving unconditional cash transfers, information meetings (one quarterly village-level meeting and monthly group meetings with 25-30 mothers), and home visits twice a month focused on both health issues and improving parenting and early childhood development; and (5) a control group.

Figure 2: Project Timeline



Notes: Regarding the project timeline, the baseline survey was conducted between January and May 2018, the cash transfers started in June 2018, and the information and home visits began in June 2019. All the interventions ended in December 2020. The endline survey was conducted in early 2022, providing information on the status of households more than 15 months after the end of the intervention.

Figure 3: Effect of Cash, Information, and Home Visits on Indexes



Notes: Following Kling, Liebman, and Katz (2007), we define indexes for families of outcomes by defining a Z-score for each outcome relative to the control group. Then we average the Z-scores across all outcomes in the same family to get an index, such as "Pregnancy Index." Each dot in the figure represents the coefficient of the indicator variable for that treatment arm. Solid lines represent 90% confidence intervals. The individual outcomes making up the index for each family are listed in Tables 3-8.

Table 1. Baseline Village and Household Characteristics

Panel A. Village Characteristics

	Mean	Standard deviation
Number of households	198	87
Health clinic in village	0.15	0.36
Distance to nearest health center (in km)	5.11	4.27
Distance to nearest market (in km)	4.72	4.98
Primary school in village	0.91	0.29
Secondary school in village	0.20	0.4
Distance to nearest secondary school (in km)	6.53	5.6
Distance to nearest paved road (in km)	21.53	15.96
Number of months roads to village impassable due to rain	3.46	1.91
Number of villages	74	

Panel B. Household Characteristics

	Mean	Standard deviation
Household head male	0.80	0.40
Household head age	45.99	12.69
Household head any education	0.09	0.29
Household size	9.25	4.09
# spouses	1.22	0.82
# children under 15	4.99	2.58
# other household members	2.04	3.30
Household head married	0.92	0.27
Household head monogamous	0.46	0.50
Household head polygamous	0.46	0.50
Household head Gourmanche	0.10	0.29
Household head Mossi	0.43	0.50
Household Head Peulh	0.06	0.24
Household head Yana	0.21	0.41
Household head Catholic or Protestant	0.29	0.45
Household head Muslim	0.70	0.46
Household head animist or no religion	0.02	0.13
Number of households	1500	

Notes: The sample includes the 74 villages and 1500 households surveyed at endline. Panel A shows village characteristics. Panel B shows household characteristics. # of children under 15 includes only biological children of the household head. # other household members includes members who are not either the spouse or a biological child of the household head (of any age).

Table 2. Baseline Balance, All 225 Villages

Village Characteristics	Control (1)	Cash Arm (T1) (2)	T1= Control (3)	Cash + Info Arm (T2) (4)	T2= Control (5)	Cash + Info + Home Visits Arm (T3/T4) (6)	T3/T4= Control (7)	All equal (8)
Number of households	189	177	0.42	197	0.61	209	0.19	0.15
Health center in village	0.11	0.18	0.37	0.29	0.03	0.18	0.29	0.20
Distance to nearest health center (in km)	8.47	7.13	0.41	6.01	0.09	6.24	0.07	0.28
Distance to nearest market (in km)	5.58	4.51	0.51	4.18	0.38	3.44	0.14	0.38
Primary school in village	0.96	0.96	1.00	0.91	0.40	0.97	0.76	0.70
Secondary school in village	0.16	0.11	0.54	0.20	0.58	0.12	0.61	0.64
Dist. to nearest secondary school (in km)	11.22	9.64	0.45	8.87	0.24	9.78	0.43	0.70
Distance to nearest paved road (in km)	37.80	40.77	0.67	38.21	0.95	40.07	0.69	0.96
# of months roads to village impassable	3.13	4.16	0.02	3.58	0.31	3.70	0.10	0.13
Household Characteristics								
Male	0.88	0.84	0.07	0.85	0.10	0.84	0.03	0.11
Age	45.92	43.82	0.01	43.94	0.04	44.38	0.05	0.07
Any education	0.06	0.06	0.60	0.08	0.14	0.08	0.05	0.18
Household size	10.07	8.87	0.00	8.94	0.00	8.90	0.00	0.00
# children	5.40	5.22	0.31	5.17	0.21	5.23	0.32	0.65
Married	0.93	0.94	0.24	0.93	0.50	0.95	0.02	0.13
Monogamous	0.45	0.45	0.77	0.49	0.24	0.47	0.55	0.48
Polygamous	0.47	0.49	0.43	0.45	0.37	0.48	0.70	0.46
Gourmanche ethnicity	0.35	0.35	0.98	0.36	0.92	0.35	0.99	1.00
Mossi ethnicity	0.15	0.20	0.43	0.20	0.49	0.21	0.31	0.76
Peulh ethnicity	0.14	0.09	0.16	0.08	0.04	0.11	0.31	0.21
Yana ethnicity	0.25	0.27	0.72	0.29	0.56	0.26	0.80	0.95
Catholic or Protestant	0.27	0.28	0.99	0.33	0.21	0.31	0.39	0.53
Muslim	0.57	0.57	0.92	0.52	0.54	0.55	0.85	0.89
Animist or no religion	0.16	0.15	0.82	0.14	0.73	0.14	0.55	0.94

Prenatal/Health								
Child receiving vitamin A	0.50	0.47	0.42	0.52	0.58	0.51	0.68	0.54
Child receiving iron	0.50	0.51	0.80	0.52	0.54	0.53	0.38	0.82
Mother receiving vitamin A	0.77	0.77	0.84	0.81	0.29	0.78	0.76	0.65
Mother receiving iron	0.89	0.90	0.55	0.89	0.69	0.88	0.76	0.77
Child fully vaccinated	0.39	0.38	0.84	0.36	0.55	0.40	0.59	0.53
Child sleeps under bednet	0.78	0.73	0.18	0.72	0.15	0.75	0.36	0.45
Index of food groups, children 6-23 mo.	0.06	-0.04	0.07	-0.02	0.22	0.00	0.24	0.32
Child has not had diarrhea past 30 days	0.61	0.61	0.91	0.62	0.67	0.64	0.34	0.71
Child given ORS	0.39	0.36	0.37	0.34	0.11	0.36	0.31	0.45
Mother washes hands after toilet	0.82	0.80	0.53	0.80	0.51	0.81	0.50	0.90
Mother washes hands before feeding	0.82	0.79	0.51	0.79	0.31	0.79	0.33	0.75
Anthropometrics								
Height-for-age z	-1.39	-1.28	0.22	-1.32	0.40	-1.32	0.41	0.66
Arm circumference-for-age z	-1.02	-1.08	0.33	-1.11	0.16	-1.13	0.04	0.23
Weight-for-age z	-1.25	-1.19	0.37	-1.27	0.80	-1.26	0.86	0.66
Education								
Enrollment	0.44	0.43	0.88	0.45	0.82	0.43	0.70	0.94
Years of school completed	1.67	1.71	0.77	1.72	0.78	1.58	0.56	0.77
Any school completed	0.48	0.49	0.84	0.48	0.94	0.47	0.86	0.98
Progression	0.44	0.45	0.89	0.45	0.87	0.43	0.66	0.92
Denver								
Total score	0.42	0.42	0.91	0.41	0.95	0.41	0.70	0.96
Language	0.39	0.39	0.66	0.39	0.92	0.38	0.59	0.77
Fine motor	0.40	0.40	0.97	0.40	1.00	0.41	0.91	1.00
Gross motor	0.47	0.47	0.81	0.47	0.89	0.47	0.87	0.98
Personal-social	0.43	0.42	0.79	0.42	0.78	0.42	0.67	0.98
Strengths & Difficulties								
Indicator for total difficulties in avg range	0.28	0.34	0.05	0.31	0.38	0.32	0.10	0.18
Indicator for low total difficulties (normed)	0.29	0.34	0.09	0.31	0.56	0.32	0.15	0.30
Indicator for prosocial in avg range	0.22	0.16	0.08	0.17	0.13	0.17	0.06	0.24
Indicator for high prosocial (normed)	0.33	0.27	0.10	0.28	0.11	0.27	0.05	0.22

Early Childhood Development								
Total activities available to child	4.21	4.24	0.76	4.10	0.34	4.16	0.58	0.56
Child injured in past 12 months	0.01	0.01	0.79	0.01	0.29	0.01	0.98	0.73
Child has birth certificate	0.72	0.71	0.71	0.70	0.67	0.70	0.46	0.90
Index of parenting behaviors	0.05	0.02	0.52	-0.02	0.13	-0.03	0.05	0.19

