The Role of Cash Transfer in Improving Child Health: A Review of the Evidence

Part I - The Effects of Cash Transfers on Child Health: A Global Review

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Part II – Design and Implementation of Cash Transfer Programs – Lessons from India

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EXECUTIVE SUMMARY

Over the last several decades, government agencies in India at both the national and state level have introduced a number of cash transfer programs that aim to improve educational, maternal and child health, girl child or other social welfare outcomes. However, there is limited credible evidence on the impact of these programs on outcomes, as very few of these programs have been rigorously evaluated, and none through a randomized evaluation. The current push towards cash transfer programs in India provides an opportunity for researchers to rigorously study these programs and understand their impacts; generating rigorous evidence on the design and delivery of cash transfers programs aimed at improving child health is a primary goal of the CaTCH initiative.

Despite the dearth of rigorous impact evaluations of cash transfer programs in India, there is existing evidence that can inform the design of CaTCH-funded evaluations, as well as the design of current cash transfer programs. There are two types of evidence we review in this report. First, we review and collate the evidence on the effects of cash transfers on child health in developing countries. Second, we review existing process evaluations of cash transfer programs in India to understand how design and implementation features promote or hinder the success of cash transfer programs.

Part I: A Global Literature Review of the Effects of Cash Transfers on Child Health

The global evidence on the impacts of cash transfers (CTs), both conditional and unconditional, has grown rapidly over the last two decades. While several systematic reviews have been conducted, there is no single review that focuses on child health, and includes the most recent evidence. Part 1 of this report compiles the existing evidence of the effects of CTs on a range of child health outcomes from studies in low- and middle-income countries around the world as a resource to inform programs targeting child health in India.

Effects on Key Child Health Measures

We report findings from CTs on the following health-related inputs and health outcomes: health care utilization (maternal and child care and immunization), mortality, birth weight, nutritional status, early child development, anemia, and morbidity. Overall, the evidence suggests CTs can effectively improve a range of child health outcomes, including some, such as birth weight, height, and early cognitive development, which have been shown to have longer run implications for health and economic wellbeing. Effects are often larger among disadvantaged groups and younger children. CTs are increasingly being piloted and scaled up in countries outside Latin America, offering opportunities to add to the evidence base.

Health Care Utilization: CCTs effectively increase utilization of required services, resulting in higher rates of perinatal care, facility delivery, child growth monitoring visits, timely and complete child immunizations, and receipt of vitamins and parasite treatment. UCTs are less likely to lead to improvements in these indicators, but this may also reflect the weaker health systems in many of the countries implementing UCTs. However, increased health care utilization has not clearly been linked to better birth and child health outcomes, possibly because outcomes require larger sample sizes to study, and depend on the quality of care utilized and other complimentary inputs. The potential for

targeted quality improvement strategies to improve health outcomes and make programs more cost-effective remains to be tested.

Birth Weight & Mortality: Studies from Mexico and Brazil find that CCTs sustained through pregnancy and the first year of a child's life can significantly reduce infant and child mortality. Effects largely manifest after the neo-natal period, are driven by reductions in infection and nutrition related mortality, which are most related to poverty, and are largest in areas with the worst pre-program mortality. However, there is no credible evidence of mortality improvements due to the largescale CCTs in India, and no studies of the mortality effects of UCTs. The evidence base on birth weight is similarly small and restricted to Latin America, but suggests that CTs provided during pregnancy and early childhood with and without conditions can be effective, and that vulnerable populations (young mothers and premature babies) typically benefit the most. Nutrition in utero is an important channel for birth weight, consistent with the larger literature on early life inputs.

Child Nutrition: The evidence to date suggests that CTs can improve child nutritional status, particularly height, and particularly for younger and more vulnerable children, but the effects are modest and not consistent across programs, possibly reflecting the complex causal pathways to better nutritional status. Timing and duration of exposure are critical: transfers initiated in utero and sustained through the first years of life have larger effects on height than transfers targeted later in childhood. However, transfers targeted to slightly older children can also help them compensate for earlier growth deficits and 'catch-up'. The effectiveness of maternal and preventive care conditions is unclear, but combining CTs with health and nutrition counselling for caregivers is often effective at improving feeding practices and anthropometric outcomes, as well as child development. While the relative effectiveness of cash, food transfers, and vouchers is likely to be context-specific, there is growing evidence that cash is typically more cost-effective.

Child Development: The existing evidence on the potential of CTs to improve several domains of early child development, such as language, memory, motor skills, and social personal behavior, is promising. The evidence comes from CCTs, as well as programs that function more like labelled but unconditional CTs or like UCTs. Longer and earlier exposure is more effective, and effects persist several years after transfers are discontinued. These findings are in line with a broader theoretical and empirical literature on the importance of timing inputs to the earliest months and years of life. Because developmental outcomes in this early critical period are linked to health and economic outcomes in adulthood, CTs that effectively improve child development could have very long-term consequences. However, most of the existing evidence comes from Latin America.

Promising Areas of Research

Given the breadth of designs that CT programs can and have employed, and the wide range of child health outcomes that may be of interest, there are several directions that future research could take. We highlight a few that may be relevant to CTs in India.

Design Variants: CT programs entail numerous design decisions that may have important effects on outcomes, but differences across program contexts make cross-country comparisons difficult. Studies that test design variations within a single program context would help isolate the relative costs and effectiveness of each. For example, studies could assess whether eligibility criteria chosen to incentivize certain behaviors – such as minimum age restrictions intended to avoid incentivizing early

child-bearing in India - inadvertently exclude the most vulnerable in need of income support. CTs may also have differential effects depending on when in the life-cycle they are timed. For example, targeting adolescent girls could help delay child-bearing, which can improve birth outcomes, while targeting pregnant women could improve nutrition in utero. Studies comparing the relative effects (and possible tradeoffs) of the timing of CTs at different points in the lifecycle on child health would provide an important contribution to program design.

Supply Side Interactions: Whether people take-up health services, and how beneficial they are, depends on the quality of the health care system. Several programs in India already bundle beneficiary CTs with provider incentives, but there is little evidence on the interplay. Studies that test the effects of demand side CTs, supply side incentives, and the interaction of the two in the same context, could provide critical evidence on whether there are complementarities between CTs and supply side interventions.

Focus on outcomes: Finally, assessing impacts on health outcomes with confidence requires adequately large studies. There are relatively few studies reporting health outcomes like birth weight, in part because they are not powered to do so. The equivocal findings for some outcomes, such as anthropometrics, may also reflect low power rather than a true absence of effect. Large studies could identify the full range of effects of CTs on important final health outcomes.

Part II: Review of Implementation of Cash Transfers in India

Governments in India have introduced a variety of cash transfer programs, but very few of them have been rigorously studied. There is currently no review that focuses on programs that target under-five child health. Here, we review process evaluations and other studies on existing cash transfer programs in India. This adds to the descriptive knowledge base, elucidating specific design and implementation features that promote or hinder the success of cash transfer programs.

Scope and Approach

To understand the design and implementation features that promote or hinder the success of cash transfer programs, we undertook several activities. We first mapped the landscape of cash transfer programs in India that target under-five child health and identified 30 programs in which either the transfer or the condition directly or indirectly targeted under-five child health. These programs included a combination of maternity benefit programs and girl child protection programs. The short-listed programs formed the basis of our desk review. We subsequently conducted a literature review and synthesized a broad range of evidence comprising of process evaluations, peer-reviewed articles, working papers, other observational studies. Our review comprised of 20 studies across 7 programs that were available in the public domain. To supplement our findings from the desk review, we conducted semi-structured interviews with 15 “experts” to enhance our understanding of cash transfer programs and unearth contemporaneous issues that may not have been captured in the desk review. Finally, we corroborated the outlined implementation gaps with a descriptive quantitative analysis of Janani Suraksha Yojana (JSY) to understand variation in the program’s implementation across states and possible reasons for it.

Review Findings

We summarize the evidence along five main components of cash transfer programs, which are necessary for the program's success. Overall, we found several issues in the design and administration of existing cash transfer programs that can and do affect their implementation quality and overall effectiveness.

Finding 1: Careful consideration of program eligibility and registration process can help to reduce errors of exclusion

Most cash transfer programs in India "target" program benefits, which requires decision on who is eligible (i.e., who should benefit from the program) and how they will be identified (i.e., means of verifying eligibility). Such decisions are entry points for errors of exclusion as well as errors of inclusion, and have implications for the program's coverage. Evidence suggests that there is some degree of exclusion in almost all of the programs reviewed, which result from a combination of inappropriate choice of program eligibility criteria that disqualified deserving groups (e.g., birth order restrictions), rigid program registration processes, burdensome identification requirements (e.g., ration card, BPL certification), and poorly informed frontline workers and beneficiaries.

It is important to consider these factors during the program design and implementation stage to minimize errors of exclusion. Programs in India and elsewhere have taken measures to reduce exclusion errors arising as a result of these factors. Some measures include relaxing the eligibility criteria (JSY), leveraging on technology (Aadhar) for identifying beneficiaries, providing beneficiaries multiple points of enrollment, and one-stop kiosks for procuring the necessary documents (Rajasthan). However, these innovative solutions do not address the fact that governments need to have an accurate database of eligible beneficiaries and a system to periodically update it.

Finding 2: Cash transfer programs need to take adequate measures to ensure that beneficiaries receive their entitlements as promised and on time

For any cash transfer program, it is imperative that the beneficiaries receive the program benefits that they are entitled to and when they are supposed to. Failure on either account can not only affect the beneficiary's trust in the government and the system, but also dilute the effectiveness of the program as the beneficiary may not be able to use the cash incentive for its intended purpose. Across the conditional cash transfer programs included in our review, the two main challenges with respect to the programs benefit structure were to do with: 1) the benefits not being aligned with the program goals, and 2) the benefits not being administered as designed. Beneficiaries either received the instalment with a significant delay, or the amount varied from that they were entitled to. Besides issues related to opening bank accounts and matching of account numbers, these delays were also a result of the existing administrative process, as multiple steps are involved between the time the frontline worker completes the paperwork for the release of the payment and when the payment is actually triggered. Even when there are no delays in the receipt of the program benefit, for some programs, the timing of the benefit payout may not be aligned to the program's overall objectives.

Given this finding, cash transfer programs should consider the resources and processes that are needed to administer benefits. There is a need to test innovative structures for program benefits that consider many of the limitations in resource poor countries such as India. While technology has a role to play in expediting processing the transfer payments, it is important to remember that such systems are prone to glitches, which need to be fixed to prevent the system from breaking down.

Finding 3: Achieving financial inclusion not an "unsurmountable" challenge, but requires continuous work

Most recent cash transfer programs rely on the banking system to pay benefits. While financial coverage is rapidly increasing across the country, evidence suggests that access to and ease of using banks remains a significant challenge. There is evidence that suggests that malpractices by bank officials and onerous documentation requirements often make it difficult for beneficiaries to open bank accounts. However, the bigger challenge remains that of "access and use", which disproportionately affects those belonging to the most vulnerable and marginalized groups. Less than a third of the villages in the country have a bank within 5 km; beneficiaries spend considerable time and money in retrieving the cash from their account. Further, with relatively low financial literacy levels, beneficiaries may also not have the capacity to operate their accounts.

The experience of other developing countries suggests that payment systems can be designed to overcome these challenges. However, in the interim, it is important for program administrators to experiment with alternative means for cashing out. Besides looking at new payment mechanisms such as mobile money, payment banks, there may be merit in providing beneficiaries multiple avenues where they can cash out (bank account, post-office account, mobile money, PayTMs, etc.)

Finding 4: Programs should consider having fewer and easily verifiable conditions

For conditional cash transfer programs, decisions related to the number and type of conditions need to be viewed in conjunction with service availability, intra-household decision-making, and ease of monitoring and compliance verification. Evidence suggests that issues related to service availability and/or service quality hamper the program's smooth implementation. Further, conditions such as those related to family planning and exclusive breastfeeding, part of a few programs, need to be seen in the context of intra-household decision-making power and means of verification. For many of the programs in the review, the monitoring system is not designed keeping in mind the capacity and capabilities of the frontline worker, the program context, and other field-level challenges (internet connectivity, electricity, etc.). These factors coupled with weak incentives for the frontline worker to deliver the program benefits make it difficult to track beneficiaries and verify their compliance with conditions. Poorly enforced conditions weaken the critical link between fulfilling program conditions and thereby receiving entitled benefits.

There is a case for introducing a UCT over a CCT since the administrative challenges associated with ensuring compliance with CCT program conditions. However, when CCTs are the chosen design, programs with fewer and simple, easily verifiable conditions are preferable. In choosing conditions, it is important for policy-makers to consider availability of services. As one expert noted, conditions need to go hand-in-hand with service delivery. Based on our discussion with experts, there seems to be multiple approaches in choosing the "appropriate" program conditions: one view was to choose conditions where there is lack of demand so that the cash incentive can generate the right incentives, the other view was to design conditions as "soft" conditions and not hard as beneficiaries face numerous challenges in complying with them, and the third view was to choose conditions that are easily verifiable (i.e., not conditioning on behavior change).

Programs should also consider ways of reducing burden arising from "conditioning" benefits such as, including a combination of soft and hard conditions, reducing costs of compliance for both

beneficiaries and administrators by disregarding non-compliance for a select period, and introducing incentives to improve supply of services. This is an area where evidence is needed, and programs would benefit from experimenting with innovative designs for conditioning program benefits.

Finding 5: Absence of a functioning grievance redress mechanism compounds implementation challenges

Given the inherent challenges in the implementation of cash transfer programs, it is important for such programs to have a well-functioning grievance redress system. This helps to ensure transparency and accountability in the implementation of the cash transfer program. Most programs in India lack formal processes set-up to address any complaints, and even when such systems are present, they don't seem to be functioning well. As a result, program beneficiaries are often unable to escalate their issues, and often reach out to the FLW who herself is unable to address any of these issues. In the absence of a well-functioning grievance redress system, many of the implementation issues identified above are likely to remain unresolved.

In designing a grievance redress system, care should be taken that such a system is not only readily accessible to beneficiaries and allows them to escalate any issue but also has mechanisms in place to provide feedback to the beneficiary once the issue has been resolved. Some of the recommendations from our experts included, requiring programs to offer multiple avenues for lodging a complaint which take the local context into consideration, setting up call centers/hotlines for beneficiaries to call in, which is independent from the FLW, and exploring the potential for involving Gram Panchayats to mediate and play a role – this would need measures in place to account for any power dynamics between the community members and the beneficiaries.

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ACRONYMS

ABAD	Apni Beti Apna Dhan
AHS	Annual Health Survey
ANC	Antenatal Care
ASHA	Accredited Social Health Activist
ATM	Automated Teller Machine
AWC	Anganwadi Center
AWW	Anganwadi Worker
BC	Banking Correspondent
BCSP	Bihar Child Support Program
BPL	Below Poverty Line
CaTCH	Cash Transfer for Child Health
CCT	Conditional Cash Transfer
CT	Cash Transfer
DBT	Direct Benefit Transfer
DLHS	District Level Household Survey
DPT	Diphtheria, Pertussis, and Tetanus
FLW	Front Line Worker
HMIS	Health Management Information System
HPS	High Performing States
ICDS	Integrated Child Development System
IFA	Iron and Folic Acid
IFMR	Institute of Financial Management and Research
IGMSY	Indira Gandhi Matritva Sahyog Yojana
IYCF	Infant and Young Child Feeding
JAM	Jan Dhan-Aadhar-Mobile
JSY	Janani Suraksha Yojana
LEAD	Leveraging Evidence for Access and Development
LPG	Liquid Petroleum Gas
LPS	Low Performing States
MCP	Mother and Child Protection
MRMBS	Dr. Muthulakshmi Reddy Maternity Benefit Scheme
NFHS	National Family Health Survey
OPM	Oxford Policy Management
PDS	Public Distribution System
PICME	Pregnancy Infant Cohort Monitoring Evaluation
SC/ST	Scheduled Caste/Scheduled Tribe
SEWA	Self Employed Women Association
THR	Take-Home-Ration
TT	Tetanus Toxoid
UCT	Unconditional Cash Transfer
UP	Uttar Pradesh
UT	Union Territory
VHND	Village Health Nutrition Day

PART I
THE EFFECTS OF CASH TRANSFERS ON YOUNG CHILD HEALTH: A GLOBAL REVIEW

Radhika Jain

The global evidence on the impacts of cash transfers (CTs), both conditional and unconditional, has grown rapidly over the last two decades. While several systematic reviews have been conducted, there is no single review that focuses on child health outcomes and includes the most recent evidence. Part I of the report compiles the most recent findings on the effects of cash transfers (CTs), both conditional and unconditional, on the full range of health outcomes of children under 5 years of age in low- and middle-income countries around the world. The objective is to compile key findings, study references, and potential directions for future research as a resource for CT programs targeting child health in India.

The global review is organized as follows. Section 1 describes methods and scope, Section 2 describes effects on key health measures for children under 5 years of age, Section 3 discusses evidence on how design aspects affect child health, and Section 4 provides directions for future research on CTs in India.

1. METHODS AND SCOPE

The scope of the review is to examine evidence on the impacts of conditional and unconditional cash transfers (CCTs and UCTs respectively) on health outcomes for children under 5 years of age in low- and middle-income countries (LMICs). In-kind transfers are not systematically included, as this would introduce a very large and diverse set of programs beyond the scope of the CaTCH initiative, but we include a brief discussion of studies comparing cash and food transfers as they relate to child anthropometric status in Section 2.

1.1 Evidence Base

In an initial literature search, we identified several existing reviews of the effects of CTs on health outcomes. Rather than replicating these efforts, we scrutinized these reviews to assess where gaps remain. We found that, although comprehensive, the various reviews focus on different sets of health outcomes, use different inclusion criteria (several only cover CCTs), and do not include the most recent studies. A full list of reviews is included in Table A.1 in the Appendix. This document combines and updates the existing reviews. The evidence base includes studies covered in previous reviews, studies that cite these studies, more recent studies found through searches of academic databases, and studies shared with us by experts. As a result of concerted efforts to embed evaluation into program rollout, there is a growing non-academic literature on the impacts of CTs, particularly for newer programs across Africa, which we also include.[1] Where multiple papers present similar results from the same study, we include the latest and most comprehensive version. Since several recent and comprehensive reviews compile the evidence on child nutrition outcomes, we draw on their findings rather than replicating the analysis.