Notes: Calculations in this table are based on baseline data from all 225 villages. Standard errors are clustered at the village level. The treatment arms are abbreviated as "T1" (cash only), "T2" (cash + information), "T3/T4" (cash + information + home visits). Column 1 presents the baseline mean in the control group; columns 2, 4, and 6 present the baseline means for each of the treatment arms; columns 3, 5, and 7 present p-values from a test of mean equality between the control arm and each of the respective treatment arms; and column 8 shows p-values for an F-test for equality across all four groups. Village and household characteristics are defined in Table 1. Outcomes from the Prenatal/Health section are reported at the household level: "Child receiving vitamin A" is the percentage of children ages 0-48 months in the household who received any vitamin A in the past 12 months. "Child receiving iron" is the percentage of children ages 0-48 months in the households who received any iron in the past 12 months. "Mother receiving vitamin A" is the percentage of pregnancies during which mothers of children ages 0-48 received vitamin A. "Mother receiving iron" is the percentage of pregnancies during which mothers of children ages 0-48 months received iron. "Child fully vaccinated" is the percentage of children ages 0-48 months in the household who have received all 10 recommended vaccines. "Child sleeps under bednet" is the percentage of children in the household ages 0-48 months who sleep under a bednet. "Index of food groups, children 6-23 mo." is an index for the different types of food groups consumed by children ages 6-23 months. "Child has not had diarrhea in past 30 days" is the percentage of children in the household ages 0-48 months who report not having diarrhea in the past 30 days. "Child given ORS" is the percentage of children in the household ages 0-48 months who were given oral rehydration solution in the past 30 days. "Mother washes hands after toilet" is the percentage of women in the household with children under five who report washing their hands after using the toilet. "Mother washes hands before feeding" is the percentage of women in the household with children under five who report washing their hands before feeding children. Anthropometrics outcomes are reported at the individual level for children less than 60 months, and z-scores are calculated using the WHO reference population. Outcomes from the Education section are reported at the individual level, for children at least 6 years old and less than 15 years old. "Enrollment" is an indicator for the child being enrolled in school, "Years of school completed" is the number of years of school that the child has completed, "Any schooling completed" is an indicator for completing any schooling, and "progression" is the actual grade divided by the expected grade (where children are expected to begin school at age 7) and capped at 1. Outcomes in the Denver section are reported at the individual level for children ages 0-71 months old. "Total Score" is the percentage of questions that a child answered correctly out of the number of questions that 90% of children in a similar age reference group are able to answer correctly. "Language," "Fine Motor," "Gross Motor," and "Personal-Social" are percentages for the questions answered correctly in each of the respective categories. In the Strengths & Difficulties section, which is reported at the individual level for children ages 24-71 months old, "Indicator for total difficulties in avg range" is an indicator for the total Strengths & Difficulties score being in the normal range, "Indicator for low total difficulties (normed)" is an indicator for the total score being at least 0.5 SD below the mean for children of the same age and gender (where a higher score is worse), "Indicator for prosocial in avg range" is an indicator for the prosocial score being in the normal range, and "Indicator for high prosocial (normed)" is an indicator for the prosocial score being at least 0.5 SD above the mean for children of the same age and gender (where a higher score is better). "Total activities available to child" is the number of categories of toys available to each child ages 0-71 months out of the following: bowls/cups, wood/leaves, homemade toys, purchased toys, push/pull toys, balls. "Child injured in past 12 months" is an indicator for whether the child, ages 0-71 months, was injured in the past 12 months. "Child has birth certificate" is an indicator for whether the child, ages 0-71 months, has a birth certificate. "Index of parenting behaviors" is an index of whether parents often tell the child (ages 0-71 months) what they are doing, ask the child questions, listen to the child, and answer the child's questions.

Table 3. Impacts on Fertility and Pregnancy

	# times pregnant	Age at 1st preg-nancy	Age at 2nd preg-nancy	Age at 3rd preg-nancy	Age at 4th preg-nancy	Age at 5th preg-nancy	Indicator for last birth assisted by medical professional	Pregnancy index
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash Arm	0.026	-0.020	-0.016	0.038	0.328	0.367	0.009	0.045
	(0.127)	(0.220)	(0.228)	(0.224)	(0.279)	(0.412)	(0.021)	(0.067)
	[0.835]	[0.930]	[0.941]	[0.870]	[0.248]	[0.375]	[0.678]	[0.512]
Cash + Info Arm	0.021	-0.016	-0.103	-0.140	0.162	0.581	-0.003	-0.018
	(0.121)	(0.193)	(0.209)	(0.221)	(0.285)	(0.435)	(0.020)	(0.056)
	[0.856]	[0.944]	[0.627]	[0.523]	[0.599]	[0.181]	[0.890]	[0.748]
Cash + Info + Home Visits Arm	-0.290**	0.297	0.379*	0.475**	0.930***	1.038**	0.036*	0.198***
	(0.117)	(0.202)	(0.210)	(0.236)	(0.296)	(0.468)	(0.018)	(0.055)
	[0.011]	[0.139]	[0.069]	[0.046]	[0.001]	[0.035]	[0.056]	[0.000]
Observations	1,051	1,051	984	914	811	688	1,029	1,051
Control Group Mean	4.63	18.71	21.56	24.16	26.51	28.95	0.96	0.00
P-value: Cash=Cash + Info	0.96	0.98	0.71	0.45	0.54	0.46	0.42	0.30
P-value: Cash=Cash + Info + HV	0.01	0.12	0.08	0.08	0.04	0.05	0.04	0.01
P-value: Cash + Info=Cash + Info + HV	0.01	0.07	0.02	0.02	0.01	0.16	0.00	0.00

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the household level. Mothers with children under 5 at the endline are included in the regression. Because this section of the survey was not asked at the baseline, the ANCOVA specification cannot be estimated for this table, and these results are from an endline-only specification. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to either treatment arm 3 or 4. "# times pregnant" is the average number of pregnancies (including current pregnancy, if applicable); "age at pregnancy" is women's average age at each pregnancy; "indicator for last birth assisted by a medical professional" is the average of an indicator for the delivery of the last child being assisted by a doctor, nurse/midwife/medical assistant, or other medical staff. The pregnancy index in column 8 is a standardized index across the outcomes in columns 1-7. Columns 1, 2, and 8 include the full sample of households in this section of the survey; columns 3-6 include only households with women who have had at least the relevant number of pregnancies; column 7 includes only households with at least one woman who has given birth to a child under age 5 (and does not include women currently pregnant but who have not yet given birth).

Table 4. Impacts on Household Health Behaviors

	Child receives vitamin A	Child receives iron	Mother receives vitamin A during pregnancy	Mother receives iron during pregnancy	Child fully vaccinated	Child sleeps under mosquito net	Food group index, children 6-23 months
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash Arm	0.016	-0.032	-0.036	-0.020	-0.014	0.017	0.055
	(0.039)	(0.041)	(0.026)	(0.016)	(0.051)	(0.050)	(0.139)
	[0.673]	[0.452]	[0.190]	[0.212]	[0.776]	[0.741]	[0.692]
Cash + Info Arm	-0.010	-0.020	-0.029	-0.041*	-0.088	0.088*	0.043
	(0.041)	(0.039)	(0.029)	(0.021)	(0.059)	(0.051)	(0.122)
	[0.794]	[0.626]	[0.360]	[0.054]	[0.169]	[0.091]	[0.707]
Cash + Info + Home Visits Arm	0.075**	0.009	-0.008	-0.010	-0.016	0.135***	0.295***
	(0.035)	(0.041)	(0.025)	(0.018)	(0.053)	(0.041)	(0.094)
	[0.041]	[0.850]	[0.737]	[0.613]	[0.786]	[0.002]	[0.002]
Observations	1,028	1,028	1,028	1,028	1,028	1,028	259
Control Group Mean	0.49	0.62	0.85	0.94	0.51	0.73	0.17
P-value: Cash=Cash + Info	0.52	0.78	0.80	0.32	0.12	0.14	0.93
P-value: Cash=Cash + Info + HV	0.11	0.30	0.22	0.47	0.96	0.00	0.05
P-value: Cash + Info=Cash + Info + HV	0.03	0.49	0.48	0.16	0.15	0.22	0.01

Table 4 (continued). Impacts on Household Health Behaviors

	# pregnancies	# prenatal visits, last birth	Indicator for breast-feeding, last birth	Child had no diarrhea last 30 days	Child given ORS	Mother washes hands after using toilet	Mother washes hands before feeding children	Health behavior index
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Cash Arm	0.026	0.055	-0.006	0.075*	-0.018	0.000	0.024	-0.030
	(0.127)	(0.105)	(0.008)	(0.038)	(0.044)	(0.020)	(0.023)	(0.022)
	[0.835]	[0.602]	[0.510]	[0.053]	[0.699]	[0.998]	[0.308]	[0.178]
Cash + Info Arm	0.021	0.186*	-0.003	0.006	0.015	-0.006	0.045**	0.015
	(0.121)	(0.104)	(0.006)	(0.029)	(0.044)	(0.020)	(0.021)	(0.024)
	[0.856]	[0.082]	[0.691]	[0.826]	[0.718]	[0.765]	[0.036]	[0.536]
Cash + Info + Home Visits Arm	-0.290**	0.199*	0.001	0.089**	-0.023	0.032**	0.050***	0.079***
	(0.117)	(0.100)	(0.004)	(0.036)	(0.043)	(0.015)	(0.019)	(0.023)
	[0.011]	[0.066]	[0.820]	[0.018]	[0.606]	[0.046]	[0.008]	[0.001]
Observations	1,051	1,032	1,032	1,028	1,028	1,144	1,144	1,028
Control Group Mean	4.63	4.67	0.99	0.61	0.52	0.94	0.93	0.15
P-value: Cash=Cash + Info	0.96	0.23	0.67	0.01	0.43	0.78	0.27	0.07
P-value: Cash=Cash + Info + HV	0.01	0.10	0.24	0.69	0.87	0.07	0.12	0.00
P-value: Cash + Info=Cash + Info + HV	0.01	0.89	0.43	0.01	0.30	0.03	0.69	0.01

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the household level using the ANCOVA specification. Outcomes in columns 1-6 and 11-12 are measured for children ages 0-47 months. The outcome in column 7 is for children ages 6-23 months, which is why the sample size is much smaller. Outcomes in columns 8-10 are asked to mothers of children under 5 or pregnant at the time of the survey. "# prenatal visits, last birth" is the number of prenatal visits for the last childbirth, and "indicator for breastfeeding, last birth" is an indicator for whether the woman breastfed her youngest child. All other outcomes are defined in Table 2. Column 8 includes all households represented in that section of the survey, while columns 9-10 include only households with women who have given birth (and do not include women currently pregnant who have not yet given birth). Outcomes in columns 13-14 are asked to all mothers of children 5 or under at the endline. The health behavior index in column 15 is a standardized index across the outcomes in columns 1-14. Endline values of the index include all 14 outcomes, but since the outcomes in columns 8-10 were only asked at endline, the baseline values of the index only include the other 11 outcomes. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4.

Table 5. Impacts on Anthropometrics

	Height-for-age Z-score	Arm circumference-for-age Z-score	Weight-for-age Z-score	Anthropometrics index
	(1)	(2)	(3)	(4)
Cash Arm	-0.101	0.258***	0.080	0.099
	(0.096)	(0.082)	(0.086)	(0.067)
	[0.309]	[0.003]	[0.364]	[0.145]
Cash + Info Arm	-0.152	-0.011	-0.031	-0.051
	(0.099)	(0.081)	(0.110)	(0.072)
	[0.138]	[0.900]	[0.783]	[0.457]
Cash + Info + Home Visits Arm	-0.007	0.139**	0.075	0.063
	(0.088)	(0.065)	(0.070)	(0.056)
	[0.935]	[0.045]	[0.307]	[0.255]
Observations	1,869	1,869	1,869	1,869
Control Group Mean	-1.19	-1.10	-1.25	-0.06
P-value: Cash=Cash + Info	0.61	0.00	0.36	0.06
P-value: Cash=Cash + Info + HV	0.28	0.12	0.95	0.56
P-value: Cash + Info=Cash + Info + HV	0.12	0.06	0.31	0.09

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the ANCOVA specification at the individual level for children ages 0-59 months. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. Z-scores are calculated using the WHO reference population. The anthropometrics index in column 4 is a standardized index across the outcomes in columns 1-3.

Table 6. Impacts on Education Outcomes

	Enrolled in school	Years of school completed	Any school completed	Progression (completed/expected)	Education index
	(1)	(2)	(3)	(4)	(5)
Cash Arm	0.111***	0.156	0.101***	0.039	0.206***
	(0.036)	(0.116)	(0.036)	(0.030)	(0.069)
	[0.005]	[0.191]	[0.010]	[0.216]	[0.008]
Cash + Info Arm	0.050	0.091	0.050*	0.025	0.101*
	(0.031)	(0.096)	(0.029)	(0.026)	(0.057)
	[0.106]	[0.347]	[0.093]	[0.356]	[0.081]
Cash + Info + Home Visits Arm	0.081***	0.266***	0.077***	0.059***	0.159***
	(0.024)	(0.083)	(0.022)	(0.022)	(0.045)
	[0.001]	[0.002]	[0.002]	[0.006]	[0.002]
Observations	5,128	5,128	5,128	4,595	5,128
Control Group Mean	0.46	2.17	0.57	0.52	0.03
P-value: Cash=Cash + Info	0.02	0.53	0.04	0.62	0.02
P-value: Cash=Cash + Info + HV	0.25	0.24	0.34	0.40	0.33
P-value: Cash + Info=Cash + Info + HV	0.15	0.03	0.20	0.12	0.13

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the ANCOVA specification at the individual level for children at least 6 years old and less than 15 years old. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. See Table 2 for variable definitions. The education index in column 5 is a standardized index across the outcomes in columns 1-4. The regression in column 4 has fewer observations because we cannot calculate progression for 6-year-olds, since the expected starting age for primary school is age 7.

Table 7. Impacts on Denver Early Childhood Development Assessment

	Total score	Language	Fine motor	Gross motor	Personal social	Denver index
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Arm	-0.008	0.002	-0.016	-0.023	-0.027	-0.046
	(0.029)	(0.023)	(0.035)	(0.033)	(0.030)	(0.076)
	[0.778]	[0.941]	[0.648]	[0.484]	[0.360]	[0.544]
Cash + Info Arm	-0.040	-0.035	-0.035	-0.055*	-0.025	-0.103
	(0.025)	(0.021)	(0.030)	(0.030)	(0.030)	(0.068)
	[0.113]	[0.096]	[0.218]	[0.070]	[0.403]	[0.114]
Cash + Info + Home Visits Arm	0.014	0.029	0.006	0.014	0.027	0.040
	(0.024)	(0.020)	(0.028)	(0.028)	(0.027)	(0.064)
	[0.567]	[0.134]	[0.815]	[0.599]	[0.314]	[0.510]
Observations	2,484	2,484	2,484	2,484	2,484	2,484
Control Group Mean	0.47	0.44	0.48	0.52	0.48	0.16
P-value: Cash=Cash + Info	0.26	0.09	0.55	0.28	0.95	0.42
P-value: Cash=Cash + Info + HV	0.39	0.17	0.48	0.17	0.04	0.20
P-value: Cash + Info=Cash + Info + HV	0.02	0.00	0.11	0.01	0.07	0.02

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the ANCOVA specification at the individual level for children ages 0-71 months. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. For variable definitions, see Table 2. The Denver index in column 6 is a standardized index across the components of the Denver test in columns 2-5.

Table 8. Impacts on Strengths and Difficulties Assessment

	Indicator for total difficulties in average range	Indicator for low total difficulties (normed)	Indicator for prosocial in average range	Indicator for high prosocial (normed)	Strengths & difficulties index
	(1)	(2)	(3)	(4)	(5)
Cash Arm	0.077	0.073	0.042*	0.033	0.123*
	(0.051)	(0.051)	(0.023)	(0.034)	(0.063)
	[0.137]	[0.147]	[0.062]	[0.352]	[0.059]
Cash + Info Arm	0.036	0.038	0.023	0.004	0.053
	(0.054)	(0.054)	(0.020)	(0.031)	(0.065)
	[0.516]	[0.482]	[0.285]	[0.907]	[0.446]
Cash + Info + Home Visits Arm	0.034	0.040	0.059***	0.061**	0.105*
	(0.047)	(0.047)	(0.015)	(0.031)	(0.053)
	[0.459]	[0.400]	[0.000]	[0.042]	[0.068]
Observations	1,677	1,677	1,677	1,677	1,677
Control Group Mean	0.28	0.28	0.06	0.17	-0.18
P-value: Cash=Cash + Info	0.44	0.50	0.41	0.35	0.34
P-value: Cash=Cash + Info + HV	0.34	0.46	0.42	0.36	0.76
P-value: Cash + Info=Cash + Info + HV	0.97	0.96	0.06	0.05	0.40

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the individual level for children ages 24-71 months. Because these children were not old enough to complete this section of the survey at baseline, we cannot run the ANCOVA specification and thus, these regressions only use endline data. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. For variable definitions, see Table 2. The strengths and difficulties index in column 5 is a standardized index across the outcomes in columns 1-4.

Table 9. Impacts on Receipt of Cash Transfers

	Any transfers	Any mobile phones	Amount of last transfer	Total amount received
	(1)	(2)	(3)	(4)
Cash Arm	0.944***	0.947***	37,948***	521,850***
	(0.014)	(0.014)	(1,524)	(16,335)
	[0.000]	[0.000]	[0.000]	[0.000]
Cash + Info Arm	0.944***	0.944***	39,938***	556,929***
	(0.015)	(0.016)	(1,340)	(18,999)
	[0.001]	[0.001]	[0.001]	[0.001]
Cash + Info + Home Visits Arm	0.966***	0.970***	40,331***	563,283***
	(0.009)	(0.008)	(1,284)	(15,548)
	[0.000]	[0.000]	[0.000]	[0.000]
Observations	1,499	1,500	1,496	1,500
Control Group Mean	0.01	0.00	411	3,415
P-value: Cash=Cash + Info	1.00	0.89	0.25	0.08
P-value: Cash=Cash + Info + HV	0.12	0.12	0.16	0.02
P-value: Cash + Info=Cash + Inf(	0.10	0.10	0.80	0.74

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. These outcomes are reported at the household level, currency amount is in FCFA, and the average exchange rate during the intervention was $1 USD = 575 FCFA. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. "Any transfers" indicates if the household received cash transfers from the program. "Any mobile phones" indicates if the household received a cell phone from the program.