We prioritize studies that use experimental or quasi-experimental designs to create a reliable control group, but also include less rigorous studies that are of interest, particularly for geographic locations

[1] See, for example, the Transfer Project: www.transfer.cpc.unc.edu

and outcomes where the evidence base is thin. We do not assign specific risk-of-bias scores to include or exclude studies, but simply note the evaluation methods for each study. Published, peer-reviewed academic papers are noted with asterisks in all tables to distinguish them from unpublished working papers and reports in the grey literature.

This strategy resulted in 70 studies across programs in 29 countries that report results on child health measures (a list of studies is presented in Table A.2).[2] We caution that, although comprehensive, this report does not constitute an exhaustive systematic review (for example, following Cochrane or Campbell Review methods) or a quantitative meta-analysis. Instead, our study selection method ensures that a wide range of studies covering a diverse set of outcomes for children under age 5 is represented in the report findings.

1.2 Compilation of Results

One difficulty that this and other reviews have faced is in comparing results across studies reliably. This is partly due to differences in program design, such as transfer amounts, duration, conditions, enforcement of conditions, and complementary interventions, but there is also considerable variation in study design, such as the outcomes, age groups, subgroups, and exposure durations studied and reported, which makes systematic compilation of results difficult (Bastagli et al. 2016; L. Fernald, Gertler, and Hidrobo 2012; Glassman et al. 2013; Manley, Gitter, and Slavchevska 2013a; Pega et al. 2017). Conducting robust quantitative analyses would require excluding many health outcomes that do not have a large evidence base, but that are, nevertheless, of interest here. Therefore, we do not conduct a meta-analysis, but follow the methods of two recent comprehensive reviews and simply list study results, as reported in the paper/report, by method, country, and outcome (Bastagli et al. 2016; L. Fernald, Gertler, and Hidrobo 2012). Although we do not distinguish between tightly estimated null results and those due to low statistical power, we discuss this in the text summaries where possible. The extent to which conditions are enforced is continuous (discussed in Section 3), and the official classification of a program as a CCT or UCT often differs from its implementation (e.g. conditions were never actually applied, or unconditional grants were perceived as being tied to conditions). We rely on the information provided by the authors of each study, noting the official program status as well as the authors' preferred classification in parentheses where applicable.

1.3 Outcomes Studied

We attempt to include any study that reported health outcomes for children 0-5 years and in utero, as well as studies that report inputs that may be important for child health, based on broader research on the determinants of child health. For the initial identification of outcomes and relevant inputs, we rely on the conceptual framework used by Fernald et al in their 2012 review of CTs and child health, although we note that it is not an exhaustive mapping of the potential causal pathways (Figure 1). The cash component of CTs can loosen the household's budget constraint, allowing it to spend more on inputs that improve the child's health and development, such as food, health care, protection from disease, and early schooling. By increasing financial security, these additional resources may also improve parental mental health (lower stress), which may result in improved child feeding, parenting, and stimulation practices that improve health and cognition as well. Conditions, such as utilization of health care services and participation in health information sessions, may have further effects on child

[2] As noted earlier, because we rely on an existing meta-analysis and several reviews for anthropometric outcomes, studies solely reporting these outcomes are not included separately in our review.

health if households comply with the conditions (in ways they would not have without the conditions) and if compliance effectively improves outcomes. Most programs build on the early Latin American models and include conditions for health care utilization (pre and post-natal care and child growth monitoring and preventive care checks) and participation in health and nutrition counseling. A key factor mediating the effects of compliance with conditions on outcomes is the quality of the required services, both at program launch and as it scales up. A more detailed discussion of the causal pathways is included with each health outcome. Table 1.1 presents the final list of reported outcomes.

Adapted from Fernald et al, 2012

Figure 1: Conceptual Framework for the Health Effects of Cash Transfers

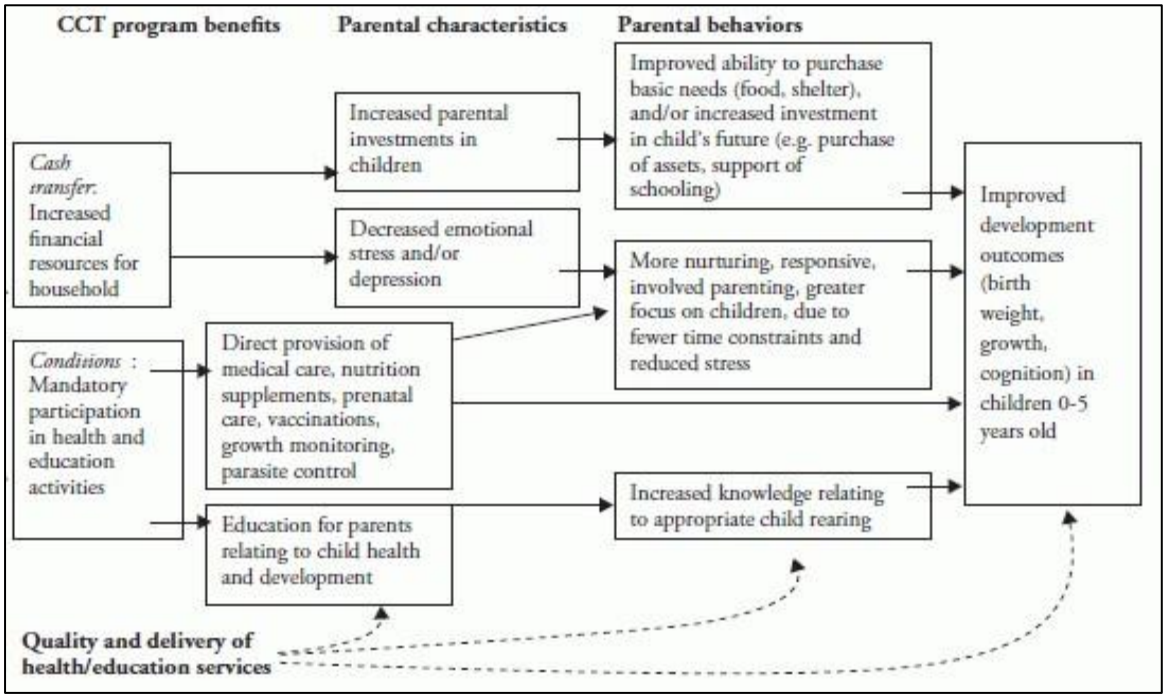


Table 1.1 Health Measures Covered in the Review

Category	Key Measures
Health Care Utilization	Prenatal care, Institutional delivery, Postnatal care, Skilled birth assistance Routine preventive care visits, Care seeking, Immunization
Mortality	Maternal mortality, Perinatal mortality, Neonatal mortality, Infant mortality, Child mortality
Birth weight	Birth weight, Low birth weight, Gestational age
Nutritional Status	Height, Weight, Dietary diversity and caloric intake
Child Development	Behavioral problems, Child development, Fine motor, Gross motor, Language, Leg motor, Memory, Social personal skills, Stress, Visual motor, Visual reception
Health Status	Hemoglobin, Morbidity

2. EFFECTS OF CASH TRANSFERS ON KEY CHILD HEALTH MEASURES

Section 2 compiles the results of studies that report the effects of CCTs and UCTs on the following child health measures: health care utilization (including maternal care, child preventive care, and immunization), infant and child mortality, birth weight, child nutritional status, child development, anemia, and morbidity.

2.1 Health Care Utilization

CT programs may increase utilization of preventive health care by reducing costs (programs often include unconditional free care), requiring it as a condition for the transfer, stimulating demand through education, empowerment, and frequent health system contacts, increasing income, or inducing supply-side investments in quantity and quality (De Brauw and Peterman 2011). Most older programs are explicitly CCTs that target mothers and children, and include pre- and post-natal care visits for women, well-baby checks for infants, and regular preventive care visits for young children (where services like immunizations, vitamins, deworming, and growth monitoring are provided) (Glassman et al. 2013; Ranganathan and Lagarde 2012). We examine the evidence on whether CTs effectively increase health care utilization and whether this is linked to health outcomes for children under 5 years of age.

2.1.1 Prenatal and Delivery Care

Overall, the findings are largely consistent across this and several reviews: CCTs increase antenatal visits significantly, and have smaller effects on skilled birth attendance, facility delivery, and post-partum care, but these shifts in utilization have not been clearly linked to better maternal or newborn health outcomes, in part because studies rarely report them (Glassman et al. 2013; Hunter et al. 2017; Ranganathan and Lagarde 2012). Utilization of related services not targeted by conditions also often increases, possibly because trust or knowledge of the health system builds with greater use (Lagarde, Haines, and Palmer 2009). Spillovers may also extend to untargeted beneficiaries – in Indonesia, prenatal visits increased by over 6% among neighbors - suggesting the diffusion of new information or norms may be an important mechanism for effects and studies must be designed to capture these (Alatas 2011).[3] There is very little evidence from Africa, as most programs in Africa are UCTs, and UCTs do not typically report maternal care indicators. Most studies focus on the first 1 to 2 years of program launch and there is little evidence on how effective programs are in the longer term (Hunter et al. 2017).

The quality of care accessed by women is rarely explicitly reported in studies, but critically affects both take-up of services and its effects on health outcomes. CCTs in India and Indonesia increased maternal care utilization, but drew women to lower level public facilities that are typically of low quality and unequipped to handle complications or avert deaths (Kusuma et al. 2016; Powell-Jackson, Mazumdar, and Mills 2015).[4] Several existing programs include targeted supply side interventions, such as worker incentives that are known to increase care quality, but their interaction with CTs has not been tested. Performance based community block grants have also improved maternal health care quality and financial access, and may be a promising supplement to CCTs (Kusuma et al. 2016; Olken, Onishi, and

[3] Such spillovers have also been explicitly documented in studies of UCTs combined with infant and child feeding information (see Nutritional Status section).

[4] The authors suggest that because the transfer amount is flat, regardless of facility quality or other characteristics, women either got the incorrect impression that they were all of similar quality or exerted the minimum effort required to comply and receive the CCT.

Wong 2012). Innovative CT design could also nudge women to choose higher quality facilities. A transfer during pregnancy that was unconditional but labeled for delivery (LCT) combined with a transfer conditional on delivery at a facility the woman preselected (CCT), helped women plan for and deliver at facilities they liked and where quality was higher (Cohen et al. 2017). This also suggests that the cost-effectiveness of UCTs targeted to pregnant women and combined with design innovations, relative to CCTs, may be an area for further study.

Few studies link care utilization to mortality and birth weight outcomes, but among those that do the links are inconclusive. In Brazil, increased antenatal care may have contributed to observed lower child mortality, but a UCT in Uruguay improved birth weight without increases in care (maternal nutrition was a key mechanism) (Amarante et al. 2016; Rasella et al. 2013). In India and Indonesia significant increases in prenatal care use led to no improvements in birth outcomes; it is unclear whether this is due to problems in study design and low statistical power or care quality (Kusuma et al. 2017; Powell-Jackson, Mazumdar, and Mills 2015).

Table 2.1 Prenatal and Delivery Care

Study	Country	Conditions	Methods	Prenatal Care	Skilled Birth Assistance	Institutional Delivery	Postnatal Care	Notes	Links to Birth Outcomes
Barber and Gertler, 2010*	Mexico	Prenatal checks, information meetings	RCT	Increase				Significant effects on quality (number of key questions/procedures done), but not quantity of visits.	44.5% decrease in incidence of low birth weight and significant increase in average birth weight.
Urquieta et al, 2009*	Mexico	Prenatal checks, information meetings	RCT, DID		Increase				
Perova and Vakis, 2012*	Peru	Prenatal and postnatal checks	IV; Matching		Increase			Effects increasing in exposure duration	
de Brauw and Peterman, 2011	El Salvador	Prenatal checks	RDD, DID	No effect	Increase	Increase	No effect		
de Brauw et al, 2012	Brazil	Prenatal and postnatal checks	DID, PSM	No effect				Baseline ANC coverage very high; weak evidence of increase in number of ANC visits.	No effect on birth weight (low power). 10.7pp increase in probability of being born full term.
Rasella et al, 2013*	Brazil	Prenatal and postnatal checks	Panel with community variation in coverage and fixed effects (mixed ecological)	Increase				Significant reduction in proportion of women with no ANC	9.3% reduction in IMR (concentrated in postnatal period)
Morris et al, 2004*	Hondurs	Prenatal checks	RCT	Increase			No effect	No effect on tetanus vaccine (in health cards) but increase in ANC visits	
Kandpal et al, 2016*	Phillipines	Prenatal and postnatal checks, assisted delivery	RCT	Increase			Increase	Prenatal care significant at 10%	
Powell-Jackson and Hanson, 2012*	Nepal	Public facility birth, free care**	PSM		Increase	Increase		Increases in public facility births partly offset by reductions in NGO facility deliveries, but net positive	

Lim et al, 2010*	India	Public (and some private) facility birth; weak requirement for pre/postnatal care**	Matching, DID	Increase	Increase	Increase		JSY Scheme. Perinatal and neonatal mortality decreased, but these findings are contested.	Lim et al find decreases in perinatal and neonatal mortality, but results contested.
Joshi and Sivaram, 2014*	India		DID	No effect		Increase	No effect	JSY Scheme. Poor information about program requirements and weak incentives for pre/postnatal care may explain null results. Women with less education and in rural areas experienced larger gains.	
Powell-Jackson et al, 2015*	India		DID	No effect	Increase	Increase		JSY Scheme. Increases in public facility births partly offset by reductions in private facility deliveries, but net positive. Facility birth increases driven mostly by increases at basic, lower level public facilities rather than district hospitals.	Powell-Jackson et al find no effects on perinatal and neonatal mortality. Authors note that increased deliveries at low quality public facilities ill equipped to handle birth complications may be reason mortality did not decline.
Raghunathan et al, 2017*	India	Prenatal checks, birth registration, immunization, exclusive breastfeeding	Nearest neighbor matching	Increase	No effect	No effect	No effect	Mamta Scheme. Increased probability of receiving antenatal care (5pp), iron tablets, birth registration, and prenatal counselling. No effects on breastfeeding or immunization. Younger, but richer and more educated women benefited.	
Alatas et al, 2011	Indonesia	Prenatal and postnatal checks, assisted delivery	RCT	Increase	No effect		Increase	Spillover effects on neighboring households - 4pp (6%) increase in probability of 4 prenatal visits. Larger effects where stronger health systems (Java and urban areas). PKH Scheme.	No effect on child mortality (or nutrition)
Kusuma et al, 2016*	Indonesia	Prenatal and postnatal checks, assisted delivery	RCT, DID	Increase	No effect	Increase	Increase	Prenatal and postnatal care significant at 10%; Insitutional delivery increases driven largely by community-level	No effects on complications and crude measures of maternal mortality.

								facilities, not hospitals. PKH Scheme.	
Galasso, 2011*	Chile	Psychosocial support meetings, no health checks	Matching, variation in rollout coverage	No effect					
Amarante et al, 2016*	Uruguay	Prenatal checks (unenforced)	RDD, DID	No effect	Decrease			Reduction in attendance by medical doctor significant at 10%.	19-25% decrease in incidence of low birth weight
	Kenya	LCT labeled for 'delivery' / LCT+ CCT conditioned on delivery at prespecified facility.	RCT			Increase		Labelled transfer had no effect, but LCT + CCT for delivery at desired facility specified during ANC increased quality of facility.	
Handa et al, 2015*	Zambia	UCT	RCT, DID	No effect	Increase			Effects only for women with better access to health facilities	
Number of studies reporting the outcome				**15**	**11**	**8**	**7**		
Number with any significant effects				**8**	**10**	**5**	**3**		

Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.

For links to mortality consult Table2.1 and to birth weight outcomes consult Table 2.2

****Studies published in an academic journal***

*****Health workers also receive financial incentives for facility births***

2.1.2 Child Preventive and Curative Care Utilization

Several reviews of CCTs find that they increase utilization of targeted child preventive care (regular health and growth monitoring checks) as well as related care that is not explicitly conditioned on (immunization, receipt of iron, vitamin, and deworming pills), suggesting basic visit requirements have positive spillovers (Cecchini and Soares 2015; Gaarder, Glassman, and Todd 2010; Ranganathan and Lagarde 2012). A 2013 quantitative pooled analysis of 5 studies of CCTs in Latin America finds an average 14% net increase in preventive health care use (Bassani et al. 2013). The effects of UCTs on preventive care are limited, though there are fewer published studies and most are from UCTs in sub-Saharan Africa, where household demand, care quality, and access may all be very different from Latin America. A recent meta-analysis of UCTs finds no meaningful effect on growth checks and modest positive effects on treatment for parasite (Pega et al. 2017). CTs can also increase curative care, though these results must be interpreted with caution, as they could reflect both better use of health care and higher morbidity.