Table 10. Implementation Fidelity

		Date and Mode of Monitoring Report				
	Recall period (months)	Jan. 2020 In Person	Mar. 2020 In Person	June 2020 By phone	Sep. 2020 By phone	Nov. 2020 By phone
	(1)	(2)	(3)	(4)	(5)	(6)
Cash received	3	89%	98%	100%	64%	94%
2 monthly village meetings	2	100%	100%	100%	68%	60%
At least 1 mother group meetings	2	100%	100%	93%	71%	77%
Received home visits	2	83%	76%	79%	67%	46%

Note: Results from monitoring reports conducted by Innovation Poverty Action (IPA) in 2020. For each report, IPA contacted (in person in January and March 2020, and by phone thereafter) 63 randomly-selected households in 9 randomly-selected villages across the 4 treatment groups and asked them whether the different treatment components relevant for their village took place. The percentages represent the households that reported that the different treatment components took place.

Table 11: Cost-Effectiveness Analysis

	Main treatments			Value-added treatments		
	Cash	Cash + Info	Cash + Info + Home visits	Cash	+ Info	+ Home Visits
	(1)	(2)	(3)	(4)	(5)	(6)
Fertility and pregnancy						
# times pregnant			-0.044			-0.928
Age at 1st pregnancy						0.937
Age at 2nd pregnancy			0.057			1.446
Age at 3rd pregnancy			0.072			1.842
Age at 4th pregnancy			0.140			2.300
Age at 5th pregnancy			0.157			
Assisted birth			0.005			0.114
Household health behaviors						
Child receives Vitamin A			0.010			0.234
Sleeps under bednet		0.015	0.018			
Food group index			0.012			0.202
# prenatal visits last pregnancy		0.033	0.030			
Child had no diarreha	0.013		0.012	0.013		0.224
Mother washes hands after toilet			0.005			0.116
Mother washes hands before feeding		0.008	0.008			
Anthropometrics						
Arm circumference for age Z-score	0.055		0.024	0.055		0.522
Education						
Enrolled	0.064		0.041	0.064		
Years completed			0.133			1.740
Any school	0.058	0.028	0.039	0.058		
Progression			0.030			
Denver early childhood development assessment						
Total Denver score						0.245
Language						0.290
Gross motor						0.312
Personal social						0.236
Strengths and difficulties assessment						
Prosocial in average range	0.008		0.010	0.008		0.118
Prosocial z-score>0.5			0.010			0.183

Notes: This table presents the cost-effectiveness analysis (CEA) of the interventions measured by changes in outcomes per $100 spent on each intervention. The left panel displays the CEA for the main treatment effects, while the right panel shows the CEA for the value-added impact, resulting from adding information sessions or home visits to existing cash transfer programs. The calculations use estimates from Tables 3-8 in the left panel, and from Appendix Tables A4-A9 for the right panel. Only statistically significant effects (p<0.10) with the expected economic direction are reported; all other values are left blank. Administrative costs are included in all calculations.

Online Appendix for

Medium-Term Impacts of Integrated Social Safety Nets: Cash Transfers, Information Meetings, and Home Visits for Child Development

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October 5, 2025

Appendix Table A1. Topics for Information and Home Visits Intervention

Panel A: Health Topics	
	Compliance with 7 prenatal visits
	Exclusive breastfeeding 0-6 months
	Feeding the child 6-23 months
	Consumption of foods rich in micronutrients (Vitamin A, Iron and Iodine)
	Early breastfeeding and breastfeeding technique
	Food groups
	Diet of the pregnant woman
	Prevention of anaemia, malaria in pregnant women
	Feeding of breastfeeding women
	Iron supplementation in vit. A and prevention of malaria in breastfeeding women
	Feeding the sick child
	Personal and clothing hygiene and hygiene of the living environment
	Family planning
	Management of diarrhea at home
	Common signs of severe malnutrition
	Water and food hygiene and hand hygiene
Panel B: Child Development Topics	
	Registering the birth and issuing birth certificates of children
	Always giving affection to children
	Providing a recreational environment for children
	Protecting children from dangerous situations and saving children first in emergencies
	Teaching children to share what they have with others

Notes: The list of topics for the monthly information meetings and home visits comes from the Burkina Faso Ministere de la Femme, de la Solidarite Nationale et de la Famille (2017).

Appendix Table A2. List of Covariates for LASSO Procedure

	Mean	Standard Deviation
Household head male	0.80	0.40
Number of months household head absent in past year	0.11	0.84
Household head absent any time in past year	0.03	0.18
Household head married	0.92	0.27
Household head monogamous	0.46	0.50
Household head polygamous	0.46	0.50
Household head Gourmanche	0.10	0.29
Household head Yana	0.21	0.41
Household head ethnic subgroup: nobles	0.43	0.50
Household head ethnic subgroup: landchief	0.13	0.33
Household head muslim	0.70	0.46
Household head Catholic/Protestant	0.29	0.45
Household head animist/no religion	0.02	0.13
Household head animist	0.02	0.13
Household head any education	0.09	0.29
Household head literate	0.12	0.33
Household size	9.25	4.09
# child of household head under 15	4.99	2.58
# other household members (not spouse or child)	2.04	3.30
Household head age in years	45.99	12.69
Household head age in years, squared	2276	1276
Household uses pump in dry and rainy season	0.80	0.40
Household uses pump in dry or rainy season	0.86	0.35
Primary light source for household: flashlight	0.87	0.34
Monthly cost of lighting	1892	2511
No latrine in household	0.69	0.46
Household uses the mill	0.98	0.14
Number of rooms in house (topcoded)	4.06	2.38
Number of rooms with a tin roof	1.88	1.79
Any rooms in house with a tin roof	0.75	0.44
Number of rooms with a tin roof (topcoded)	1.87	1.73
Percent of rooms in house with a tin roof	0.49	0.38
Number of rooms with cement walls	0.75	1.31
Any rooms in house with cement walls	0.36	0.48
Number of rooms with cement walls (topcoded)	0.72	1.19
Percent of rooms in house with cement walls	0.19	0.32
Number of rooms with cement floors	1.53	1.95
Any rooms in house with cement floors	0.56	0.50
Number of rooms with cement floors (topcoded)	1.50	1.83
Percent of rooms in house with cement floors	0.39	0.41
Total value of assets	321,304	509,394
Informal savings	7,045	24,432
Indicator for having a ROSCA	0.07	0.25

Tropical Livestock Units	2.71	4.97
Total value of annual food consumption	729,868	1,036,765
Total value of non-food expenditures	601,738	546,808
Total value of non-food expenditures and consumption	1,331,605	1,348,029
Village population	2,583	2,194
Health center in village	0.15	0.36
Distance to nearest market	4.75	4.94
Distance to nearest health center (km)	5.15	4.26
Village has a pump in both rainy and dry seasons	0.85	0.36
Village has a pump in either rainy or dry seasons	0.90	0.29
Primary school in village	0.90	0.30
Distance to nearest primary school (km)	0.33	1.37
0-3 classes in school	0.20	0.40
Meals provided at school	0.82	0.38
Secondary school in village	6.62	5.60
Distance to nearest secondary school (km)	0.20	0.40
Adult literacy program in village in past year	0.10	0.30
Cost for transportation to regional capital	2162	1595
Cost for transportation to Ouagadougou	4843	1547
Distance to nearest paved road (km)	21.48	15.94
Number of months roads to village impassable	3.47	1.91
Any months roads to village impassable	0.94	0.23
Any epidemics in village in past 12 months	0.30	0.46
Number of months in year with dry wells in village	1.22	1.77
Any months with dry well in village	0.42	0.49
Number of months in year with dry marigot in village	4.53	2.78
Any epidemics that killed animals in past year	0.88	0.33
Any development projects in village	0.24	0.43
Very bad rainy season in past 12 months	0.31	0.46
Pests destroyed more than 1/2 of crops in past 12 months	0.25	0.43

Notes: These covariates are measured at baseline for the 1500 households surveyed at endline.

Appendix Table A3. Baseline Balance, 74 Villages in Endline Sample

	Control	Cash Arm (T1)	T1= Control	Cash + Info Arm (T2)	T2= Control	Cash + Info + Home Visits Arm (T3/T4)	T3/T4= Control	All equal
Village Characteristics	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Number of households	207	197	0.76	197	0.73	194	0.67	0.98
Health center in village	0.12	0.29	0.21	0.20	0.54	0.04	0.39	0.12
Distance to nearest health center (in km)	6.94	4.00	0.06	5.20	0.31	4.58	0.11	0.29
Distance to nearest market (in km)	3.82	5.76	0.26	4.60	0.69	4.68	0.55	0.74
Primary school in village	0.94	0.94	1.00	0.87	0.49	0.88	0.49	0.81
Secondary school in village	0.29	0.12	0.21	0.27	0.87	0.16	0.33	0.53
Dist. to nearest secondary school (in km)	6.53	6.06	0.79	5.23	0.48	7.62	0.59	0.59
Distance to nearest paved road (in km)	17.09	23.35	0.25	19.63	0.62	24.44	0.15	0.45
# of months roads to village impassable	2.65	3.71	0.06	4.07	0.05	3.48	0.14	0.14
Household Characteristics								
Male	0.87	0.79	0.03	0.83	0.25	0.75	0.00	0.00
Age	47.87	44.39	0.02	45.71	0.21	45.87	0.17	0.11
Any education	0.07	0.08	0.87	0.11	0.15	0.11	0.15	0.32
Household size	10.24	8.92	0.01	9.14	0.03	8.86	0.01	0.04
# children	4.93	5.13	0.35	5.08	0.50	4.91	0.91	0.63
Married	0.90	0.92	0.56	0.93	0.20	0.93	0.25	0.54
Monogamous	0.45	0.42	0.55	0.49	0.42	0.48	0.53	0.45
Polygamous	0.45	0.49	0.42	0.44	0.84	0.45	0.91	0.81
Gourmanche ethnicity	0.08	0.08	0.98	0.13	0.52	0.10	0.73	0.91
Mossi ethnicity	0.28	0.42	0.24	0.43	0.29	0.55	0.03	0.17
Peulh ethnicity	0.12	0.05	0.07	0.05	0.07	0.05	0.08	0.29
Yana ethnicity	0.24	0.28	0.79	0.21	0.79	0.15	0.36	0.60
Catholic or Protestant	0.25	0.25	0.96	0.26	0.94	0.35	0.18	0.51
Muslim	0.72	0.74	0.84	0.73	0.89	0.64	0.31	0.54
Animist or no religion	0.03	0.01	0.12	0.01	0.28	0.02	0.38	0.39

Prenatal/Health								
Child receiving vitamin A	0.50	0.44	0.30	0.45	0.29	0.52	0.70	0.36
Child receiving iron	0.53	0.51	0.73	0.46	0.07	0.55	0.51	0.02
Mother receiving vitamin A	0.74	0.76	0.67	0.78	0.49	0.78	0.43	0.85
Mother receiving iron	0.90	0.92	0.34	0.90	0.88	0.89	0.76	0.58
Child fully vaccinated	0.45	0.44	0.81	0.38	0.26	0.50	0.39	0.09
Child sleeps under bednet	0.76	0.70	0.30	0.73	0.62	0.78	0.76	0.51
Index of food groups, children 6-23	0.15	-0.05	0.01	0.05	0.38	-0.07	0.01	0.04
Child has not had diarrhea past 30 days	0.68	0.64	0.29	0.66	0.68	0.71	0.55	0.36
Child given ORS	0.50	0.43	0.23	0.45	0.30	0.45	0.22	0.56
Mother washes hands after toilet	0.86	0.86	0.89	0.84	0.71	0.87	0.81	0.92
Mother washes hands before feeding	0.86	0.87	0.94	0.82	0.34	0.88	0.76	0.59
Anthropometrics								
Height-for-age z-score	-1.31	-1.29	0.84	-1.25	0.64	-1.10	0.05	0.14
Arm circumference-for-age z-score	-0.94	-0.96	0.79	-0.94	0.96	-0.93	0.99	0.99
Weight-for-age z-score	-1.22	-1.17	0.64	-1.19	0.80	-1.18	0.65	0.96
Education								
Enrollment	0.54	0.53	0.84	0.49	0.38	0.57	0.54	0.65
Years of school	2.16	2.09	0.76	1.97	0.48	2.28	0.62	0.75
Any schooling	0.59	0.58	0.90	0.53	0.28	0.64	0.30	0.38
Progression	0.55	0.53	0.81	0.49	0.35	0.58	0.51	0.58
Denver								
Total score	0.43	0.43	0.80	0.44	0.53	0.44	0.65	0.92
Language	0.39	0.41	0.36	0.40	0.66	0.41	0.41	0.76
Fine motor	0.42	0.41	0.80	0.43	0.63	0.45	0.18	0.33
Gross motor	0.48	0.48	0.99	0.50	0.48	0.50	0.50	0.78
Personal-social	0.43	0.43	0.97	0.45	0.48	0.44	0.71	0.82

Strengths & Difficulties								
Indicator for total difficulties in avg range	0.32	0.42	0.07	0.34	0.63	0.43	0.02	0.06
Indicator for low total difficulties (normed)	0.33	0.41	0.15	0.34	0.89	0.43	0.02	0.08
Indicator for prosocial in avg range	0.28	0.22	0.34	0.24	0.50	0.25	0.59	0.80
Indicator for high prosocial (normed)	0.39	0.30	0.18	0.35	0.52	0.32	0.23	0.54
ECD								
Total activities available to child	4.42	4.38	0.77	4.47	0.81	4.53	0.44	0.60
Child injured in past 12 months	0.01	0.01	0.78	0.01	0.62	0.02	0.29	0.56
Child has birth certificate	0.84	0.85	0.68	0.80	0.42	0.83	0.85	0.61
Index of parenting behaviors	0.08	0.04	0.37	0.02	0.34	0.00	0.08	0.35

Notes: Calculations in this table are based on baseline data from the 74 villages in the main sample. Standard errors are clustered at the village level. The treatment arms are abbreviated as "T1" (cash only), "T2" (cash + information), "T3/T4" (cash + information + home visits). Column 1 presents the baseline mean in the control group; columns 2, 4, and 6 present the baseline means for each of the treatment arms; columns 3, 5, and 7 present p-values from a test of mean equality between the control arm and each of the respective treatment arms; and column 8 shows p-values for an F-test for equality across all four groups. For variable definitions, see Table 2.

Appendix Table A4. Impacts on Fertility and Pregnancy, Value-Added Specification

	# times pregnant	Age at 1st pregnancy	Age at 2nd pregnancy	Age at 3rd pregnancy	Age at 4th pregnancy	Age at 5th pregnancy	Indicator for last birth assisted by medical professional	Pregnancy index
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash	0.026	-0.020	-0.016	0.038	0.328	0.367	0.009	0.045
	(0.127)	(0.220)	(0.228)	(0.224)	(0.279)	(0.412)	(0.021)	(0.067)
	[0.835]	[0.930]	[0.941]	[0.870]	[0.248]	[0.375]	[0.678]	[0.512]
+ Info	-0.005	0.004	-0.088	-0.178	-0.166	0.214	-0.011	-0.063
	(0.122)	(0.200)	(0.232)	(0.236)	(0.272)	(0.289)	(0.014)	(0.060)
	[0.963]	[0.982]	[0.706]	[0.454]	[0.586]	[0.470]	[0.427]	[0.306]
+ Home Visits	-0.310***	0.313*	0.483**	0.615**	0.768***	0.457	0.038***	0.215***
	(0.113)	(0.172)	(0.211)	(0.258)	(0.285)	(0.319)	(0.011)	(0.051)
	[0.010]	[0.073]	[0.021]	[0.017]	[0.007]	[0.152]	[0.002]	[0.000]
Observations	1,051	1,051	984	914	811	688	1,029	1,051
P-value: Cash+Info+HV=0	0.02	0.15	0.08	0.05	0.00	0.03	0.05	0.00
Control Group Mean	4.63	18.71	21.56	24.16	26.51	28.95	0.96	0.00

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the household level using the value-added specification. Mothers with children under 5 at the endline are included in the regression. Because this section of the survey was not asked at the baseline, the ANCOVA specification cannot be estimated for this table, and these results are from an endline-only specification. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4). The outcomes are defined in Table 3. Columns 1, 2, and 8 include the full sample of households represented in this section of the survey, columns 3-6 include only households with women who have had at least the relevant number of pregnancies, and column 7 includes only households with at least one woman in the section who has given birth to a child under 5 (and does not include women currently pregnant who have not yet given birth).

Appendix Table A5. Impacts on Household Health Behaviors, Value-Added Specification

	Child receives vitamin A	Child receives iron	Mother receives vitamin A during pregnancy	Mother receives iron during pregnancy	Child fully vaccinated	Child sleeps under mosquito net	Food group index, children 6-23 months
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cash	0.016	-0.032	-0.036	-0.020	-0.014	0.017	0.055
	(0.039)	(0.041)	(0.026)	(0.016)	(0.051)	(0.050)	(0.139)
	[0.673]	[0.452]	[0.190]	[0.212]	[0.776]	[0.741]	[0.692]
+ Info	-0.027	0.012	0.007	-0.021	-0.074	0.071	-0.012
	(0.041)	(0.041)	(0.027)	(0.021)	(0.046)	(0.048)	(0.142)
	[0.526]	[0.807]	[0.799]	[0.322]	[0.125]	[0.145]	[0.939]
+ Home Visits	0.086**	0.029	0.021	0.031	0.072	0.047	0.252**
	(0.039)	(0.042)	(0.029)	(0.022)	(0.049)	(0.038)	(0.100)
	[0.026]	[0.479]	[0.474]	[0.163]	[0.142]	[0.228]	[0.011]
Observations	1,028	1,028	1,028	1,028	1,028	1,028	259
P-value: Cash+Info+HV=0	0.03	0.83	0.74	0.57	0.77	0.00	0.00
Control Group Mean	0.49	0.62	0.85	0.94	0.51	0.73	0.17

Appendix Table A5 (continued). Impacts on Household Health Behaviors, Value-Added Specification