Table 2.2 Preventative and Curative Care

Study	Country	CT Type	Methods	Preventive/ Monitoring Visits	VitA / Iron / Deworming	Curative Visits	Indicator
Morris et al, 2004*	Honduras	CCT	RCT	Increase			Increase in routine preventive care visits and growth monitoring
Akresh et al, 2016	Burkina Faso	CCT	RCT	Increase			Routine health visits in CCT arm increased compared to Control, but not in UCT
Attanasio et al, 2005	Colombia	CCT	DID, PSM	Increase			Routine health checks increased; effects largest among 24-48mo olds
Kandpal et al, 2016*	Phillipines	CCT	RCT			Increase	9.8pp increase in probability of seeking treatment for illness
Benedetti et al, 2016*	Honduras	CCT	RCT	No effect			No effect on health checks
Morris et al, 2004*	Brazil	CCT	RCT	Increase			15-20% increase in probability of health visit and child weighing
Maluccio and Flores, 2005	Nicaragua	CCT	RCT	Increase	Increase		Increase in share of children given iron, well child visits, child weighing
Gertler and Boyce, 2001	Mexico	CCT	RCT	Increase		Decrease	Increase in utilization of public clinics; decrease in hospital inpatient stays
Perova and Vakis, 2012*	Peru	CCT	IV, Matching	Increase		Increase	Increase in preventive health checks and care seeking for illness
Levy and Ohls, 2007	Jamaica	CCT	RDD	Increase			Increase in preventive health center visits
Alatas et al, 2011	Indonesia	CCT	RCT	Increase	No effect	Increase	Increase in child weighing, treatment for diarrhoea; No effect on vitamins or iron. Spillovers in child weighing on neighboring households.
Bazzi et al, 2012	Indonesia	UCT	Matching, Exploiting			Increase	Increases in outpatient visits; effects grow larger as transfer

			Variations in Rollout				size increases; effects dissipate in 2nd yr
Galasso, 2011*	Chile	CCT (no health conditions)	Matching, variation in rollout coverage	No effect			No effect on regular health checks
Macours et al, 2012*	Nicaragua	CCT (weakly enforced)	RCT		Increase		Increase in receipt of VitA/iron and parasite treatment at 1 and 3yr follow-up
Robertson et al, 2013*	Zimbabwe	CCT (weakly enforced)	RCT	Increase			CCT (weakly enforced) increased birth registration, but UCT did not
Fernald and Hidrobo, 2011*	Ecuador	CCT (unenforced)	RCT	Some increases	Some increases		Increase in receipt of VitA or iron, growth monitoring, but effects in rural sample only; no effects on parasite treatment
Paxson and Schady, 2010*	Ecuador	UCT	RCT	No effect	Some increases		Increase in receipt of VitA/iron and parasite treatment within bottom expense quintile only; no effect on growth monitoring visits
Handa et al, 2014	Ghana	UCT	PSM	Some increases			Increases in preventive care visits in male-headed households only
Pellerano et al, 2014	Lesotho	UCT	RCT			No effect	No effect on care seeking for illness or health expense
Abdoulayi et al, 2016	Malawi	UCT	RCT	No effect		Increase	No effect on regular preventive care visits; increase only in treatment seeking for fever
Merttens et al, 2016	Uganda	UCT	PSM, DID			No effect	No effect on care seeking for illness or health expense
American Institutes for Research, 2014	Zambia	UCT	RCT	Some increases			Significant increases in preventive care only among children within 3km of a health facility
Seidenfeld and Handa, 2014	Zambia	UCT	Non-experimental comparison of treated and untreated with controls			Decrease	Decrease in care seeking for illness
Number of studies				**17**	**5**	**9**	
Number with any significant effects				**13**	**4**	**7**	
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.							
****Studies published in an academic journal***							

2.1.3 Immunization

Table 2.3 shows that CTs have increased full immunization coverage across a range of countries and program contexts. CTs can also ensure children receive age-appropriate vaccines on time and that older children 'catch-up' on their immunizations (Barham and Maluccio 2009; Brauw et al. 2012). Studies comparing short and medium-term rates find that effects attenuate but, in some cases, can persist up to 2 years after program initiation. Almost all of the evidence is from CCTs (conditions do not always explicitly include immunizations, but require regular preventive health checks) and the limited evidence from UCTs is not positive (Pega et al. 2017). One RCT in Zimbabwe comparing a UCT and a poorly enforced CCT finds that neither has positive effects on immunization (Robertson et al. 2013). However, poorly designed conditions may undermine program performance rather than induce behavior change. The *Mamta* CCT program in India, which explicitly conditions on immunizations, breastfeeding, and complementary feeding, had no effect on full immunization (Raghunathan et al. 2016). The authors suggest this was due to delays in payments, the complexity of conditions (particularly the feeding conditions that were lumped with immunization requirements), and the difficulty in providing documentation of compliance.

In countries like Nicaragua and Mexico, CCTs have effectively increased rates among groups typically hard to reach with supply side strategies alone, such as children living further from health facilities and with less educated mothers (Barham, Brenzel, and Maluccio 2007; Barham and Maluccio 2009). However, achieving high coverage requires concurrent supply strengthening - for example, the Nicaragua program paid health workers incentives for vaccine delivery. Improvements in quality and availability on the supply side interact positively with demand-side incentives for immunization, and are likely to be critical where baseline quality is very low (Banerjee et al. 2010).

Table 2.3 Childhood Immunization

Study	Country	CT Type	Methods	Full Immunization	Other Indicators	Notes
Ahmed et al, 2007	Turkey	CCT	RDD	13.6% increase on baseline rate of 43.8%		
Attanasio et al, 2005	Colombia	CCT	DID, PSM		DPT: 8.9pp increase among 0-24month-olds. No effect among >24month-olds	
Barham and Maluccio, 2009*	Nicaragua	CCT	RCT	23pp increase after 5 months and 15pp after 17 months	Mixed effects on specific vaccines. 15pp increase in 'catch-up' full immunization among older children.	
Maluccio and Flores, 2005	Nicaragua	CCT	RCT		Age-appropriate vaccination: no effect	
Leroy and Ohls, 2007	Jamaica	CCT	RDD	No effect		
Morris et al, 2004*	Honduras	CCT	RCT		DTP1/Pentavalent: 9.1% increase in timely vaccine Measles: no effect	

de Brauw et al, 2012	Brazil	CCT	DID, PSM	No effect. Control group coverage >90%.	Increase in on-time receipt of DPT3 and Polio3 vaccination (not probability of vaccination). No effect on BCG, DPT1/2, Polio 1/2	
Perova and Vakis, 2012*	Peru	CCT	IV, Matching		Any vaccine in 3 months: no effect	
Carvalho et al*, 2014	India	CCT	PSM	9.1pp increase on baseline of 54.1%	Individual vaccines: increases of 3-9pp. No vaccine: 3.2pp decrease.	JSY program
Raghunathan et al, 2017*	India	CCT	Nearest neighbor matching	No effect		Mamta Scheme
Sinha and Yoong, 2009	India	CCT	Triple difference comparing eligible and non-eligible girls and boys over time across 3 cross-sectional surveys		Measles: 18-22pp increase. Polio: 10pp increase. Increases also in number of vaccines, any vaccine.	Apni Beti Apna Dhan
Beck et al*, 2015	India	UCT	RCT + PSM to address imbalance	No increase on baseline rate of 90%	Basic Income Pilot program in Madhya Pradesh state	Basic Income Pilot program in Madhya Pradesh state
Alatas et al, 2011	Indonesia	CCT	RCT	3pp or 11% increase		
Kandpal et al, 2016*	Phillipines	CCT	RCT		MMR: 8.7pp increase significant at 10% level	
Robertson et al, 2013*	Zimbabwe	CCT, UCT	RCT	No effect of UCT or weakly enforced CCT		
Cheema et al, 2016	Pakistan	UCT	RDD	No effect		Benazir Income Support Program
Number of studies				**10**	**9**	
Number with any significant effects				**4**	**9**	
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.						
****Studies published in an academic journal***						
Beck et al 2015 studied the Basic Income Pilot in Madhya Pradesh state, while Carvalho et al 2014 studied the national JSY program						

Summary: CCTs have effectively increased take-up of targeted preventive health-services, particularly pre- and post-natal care and child preventive care, in programs around the world. These contacts with the health system help increase growth monitoring, receipt of vitamins and deworming pills, and immunization rates. UCTs are less effective, but this may also reflect the relatively lower quality of health care in these contexts as well as other spending priorities. Increased health care utilization has not clearly been linked to outcomes and, with the exception of immunization, there is little evidence on whether CCTs requiring them are the most cost-effective

strategy to improve child health outcomes. [5] The potential for targeted quality improvement strategies to improve health outcomes and make programs more cost-effective remains to be tested.

2.2 Infant, Child and Maternal Mortality

Relatively few studies have examined impacts on child mortality and none are RCTs, largely because this is a low probability event that requires a large sample size to detect significant effects. Standard indicators used are perinatal mortality (PMR, stillbirth after 28 weeks of pregnancy or death of the child within the 1st week of being born), neonatal mortality (NMR, death of the child within the first month of being born), infant mortality (IMR, death of the child within the first year of being born), and under-five mortality (all are expressed per 1,000 live births).

The *PROGRESA* CCT program in Mexico and *Bolsa Familia* in Brazil are similarly designed, requiring prenatal care and routine child health visits in order to receive transfers during pregnancy and early childhood. Two studies use longitudinal mortality data and exploit variation in the coverage over time with community fixed effects to determine the casual effect of CCTs on mortality. IMR decreased by 8% among eligible households in Mexico and 9.3% in Brazil, while NMR was less responsive in both countries (Barham 2011; Shei 2013; Shei et al. 2014). In Brazil, under-five mortality also declined by 12% in the highest CCT coverage areas (Rasella et al. 2013). In both contexts, effects were driven by reductions in deaths from respiratory disease, diarrhea, intestinal infections, and nutritional deficiencies. In Brazil, hospital admissions of children under five decreased, while vaccination coverage and prenatal care utilization increased in treated areas, suggesting reduced morbidity and increased preventive care are possible channels. Improvements in food security and nutrition documented elsewhere may also have contributed (Paes-Sousa, Santos, and Miazaki 2011).

In India, the most recent largescale study of *Janani Suraksha Yojana* (JSY), a national CCT program that makes a single transfer conditional on institutional delivery, finds no overall effects on NMR or PMR (Powell-Jackson, Mazumdar, and Mills 2015). An observational study also finds no association between increased facility deliveries and MMR (Randive, Diwan, and De Costa 2013). Institutional deliveries increased, but this was mostly at low-level public facilities, such as community health centers, which may not have been equipped to manage life-threatening complications to reduce mortality.[6] Qualitative work discussion in Part 2 of the report confirms that the technical quality of care at incentivized facilities was very low, in part because JSY did not sufficiently change health worker incentives (Coffey 2014). It is also possible that the program failed to draw in the most at-risk women. Lim et al (2010) do find positive effects of JSY but the study design has been critiqued (see Glassman et al, 2013 for a discussion). An assessment of the *Apni Beti Apna Dhan* program finds no effects on mortality, but the sample is only about 3000 children (Sinha and Yoong 2009).

Summary: Despite the methodological limitations linked to the difficulties in studying mortality effects in low income contexts, 4 studies from Mexico and Brazil provide convincing evidence that CTs sustained through pregnancy and the first year of a child's life can significantly reduce early mortality.

[5] For example, Pega et al (2017) find in their systematic review that UCTs do not significantly affect health care use or expense, but do reduce the likelihood of illness, opening the possibility that other types of household, besides health care use, are improving child health.

[6] The PKH program in Indonesia had similar findings, which may have muted effects of utilization on birth outcomes (Kusuma et al. 2016). The authors note that incentivizing delivery at any facility equally may have given beneficiaries the impression they were all of equal quality, or that women simply exerted the minimal effort required to comply with the CCT and receive benefits.

Effects largely manifest after the neo-natal period, are driven by reductions in infection and nutrition related mortality, and are biggest in poor areas with high pre-program mortality, suggesting the programs benefit the poorest. Successful programs included conditions for use of prenatal and early childhood preventive care, but there are no results for programs without conditions for comparison. There is no credible evidence that CCTs in India have reduced mortality. Study design, implementation issues, transfer timing, duration, and size (unlike programs in Latin America, JSY is a one-time transfer provided after delivery), and the poor quality of the incentivized care may all be important factors. The review found no studies of the effects of UCTs on mortality.

Table 2.4 Child Mortality

Study	Country	CT Type	Methods	Peri- natal Mortality	Neonatal Mortality	Infant/ Child Mortality	Maternal Mortality	Mechanisms / Notes
Barham, 2011*	Mexico	CCT	Exploiting rollout variation with municipality/time fixed effects		Decreases only in rural areas with above-median average pre-program mortality.	17% reduction in IMR on recipients, 8% reduction among all eligible. 3.01 fewer deaths per 1000 live births relative to average rural IMR of 17.5.		Effects driven by reductions in mortality from respiratory illness, intestinal infections, nutrition. No association between effect size and variation in health service supply.
Rasella et al, 2013*	Brazil	CCT	Panel with community variation in coverage and fixed effects (mixed ecological)			12% decrease in U5-mortality; higher coverge associated with larger effects		Effects driven by reductions in 'poverty causes of mortality' - diarrhea and malnutrition-related deaths. Prenatal care use and admissions increased; child hospital admissions decreased.
Shei, 2013* Shei et al, 2014*	Brazil	CCT	Pooled time-series exploiting time variation in rollout and municipality fixed effects		No effect	9.3% reduction in IMR (ATE); 24.3% decline in post-neonatal mortality (ATE)		Declines in share of deaths from infectious/parasitic disease, respiratory illness, and endocrine/nutritional illness. Increase in share of deaths from perinatal conditions, congenital problems.
Sinha and Yoong, 2009	India	CCT	Triple difference comparing eligible and non-eligible girls and boys over time across 3 cross-sectional surveys		No effect	No effect for children 1-3yrs		Sample may be too small (approx 3000 children)
Lim et al, 2010*	India	CCT	Matching, DID	Decrease of 3.7 deaths per 1000 pregnancies	Decrease of 2.3 deaths per 1000 live births		No effect	Study findings contested; see Glassman et al, 2013 for a discussion

Powell-Jackson et al, 2015*	India	CCT	DID	No effect	Decrease of 3.1 deaths in high coverage areas significant at 10% level			Facility deliveries and skilled birth attendance increased, mostly at low-level public health facilities. Authors suggest these ill-equipped to handle birth complications.
Number of studies reporting the outcome				**2**	**5**	**4**	**1**	
Number with any significant effects				**1**	**3**	**3**	**0**	
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.								
Studies published in an academic journal								

2.3 Birth Weight

Low birth weight is associated with morbidity and mortality during childhood, impaired cognitive function in childhood and as adults, poorer adult physical health, and worse adult economic outcomes (Almond and Currie 2011). Very few studies document the impacts of CTs on birth weight in LMICs, possibly because the data require observation at or soon after birth and are difficult to collect.

Amarante et al (2016) find that a CCT (the authors classify it as a UCT because conditions were not known or enforced) during pregnancy equivalent to approximately 25% of household income led to a 19-25% drop in the incidence of low birth weight (<2.5 kilograms) in Uruguay. They find no changes in prenatal care, maternal stress, fertility, or gestational age, but provide suggestive evidence that improved maternal nutrition during pregnancy was the key mechanism that led to marked reductions in intrauterine growth retardation. Effects were larger among premature children and single and teen mothers, both vulnerable subgroups. Measures of birth weight also improved significantly in response to CCTs in Mexico and Colombia; in Mexico this may have contributed to the reduction in IMR noted earlier (Attanasio et al. 2005; Barber and Gertler 2010). A Brazilian CCT had no effect on birthweight (the authors note that the sample may be too small), but increased the probability of being born full term by 10.7 percentage points (de Brauw et al. 2012).

Summary: Overall, the evidence suggests that birth weight is responsive to CTs provided during pregnancy and early childhood, and that vulnerable populations (young mothers and premature babies) may benefit the most. Nutrition in utero is an important channel, consistent with the larger literature on early life inputs (Almond and Currie 2011). The evidence comes from both CCTs that condition on pre-natal care and UCTs, but is based on only 4 studies, all in Latin America.

Table 2.5 Birth Weight

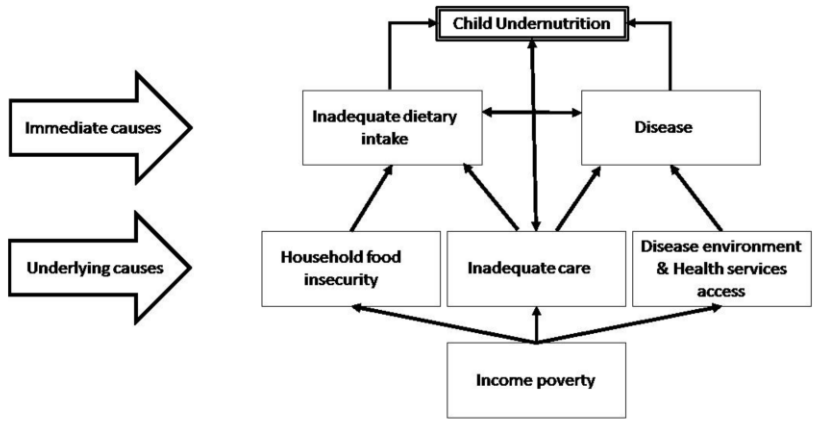
Study	Country	CT Type	Methods	Birth weight (Kg)	Low Birth Weight (<2500g)	Gestational Age
Barber and Gertler, 2010*	Mexico	CCT	RCT	127.3g increase	44.5% decrease; 4.6pp compared to 10.3% in control at end line	
Attanasio et al, 2005	Colombia	CCT	DID, PSM	578g increase only in urban sub-sample		

de Brauw et al, 2012	Brazil	CCT	DID, PSM	No effect, but sample may be too small		10.7pp increase in probability of being born full term
Amarante et al, 2016*	Uruguay	CCT (unenforced)	RDD, DID	Increase (only significant at 10%)	19-25% decrease (1.9-2.4pp on base line incidence of 10%)	No effect
Number of studies reporting the outcome				4	2	2
Number with any significant effects				3	2	1
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.						
***Studies published in an academic journal**						

2.4 Child Nutritional Status

The causal pathways between CTs and child nutrition are complex (see Figure 2) and include household access to food, caregiver knowledge of good nutrition and their ability to provide it, and child health status (which affects food absorption) and its environmental determinants (clean water, sanitation, hygiene, disease environment, and health care) (de Groot, Palermo, and Handa 2015; Manley and Slavchevska 2016). Several existing reviews compile the evidence on the effects of CTs on child anthropometric outcomes and find mixed results: overall, CTs can improve anthropometric outcomes, height in particular, but effects are often modest and many programs fail to demonstrate any effects (Bastagli et al. 2016; Manley, Gitter, and Slavchevska 2013a).

Figure 2: Causal Pathways to Child Nutritional Status



Adapted from Manley and Slavchevska, 2016

2.4.1 Household Food Insecurity and Diet

Child dietary intake is the most proximate determinant of nutritional status. Several comprehensive reviews finds that both CCTs and UCTs improve household food consumption and dietary diversity across many program contexts (Bastagli et al. 2016; de Groot, Palermo, and Handa 2015; Manley and Slavchevska 2016; Pega et al. 2017). Of 12 studies covering programs in 11 countries (2 in South Asia, 5 in sub-Saharan Africa, and the rest in Latin America), Bastagli et al (2016) find that 7 studies showed positive effects on at least one measure of food intake or dietary diversity. Reported indicators of food intake include food consumption scores, dietary diversity indices/scores, number of unique food items, or number of food items eaten. The authors of the review point out that some of these indicators - e.g. 'number of different foods eaten' – may reflect changes that are not beneficial to health if they include processed or sugary foods, as in the cases of the Nicaragua studies of *Red de*

Proteccion Social (RPS). It is also important to note that studies frequently report changes in food consumption at the household-level, which is easier to measure but may not reflect changes in child food intake, which is the critical input for anthropometric outcomes. This may be one explanation for why reported improvements in food consumption do not translate into better nutritional status (de Groot, Palermo, and Handa 2015).[7]

2.4.2 Anthropometric Status

A quantitative meta-analysis of the effects of CTs on child height across 21 studies of 17 different programs (2 in Africa and 3 in South Asia, including the *Apni Beti Apna Dhan* program in India) finds a small mean impact of 0.025 height-for-age z-scores (HAZ) that is not statistically significant (Manley, Gitter, and Slavchevska 2013b). They also find that CCTs and UCTs have similar effects (though the studies included do not explicitly test the effect of conditions in the same context), and that disadvantaged populations, particularly girls, younger children, and children in worse health environments, seem to benefit the most. A 2016 review that includes the most recent studies and covers several measures of child anthropometric status largely confirms these findings (Bastagli et al. 2016). Child height is the most responsive outcome: 5 out of 13 studies (38%) reporting height-for-age z-score or stunting had significant positive results (effect sizes ranging from 5.5 percent reduction in probability of stunting and 0.07 to 0.4 standard deviation increases in z-scores). 1 of 5 studies that reported weight-for-height z-scores or wasting had positive effects (effect size 0.13 percentage point reduction in probability of wasting). And 1 of 8 that reported weight-for-age z-scores or underweight had significant positive effects (effect size 0.06 percentage point reduction in probability of underweight). Evidence from Africa and Asia is still relatively under-represented, in part because studies from these settings often do not report anthropometric outcomes – for example, of 13 studies covering height, 3 were from Africa and 2 from Asia.

Exactly why CTs do not consistently lead to better outcomes, though they increase household food resources, is unclear. As noted earlier, improvements in household food resources may not translate into better child dietary quality, which is often unmeasured. Improved food intake may still not improve nutritional status if absorption is inhibited due to poor child health, which depends on factors like health care access, sanitation, hygiene, and infectious disease exposure that the CTs may not adequately influence (de Groot, Palermo, and Handa 2015).

The timing of the transfer as well as the duration of exposure before measurement of outcomes may affect the magnitude of effects in nuanced ways. For example, a study of UCTs for adolescent girls in Malawi finds that children exposed in utero and several months later, but not children exposed only briefly in utero, were significantly taller 2-3 years later, after transfers were discontinued (Baird, Mcintosh, and Özler 2016). Similarly, in Nicaragua, children exposed in utero and the first 2 years were taller than children exposed only at 2 to 5 years after 2 years of exposure, but these short-term differences disappeared at the 10 year follow-up, suggesting children experienced 'catch-up' growth and closed the height deficit (Barham, Macours, and Maluccio 2013).[8] These dynamics are consistent with the child development literature: conditions in utero affect early height, height is most malleable in the first 2 years of life, yet children demonstrate substantial 'catch-up' growth in later years too (Almond and Currie 2011; Crookston et al. 2013; Fink and Rockers 2014). Other program and study

[7] The October 2017 issue of "Food Policy" focuses on some of the difficulties and best practices in measuring food consumption. https://www.sciencedirect.com/science/article/pii/S0306919217306802#s0010

[8] However, cognitive catch-up was not similarly complete (see Section 2.5).

design factors such as implementation quality, transfer size, baseline undernutrition, parental knowledge, and sample size are likely to affect outcomes, but vary considerably across studies (Bastagli et al. 2016; Manley, Gitter, and Slavchevska 2013b).

2.4.3 Supplementary Nutrition Counselling Combined with CTs

Caregivers must also understand malnutrition as a problem, know good feeding practices, and understand its determinants (including health and hygiene), in order to effectively use transfers to improve child nutrition. Qualitative work conducted alongside an RCT of a Kenyan UCT program finds that low knowledge of what constitutes a balanced diet may help explain the lack of effects on child anthropometric measures (Merttens et al. 2013). Several older CCTs require attendance at health and nutrition information sessions, but few have evaluated these components. Some recent studies provide insights. An RCT in Bangladesh comparing cash, food, cash plus food, and cash conditional on attending nutritional behavior-change counselling finds that all interventions improve household food intake, but only the addition of counselling led to significant improvements in child anthropometric status (Ahmed et al. 2016). The combined intervention improved infant and young child feeding (IYCF) knowledge and practices; these effects persisted after counselling was discontinued, and there were positive spillovers on IYCF practices of neighboring households (Hoddinott, Ahmed, Ahmed, et al. 2017; Hoddinott, Ahmed, Karachiwalla, et al. 2017). However, pilot studies in Nepal and Nigeria find small CTs combined with counselling performed much better than counselling alone at improving caregiver reported feeding practices (breastfeeding, caloric intake, vitamin supplements), and had positive spillovers on non-targeted households, but had no effect on physical growth (Barry, Maidoka, and Premand 2016; Levere, Acharya, and Bharadwaj 2016).[9]

Summary: The evidence to date suggests that CTs can improve child nutritional status, particularly height, and particularly for younger and more vulnerable children, but the effects are modest and not consistent across programs. Conditions seem to have little additional effect. Timing and duration of exposure are critical: transfers initiated in utero and sustained through the first years of life have larger effects on height than transfers targeted later in childhood. Better measurement of causal pathways between CTs and child nutrition, such as child diet, hygiene environment, caregiver feeding behaviors, and psychosocial stress could help explain the mixed effects on nutritional status observed. Recent studies suggest that supplementary nutritional counselling and parenting support may interact positively with CTs. Finally, while the relative effectiveness of cash and food transfers is likely to be context-specific, there is growing evidence that cash is often most cost-effective, but may need to be combined with additional strategies for some contexts.[10]

2.5 Child Development

CTs can improve child development by 1) increasing caregivers' ability to procure critical inputs, such as improved nutrition (in utero and early life), protection from infection, health care, and stimulating toys, and 2) empowering and improving the psychological wellbeing of caregivers, which can lead to more supportive and nurturing parenting and better decision-making (Attah et al. 2016; L. Fernald, Gertler, and Hidrobo 2012; Goodman, Cicchetti, and Walker 2003; de Groot, Palermo, and Handa 2015). Several studies find significant positive impacts of CTs on early child language development; effects on motor skills, memory tests, and behavioral problems are more mixed, but largely positive.

[9] The program in Nepal did improve child cognitive development – see Section Child Development)

[10] *We discuss the evidence on how the type of transfer – cash, food, or vouchers – affects child diet and anthropometrics in Section Cash, Food Vouchers, and Food Transfers).*

The tools and indicators used to measure child development outcomes vary considerably (Table A.3 in the appendix), but resources on standardized and high quality measures for program evaluation are available (L. C. H. Fernald et al. 2017).[11]

A weakly enforced CCT in Ecuador had positive effects on children 1 to 3 years, but only in the rural subgroup, and effects of 0.18 standard deviation among older children 3 to 7 years, but only in the poorest quintile (L. C. H. Fernald and Hidrobo 2011; Paxson and Schady 2010). In the older cohort, transfers also reduced caregiver stress and harsh parenting, improved hemoglobin status, and increased likelihood of receiving deworming pills. A 10-year follow-up study of the same program finds no long-term effects on tests of math, language, attention, working memory, or behavioral outcomes (Araujo, Bosh, and Schady 2016). In Nicaragua, developmental effects kicked in after just 9 months of exposure and were stable and persistent 2 years after transfers stopped (Macours, Schady, and Vakis 2012). The effect size is equivalent to the difference in child outcomes associated with 1.5 additional years of maternal schooling in the study population and is similar in magnitude to those observed in Ecuador. A CT conditional only on enrollment (not attendance) in a local early child development group increased a composite cognitive development measure by 0.33 standard deviations (9 percentage points), while food transfers had no effect (D. O. Gilligan and Roy 2016). In the Ecuador, Nicaragua, and Uganda studies the authors provide suggestive evidence that improved dietary quality, use of preventive care (especially deworming), higher hemoglobin levels, and better parenting (reduced stress, less harsh parenting, more stimulation) were important mechanisms, though conditions were weak or unenforced.

A long-run follow-up in Nicaragua finds that children exposed in utero to a CT for 2 years demonstrated cognitive outcomes that were 0.15 standard deviations better 10 years later, than children exposed at 2 to 5 years, suggesting both that cognitive development is more responsive to CTs targeted at younger ages and that effects persist up to 7 years after the transfers stop (even though height differences did not do so) (Barham, Macours, and Maluccio 2013). Most of these programs were targeted to women and advertised as support for child health, but conditions were enforced weakly or not at all.

Elevated cortisol level is a biomarker for exposure to acute and chronic stressors, such as inflammatory immune responses, health or cold stress, uncertainty, conflict, negative emotions, feelings of threat, or loss of control, and is associated with long-term mental and physiological damage (L. Fernald and Gunnar 2009; Haushofer and Shapiro 2016). In a matched study in Mexico, children 2-6 years old in households that had been in a CCT program for 3.5 years had significantly lower mean cortisol levels, and effects were concentrated among children of depressive mothers, providing some of the first evidence of the role CTs could play in protecting the development of children's stress system (L. Fernald and Gunnar 2009).

2.5.1 Supplementary Parenting Support Combined with CTs

Several studies have investigated the effects of combining cash and information for parents on feeding, parenting, and child cognitive stimulation, on cognitive development. An RCT in Mexico finds that providing group-based parenting support on child cognitive stimulation had significant effects on verbal, perceptual, quantitative, and memory measures for children 3 to 5 years of age when

[11] Fernald et al 2017 provide an extensive and freely available toolkit for measuring early child development in low and middle-income countries around the world.

integrated with and promoted through a CCT program (L. C. H. Fernald et al. 2016). In Nepal, combining small, short term monthly transfers labelled for children with monthly health information meetings increased child scores on a composite measure of cognitive, communicational, socio-emotional, and motor skill development by 1SD relative to the control and information-only groups (Levere, Acharya, and Bharadwaj 2016). Conversely, CTs combined with village-level parenting support meetings in Niger improved caregiver knowledge and self-reported feeding and parenting practices, but did not affect child cognitive development (Barry, Maidoka, and Premand 2016).

Summary: The evidence of the potential for CTs to improve several domains of early child development, such as language, memory, motor skills, and social personal behavior, is mixed but promising. Effects are largest when targeted at young ages, can appear fairly soon after transfers begin, and persist several years after they are discontinued. However, even transfers targeted at children above 3 years improved development outcomes by approximately 0.2 standard deviations in several contexts. Although conditions were weak or unenforced in most programs studied, child nutritional intake, parenting behavior, and health status improved in several programs, and it seems likely that program marketing and information played a role in ensuring transfers were spent on children. Combining transfers with caregiver support on good health, nutrition, and parenting practices, seems to improve parenting nutrition and health practices, as well as child development outcomes, but depends on the scalability of high quality counseling. Most of the existing evidence comes from Latin America (much of it from Mexico), but the evidence base is growing rapidly. Larger scale studies using standardized indicators and powered to measure the effects of CTs on the full range of early child development outcomes in other geographical contexts may be fruitful.

Table 2.6 Child Development

Study	Country	Methods	CT Type	Composite Cognitive Measures	Stress	Language Skills	Memory	Gross Motor Skills	Fine Motor Skills	Leg Motor Skills	Visual Motor Function	Behavioral Problems	Social Personal Skills	Notes
Fernald and Gunnar, 2009*	Mexico	Matching	CCT		Decrease									Change in mean levels, but not stress response. Significant interaction with maternal depression - i.e. effects concentrated among children of initially depressed mothers.
Fernald et al, 2008*	Mexico	Cross-section 5yr follow-up to RCT	CCT			Increase	Increase	Increase			Increase			Comparing 3.5yr to 5yr exposure, and cumulatively larger cash transfer may not provide reliable causal estimates
Fernald et al, 2009*	Mexico	Cross-section 10yr follow-up to RCT	CCT			No effect						Decrease		Effect of 18mo additional exposure at 10yr follow-up, when children are 8-10yrs
Ozer et al, 2009*	Mexico	Matching	CCT									Decrease		No effect on BPI anxiety/depression subscale; positive effect on aggressive/oppositional subscale. Maternal stress and depression also improved.
Paxson and Schady, 2010*	Ecuador	RCT	CCT (unenforced)			Increase	Increase		No effect		No effect	No effect		Effects in bottom quintile only. Caregiver stress and harsh parenting also decreased in bottom quintile. Children had higher hemoglobin and received deworming pills.
Fernald and Hidrobo, 2011*	Ecuador	RCT	CCT (unenforced)			Increase								Effects among rural sample only. No effects on maternal stress or harsh parenting.
Macours et al, 2012*	Nicaragua	RCT	CCT (weakly enforced)			Increase	Increase	No effect	Increase	No effect		No effect	Increase	Using 2nd follow-up, most effects persist 2yrs after CT ended. No effect on maternal stress and

														depression, but increased child stimulation by caregivers.
Barham et al, 2013*	Nicaragua	10-year follow-up to RCT	CCT (weakly enforced)	Increase										Comparing boys exposed in utero-2yrs to boys exposed at 2-5yrs at 10yr follow-up; 0.15SD difference
Gilligan et al, 2016	Uganda	RCT	CCT (conditional on enrollment)			Increase	No effect		No effect		Increase			Effects compared to ECD-only group. Food+ECD group had no effect. Accompanied by improvements in diet, anemia, ECD participation, and stimulation.
Fernald et al, 2016*	Mexico	RCT	CCT + Group parenting support			Increase	Increase							Positive results also found on perceptual and quantitave development. Effects relative to comparison group that received CCTs only.
Levere et al, 2016	Nepal	RCT	LCT + group parenting information	Increase										Effects in LCT+information significantly higher than both control group and information-only group, which had no effect. Authors propose mechanism is improved maternal knowledge in combination with cash. Cash was minimal - $7/month for 5 months.
Barry et al, 2016	Niger	RCT	UCT + group parenting support	No effect										Approximately 18 month exposure and over 90% take-up of counseling sessions
Number of studies				**3**	**1**	**7**	**5**	**2**	**3**	**1**	**3**	**4**	**1**	
Number with any significant effects				**2**	**1**	**6**	**4**	**1**	**1**	**0**	**2**	**2**	**1**	
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported. "Decrease" or "Increase" reflects significant effects.														
See Table A3 in the Appendix for the full list of measures / indicators used for each child development outcome.														
****Studies published in an academic journal***														

2.6 Anemia and Hemoglobin

Low hemoglobin or anemia (hb<11 g/dl) are considered a good measure of iron deficiency, which has been linked directly to worse child cognitive development, and may also be a channel through which helminth infections affect cognitive and schooling outcomes. Two studies of a CCT in Mexico find 19-25% reductions in the prevalence of anemia and increases in hemoglobin levels among children 12-24 months old, though an additional year of program exposure had no added effect (Gertler 2004; Rivera et al. 2004). A similarly designed CCT in Nicaragua, however, had no effects, although receipt of iron supplements and household dietary diversity (child diet not reported) increased, possibly because average anemia were much lower at 30% relative to 55% in Mexico (Maluccio and Flores 2005). Despite high baseline anemia rates of 68.9%, a UCT in Ecuador had no effect on hemoglobin concentration among children 36-83 months, except among those in the bottom expenditure quintile (Paxson and Schady 2010). In Uganda, a CT that only required enrolment (not attendance) in an early child development program significantly reduced prevalence of severe and moderate anemia among children 3 to 5 years by approximately 9 percentage points after a year, but food transfers had no effect (D. Gilligan et al. 2013). The authors find improved child dietary quality, higher likelihood of treatment for parasites, and lower diarrhea illness may be potential causes, and that all of these factors jointly improved cognitive development. A pilot study comparing UCTs with food vouchers in Pakistan found that both programs improved child anthropometric status, but UCTs had no effect on anemia or hemoglobin, while vouchers significantly lowered (worsened) hemoglobin status, possibly due to restrictions on the kinds of foods for which they could be used (Fenn et al. 2017b).

Summary: Anemia status, though an important child health indicator because of its long-term consequences on development, is not often reported, possibly due to data collection burden. Several CCT and UCT (or weak CCT) programs have improved anemia status, but the mechanisms for these effects and why some programs have no effects are unclear and little discussed in the literature. Two studies suggest CTs perform at least as well as food transfers.

Table 2.7 Anemia and Hemoglobin

Study	Country	CT Type	Methods	Hemoglobin Concentration	Anemia
Gertler, 2004*	Mexico	CCT	RCT; Matching		25.5% decrease
Rivera et al, 2004*	Mexico	CCT	RCT	11.12d/gl or 3.4% increase after 1yr; no difference in 1yr and 2yr exposure	19.3% decrease relative to control mean of 54.9% (10pp lower); no difference in 1yr and 2yr exposure
Fernald et al, 2008*	Mexico	CCT	Follow-up to RCT exploiting variation in cash amount	No effect	
Maluccio and Flores, 2005	Nicaragua	CCT	RCT	No effect	No effect
Gilligan et al, 2016	Uganda	CCT conditional only on enrollment at ECD center	RCT		Significant 9.6pp decrease in moderate/severe anemia; 10pp decrease in any anemia significant at 10%
Fenn et al, 2017*	Pakistan	UCT, Food vouchers	RCT	No effect of UCT; vouchers decreased Hb relative to control	No effect

Fernald and Hidrobo, 2011*	Ecuador	UCT	RCT	No effect	
Paxson and Schady, 2010*	Ecuador	UCT	RCT	29% of 1SD increase among bottom expenditure quintile only.	
Number of studies reporting the outcome				**6**	**5**
Number with any significant effects				**3**	**3**
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported.					
Studies published in an academic journal					

2.7 Morbidity

Most CTs in the review (and all of the CTs studied using an RCT) have positive effects on morbidity, typically measured as the probability of any self-reported illness or of diarrhea/cough/fever in the past 2 weeks or month despite significant differences in the health systems and disease environment. One study that compares UCTs and CCTs in Burkina Faso finds that CCTs slightly outperform UCTs (Akresh 2016). However, a systematic review of UCTs finds they significantly decrease the probability of illness, even though they have no clear effect on health utilization (Pega et al. 2017). An RCT of a CCT in Tanzania (conditional on regular health visits) finds that morbidity effects take time to materialize, with no reduction in sick days among children under 5 years after 1.5 years in the program, but 0.76 fewer sick days per month after 2.5 years (Evans, Holtemeyer, and Kosec 2016). Consistent with findings elsewhere that health care supply constraints may be important, reductions are largest in areas with more health workers.

Summary: Overall, the findings are encouraging: CTs reduce the likelihood of self-reported illness, particularly fever, diarrhea, and respiratory problems. Given that the effects are seen across CCTs and UCTs, it is possible that different mechanisms are driving these results or that conditions are not the critical component. However, these measures are typically self-reports and may not be a reliable measure, and could be biased if beneficiaries believe they are expected to be healthier.