	# pregnancies	# prenatal visits, last birth	Indicator for breast-feeding, last birth	Child had no diarrhea last 30 days	Child given ORS	Mother washes hands after using toilet	Mother washes hands before feeding children	Health behavior index
	(8)	(9)	(10)	(11)	(12)	(14)	(13)	(15)
Cash	0.026	0.055	-0.006	0.075*	-0.018	0.000	0.024	-0.030
	(0.127)	(0.105)	(0.008)	(0.038)	(0.044)	(0.020)	(0.023)	(0.022)
	[0.838]	[0.602]	[0.510]	[0.053]	[0.699]	[0.998]	[0.308]	[0.178]
+ Info	-0.005	0.131	0.003	-0.068**	0.033	-0.006	0.020	0.045*
	(0.122)	(0.108)	(0.008)	(0.027)	(0.042)	(0.021)	(0.018)	(0.024)
	[0.967]	[0.243]	[0.708]	[0.015]	[0.450]	[0.762]	[0.288]	[0.068]
+ Home Visits	-0.310***	0.014	0.004	0.083***	-0.038	0.038**	0.005	0.064**
	(0.113)	(0.097)	(0.005)	(0.029)	(0.037)	(0.017)	(0.013)	(0.025)
	[0.011]	[0.885]	[0.456]	[0.005]	[0.304]	[0.027]	[0.692]	[0.012]
Observations	1,051	1,032	1,032	1,028	1,028	1,144	1,144	1,028
P-value: Cash+Info+HV=0	0.02	0.05	0.80	0.02	0.59	0.04	0.01	0.00
Control Group Mean	4.63	4.67	0.99	0.61	0.52	0.94	0.93	0.15

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the household level using the value-added ANCOVA specification. Outcomes in columns 1-6 and 11-12 are measured for children ages 0-47 months. The outcome in column 7 is for children ages 6-23 months, which is why the sample size is much smaller. Outcomes in columns 8-10 are asked to mothers of children under age 5 or pregnant at the time of the survey. All outcomes are defined in the notes in Table 2 or 4. Column 8 includes all households represented in that section of the survey, while columns 9-10 include only households with women who have given birth (and do not include women who are currently pregnant but have not yet given birth). Outcomes in columns 13-14 are asked to all mothers of children age 5 or under at the time of the endline. The health behavior index in column 15 is a standardized index across the outcomes in columns 1-14. Endline values of the index include all 14 outcomes, but since the outcomes in columns 8-10 were only asked at endline, the baseline values of the index only include the other 11 outcomes. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4).

Appendix Table A6. Impacts on Anthropometrics, Value-Added Specification

	Height-for-age Z-score	Arm circumference-for-age Z-score	Weight-for-age Z-score	Anthropometrics index
	(1)	(2)	(3)	(4)
Cash	-0.101	0.258***	0.080	0.099
	(0.096)	(0.082)	(0.086)	(0.067)
	[0.309]	[0.003]	[0.364]	[0.145]
+ Info	-0.051	-0.269***	-0.110	-0.150*
	(0.099)	(0.092)	(0.119)	(0.078)
	[0.609]	[0.007]	[0.342]	[0.049]
+ Home Visits	0.144	0.150*	0.105	0.114*
	(0.091)	(0.077)	(0.103)	(0.067)
	[0.102]	[0.066]	[0.288]	[0.086]
Observations	1,869	1,869	1,869	1,869
P-value: Cash+Info+HV=0	0.93	0.04	0.29	0.26
Control Group Mean	-1.19	-1.10	-1.25	-0.06

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the value-added ANCOVA specification at the individual level for children ages 0-59 months. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4). Z-scores are calculated using the WHO reference population. The anthropometrics index in column 4 is a standardized index across the outcomes in columns 1-3.

Appendix Table A7. Impacts on Education Outcomes, Value-Added Specification

	Enrolled in school	Years of school completed	Any school completed	Progression (completed/ expected)	Education index
	(1)	(2)	(3)	(4)	(5)
Cash	0.111***	0.156	0.101***	0.039	0.206***
	(0.036)	(0.116)	(0.036)	(0.030)	(0.069)
	[0.005]	[0.191]	[0.010]	[0.216]	[0.008]
+ Info	-0.060**	-0.065	-0.051**	-0.014	-0.105**
	(0.025)	(0.103)	(0.024)	(0.028)	(0.045)
	[0.012]	[0.503]	[0.027]	[0.610]	[0.017]
+ Home Visits	0.031	0.175**	0.027	0.034	0.058
	(0.021)	(0.080)	(0.021)	(0.022)	(0.038)
	[0.148]	[0.034]	[0.186]	[0.119]	[0.126]
Observations	5,128	5,128	5,128	4,595	5,128
P-value: Cash+Info+HV=0	0.00	0.00	0.00	0.01	0.00
Control Group Mean	0.46	2.17	0.57	0.52	0.03

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the value-added ANCOVA specification at the individual level for children at least 6 years old and less than 15 years old. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4). For variable definitions, see Table 2. The education index in column 5 is a standardized index across the outcomes in columns 1-4. The regression in column 4 has fewer observations because we cannot calculate progression for 6-year-olds, since the expected starting age for primary school is age 7.

Appendix Table A8. Impacts on Denver Early Childhood Development Assessment, Value-Added Specification

	Total score	Language	Fine motor	Gross motor	Personal social	Denver index
	(1)	(2)	(3)	(4)	(5)	(6)
Cash	-0.008	0.002	-0.016	-0.023	-0.027	-0.046
	(0.029)	(0.023)	(0.035)	(0.033)	(0.030)	(0.076)
	[0.778]	[0.941]	[0.648]	[0.484]	[0.360]	[0.544]
+ Info	-0.032	-0.036*	-0.019	-0.032	0.002	-0.058
	(0.028)	(0.021)	(0.032)	(0.030)	(0.031)	(0.071)
	[0.249]	[0.094]	[0.576]	[0.273]	[0.952]	[0.413]
+ Home Visits	0.054**	0.064***	0.041	0.069***	0.052*	0.143**
	(0.023)	(0.018)	(0.025)	(0.024)	(0.028)	(0.058)
	[0.014]	[0.001]	[0.106]	[0.004]	[0.058]	[0.015]
Observations	2,484	2,484	2,484	2,484	2,484	2,484
P-value: Cash+Info+HV=0	0.56	0.14	0.84	0.61	0.32	0.53
Control Group Mean	0.47	0.44	0.48	0.52	0.48	0.16

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the value-added ANCOVA specification at the individual level for children ages 0-71 months. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4). For variable definitions, see Table 2. The Denver index in column 6 is a standardized index across the components of the Denver test in columns 2-5.

Appendix Table A9. Impacts on Strengths and Difficulties Assessment, Value-Added Specification

	Indicator for total difficulties in average range	Indicator for low total difficulties (normed)	Indicator for prosocial in average range	Indicator for high prosocial (normed)	Strengths & difficulties index
	(1)	(2)	(3)	(4)	(5)
Cash	0.077	0.073	0.042*	0.033	0.123*
	(0.051)	(0.051)	(0.023)	(0.034)	(0.063)
	[0.137]	[0.147]	[0.062]	[0.352]	[0.059]
+ Info	-0.041	-0.035	-0.019	-0.029	-0.070
	(0.052)	(0.052)	(0.023)	(0.031)	(0.072)
	[0.447]	[0.517]	[0.440]	[0.382]	[0.334]
+ Home Visits	-0.002	0.002	0.037*	0.057**	0.052
	(0.047)	(0.047)	(0.019)	(0.028)	(0.061)
	[0.975]	[0.958]	[0.067]	[0.045]	[0.406]
Observations	1,677	1,677	1,677	1,677	1,677
P-value: Cash+Info+HV=0	0.47	0.40	0.00	0.05	0.05
Control Group Mean	0.28	0.28	0.06	0.17	-0.18

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run using the value-added ANCOVA specification at the individual level for children ages 24-71 months. Because these children were not old enough to complete this section of the survey at baseline, we cannot run the ANCOVA specification, and thus, these regressions only use endline data. "Cash" is an indicator for being assigned to receive cash (T1, T2, T3, T4), "+ Info" is an indicator for being assigned to receive information (T2, T3, T4), and "+ Home Visits" is an indicator for being assigned to receive home visits (T3, T4). For variable definitions, see Table 2. The strengths and difficulties index in column 5 is a standardized index across the outcomes in columns 1-4.

Appendix Table 10. Impacts on Early Child Development Outcomes

	Indicator for prosocial in average range	Total categories of toys available to child	Child injured, past yr	Child has birth certificate	Parent interactions index	Child development information Index
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Arm	0.042*	-0.106	-0.004	0.039	-0.099**	-0.016
	(0.023)	(0.166)	(0.009)	(0.028)	(0.040)	(0.048)
	[0.062]	[0.515]	[0.625]	[0.195]	[0.020]	[0.716]
Cash + Info Arm	0.023	0.003	-0.006	0.020	-0.037	-0.001
	(0.020)	(0.147)	(0.009)	(0.028)	(0.038)	(0.038)
	[0.285]	[0.984]	[0.539]	[0.504]	[0.334]	[0.972]
	0.059***	0.001	-0.005	0.037	0.000	0.026
Cash + Info + Home Visits Arm	(0.015)	(0.150)	(0.009)	(0.027)	(0.036)	(0.035)
	[0.000]	[0.998]	[0.596]	[0.154]	[0.989]	[0.455]
Observations	1,677	2,467	2,467	2,467	2,467	2,467
Control Group Mean	0.06	4.33	0.03	0.78	0.11	0.06
P-value: Cash=Cash + Info	0.41	0.42	0.88	0.47	0.13	0.72
P-value: Cash=Cash + Info + HV	0.42	0.42	0.95	0.95	0.01	0.29
P-value: Cash + Info=Cash + Info + H'	0.06	0.98	0.94	0.43	0.28	0.30

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Regressions are run at the individual level. The regression in column 1 is repeated from Table 8 column 3 and is estimated using endline data only. The regressions in columns 2-6 are run using the ANCOVA specification. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. For variable definitions, see Table 2. All columns include children ages 0-71 months, except column 1, which includes only children ages 24-71 months. The child development information index is a standardized index across columns 1-5.