Table 2.8 Child Morbidity

Study	Country	CT Type	Methods	Morbidity	Notes
Akresh et al, 2016	Burkina Faso	CCT	RCT	Decrease	Compared to control and to UCT
Attanasio et al, 2005	Colombia	CCT	DID, PSM	Decrease	Decrease in incidence of diarrhea and respiratory illness. Effects only on rural <48mo; not urban children or those >48-60mo
Evans et al, 2016	Tanzania	CCT	RCT	Decrease	No effect at 1.5yr follow-up, but significant at 2.5yr
Fernald et al, 2008*	Mexico	CCT	Cross-section 5yr follow-up to RCT	No effect	Comparing 3.5yr to 5yr exposure, and cumulatively larger cash transfer
Gertler, 2004*	Mexico	CCT	RCT; Matching	Decrease	No effect after 6mo; increasing effects with exposure; max effects after 24months. 22-25% decrease in probability of illness
Perova and Vakis, 2012*	Peru	CCT	IV, Matching	No effect	
Macours et al, 2012*	Nicaragua	CCT (weakly enforced)	RCT	Decrease	Positive effects at 2yr follow-up, but not after 4yrs, 2yrs after benefits ended
Gilligan et al, 2016	Uganda	CCT conditional	RCT	Decrease	Decrease in probability of diarrhoea and worms

		only on enrollment at ECD center			
Alatas et al, 2011	Indonesia	CCT	RCT	Increase	Higher reported fever and diarrhoea - authors believe due to improved knowledge
Cheema et al, 2016	Pakistan	UCT	RDD	No effect	
Abdoulaye et al, 2016	Malawi	UCT	RCT	No effect	
Handa et al, 2014	Ghana	UCT	PSM	No effect	
Merttens et al, 2016	Uganda	UCT	PSM, DID	No effect	
Pellerano et al, 2014	Lesotho	UCT	RCT	Decrease	Decrease largely in fever/cold and diarrhea
Houngbe et al, 2017	Burkina Faso	UCT	RCT	Decrease	21% reduction in self-reported respiratory illness
Handa et al, 2016	Zambia	UCT	RCT	Decrease	4.9pp decrease in diarrhea, but not respiratory illness prevalence, among children <5 at 24mo, but not 36mo or 48mo
Number of studies reporting the outcome				**16**	
Number with any significant effects				**9**	
Results only reported for outcomes reported in the papers; blank spaces mean the outcome was not reported. "Decrease" or "Increase" reflects significant effects.					
Morbidity measures include probability of any illness or specific illnesses in the last 2-4 weeks. Due to the diversity of indicators used, we simplify presentation of results.					
****Studies published in an academic journal***					

3. EFFECTS OF CASH TRANSFER DESIGN ON CHILD HEALTH

CT programs entail numerous design decisions that may have important effects on outcomes. Several existing reviews compile insights on the implementation and program design of CTs from programs around the world (Bastagli 2011; Bastagli et al. 2016; Fiszbein and Schady 2009; Garcia and Moore 2012). Table 3.1 identifies some recent reviews focused on implementation and design.

Table 3.1 Reviews of Design and Implementation CCTs Around the World

	CT Type	Implementation aspects covered	Year	Authors
1	CCT	Broad overview of the theory, implementation, and effects of CCTs on poverty, health, and education	2009	Fiszbein, A., Schady, N., Ferreira, F., Grosh, M., Kelleher, N., Olinto, P., & Skoufias, E. (2009). Conditional Cash Transfers: Reducing Present and Future Poverty Washington. DC: World Bank.
2	CCT, UCT	Detailed review of experiences with the design and implementation of CCTs and UCTs across Sub-Saharan Africa. Includes targeting, enrollment, benefit structure, cash delivery systems, and monitoring, as well as descriptions of programs.	2012	Garcia, M., & Moore, C. M. (2012). The cash dividend. The Rise of Cash Transfer Programs in Sub-Saharan Africa. Washington: The World Bank.

3	CCT, UCT, Voucher, Food transfer	Theory, implementation lessons, and evidence on cash, food, and vouchers	2016	Gentilini, U. (2016). Revisiting the "Cash versus Food" Debate: New Evidence for an Old Puzzle?. The World Bank Research Observer, 31(1).
4	CCT, UCT	Comprhensive review of the impacts of CTs and their design features on 6 outcome areas: monetary poverty, education, health and nutrition, savings, investment and production, employment, and empowerment. Within health, the review focuses on impacts on 1) use of health facilities, 2) dietary diversity, and 3) anthropometric outcomes, and includes the effects of design differences in transfer recipient, level, duration, conditions, payment mechanisms, and complementary interventions.	2016	Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., Schmidt, T., & Pellerano, L. (2016). Cash transfers: what does the evidence say? A rigorous review of programme impact and the role of design and implementation features. London: Overseas Development Institute (www. odi. org/projects/2797-social-protection-literature-review-poverty-impact).
5	CCT	Implementation review	2017	Ibarrarán, P., Medellin, N., Regalia, F., Stampini, M. (2017). How Conditional Cash Transfers Work: Good Practices after 20 Years of Implementation. Inter-American Development Bank.
6	CCT, UCT, Voucher, Food transfer	Examines the historical evolution and implementation of largescale food-focused transfer programs using Egypt, India, Indonesia, Mexico, Sri Lanka, and the United States as case studies. Considers how and why countries have made the decision between food, vouchers, and cash transfers.	2018	Alderman, H., Gentilini, U., & Yemtsov, R. (Eds.). (2018). The 1.5 Billion People Question: Food, Vouchers, or Cash Transfers? Washington, DC: World Bank.
7	CCT	PROGRESA/Oportunidades	2017	Parker, Susan W., and Todd, P. (2017). "Conditional Cash Transfers: The Case of Progresa/Oportunidades." Journal of Economic Literature, 55(3): 866-915.

However, causal evidence on the effects of variations in the design of CT programs on child health is relatively limited. We briefly discuss evidence on a few key design elements.

3.1 Transfer Duration, Timing, and Frequency

The effects of the duration, timing, frequency, and size of transfers are likely to be significant, interact with each other, and vary by objective. The causal evidence on health effects of variations in transfer size is weak, in part because study settings have made disentangling it from cumulatively larger transfers difficult (Parker and Todd 2017). We focus on duration, timing, and frequency. Most programs that successfully improve birth, anthropometric, and developmental outcomes provide monthly or bimonthly transfers over several years. Children exposed to CTs in utero and up to 2 years had better cognitive development 10 years later than children exposed from 2 to 5 years, while physical growth differed in the short but not long term because children were able to catch up (Barham, Macours, and Maluccio 2013). The unforeseen discontinuation of a CT in Ecuador caused lower child height and weight 2 years later, particularly among children that were in utero at the time, relative to households that stayed in the program because households were unable to maintain food expenditures (Buser et al. 2016). In a Malawian study of UCTs for adolescent girls, children that were born during the program (exposed in utero and the first months of life) were significantly taller than the control group 2-3 years later, but children that were born just after the program ended (exposed in utero or not at all) were not (Baird, Mcintosh, and Özler 2016). A CCT arm conditional on schooling in the same study successfully delayed childbearing, and effects on height among later-born children were positive but smaller.

Jointly these findings suggest that outcomes like birthweight, early height, and cognitive development are most responsive to transfers sustained through pregnancy and at least the first year of life. This may require transfers to be targeted to women as early as adolescence, depending on local childbearing norms. Children at younger ages are more responsive to CTs and early benefits persist in the long run, possibly due to complementarities between early and later cognitive development (Almond and Currie 2011; Barham, Macours, and Maluccio 2013). Nevertheless CTs targeted to slightly older children can also help them recover from early deficits to some extent, which is consistent with recent studies on 'catch-up' growth (Barham, Macours, and Maluccio 2013; Crookston et al. 2013). Maternal and early child nutrition is an important channel for early effects and appears to be sensitive to CT disruptions, suggesting a need for regular disbursements (Amarante et al. 2016; Buser et al. 2016). However, outcomes like health-care utilization and morbidity are responsive to shorter-term transfers. Delayed or lumpsum disbursements may also act as incentives or commitments to take actions now to meet future targets, such as making a birth plan to deliver at a high quality facility (Barrera-osorio et al. 2011; Cohen et al. 2017; Cohen, Lofgren, and McConnell 2017). Future studies could leverage lessons from behavioral economics to test the effectiveness of different revenue-neutral payment schedules.

3.2 Choice of Conditions

For conditions to be effective, targeted households must comply with conditions (in ways they would not have otherwise), and there must be a clear causal link between compliance with the conditions and improvements in the desired outcomes. Overall, the evidence suggests that conditions for health care utilization do increase take-up of the required behaviors, and can also have positive spillovers on untargeted behaviors and neighboring households, but these changes do not consistently translate into better health outcomes (Alatas, 2011; Glassman et al., 2013; Hunter, Harrison, Portela, & Bick, 2017). A meta-analysis of CT effects on child height across programs finds UCTs and CCTs (typically conditional on preventive care visits) perform similarly, but includes no studies that test the two designs in the same context (Manley, Gitter, & Slavchevska, 2013). Studies comparing CCTs and UCTs head to head in Burkina Faso and Colombia find that conditioning transfers on preventive care visits increased utilization and improved child health outcomes relative to UCTs, while in Zimbabwe neither transfer type had any effects on immunization (Akresh, 2016; Attanasio & Oppedisano, 2015; Robertson et al., 2013). The effectiveness of conditions in improving outcomes depends critically on the quality and availability of health services: In some cases conditions induced beneficiaries to utilize low quality facilities ill-equipped to handle complications, which may explain why they did not reduce mortality (Kusuma, Cohen, McConnell, & Berman, 2016; Powell-Jackson, Mazumdar, & Mills, 2015).[12]

Conditions may also be used as a targeting mechanism if the costs of compliance relative to benefits are high for non-target groups and induce them to self-select out of the program (Das, Do, & Ozler, 2005). For example, there is suggestive evidence from the Mexican CCT that among those eligible, the well-off were less likely to comply with attendance at public health facilities and information sessions and receive program benefits (Álvarez, Devoto, & Winters, 2008). However, if the most vulnerable

[12] Kusuma et al 2016 also note that providing flat transfers regardless of facility type or quality may have given women the impression that all facilities are equally good. Women may have also simply exerted the lowest effort required to comply and receive the CCT.

subgroups are least able or likely to comply with conditions, enforcing conditions may effectively exclude those most in need of income support (Álvarez et al., 2008; Baird, McIntosh, & Özler, 2011).

The distinction between UCTs and CCTs is rarely binary. In practice, programs typically lie on a continuum between purely unconditional and strictly enforced conditional transfers, as the extent to which conditions are announced, monitored, and enforced is continuous and simple program details can influence how CTs are perceived and spent (Gaarder, 2012; Ozler, 2013). Targeting transfers to women, coupling them with access to parenting support, and "labeling" them for specific purposes may all be promising strategies to target child health priorities without incurring some of the costs of conditions (Benhassine, Devoto, Duflo, Dupas, & Pouliquen, 2015; Cohen, Lofgren, & McConnell, 2017; Gilligan & Roy, 2016; Schady & Rosero, 2008).

3.3 Cash, Food Vouchers, and Food Transfers

The relative effectiveness of cash, food vouchers, and food in-kind depends critically on the specific outcome of interest (e.g. caloric intake or dietary quality), beneficiary preferences (e.g. whether food transfers would be infra-marginal – i.e. households would spend additional cash on the same type and quantity of food), the composition of the food transfer (e.g. nutrient density), and local market characteristics (e.g. financial access, food price volatility), making findings hard to generalize (see Gentilini, 2014 for a detailed global review; Alderman et al, 2018 provide a detailed case study of Indian programs). For example, an RCT comparing cash, food vouchers, and food transfers in an urban setting in Ecuador finds that all three significantly improve food quantity and quality, but food transfers increase caloric intake most, while vouchers increase dietary diversity most (Hidrobo et al. 2014). Nevertheless, high quality evidence from several contexts, including Bangladesh, Pakistan, and Mexico, suggests that differences in impact of different transfer modalities on dietary intake and anthropometric status are small on average (Ahmed et al. 2016; J. M. Cunha 2014; Fenn et al. 2017a; Gentilini 2016; Hidrobo et al. 2014). However, differences in cost are typically large: Cost assessments of cash, food, and vouchers across Ecuador, Niger, Uganda, and Yemen finds that per-transfer cost of delivering food is 2 to 4 times more than that of cash, making cash most cost-effective (Gentilini 2016; Margolies and Hoddinott 2015). Technology improvements may increase the efficiency of food and vouchers, but cash is likely to remain the cheapest option. Cash had larger effects on cognitive outcomes than food, when combined with access to a child development group, in Uganda, possibly because cash provided parents the flexibility to procure a diverse set of inputs (deworming, dietary quality, hemoglobin, and financial contributions to the ECD group all increased) that food transfers did not (D. O. Gilligan and Roy 2016). Design strategies like labeling or targeting CTs to women in the household can also increase the likelihood that CTs will be used for food without explicitly requiring it (Attanasio, Battistin, and Mesnard 2012; Schady and Rosero 2008). Cash and in-kind transfers may also have complex effects on local food markets: for example, in-kind transfers result in modest decreases in local village prices overall, but large decreases in villages that have fewer food suppliers and are less connected to other markets (J. Cunha, De Giorgi, and Jayachandran 2018). Ultimately, the choice of transfer modality requires careful assessment of and targeting to local conditions, including availability, knowledge, and current consumption of nutritious foods (Alderman, Gentilini, and Yemtsov 2018).

3.4 Payment Mechanisms

In addition to reducing administrative costs and leakages, the choice of payment mechanism affects the costs beneficiaries face in accessing transfers and, thus, the effective size of the transfer. One

study comparing mobile to cash delivery of a UCT in Niger (where mobile payment penetration is relatively low) finds that mobile transfers improve child food intake more than cash delivery, both because beneficiary costs of accessing mobile money were lower (increasing the effective transfer size) and because women were able to keep greater control over mobile than cash transfers (Aker et al. 2014). Electronic smartcard based payments have also been found to improve targeting and increase the share of the benefit accruing to intended beneficiaries (due to lower leakage along the way) (Muralidharan, Niehaus, and Sukhtankar 2016). If payment mechanisms can reduce administrative per-transfer costs, they may also increase the feasibility of more frequent and timely transfers, which may be important for sustained effects.

4. CONCLUSION

Overall, the evidence suggests CTs can effectively improve a range of child health outcomes, including some, such as birth weight, height, and cognitive development, that have been shown to have longer run implications for health, schooling, and economic wellbeing. Several studies find that effects are larger among the most disadvantaged populations – poorer, less educated households, girls, and younger children. Transfers seem to act as a safety net, protecting households during negative shocks. Such protection during critical periods of child development (e.g. in utero), has lasting effects on child health and development. Transfers conditioned on pre- and post-natal care and routine health checks for children can effectively increase household contacts with the health system and utilization of health services, including child immunization and growth monitoring. However, the links between health care utilization and health outcomes are unclear, possibly reflecting variations in the quality of services. Given the difficulty comparing results across program contexts, studies testing design variations within the same context could help identify the specific effects of variations in CT design. In the Indian context, the differential effects of CTs targeted at different points in the life cycle, the synergies between CTs and targeted supply side interventions, and effects on less evaluated health outcomes, such as birth weight, may be fruitful areas for future research.

PART II
DESIGN & IMPLEMENTATION OF CASH TRANSFER PROGRAMS – LESSONS FROM INDIA

*Shubhra Mittal**

In India, cash transfer programs have been a popular policy tool for delivering social security benefits. Over the last decade governments in India (centre and state) have introduced a number of cash transfer programs – ranging from maternity benefit schemes to girl child protection schemes to those aimed at improving nutritional outcomes. In more recent years, there has been a renewed interest in cash transfer programs by the Indian government in place of in-kind transfers in a bid to reduce leakages and increase administrative efficiency of some of the existing large-scale government subsidy programs[13]. As part of its Direct Benefits Transfer (DBT) agenda, the Government of India (GoI) is looking to leverage on the JAM platform (*Jan Dhan Bank Aaccounts*, *Aadhaar ID*, Mobile), to directly deliver benefits under various government anti-poverty schemes, thereby improving service delivery and governance. Following the success of the JAM-DBT reform in LPG (*Pahal*[14]) in late 2014/early 2015, the GoI has initiated similar reforms in other in-kind welfare programs. In late 2015, cash transfers in lieu of food rations from the Public Distribution System (PDS) were piloted in the Union Territories (UTs) of Chandigarh, Dadra and Nagar Haveli, and Puducherry, and more recently, the government rolled out the *Pradhan Mantri Matru Vandana Yojana*[15], a new Maternity Benefit Program that provides pregnant and lactating women delivering their first child Rs.5,000 in three instalments upon fulfilling certain conditions[16]. The government and other agencies have been exploring replacement of the Take-Home-Ration (THR) component of the Integrated Child Development System (ICDS) with an equivalent cash transfer.

Despite the tremendous push towards cash transfer programs, the evidence base for such programing in India is limited. Very few of these programs have been rigorously evaluated, and none through a randomized evaluation. Much of the evidence base on the impact of cash transfer programs on education and health outcomes comes from Latin America and elsewhere. However, given the differences in the design of cash transfer programs in India and those in Latin America, as well as the variation in context, there is a need to generate India-specific evidence on the impact of cash transfer programs on a range of outcomes. The current push towards cash transfer programs provides an opportunity for us to rigorously study these programs to understand their intended impacts and add to the knowledge base. In parallel, it is important to take stock of and learn from our experiences in implementing the existing cash transfer programs. Since gaps in implementation dilute the efficacy and efficiency of any program, including cash transfer programs, this knowledge can help in

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[13] According to the Economic Survey 2014-15, 41 percent of Public Distribution System (PDS) kerosene allocation, 15 percent of PDS rice allocation and 54 percent of PDS wheat allocation is lost as leakages.

[14] Under the Pahal scheme, household consumers buy the LPG cylinder at market price and receive the LPG subsidy directly in their bank accounts, instead of purchasing the LPG cylinder at a subsidized price.

[15] The program is an expansion of the current Indira Gandhi Matritva Sahyog Yojana (active in 53 districts) to all the districts across the country.

[16] Rs.1,000 upon early registration, Rs.2,000 after completion of at least one ante-natal check-up (after six months of pregnancy), and Rs.2,000 after registering the child's birth and completion of first cycle of vaccination (BCG, OPV, DPT, and Hepatitis-B)

strengthening the design and implementation of ongoing and new cash transfer programs by the centre and the states.

Against this background, this review seeks to understand the design and implementation features that promote or hinder the success of cash transfer programs in India, with a focus on programs that target under-five child health. These lessons can help, (i) policymakers strengthen the administration of current and future cash transfer programs, and (ii) help donors and researchers advocate with government partners when designing or modifying cash transfer programs.

This review is organized as follows: Section 5 describes the methodology and approach for the review paper, Section 6 describes the findings on key design and implementation aspects related to cash transfer programs, and Section 7 describes findings on Janani Suraksha Yojana's (JSY) implementation, as a case study, and Section 8 describes next steps.

5. SCOPE AND APPROACH

We undertook two distinct but complementary approaches to identify the design and implementation features that promote or hinder the success of cash transfer programs. First, we conducted a desk review of existing programmes which involved, (i) mapping the landscape of existing cash transfer programs in India that target under-five child health to form the basis of our desk review, (ii) identifying and summarizing existing evidence on the design and implementation of these programs, and (iii) conducting interviews with key individuals who had worked on or studied cash transfer programs ("experts") to enhance our understanding of cash transfer programs and unearth contemporaneous issues that may not have been captured in the desk review.

Second, we conducted a standalone quantitative analysis of Janani Suraksha Yojana (JSY), using administrative data, in order to corroborate our findings from the review. We focused on the variation in JSY's implementation across states, potential reasons for it and highlighted similarities (or dissimilarities) with the review findings.

5.1 PROGRAM SELECTION

We used the following inclusion criteria to identify government-implemented cash transfer programs that would form the basis of our review[17]

i. Programs that are government-implemented (centre/state) and had been active at least at some point in time from 2005 till end-2016.
ii. Programs for which the condition, transfer or both target directly or indirectly under-five health.

Using the above criteria, we identified 30 cash transfer programs in India which are quite diverse in terms of their objectives, choice of conditions, and payment structure. Of these, 23 programs are conditional cash transfer programs (CCTs), i.e., beneficiaries need to fulfill specific conditions (such as school enrolment or attendance, immunization, prenatal and postnatal care check-ups, nutrition supplements) to receive the transfer, and the remaining are unconditional cash transfer programs (UCTs), i.e., the transfer is not contingent on the beneficiary's action (See Appendix Table C.1 for a

[17] We excluded in-kind transfer programs in this review

complete list of programs shortlisted). Further, majority of the programs are maternity benefit programs (18) and about a third of the programs are girl child protection programs (9)[18].

5.2 REVIEW METHODOLOGY

We undertook two sequential but complementary activities. We began with a desk review of the shortlisted cash transfer programs. This involved identifying and synthesizing broad range of evidence from quantitative, qualitative and mixed methods studies on the administration and implementation of these programs. To identify the studies, we conducted searches on JSTOR, google scholar, and google search engine, and used terms such '*implementation*', '*awareness*', '*evaluation*', '*monitoring*', '*access*', '*use*', and '*assessment*' in combination with the program's name. Our search yielded studies - peer reviewed articles, working papers, grey literature, and other, for only seven programs (see Table 5.1). Importantly, we identified a large number of studies on JSY[19] but very few studies on the remaining six programs (refer to Appendix Table C.2 for a complete list of studies identified and included). It is highly probable that many programs (other than JSY) have been studied but the reports are not publicly available.

Table 5.1 List of Cash Transfer programs reviewed*

S.No	Program Name (year)	States	Program objective	# reports included
Conditional Cash Transfer programs currently active				
1	Janani Suraksha Yojana (JSY) (2005)	Centre	1. To reduce maternal and neo-natal mortality by promoting institutional delivery among pregnant women	7
2	Indira Gandhi Matritva Sahyog Yojana (IGMSY) (2010)	Centre/53 Districts across India	1. To promote appropriate practices, care and service utilization during pregnancy, safe delivery and lactation 2. To encourage women to follow (optimal) infant and young child feeding practices including early and exclusive breast feeding for the first six months 3. To contribute to better enabling environment by providing cash incentives for improved health and nutrition to pregnant and lactating mothers	1
3	Dr. Muthulakshmi Reddy Maternity Benefit Scheme (2007)	Tamil Nadu	1. To provide assistance to poor pregnant women to ensure access to nutritional food 2. To compensate for wage loss during pregnancy	3
4	Bihar Child Support Program (2014)	Bihar (pilot program)	1. To improve child nutrition outcomes	1
Unconditional Cash Transfer Programs currently active				
5	Direct Benefit Transfer in PDS (2015)	Chandigarh, Dadra and Nagar Haveli, & Puducherry	1. To improve nutrition and reduce poverty. The direct benefit relative to in-kind, is to avoid pilferages and losses during the transit of food grains	2
CCT-UCT either inactive or terminated				
6	Vijaya Raje Janani Kalyan Bima Yojana (2006)	Madhya Pradesh	1.To promote institutional deliveries and eventually reduce maternal mortality	1
7	Dhanalakshmi Scheme (2009)	Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Odisha, Punjab and Uttar Pradesh	1. To provide a set of staggered financial incentives for families to encourage them to retain the girl child and look after her well being 2. To change the attitudinal mind set of the family towards the girl – by linking cash transfers to her well-being	1

*Note: This table includes the list of cash transfer programs for which we found studies

[18] The girl child schemes included in our review are those that have an explicit health-related condition (i.e., immunisation)

[19] An advanced search on google scholar using the following key words, 'Janani Suraksha Yojana +"implementation" +"awareness" +"evaluation"' with publication date ranging from 2006 till date showed 569 results

Following the desk review, we conducted interviews with key individuals ("experts") who had worked on cash transfer programs to better understand the program functioning, issues related to program design and implementation, as well as suggestions to strengthen cash transfer programs. This was prompted by our desire to understand some of the contemporary issues that may not have been captured by the desk review. Ideally, we would have liked to understand the perspective of policymakers, researchers, and other stakeholders. We contacted 19 individuals, and were able to conduct 15 interviews (in-person or phone) each of which lasted for about 45 to 60 minutes. All but three of our interviewees were researchers who had studied cash transfer program(s) in India. We reached out to a couple of policymakers but were unable to speak with them. Refer to the list of stakeholders interviewed in Appendix Table C.4.

5.3 Case Study: Janani Suraksha Yojana (JSY)

In order to corroborate the findings from the literature review on implementation gaps, we undertook an analysis of JSY using existing household survey data. Ideally, we would have liked to analyze the administrative data for several cash transfer programs to understand issues of targeting, beneficiary enrollment, timeliness and sufficiency of the cash incentive, and other aspects related to cash transfer programs. However, we limited our analysis to JSY due to two reasons: one, data availability, [20] and two, since JSY is one of the largest conditional cash transfer program in India that is being implemented across all the states and UTs, it lends itself well to cross-state comparison.

We used national household survey data to enhance our understanding of JSY's implementation. For states initially classified as High Performing (HPS) [21], we used the latest round of the District Level Household Survey (DLHS) 2012-13 (International Institute for Population Sciences). For states categorized at low performing states (LPS), we used data from the final round of the Annual Health Survey (2012-13). The reference period for deliveries included in DLHS-4 is 2008-2013 and for AHS is 2007-2011 (Refer to Appendix C for a detailed discussion on data)[22].

5.4 Limitations of the Review

We briefly discuss some of the limitations of the review. First, the review findings are biased towards the experiences of "select" cash transfer programs. Although we had identified 30 programs, we found relevant studies for only seven programs. For many of the smaller, state-level cash transfer programs we found no information beyond the basic structure of the program. As a result, it was difficult to incorporate these programs in any meaningful way in the review. Moreover, for programs other than JSY, we had only a few studies to reference. A related point is that five of the programs for which studies were available are maternity benefit programs; there is only one study on a cash transfer program that targets the girl child. Given the difference in the structure and administration of these two sets of programs, some of the findings may not be applicable to programs targeting the girl child.

[20] In the fall, we plan to reach out to state governments to request access to program administrative data. Our experience working with different government partners suggests that governments are often reluctant to share this information but we think it is nevertheless important to give it a try (if only to document / expose this reluctance).

[21] DLHS-4 does not include data on Daman & Diu, Dadra & Nagar Haveli, Delhi, Gujarat, and Lakshadweep, and 10 states classified as Low Performing JSY States.

[22] At the time JSY was launched in 2005, ten states were classified as Low Performing based on prevailing rates of institutional delivery, while the rest of the states were classified as High Performing. The ten states are Assam, Bihar, Chattisgarh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh, and Uttarakhand.

From our perspective, this is less of a concern since much of the current policy push is towards maternity benefit programs and other nutrition-based programs targeting pregnant and lactating mothers.

Second, given the dearth of studies for most programs, we included findings from less rigorous process evaluations, descriptive studies (quantitative, qualitative, mixed methods), and grey literature to inform our understanding.

Finally, similar to the concerns on the desk review, the findings from our experts' interviews also represent the perspective of predominantly one group of stakeholder, that of researchers and academicians. Ideally we would have liked to understand the perspective and experiences of different stakeholders - policymaker, program administrators, frontline worker, beneficiaries, and researchers. However, due to difficulties in accessing and contacting government partners and time considerations, we were unable to do so.

These limitations of the review highlight a key need for rigorous and systematic evaluation of cash transfer programs in India. The weaknesses in record keeping, and poor quality of the data that is collected are sources of significant concern regarding the likely implementation quality of the programs.

6. FINDINGS

This section discusses the combined findings that emerged from the desk review and key informant interviews. These are organized along the five key components of cash transfer programs which are important to the success of any cash transfer program, namely:

- Targeting and beneficiary identification
- Benefit structure (frequency, size, timeliness and sufficiency of cash incentive)
- Payment system (type of payment system used, and issues of financial inclusion)
- Conditions and their verification (choice of conditions, means of verifying compliance and enforcement), and
- Grievance redress system.

6.1 Targeting and Beneficiary Identification

An important consideration in the design of a cash transfer program is related to the choice of program beneficiaries. Specifically, program administrators need to decide whether the program benefits should be targeted or universal. The ultimate choice depends on the overall goals and objectives of the program, i.e., knowing who, in principle, should be reached by the program and why, as well as budget constraints. There are several ways for targeting program benefits: geographic (targeting program to those residing in a particular area, village, district, region), income or proxy means testing (targeting program to those who fall below a certain threshold of the income/welfare measure calculated using observable characteristics of households), community assessment (targeting program to those who have been identified by their communities as the neediest) and self-targeting. Most programs use a combination of the above along with other means of targeting such as gender and social status. Having selected a targeting method, operationalising it requires a decision on the criteria that will be used to determine who is eligible (i.e., who should benefit from the programme) and, how

they will be identified (i.e., means of verifying eligibility). Conditional on a given targeting rule, the implementation of the targeting may not be perfect, leading to errors of exclusion, i.e., those eligible are excluded from the program and errors of inclusion, i.e., those ineligible receive program benefits.

Most of the cash transfer programs in our review are directed towards one of the following two groups, pregnant and lactating mothers (maternity benefit programs) or the girl child. Proxy means testing (below poverty line/other income criteria) is the most common targeting method, followed by gender and geographic (rural vs. urban) (See Table 6.1). Of the 18 maternity benefit programs, about half of them use means-testing while a quarter include geographic targeting. In terms of the maternity benefit programs in our review, using income as criteria to target program benefits seems reasonable in theory. This is because rates of institutional delivery vary considerably among different income groups, and such an approach would ensure that the program targets those who would benefit the most from it[23]. In practice, however, this would depend upon a number of factors such as the extent to which the BPL line or the income criteria can identify the poor, availability of BPL cards/income certificates among the target, and so on. Having chosen the targeting method, most maternity benefit programs use age (19 years and above) and/or birth order (e.g., for up to two live births) to define the eligible population.

Table 6.1 Targeting Methods used in select Cash Transfer Programs in India

S.No	Scheme	State (s)	Year	Geographic	Income	Gender	Social status
	Maternity benefit schemes						
1	JSY	All India	2005 till date	X	X		X
2	IGMSY	All India	2010 till date	X			
3	Dr. Muthulakshmi Reddy Maternity Benefit Scheme	Tamil Nadu	2007 till date		X		
4	MAMATA	Odisha	2011 till date				
5	Ma-moni Scheme	Assam	2009 till date				
6	Meghalaya Maternity Benefit Scheme (MMBS)	Meghalaya	2011 till date		X		
7	Matru Samrudhi Yojana	Daman and Diu & Dadra and Nagar Haveli	2011 till date				
8	Matritva Laabh	Haryana					
9	Sukhibhava Scheme	Andhra Pradesh	2000 to till date	X	X		
10	Thayi Bhagya Plus	Karnataka	2008 to till date		X		x
11	Maternity benefit scheme for female beedi, imc, lsdm and cine workers	All India					
12	Maternity Benefit	Odisha	2012 to till date				

[23] According to DLHS-3, institutional delivery rates were less than 20 percent among women in the lowest quintile who delivered compared to 80 percent among women in the highest quintile group

13	Bihar Child Support Program	Bihar	2013 to 2016				
14	Maternity benefit for women labors and wife of labors	Haryana	2009 to till date				
15	Motherhood Maternity Benefit Scheme (Matritva Laabh Prasuti Sahayta Yojana)	Rajasthan			X		
16	Matrutva Anudhan Scheme	Maharashtra			X		
17	Vijaya Raje Janani Kalyan Bima Yojana	Madhya Pradesh	2006 to 2007		X		
18	Prasav Hetu Parivahan Evam Upchar Yojana	Madhya Pradesh	2005 to 2007	X			
19	Kasturba Poshan Sahay Yojana	Gujarat	2012 to till date		X		
	Girl Child Scheme						
20	Dhana Lakshmi Scheme	Andhra Pradesh, Bihar, Chattisgarh, Jharkhand, Odisha, Punjab and Uttar Pradesh	2008 to 2014	X		X	
21	Bebe Nanki Laadli Beti Kalyan Scheme	Punjab	2011 to till date		X	X	
22	Bangaru Thalli	Andhra Pradesh	2013 to till date		X	X	
23	Mamta Scheme	Goa	2011 to till date	X		X	
24	Mukhyamantri Rajshree Yojana	Rajasthan	2016 to till date		X	X	
25	Girl Child Scheme	Tripura	2010 to till date		X	X	
26	Balri Rakshak Yojana	Punjab	2005 to 2014		X	X	
27	Bangaru Thalli	Telangana	2013 to 2016		X	X	
	Others						
28	Direct Benefit Transfer in PDS	Chandigarh, Puducherry and Dadra and Nagar Haveli	2015 to till date		X		X
29	Griha Aadhar Scheme	Goa	2012 to till date	X	X		
30	Mother Teresa Asharya Matri Sambel Yojana	Himachal Pradesh	2012 to till date		X		

*Schemes highlighted in grey are either dormant or have been terminated

For assessing whether the program is reaching the intended population, the first order question is whether the eligibility criteria are consistent with the overall goals and objectives of the program. Existing studies as well as interviews with our experts suggested that for some programes, certain population groups are systematically excluded from accessing the program benefits due to the program's eligibility criteria. For instance, under the erstwhile *Indira Gandhi Matritva Sahyog Yojana* (IGMSY), a pilot program launched in 2010 with the objective of providing pregnant and lactating

women with cash incentives to improve their health and nutritional outcomes, only women 19 years and above and who had had up to two children were eligible for the benefits. However, data suggests that nearly 40 percent of women belonging to SC/ST/OBC and 54 percent of those in the lowest wealth quintile have a birth order of three or more (DLHS-3, 2012-13). Thus, these women are automatically excluded from availing IGMSY benefits. A mixed methods study of IGMSY in the states of Bihar, Chattisgarh, Jharkhand and Madhya Pradesh found that the most marginalized and the poorest communities were more likely to practice early marriage and/or have norms around large family size, which were hard to change through a cash incentive (Falcao et al. 2015). The study estimated that the age and birth order criteria disqualified nearly 40 percent of women from availing IGMSY benefits. Similarly, in the context of girl child programs, our experts suggested that requiring parents of the girl child to undergo sterilization (as is the case with *Balri Rakshak Yojana* and other programs) to be eligible for the benefits did not align with the objectives of the program.

Some experts we spoke to were not in favor of limiting program benefits based on criteria such as poverty, age, birth order, income, and so on: "*One of the first lessons we learnt in the JSY was that restrictions (i.e., limiting program benefits based on age, birth other, BPL) actually don't work in this country (i.e., tend to exclude those deserving of the benefits). People accessing the government system are generally from the poor category, poor backgrounds… they should be given full access to cash transfer"* (Anonymous). In fact, one expert recommended that social welfare programs should consider having exclusion criteria instead of inclusion criteria, as these may be easier to implement administratively.

Given the eligibility criteria, the second question is related to understanding reasons for non-participation by those eligible for the program. Across a number of programs, we find that the program coverage is low: for instance, approximately 50 percent of the eligible beneficiaries had enrolled for the Bihar Child Support Program (BCSP), and this dropped to 41 percent for women who moved to their natal village for delivery. Below we discuss the main factors that influence program enrolment, i.e., low awareness among key stakeholder and onerous procedural requirements. Besides these, high turnover among frontline workers is argued to affect, at least temporarily, the program's administration as the new staff requires time to be oriented to the program (expert opinion).

Onerous procedural requirements for registering into the program

Almost all cash transfer programs require eligible beneficiaries to register in to the program in order to receive the incentives. This typically involves a combination of the following: traveling to a centralized location (*Anganwadi* Centre, PHC, school), furnishing a number of documents to establish their identity and prove their eligibility, and opening a bank account (to be able to receive the transfer). Studies suggest that all these tend to exclude those eligible for the program, to a varying degree, and disproportionately affect poorer and marginalized households. We discuss the challenges with financial inclusion resulting in low program coverage in Section 6.3.

For instance, programs such as IGMSY, Odisha's *Mamata* program, Bihar's Child Support Program require pregnant women to register at the *Anganwadi* Center (AWC) in whose service area she ordinarily resides. The geographical distance to this location along with the associated cost (time and travel) tends to deter migrant women from participating in the program (Falcao et al. 2015, OPM 2016, Duflo et al. 2017). A study on BCSP found enrolment rates among migrant women were only around

25 percent compared to 60 percent for others. Having such a rigid process also makes it difficult for women who move to their natal villages to avail the programme benefits. In the context of girl child programs, limiting the enrollment process to schools makes it difficult for "out-of-school" children to avail the program benefits. Multiple experts we interviewed recommended that programs should provide multiple options for registering into the program, including e-registration facilities, to overcome some of the above challenges.