Appendix Table A11. Impacts on Main Indexes, Alternative Specifications

Panel A: Indexes for Main Tables (ANCOVA Specification)

	Pregnancy index	Health behaviors index	Anthropometrics index	Education index	Denver index	SDQ index
	(1)	(2)	(3)	(4)	(5)	(6)
Cash Arm	0.045	-0.030	0.099	0.206***	-0.046	0.123*
	(0.067)	(0.022)	(0.067)	(0.069)	(0.076)	(0.063)
	[0.512]	[0.178]	[0.145]	[0.008]	[0.544]	[0.059]
Cash + Info Arm	-0.018	0.015	-0.051	0.101*	-0.103	0.053
	(0.056)	(0.024)	(0.072)	(0.057)	(0.068)	(0.065)
	[0.748]	[0.536]	[0.457]	[0.081]	[0.114]	[0.446]
Cash + Info + Home	0.198***	0.079***	0.063	0.159***	0.040	0.105*
Visits Arm	(0.055)	(0.023)	(0.056)	(0.045)	(0.064)	(0.053)
	[0.000]	[0.001]	[0.255]	[0.002]	[0.510]	[0.068]
Observations	1,051	1,028	1,869	5,128	2,484	1,677
Control Group Mean	0.00	0.15	-0.06	0.03	0.16	-0.18

Panel B: Indexes for Main Tables - No Controls (ANCOVA Specification)

	Pregnancy index	Health behaviors index	Anthropometrics index	Education index	Denver index	SDQ index
Cash Arm	-0.007	-0.002	0.081	0.068	-0.046	0.128*
	(0.060)	(0.028)	(0.068)	(0.077)	(0.076)	(0.065)
	[0.926]	[0.929]	[0.229]	[0.388]	[0.544]	[0.055]
Cash + Info Arm	-0.048	0.004	-0.063	0.050	-0.103	0.049
	(0.051)	(0.029)	(0.075)	(0.068)	(0.068)	(0.066)
	[0.363]	[0.908]	[0.393]	[0.486]	[0.114]	[0.491]
Cash + Info + Home	0.169***	0.072***	0.074	0.134**	0.040	0.115**
Visits Arm	(0.057)	(0.026)	(0.058)	(0.063)	(0.064)	(0.056)
	[0.003]	[0.010]	[0.210]	[0.028]	[0.510]	[0.059]
Observations	1,051	1,028	1,869	5,128	2,484	1,677
Control Group Mean	0.00	0.15	-0.06	0.03	0.16	-0.18

Panel C: Indexes for Main Tables - Endline - Only Specification

	Pregnancy index	Health behaviors index	Anthropometrics index	Education index	Denver index	SDQ index
Cash Arm	0.045	-0.031	0.075	0.171**	-0.044	0.123*
	(0.067)	(0.021)	(0.069)	(0.077)	(0.076)	(0.063)
	[0.512]	[0.153]	[0.273]	[0.036]	[0.561]	[0.059]
Cash + Info Arm	-0.018	0.015	-0.059	0.073	-0.101	0.053
	(0.056)	(0.025)	(0.078)	(0.069)	(0.068)	(0.065)
	[0.748]	[0.541]	[0.454]	[0.287]	[0.132]	[0.446]
Cash + Info + Home Visits Arm	0.198***	0.082***	0.072	0.174***	0.036	0.105*
	(0.055)	(0.022)	(0.062)	(0.055)	(0.065)	(0.053)
	[0.000]	[0.001]	[0.235]	[0.003]	[0.561]	[0.068]
Observations	1,051	1,028	1,869	5,128	2,484	1,677
Control Group Mean	0.00	0.15	-0.06	0.03	0.42	-0.18

Panel D: Indexes for Main Tables - Difference-in-Differences Specification

	Pregnancy index	Health behaviors index	Anthropometrics index	Education index	Denver index	SDQ index
Cash Arm X Post	-	0.035	0.093	0.129**	-0.027	0.132
	-	(0.045)	(0.093)	(0.060)	(0.074)	(0.091)
		[0.464]	[0.308]	[0.029]	[0.712]	[0.191]
Cash + Info Arm X Post	-	0.009	0.039	0.104*	-0.073	0.059
	-	(0.052)	(0.083)	(0.056)	(0.071)	(0.080)
		[0.885]	[0.652]	[0.062]	[0.302]	[0.480]
Cash + Info + Home Visits Arm X Post	-	0.101**	0.113	0.170***	0.088	0.079
	-	(0.044)	(0.075)	(0.056)	(0.063)	(0.075)
		[0.023]	[0.162]	[0.000]	[0.157]	[0.320]
Observations	-	5,000	10,179	18,845	12,667	8,735
Control Group Mean	-	0.05	0.02	0.04	0.04	-0.02

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. Each panel contains the Kling et al. indexes from Tables 3 through 8. Panel A repeats the results with the main ANCOVA specification, Panel B shows the results without lasso-selected covariates, Panel C shows the results from an endline-only specification that does not control for baseline values of the outcome (lasso-selected controls are also included in this specification), and Panel D shows the results from a difference-in-differences specification that includes all 225 baseline villages. Since we do not have questions on pregnancy at baseline, we cannot run the difference-in-differences specification for the pregnancy index.

Appendix Table A12. Heterogeneity, by Distance from Conflict

	Pregnancy index		Health behaviors index		Anthropometrics index		Education index		Denver index		Strengths & difficulties index	
	Close to conflict	Far from conflict	Close to conflict	Far from conflict	Close to conflict	Far from conflict	Close to conflict	Far from conflict	Close to conflict	Far from conflict	Close to conflict	Far from conflict
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Cash Arm	-0.040	0.044	0.001	-0.061	-0.007	0.284***	0.283***	0.189**	0.109	-0.157	0.250***	-0.073
	(0.080)	(0.070)	(0.032)	(0.048)	(0.066)	(0.104)	(0.054)	(0.082)	(0.070)	(0.107)	(0.067)	(0.124)
	[0.606]	[0.534]	[0.972]	[0.223]	[0.898]	[0.009]	[0.000]	[0.031]	[0.137]	[0.145]	[0.001]	[0.594]
Cash + Info Arm	-0.015	-0.090	0.007	-0.058	-0.176*	0.086	0.177***	-0.009	-0.023	-0.143*	-0.003	0.076
	(0.080)	(0.056)	(0.034)	(0.060)	(0.087)	(0.141)	(0.047)	(0.053)	(0.079)	(0.077)	(0.063)	(0.114)
	[0.855]	[0.127]	[0.848]	[0.357]	[0.059]	[0.557]	[0.001]	[0.880]	[0.796]	[0.072]	[0.953]	[0.514]
Cash + Info + Home Visits Arm	0.283***	0.078	0.107***	-0.008	0.010	0.189*	0.308***	0.165***	0.153**	0.052	0.181***	0.007
	(0.074)	(0.065)	(0.032)	(0.047)	(0.079)	(0.099)	(0.047)	(0.058)	(0.075)	(0.075)	(0.067)	(0.114)
	[0.002]	[0.264]	[0.001]	[0.878]	[0.905]	[0.079]	[0.001]	[0.011]	[0.052]	[0.503]	[0.010]	[0.950]
Observations	537	514	556	472	988	881	2,684	2,444	1,307	1,177	878	799
Control Group Mean	-0.01	0.02	0.14	0.18	-0.03	-0.11	0.05	0.00	0.17	0.15	-0.21	-0.13

Notes: Standard errors clustered at the village level are in parentheses, and randomization inference p-values are in brackets. *** p<0.01, ** p<0.05, * p<0.1. Conflict data comes from the Uppsala Conflict Data Program. We use GPS locations for conflict events from January 2018 to May 2022 and calculate the distance from each village to the nearest conflict event. Villages below the median distance to the nearest conflict event are considered close to the conflict; villages above the median distance are considered far from the conflict. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4. This table contains the Kling et al. (2007) indexes from Tables 3 through 8 as the outcome variables, split by whether the village was below or above the median distance from the nearest conflict site.