During registration, beneficiaries are typically required to furnish 3-4 documents to establish their identity and prove their eligibility (see Table 6.2). In case they are unable to furnish even one of documents or their details (name, address) differs across these documents, then it could make it harder for them to enroll in to the program (Dulfo et al. 2017, Falcao et al. 2015, Balasubramanian et al. 2012, Ganesan et al. 2016, Shekhar 2015). For instance, one study on Tamil Nadu's Dr Muthulakshmi Reddy Maternity Benefits Scheme (MRMBS) found that nearly 11 percent of the beneficiaries did not receive the benefits as they were unable to submit all the documents (income certificate, ration card, bank account) (Ganesan et al. 2016). An older study found that the inability to furnish the relevant documents was the second most cited reason for not receiving program benefits among the landless (21 percent) and those belonging to SC/ST caste (25 percent) (Balasubramanian et al. 2012). Beneficiaries may also choose not to enroll into the program if they consider the documentation burden to be excessive, as was seen to be in the case of Dhanlakshmi program (Shekhar 2015). As one expert indicated, "*These things require quite laborious paper work from the FLWs but also from the household side. Any documentation you have to provide automatically kind of biases against poorer, less educated households*" (Anonymous).

While most programs have a provision that require the Frontline worker (FLW) to help beneficiaries procure the necessary documents, beneficiary experience suggests that the process in itself is quite tedious and time-consuming (Doke et al. 2015; Falcao et al., 2015; Jyothi et al., 2015, Nandan et al. 2008). There are also instances where beneficiaries have been asked to pay unofficial fees to FLWs/officials to obtain these documents or for registering into the program (Shekhar 2012, Falcao et al. 2015). One expert highlighted in the context of enrolment into a maternity benefit program, "*In (state) there is no BPL card. The FLW decides whether the potential beneficiary deserves to be a beneficiary or not which is prone to a lot of manipulation.*" (Anonymous)

Table 6.2 Documents required to register for select cash transfer programs

Program Name	Income certificate	BPL Card	Residence / Domicile Proof	Ration Card	Age Proof	Bank a/c details	Birth Certificate	Aadhar	Other
IGMSY			✓	✓	✓				
MRMBS	✓			✓		✓			
Mamata (Odisha)					✓	✓	✓		
Ma-moni Scheme (Assam)		✓	✓	✓				✓	
Matru Samrudhi Yojana			✓		✓		✓		
Bebe Nanki Laadli Beti Kalyan Scheme			✓			✓	✓		

Bangaaru Tahlli				✓		✓	✓	✓	
Mukhyamantri Rajshree Yojana			✓			✓	✓	✓	
Direct Benefit Transfer in PDS				✓		✓		✓	
Mother Teresa Asharya Matri Sambel Yojana			✓			✓	✓	✓	
Dhanlakshmi Scheme			✓				✓		✓
Balri Rakshak Yojana	✓		✓				✓		✓

Low levels of awareness among program administrators and beneficiaries

Cash transfer programs, like any other program, are accompanied by outreach activities that are geared towards informing eligible beneficiaries about the program and its various application procedures. Often these activities are led by the frontline worker (i.e., ASHA for JSY, AWW for IGMSY, AWW for *Dhanlakshmi*). Misinformation and/or incomplete information on the part of either the FLW or the beneficiary can be entry points for excluding those eligible for the program (Vellakkal et al. 2017, Uttekar et al. 2007, Doke et al. 2015, Nandan et al. 2008).

Leaving aside Odisha's Mamata scheme, and Tamil Nadu's MRMBS, for most other programs frontline workers and beneficiaries are seen to have an imperfect understanding of the program, its objectives and various components (Doke et al., 2015, Vellakkal et al. 2017, Devadasan et al. 2008, Malini et al. 2008, Duflo et al. 2017, Singh 2016, OPM 2016, Shekhar 2015). This has implications for the program's on-ground implementation, including program coverage. A study on IGMSY found instances of AWWs registering women well after the stipulated period (i.e., after delivery and not during pregnancy) and devising their own rules to deal with migrant women (Falcao et al. 2016), while another one on *Dhanlakshmi program* found that the frontline workers wrongly required families to submit BPL card and caste certification as part of the registration process (Shekhar 2015).

The lack of clarity among FLWs tends to percolate down to the beneficiaries and their understanding of the program. A study on the BCSP found that most women identified the program as "250 rupees program" which possibly diluted the underlying messaging on the program's intentionality (OPM 2017). Even though *Dhanlakshmi* program placed no restrictions on the number of girl children eligible for the program, a significant proportion of the households had only one girl child enrolled (12 percent of households had 2 girl children and 4 percent had 3 or more daughters) (Shekhar 2015). Similarly, a mixed methods study of JSY in two districts in Rajasthan found that while there was near universal awareness about JSY's existence 4.5 years after its launch, only 65 percent of urban women and 32 percent of rural women knew the amount they were entitled to receive. Importantly, none of the women were aware of the eligibility conditions for home delivery[24], and only 2 percent were aware that delivery in an accredited private institution also qualified for JSY benefits. The study estimated that nearly 14 percent of women eligible for JSY had not enrolled as they were unaware of the program at the time of their delivery (Santhya et al. 2011). The experts emphasized on the need to have

[24] Under JSY, which was launched in 2005, women belonging to BPL households and above 19 years of age would be eligible for JSY incentive (of Rs.500) should they deliver at home for up to two deliveries.

programs be accompanied by strong information and communication strategies that build awareness among all stakeholders, from program administrators to frontline workers to beneficiaries.

Concluding thoughts: Careful consideration of program eligibility and registration process can help to reduce errors of exclusion

The discussion above highlights that the process of identifying and enrolling beneficiaries can exclude deserving beneficiaries from accessing the program. On the flip side, by carefully considering these aspects during the design and implementation stage, programs can achieve sizeable gains. For example, in 2006, JSY removed the eligibility criteria related to age and BPL status for women delivering in public facilities in states classified as low performing. This helped to significantly expand JSYs coverage in these states, and also removed the documentation required for the women in these states to access the program.

Other programs such as the LPG reform (Pahal) and Andhra Pradesh's Smart Card program have tried to reduce the documentation burden by leveraging on technological solutions to identify beneficiaries. In Andhra Pradesh, deploying a unique ID to identify beneficiaries and disburse payments removed the need for beneficiaries to furnish ID documents and also improved their satisfaction levels (Muralidharan et al. 2016)[25]. While introducing such systems it is important to take steps to minimize authentication failures that would deny beneficiaries their payment (there are reports of Aadhar-authentication failures in some states, as high as 49 percent in Jharkhand and 37 percent in Rajasthan) (Economic Survey 2016-17). Besides this, it is important to remember that technological systems like Aadhar, don't solve the problem of targeting. This requires the government to have an updated database of eligible beneficiaries that can be digitized, which is often a challenge.

Finally, as we heard from many experts, it is useful to provide beneficiaries multiple avenues for registering into a program, including self-registration. This can help address issues related to poor access to service centres, power dynamics between FLW and beneficiaries, and other factors that make it difficult for some beneficiaries to enroll into the program.

6.2 Benefits Structure

For cash transfer programs, the program's benefit structure, i.e., the size, composition (duration, timing/frequency, flat vs variable), and recipient of the transfer are important design considerations. Ideally, the design of the benefit structure should be such that it aligns with the overall objectives of the program and generates the right incentives for beneficiaries to participate. At the same time, these need to be balanced against logistical and administrative capacity to distribute the benefits and budget considerations.

Cash transfer programs included in our review fall into two broad groups: (i) maternity benefit programs aimed at improving maternal and child health and nutrition through promoting uptake of health services during and post pregnancy, and (ii) girl child programs aimed at providing long-term financial support to families so as to encourage investment in the girl child and delay age of marriage.

[25] A randomized evaluation of this program by Muralidharan et al 2017 in eight districts found that the program reduced "quasi-ghost" beneficiaries, i.e., of government officials reporting work against a beneficiary and claiming payments.

In terms of the benefit structure, almost all of these programs target the transfer towards the woman. However, on all other aspects we find considerable variation in programs benefit structure, both within and across these two groups (See Appendix Table C.3 for details).

Some maternity benefit programs such as JSY, *Matru Samrudhi Yojana* (Daman & Diu, Dadra & Nagar Haveli) pay a lump sum amount to beneficiaries at the time of delivery, while others such as IGMSY, MRMBS, *Mamata* scheme pay out the incentive in multiple smaller installments staggered over a period of one year or less. In terms of the benefit value, for about half of the programs the total benefit amount is Rs1,000 or less and it exceeds Rs10,000 for three programs. In the case of the Bihar Child Support Program eligible women receive a fixed monthly payment over a relatively long period (i.e., 30 months starting from fourth month of pregnancy until the child is 2 years old). In addition, the program pays a terminal "bonus" incentive to beneficiaries provided they meet certain conditions.

Most of the girl child programs provide long-term financial support to families, typically starting from her birth until she completes school/college. While the total benefit amount is typically between Rs50,000 to Rs60,000, there is significant variation in how this amount is structured across the schemes. In all but three programs, benefits are structured as progressive payments with larger payments associated with reaching or completing a higher milestone. For instance, under Andhra Pradesh's *Bangaaru Tahli* program, beneficiaries receive Rs2,000 per year while the girl is in primary school, and it increases to Rs3,500 for Class XI-XII. In a couple of programs like Andhra Pradesh's *Bangaaru Tahli* and Karnataka's *Dhanlakshmi*, beneficiaries receive a lump sum terminal payment if the girl is unmarried at 18 years. The programs in Tripura and Punjab provide a fixed amount per month to the girl's families until the girl turns 18.

Below we discuss the experiences and lessons that existing programs can offer on the structure of program benefits.

Benefit structure not necessarily aligned with the overall objectives of the program

For a number of programs reviewed, we find that the composition of the benefits (i.e., duration, timing/frequency) is not fully aligned with the program objectives. For instance, Tamil Nadu's MRMBS program is a CCT that provides cash incentives to pregnant women to compensate them for wage loss during pregnancy, obtaining nutritious food and avoiding low birth babies. However, until recently the program was structured such that the earliest the pregnant woman could receive the first transfer was in her seventh month of pregnancy, which gave the woman almost no time to use the transfer to improve her nutritional status. Ideally, transfers should be timed such that beneficiaries have access to it when they would benefit the most from it. In the context of programs geared towards improving women's nutritional status during pregnancy, few of our experts suggested that it would be useful to front-load the cash transfer (i.e., during pregnancy and childbirth).

Our expert respondents also noted the need for the transfer to be accompanied by appropriate messaging so that beneficiaries use the money for its intended purpose. In case of girl child programs, such as *Dhanlakshmi,* that provide a terminal benefit when the girl turns 18 years, studies suggest that parents view this as governments' support for their daughter's marriage (and not for higher education) (Shekhar 2015, ICRW 2015). Moreover, these perceptions are stronger among families from lower socio-economic status than those with a higher economic status.

Cash transfer size often not "large enough" so as to generate the right incentives

For cash transfer programs, the program benefit needs to be large enough so that it creates the right incentive for beneficiaries to participate. Among other things, this involves understanding the various costs (monetary and non-monetary) that beneficiaries incur when participating in the program. Moreover, there is a need to consider the temporal and geographical variations in these costs. In general, for all cash transfer programs, there is time and opportunity cost in securing the necessary documents for registering into the program and in retrieving the transfer from the bank. Additionally, for CCTs there is the added cost associated with fulfilling the conditions (accessing services, for instance) and completing the verification related paperwork. As our expert respondents pointed out, these costs are likely to be much higher for the poorest and most marginalized population groups who are targeted through such programs.

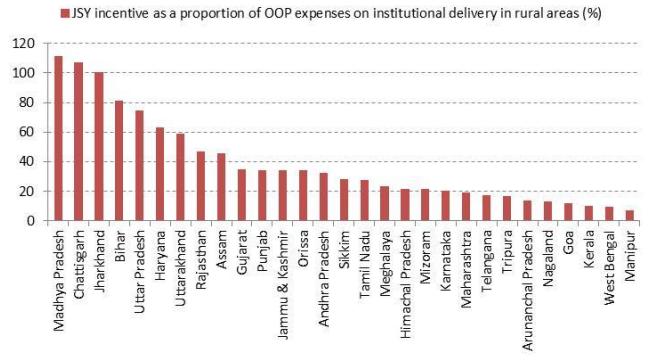
For cash transfer programs in our review other than BCSP and the DBT pilot in the PDS in the UTs, it is unclear how the benefit value was arrived at. Even for these two programs, it seems that many of the above costs were not taken into consideration which may have led to concerns of insufficiency of the transfer amount. For BCSP, the monthly transfer was seen as a supplement to household resources, and amounted for about one-third of the per capita monthly consumption food expenditure. For DBT pilot in PDS in UTs, the monthly transfer size was essentially the monetized value of the in-kind entitlement that beneficiaries received under PDS. Thus, it did not account for the additional costs that beneficiaries incurred, i.e., in retrieving the transfer and then purchasing food grains from the market place. A study by Muralidharan et al. 2017 showed that beneficiaries were unable to purchase the same quantity of food grains after controlling for quality differentials. Singh (2016) found that households in Puducherry spent more than twice of what they did prior to this reform to access the same amount of rice (i.e., Rs241 versus Rs105 for 35 kgs of rice).

In the case of JSY, repeated studies have shown that families incur several expenses at the time of delivery. These include expenses on transportation, food and lodging for the caregiver, medicines and tests which technically should be free (Falcao et al. 2015, Nandan et al. 2008, Coffey 2014, Vellakkal et al. 2017). Besides these, some families reported to have paid "tips" or "unofficial" payments to hospital staff (Coffey 2014, Nandan et al. 2008 and Santhya et al. 2011). Coffey 2014 found that women in rural Uttar Pradesh paid ASHAs anywhere between Rs100-Rs200 and hospital staff anywhere between Rs500-Rs700 in order to avail JSY benefits. Some women reported that their families had been asked to borrow or save money prior to the delivery to make these payments at the time of delivery. The same study found that families spent anywhere between Rs950 to Rs1,250 on delivery at a public facility, which is just about covered by the JSY incentive of Rs1,400 (Coffey 2014). In fact the latest NFHS-4 data also suggests similar levels of out-of-pocket expenses at the time of public institutional delivery (Chart 6.1). There is some evidence that suggests that the insufficiency of the incentive amount vis-à-vis the monetary and non-monetary costs associated with participating in JSY prevent some beneficiaries from participating in it (Vellakkal et al 2017).

Moreover, since costs associated with accessing programs varies over time and across geographies, there may be merit in assessing the sufficiency of the transfer on these two accounts. The JSY incentive for institutional delivery has remained unchanged at Rs1,400 over the last four years, but it is quite likely that institutional delivery costs have changed over time. Inflation-indexing the transfer payment

is only a partial solution as it does not address geographical variation in these costs. The geographic variation in accessing markets (or services) and commodity prices are particularly relevant for in-kind to cash transfer related reforms, such as DBT in PDS and THR-to-cash.

Chart 6.1: Public institutional delivery expenses covered by JSY



Source: NFHS-4

One final point is related to the transfer amount that beneficiaries receive. It is important that beneficiaries receive the program benefits that they are supposed to. However, there is weak but suggestive evidence that beneficiaries in some cases don't receive their full entitlement (Falcao et al 2015, Nandan et al 2008). A study of IGMSY found that women received amounts ranging from Rs1,000-Rs4,000[26] and in different number of instalments (lump sum to multiple payments) (Falcao et al. 2015). The same study also found cases wherein beneficiaries received a lower amount for public institutional delivery than that stipulated under JSY (i.e., Rs1,000 and not Rs,1400). However, our study experts do not find corruption to be an issue on transfer payouts, and the few mentions were based on anecdotal evidence. One expert rationalized observing side payments to FLWs in one program (JSY) but not in another (IGMSY) to be linked to the certainty of receiving the transfer – the certainty of receiving the benefit in one program may have given the FLW bargaining power to demand a payment from the beneficiary.

Timeliness of incentive payout is key, but a serious challenge

One of the key issues that emerged is the inability of programs to make payments to beneficiaries within the stipulated time frame. Barring select programs in the review (JSY, BCSP, DBT pilot in PDS in UTs) for all other programs we found that there were considerable delays in making the payment. In Jharkhand, beneficiaries received the IGMSY incentive on an average when the child turned 10 months, instead of the end of second trimester/beginning of third trimester (Falcao et al. 2015). A more recent study of Tamil Nadu's maternity benefit CCT found that only about half of the beneficiaries had received their first and second instalment within 3 months of the stipulated time, and this dropped to 22 percent for the final instalment (Duflo et al. 2017). Similarly, many beneficiaries of *Dhanlakshmi* program had not received the incentive even three years after having enrolled (Shekhar 2015).

[26] At the time of the study, the total incentive under IGMSY was Rs4,000 and it was paid in three installments extending from the end of the second trimester of pregnancy till the child was six months old.

This issue was raised by many of the experts, and they noted that such delays are undesirable for several reasons. One, beneficiaries are unable to use the transfer for its intended purpose, which defeats the overall objective of the transfer. Two, the unpredictability in the transfer makes it harder for beneficiaries to plan for the usage of the limited resources: "*Receiving cash incentive, which is large enough and predictable, possibly helps to eliminate the stress that comes from receiving new information (i.e., behaviour change communication) by providing resources to act on it….. regularizing cash payments is going to be so so so important, especially for nutritional outcomes.*" (Anonymous)

Three, specifically in the context of CCTs, it weakens the link for the beneficiary and the FLW between fulfillment of the condition(s) and the associated transfer. For maternal and child health related programs, this essentially implies that the program loses its ability to effectively signal the salience of health to beneficiaries.