Appendix Table A13. Attrition by Treatment Arm

	Control	T1	T2	T3	T4	All groups
Panel A: Village-level attrition, Est & Centre-Est	(1)	(2)	(3)	(4)	(5)	(6)
Percentage of Baseline Villages Surveyed at Endline	37.8	37.8	33.3	28.9	26.7	32.9
P-value for F-test Against Control	-	1	0.663	0.37	0.27	0.724
Number of Baseline Villages	45	45	45	45	45	225
Number of Endline Villages	17	17	15	13	12	74

Panel B: Household-level attrition, Est & Centre-Est	**Control**	**T1**	**T2**	**T3**	**T4**	**All groups**
Percentage of Baseline Households Surveyed at Endline	36.7	36.8	32.3	26.8	26.0	31.7
P-value for F-test Against Control	-	0.99	0.66	0.31	0.265	0.671
Number of Baseline Households	946	940	944	961	939	4730
Number of Baseline Households in Villages Surveyed at Endline	357	356	315	267	246	1541
Number of Endline Households	347	346	305	258	244	1500

Notes: Calculations in this table are based on baseline data from all 225 villages. The first row in each panel shows the share of villages or households that were resurveyed at endline. The second row reports p-values from F-tests comparing attrition in each treatment arm with attrition in the control group. Standard errors are clustered at the village level. The treatment arms are abbreviated as "T1" (cash only), "T2" (cash + information), "T3" (cash + information + nutrition home visits), "T4" (cash + information + nutrition & parenting home visits). The remaining rows show the raw numbers of villages and households.

Appendix Table A14. Attrition by Treatment Arm

	Village present at endline	Household present at endline
	(1)	(2)
Cash Arm	0.000	0.001
	(0.103)	(0.100)
Cash + Info Arm	-0.044	-0.044
	(0.102)	(0.098)
Cash + Info + Home Visits Arm	-0.100	-0.103
	(0.087)	(0.084)
Observations	225	4,730
Control Group Mean	0.38	0.37

Notes: Standard errors clustered at the village level are in parentheses. *** p<0.01, ** p<0.05, * p<0.1. "Cash arm" indicates the household is in a village assigned to treatment arm 1, "cash + info arm" indicates the household is in a village assigned to treatment arm 2, and "cash + info + home visits arm" indicates the household is in a village assigned to treatment arm 3 or 4.

Appendix Table A15. Attrition by Arm, All 225 Villages

	Control non-attritted village	Control attritted village	T1 non-attritted village	T1 attritted village	T2 non-attritted village	T2 attritted village	T3/T4 non-attritted village	T3/T4 attritted village	Differences equal across arms
Village Characteristics	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Number of households	207	178	197	165	197	197	194	215	0.29
Health center in village	0.12	0.11	0.29	0.11	0.20	0.33	0.04	0.23	0.05
Distance to nearest health center (in km)	6.94	9.39	4.00	9.04	5.20	6.42	4.58	6.88	0.52
Distance to nearest market (in km)	3.82	6.64	5.76	3.75	4.60	3.97	4.68	2.97	0.32
Primary school in village	0.94	0.96	0.94	0.96	0.87	0.93	0.88	1.00	0.70
Secondary school in village	0.29	0.07	0.12	0.11	0.27	0.17	0.16	0.11	0.58
Dist. to nearest secondary school (in km)	6.53	14.07	6.06	11.82	5.23	10.68	7.62	10.61	0.49
Distance to nearest paved road (in km)	17.09	50.38	23.35	51.35	19.63	47.50	24.44	46.09	0.61
# of months roads to village impassable	2.65	3.43	3.71	4.43	4.07	3.33	3.48	3.78	0.35
Household Characteristics									
Male	0.87	0.89	0.78	0.88	0.82	0.86	0.74	0.88	0.04
Age	47.71	44.84	44.14	43.62	45.74	43.05	45.66	43.91	0.45
Any education	0.07	0.05	0.08	0.05	0.10	0.07	0.12	0.07	0.87
Household size	10.25	9.96	8.86	8.87	9.08	8.87	8.81	8.93	0.87
# children	4.94	5.68	5.11	5.29	5.04	5.24	4.88	5.36	0.25
Married	0.90	0.94	0.92	0.95	0.93	0.94	0.93	0.96	0.75
Monogamous	0.45	0.46	0.43	0.46	0.49	0.49	0.48	0.46	0.83
Polygamous	0.46	0.48	0.49	0.50	0.44	0.45	0.45	0.49	0.91
Gourmanche ethnicity	0.08	0.51	0.08	0.52	0.13	0.47	0.10	0.44	0.75
Mossi ethnicity	0.27	0.08	0.43	0.06	0.42	0.08	0.55	0.08	0.18
Peulh ethnicity	0.12	0.15	0.05	0.12	0.05	0.10	0.05	0.13	0.74
Yana ethnicity	0.25	0.24	0.27	0.27	0.21	0.33	0.15	0.30	0.54
Catholic or Protestant	0.25	0.29	0.25	0.29	0.25	0.37	0.35	0.30	0.33
Muslim	0.72	0.47	0.74	0.47	0.73	0.42	0.64	0.52	0.23
Animist or no religion	0.03	0.23	0.01	0.23	0.01	0.21	0.02	0.18	0.64

Prenatal/Health									
Child receives vitamin A	0.50	0.49	0.44	0.48	0.45	0.56	0.52	0.51	0.31
Child receives iron	0.53	0.48	0.51	0.51	0.46	0.55	0.55	0.52	0.04
Mother receives vitamin A	0.74	0.80	0.76	0.77	0.78	0.82	0.78	0.78	0.77
Mother receives iron	0.90	0.88	0.92	0.89	0.90	0.89	0.89	0.88	0.95
Child fully vaccinated	0.45	0.35	0.44	0.34	0.38	0.35	0.50	0.37	0.43
Child sleeps under bednet	0.76	0.79	0.70	0.74	0.73	0.72	0.78	0.74	0.62
Food group index, children 6-23	0.15	0.01	-0.05	-0.03	0.05	-0.06	-0.07	0.02	0.07
Child no diarrhea past 30 days	0.68	0.57	0.64	0.59	0.66	0.60	0.71	0.61	0.58
Child given ORS	0.50	0.33	0.43	0.32	0.45	0.29	0.45	0.34	0.64
Mother washes hands after toilet	0.86	0.80	0.86	0.77	0.84	0.79	0.87	0.78	0.83
Mother washes hands before feeding	0.86	0.79	0.87	0.75	0.82	0.77	0.88	0.76	0.54
Anthropometrics									
Height-for-age z-score	-1.31	-1.44	-1.29	-1.27	-1.25	-1.35	-1.10	-1.40	0.19
Arm circumference-for-age z-score	-0.94	-1.06	-0.96	-1.15	-0.94	-1.19	-0.93	-1.19	0.69
Weight-for-age z-score	-1.22	-1.27	-1.17	-1.20	-1.19	-1.30	-1.18	-1.29	0.92
Education									
Enrollment	0.54	0.38	0.53	0.37	0.49	0.42	0.57	0.37	0.37
Years of school	2.16	1.35	2.09	1.47	1.97	1.58	2.28	1.33	0.37
Any schooling	0.59	0.41	0.58	0.43	0.53	0.46	0.64	0.41	0.22
Progression	0.55	0.37	0.53	0.39	0.49	0.43	0.58	0.37	0.29
Denver									
Total score	0.43	0.41	0.43	0.41	0.44	0.40	0.44	0.40	0.89
Language	0.39	0.38	0.41	0.38	0.40	0.38	0.41	0.37	0.71
Fine motor	0.42	0.40	0.41	0.40	0.43	0.39	0.45	0.39	0.42
Gross motor	0.48	0.46	0.48	0.47	0.50	0.45	0.50	0.46	0.72
Personal-social	0.43	0.42	0.43	0.42	0.45	0.41	0.44	0.41	0.76

Strengths & Difficulties									
Indicator for total difficulties in avg range	0.32	0.27	0.42	0.30	0.34	0.29	0.43	0.29	0.28
Indicator for low total difficulties (normed)	0.33	0.27	0.41	0.30	0.34	0.29	0.43	0.29	0.30
Indicator for prosocial in avg range	0.28	0.19	0.22	0.14	0.24	0.15	0.25	0.15	0.99
Indicator for high prosocial (normed)	0.39	0.29	0.30	0.25	0.35	0.24	0.32	0.25	0.83
ECD									
Total categories of toys available to child	4.42	4.09	4.38	4.15	4.47	3.93	4.53	4.04	0.29
Child injured in past 12 months	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.15
Child has birth certificate	0.84	0.66	0.85	0.63	0.80	0.66	0.83	0.65	0.48
Index of parenting behaviors	0.08	0.03	0.04	0.01	0.02	-0.04	0.00	-0.04	0.99

Notes: Calculations in this table are based on baseline data from all 225 villages. Standard errors are clustered at the village level. The treatment arms are abbreviated as "T1" (cash only), "T2" (cash + information), "T3/T4" (cash + information + home visits). Columns 2, 4, 6, and 8 present the baseline means by treatment arm for the villages not resurveyed at endline. Columns 1, 3, 5, and 7 present the baseline means by treatment arm for the villages resurveyed at endline. Column 9 presents p-values for an F-test of equality across the differences within the pairs of columns (e.g. comparing the differences between the means in columns 1 and 2 with the differences between the means in columns 3 and 4, columns 5 and 6, and columns 7 and 8). For variable definitions, see Table 2.