The discussion with the experts helped to better understand the underlying reasons for these delays. Some of the delays are caused due to issues such as incorrect beneficiary bank details, delays in obtaining beneficiary *Aadhaar* number and seeding it, delays in opening bank account, which are more transient in nature. These issues tend to be particularly prevalent during the initial stages of a program's roll-out, and are expected to resolve (or reduce) over time as the program's implementation systems and processes get streamlined. Importantly, the existing administrative set-up for most cash transfer programs is a major source of delay, which is likely to continue unless the system is changed. This is to do with the mechanism through which the payment is triggered. As noted previously, beneficiaries are required to provide a lot of paperwork at the time of enrolment. In addition, for CCTs as well beneficiaries need provide paperwork confirming fulfilment of the conditions. All this paperwork needs to be verified and processed before the money can be transferred – from FLW, the reports pass through her supervisors and from them to senior officials, and only after the last official in the chain has verified the paperwork does the payment get processed. Thus, any delay in this chain can and does results in payment delays. Automating this process can help to reduce the extent of these delays. As one expert noted, "*In case of (program name retracted), what I understand is that these FLWs have to physically create a list of people who would be eligible for transfers at any point of time. This is supposed to be done monthly … This is then sent to the medical officer who is supposed to do his own vetting (not sure what that is). Then the medical officer sends it to the block level officer and it is only at the block level where the money is disbursed. As you can see there are many sorts of levels of pushes – so, FLW may delay making the list, the MO might delay sending the list to the block office, at the block office, from what I understand, they literally have names of women and like numbers of their account. So there could be delays over there or it could be even for something like putting down the wrong bank account. We have seen in (program name retracted) that there are delays of as much as 4-6 months to get your money. But for something much more automated like (program name retracted), it is literally within hours or at max within 48 hours. An incentive can be considered an incentive if it is something which they can get immediately. Given that you have so many uncertainties especially in the government in the Indian context, if people feel that they are never going to get the money then what is the point of the incentive?"* (Anonymous)

In addition to this, the process of allocating and disbursing funds from a higher administrative level to a lower administrative level also can be a source of delay. Some of our experts suggested that due to inflexibility in this process, there are situations where the facility does not have the requisite fund

balance to transfer the incentive amount to the beneficiary. Moreover, in case of varying fund balances at lower administrative units (due to variation in utilization rates), it is not easy to re-allocate budgeted funds among these units. Few of our experts suggested that programs centrally-funded are likely to be more prone to delays than those that are state-funded.

Concluding thoughts: Critical for cash transfer programs to have systems and processes in place to ensure beneficiaries receive their entitlements as promised and on time

The above discussion highlights two main challenges with respect to the programs benefit structure, one the benefits may not be aligned with the program goals, and two the benefits may not be administered as designed. Cash transfer programs should consider the resources and processes that are needed to administer the benefits. There is a need to test innovative structures for program benefits that take into consideration many of the limitations in resource poor countries such as India. For instance, the Bihar Child Support Program (BCSP) evaluation tested an innovative program design that combined a monthly conditional cash transfer provided over a sufficiently long period of time, with a bonus incentive conditional on behaviour change. Elsewhere in Zambia a cash transfer program in Chapata district is combining a basic income transfer with bonus payments.

Further, as the experience with BCSP and J-PAL South Asia's ongoing evaluation of a CCT in Haryana suggests, programs ought to leverage technology to expedite the processing of payments and ensure their timeliness. Since such systems are prone to glitches, it is also important to ensure that there are systems in place to identify and fix any glitches to prevent the system from breaking down.

6.3 Payment System

For cash transfer programs, guaranteeing that the money is transferred to beneficiaries is necessary but not sufficient. Programs need to equally ensure that beneficiaries are able to readily retrieve the transfer. Thus, the program's payment system, i.e., the transfer mechanism and its distribution to beneficiaries, is an important consideration. Ideally, the payment system should be such that it does not impose unnecessary costs on beneficiaries in accessing and retrieving the transfers, while reducing administrative inefficiencies in transferring the incentive (i.e., delays in payments, leakages, wrongful exclusion).

Most cash transfer programs in India use (or have used) one or a combination of the following payment options – cash, post office accounts, account payee checks, and direct bank transfers. Initially when JSY was introduced in 2005, the incentive was paid out either as cash or check at the time the beneficiary was discharged from the hospital. In late 2007, in response to data that suggested payment delays and a need to streamline the payment system across the country, the government made it mandatory to pay the JSY incentive only as account payee checks (GoI notification, dated October 2007)[27]. Later in 2013, the payment system changed, this time to direct transfers into the beneficiary's bank account[28].

[27] GoI Notification, D.O.Z. 14018/39/2006-NMBS, Dated October 8, 2007

[28] In 2013, the central government rolled out of Direct Benefit Transfers (DBT) to reduce leakages and improve administrative efficiencies. A number of welfare programs, including JSY, moved to DBT.

At present, leaving aside a handful of programs that possibly depend on alternative means of payment, such as issuing an account payee check (e.g., Mamomi scheme in Assam), most other programs such as IGMSY, *Mamata* in Odisha, and MRMBS make transfers directly into the beneficiary's bank account. Since bank penetration rates, particularly in rural and remote areas, are low, these programs make provisions for assisting beneficiaries to open a bank account. Interestingly, unlike many other countries such as Kenya, Nigeria, Ghana, programs in India have not tested other innovative means of transferring money, such as mobile transfer and mobile money[29].

More recently, the central government has been taking measures to leverage on the JAM Trinity (*Jan Dhan*, *Aadhaar*, Mobile) for implementing Direct Benefit Transfers in various subsidy and welfare schemes. Following the successful use of the JAM platform with the LPG subsidy scheme, the government used this for transferring the benefits under the DBT pilot in PDS. The JAM platform essentially relies on the unique *Aadhaar* number to identify beneficiaries (thereby reducing issues of ghost beneficiaries and duplicates as the unique *Aadhaar* number is updated in the program beneficiary database), and to transfer the incentive into the beneficiary's *Aadhaar*-seeded bank account.

Given that direct bank transfers are the preferred mode for incentive pay outs for existing and potentially new cash transfer programs, we look at the experiences and lessons that existing programs can offer on this aspect of cash transfer programs. Specifically, we focus on ease of financial access (i.e., opening a bank account and operating it), as well as considerations for introducing JAM-based DBT.

Poor access to banking services increases the opportunity cost for beneficiaries for accessing financial services

Most cash transfer programs require beneficiaries to either have a bank account or open one at the time of registering into the program. Inability (or delay) to open one can result in their exclusion from the program (OPM 2016, Falcao et al. 2015). Even though most programs have provisions to assist beneficiaries in opening a bank account, beneficiaries face a number of issues when opening a bank account.

One, in cases where the bank is not readily accessible (due to distance, terrain, or other reasons), beneficiaries tend to find it difficult and/or costly to avail banking services (Falcao et al. 2015, Santhya et al. 2011, Dulfo et al. 2017, Nandan et al. 2008, Shekhar 2015). A study on IGMSY (data collection in 2014) reported that the nearest bank branch was nearly 30kms away for some beneficiaries, and women spent a considerable sum of money in opening an account (on travel, food, day's wage and other miscellaneous expenses) (Falcao et al. 2015). Similar challenges were seen in BCSP where more than a third of the beneficiaries reported accessing banking services to be challenge. Women reported making on an average three trips to open the bank account, and spent approximately 10 percent of the total monthly transfer on average as travel cost (OPM, 2016). While banking access has been

[29] The Haryana National Health Mission launched a pilot CCT program in December 2016 with the objective of increasing full immunisation rates, which provides mobile talk-time credit to beneficiaries for fulfilling the conditions. The program is being evaluated using a randomised evaluation by J-PAL affiliates, Esther Duflo and co researchers.

improving, even today less than a third of the villages have a bank branch within a 5km distance (Economic Survey 2015-16, Economic Survey, 2016-17).

Two, beneficiaries need to furnish a number of documents/identity proofs (voter ID, residential proof, other) at the time of opening a bank account which place an unnecessary burden on beneficiaries (Falcao et al. 2015, Santhya et al. 2011, Nandan et al. 2008, Shekhar 2015). Beneficiaries don't always possess the necessary documents (particularly true for women), and as discussed in Section 6.1, acquiring these documents can be a time-consuming and costly affair, and may involve bribing various officials (Falcao et al. 2015, OPM, 2015). There is also evidence of bank officials applying arbitrary rules when opening accounts, such as asking the beneficiary to pay an account opening fees or requiring a deposit into the zero-balance account (Falcao et al. 2015, OPM 2016). The experts highlighted other types of malpractices by banking officials, such as requiring accountholders to maintain a minimum balance in their zero-balance accounts, using the cash incentive to settle existing bank dues, and limiting small withdrawals.

Many experts were of the view that financial inclusion although far from universal has improved and will continue to do so. To them, the issues around this were largely limited to remote and tribal areas. Programs such as the *Jan Dhan Yojana* (and other measures by the government) are playing an important role in bringing households and individuals, particularly women, into the ambit of the formal financial sector. In 2014 alone (when PMJDY launched), 120 million bank accounts were opened, and over 270 million *Jan Dhan* accounts have been opened as of February 2017[30]. Some experts indicated that documentary burden associated with bank account opening may no longer be a valid concern as beneficiaries can provide a number of ID proofs (ration cards, Aadhaar card, others) for opening a PMJDY account.[31] Having said this, most of our interviewees were not familiar with the PMJDY's working on-ground, and whether some of the malpractices by banking officials had been corrected for under the current scheme.

"Last mile" financial inclusion remains a challenge

For cash transfer programs, it is important to ensure that the payment system does not impose undue costs on beneficiaries for cashing-out, i.e., in accessing and operating their accounts. An evaluation of the BCSP found that women choose to withdraw cash quarterly (and not monthly) due to the high opportunity cost of visiting the branch.

This is a challenge not only in for those in rural and remote areas, but also for those in urban and peri-urban areas, though to a lesser degree. A study of the DBT pilot in PDS (in urban areas) found that beneficiaries spent a considerable amount of time and money in accessing their bank accounts (loss of day's wages, transportation). It seems that beneficiaries trust or find it more comfortable to visit the bank branch to withdraw money (than use the ATMs) (Singh 2016). Another study found that even though using ATMs reduced the time cost for accessing the cash incentive by 31 minutes, only 37 percent of beneficiaries possessed an ATM card for the bank where they were receiving the cash

30 Despite the recent surge, a third of the adults remain outside the formal banking system, likely to be from the more vulnerable sections of the society (Economic Survey 2015-16, 2016-17)

31 Under this, individuals can open 'small accounts' by providing only a photograph and person's signature. However, it is unclear if and how this is working on ground, i.e., whether bank staff are aware of these provisions and banks are willing to open "small accounts. https://www.pmjdy.gov.in/scheme

transfer (Muralidharan et al. 2017). In fact, last year's Economic Survey reported that the main bottleneck that states face in introducing JAM for DBT payments is the last-mile financial inclusion (Economic Survey 2015-16).

The government has been taking various steps to improve "last mile" financial access, including strengthening the Banking Correspondent (BC) space. However, besides low cover of BCs (1 BC per 6,630 people), there are a number of issues with the model that need to be addressed. The first is related to the financial viability of the model for the various stakeholders involved (BCs, banks, customers), as pointed out by one expert. BCs incur significant costs –fixed costs in setting up the infrastructure on items such as printer, devices, and operating costs (internet, rent, etc). However, the commissions are not necessarily lucrative for them to operate. Second, there are issues related to inter-operability among BCs, i.e., BCs of one bank are unable to help beneficiaries with accounts in another bank transact unless they have a biometric authentication device.

Some experts noted the need for the program's benefit structure to reflect the above limitations of the payment: "*There is an argument to be made for sizeable and regular payments. And I think, it's nice to have, in a case where you can easily access the bank account, it is nice to have a monthly amount. But I think the reason why most of these cash transfer schemes operate in kind of these lumpy payments at regular but not necessarily closely spaced intervals is precisely because they understand that there are costs to accessing money."* (Anonymous).

Further some experts also discussed the issue of illiteracy and financial illiteracy that impedes the usage of banking services and creates space for corruption and manipulation: "*Rather than literacy we have miserably failed in terms of giving financial literacy and financial education, the know-how to use these innovative technologies…Financial Literacy Credit Counselling Centres - they have failed miserably*." (Anonymous) While they recognized this to be a barrier for enabling "usage" and "cashing out", they added that this is not insurmountable.

Using JAM Trinity to enable DBT payments

The limited experience of using the JAM platform for DBT suggests one serious issue with *Aadhaar*-linked cash transfers. Under the current system, each time a beneficiary opens a new bank account and seeds it with their *Aadhaar*, any previous mapping is overwritten by this fresh seeding. For *Aadhaar*-linked DBT, this new account becomes the default account for receiving the cash transfer. In case beneficiaries that have more than one bank account, which tended to happen after the recent drive to open *Jan Dhan* accounts, beneficiaries are unaware of their bank account in which they are receiving the transfer. For Aadhar-linked DBT transfers since beneficiaries are unable to choose the account to receive the transfer, the payment may be credited to an account which is not their primary account causing confusion and inconvenience, as noted by some experts.

A study on the DBT pilot in PDS found that 20 percent of beneficiaries reported not receiving the transfer payment, which could be due to payment processing errors, lack of awareness among beneficiaries of the transfer, or payments being transferred to bank accounts beneficiaries don't access (Muralidharan et al. 2017). "*Challenge is that beneficiaries don't know where the money is going. This is not as simple as saying, that the money was not transferred since in that case we would have money being returned or bounced back. The current situation is very difficult to reconcile, it is not*

leakage or diversion. This is a huge blind spot for about a fifth of the beneficiaries which is not a small number. This is the biggest challenge, but it's gotten better over time. Even then, a fifth is a very large number." (Anonymous).

The issue of unawareness of payment transfer gets compounded by the fact that beneficiaries often don't receive any notification from the bank (via an SMS text) informing them of the credit (Singh 2016, Muralidharan et al. 2017). A study on DBT in PDS found that while 65 percent of beneficiaries had seeded their bank accounts with their mobile number, only 16 percent recollected receiving an SMS on the transfer in the previous month. Moreover, there was considerable variation across months on SMS receipts, and even when such messages were sent, the content of the message (i.e., absence of details about the purpose) and the language (i.e., English) made it uninformative for the beneficiary (Muralidharan et al. 2017).

Concluding thoughts: Achieving financial inclusion not an "insurmountable" challenge, but requires continuous work

From the above, it is evident that although financial inclusion has been on the rise, there are still gaps and beneficiaries continue to face several challenges in retrieving the cash transfer. For cash transfer programs, this is highly undesirable. However, experiences of other developing countries suggest that payment systems can be designed to overcome these challenges. For instance, cash transfer programs in some of the Sub-Saharan African region have looked at different ways of addressing the financial access challenge including using mobile money, providing beneficiaries multiple points for cashing out (bank account, post office account, mobile money), and providing point-of-service devices to local shopkeepers (Garcia & Moore).

In India, so far much of the efforts towards financial inclusion have been focused on developing the Business Correspondent model, licensing mobile money operators and payment banks. According to one expert, the commission rate for BCs is not lucrative and there is considerable variation across banks in the contract structure with the bank agents. They suggested that it would be worth considering increasing the commission rate so as to make the model more attractive for bank agents. Further, it is important to allow beneficiaries alternative means for cashing out and experiment with new modes for transferring money such as PayTMs, m-Pesa, and others as is being done in some of the African countries.

6.4 Conditions and Verifying their Compliance

For cash transfer programs, an important design consideration is whether to condition the transfer or not. Globally rigorous evaluations of CCTs across middle and high-income countries suggest that conditions can be effective in inducing desirable behavior. However, context is important, and decision on the choice and number of conditions need to be made in conjunction with the ease of monitoring and verifying their compliance in that context. The latter is a complex task and requires systems that can help governments systematically collect information in a timely manner, and use this information to enforce compliance.

In India, there seems to be a strong preference for introducing CCTs over UCTs – three in every four cash transfer programs in our review are CCTs. However, among the CCTs, there is considerable

variation in terms of the conditions, means of verifying compliance, and enforcement. Among the maternity benefit CCTs, most of the conditions are related to the uptake of health services –conditions related to institutional delivery and ante-natal check-ups are the most common, followed by immunization, birth registration, and receipt of Iron and Folic Acid tablets, and TT injection. A couple of programs also include conditions that are linked to behaviour change, such as exclusive breastfeeding, introduction of complementary feeding or attendance at counseling sessions (village health and nutrition days, growth monitoring sessions, etc). Among the girl child CCTs in our review, all of the programs include a condition(s) linked to the girl child's health (i.e., full immunization), possibly to address any gender bias in access to health care. Besides this, other conditions include enrollment or completion of a particular grade, remaining unmarried at the age of 18 years etc.

One key difference between the maternity benefit CCTs and girl child CCTs is related to the structure of the conditions. Most maternity benefit programs in our review such as IGMSY, MRMBS, Odisha's *Mamata* program, make the transfer contingent on fulfilling a set of conditions which can be administratively burdensome. For instance, under Odisha's *Mamata* program, the first transfer requires the pregnant women to register their pregnancy (preferably in the first trimester), avail at least one ante-natal check-up (of three), receive IFA tablets, receive at least one TT injection, and attend at least one counselling session with the FLW. Similarly, to avail the third instalment after the infant is 6 months old, beneficiaries need to have fulfilled five different conditions: exclusively breastfeed child for first six months, introduced child to complementary foods on completion of six months, completed required vaccination (Polio 3 and DPT-3), have the child weighed at least twice between 3 and 6 months, and attended at least two IYCF counselling sessions between 3 and 6 months of lactation at the AWC/VHND/home visit. In contrast, girl child programs make payments conditional on either the girl enrolling or passing a particular grade as seen in Andhra Pradesh's *Bangaaru Tahlli* and the *Dhanlakshmi* program or on achieving certain education milestones (i.e., completion of Class X, completion of Class XII) as is the case with Goa's *Mamta* program and Rajasthan's *Mukhyamantri Rajshree* Yojana.

Alongside the conditions, CCTs need to have some means of monitoring and verifying beneficiary compliance. An ideal monitoring system would be one that allows officials to collect beneficiary-level data in a timely, systematic, and efficient manner to monitor and verify compliance. Some of the earlier cash transfer programs in India relied on paper-based reporting systems, but more recently the trend has been to use digital platforms. Programs such as the MRMBS, BCSP, and Odisha's *Mamata* program use an online platform to record and monitor beneficiary-level data. Such systems are designed to enable real-time monitoring of beneficiaries and help to reduce any payment delays (OPM 2016). Other programs such as IGMSY and *Dhanlakshmi* rely on paper records to monitor beneficiary compliance which adds to the administrative burden of the FLW.

Below we discuss some of experiences and lessons on the choice and administration of CCTs and their associated monitoring systems:

Poor choice of conditions

Since conditional cash transfer programs tie the incentive to fulfillment of conditions linked to "desirable behaviour", the choice of conditions is an important decision point for conditional cash transfer programs. Ideally the condition(s) chosen should be such that it meets the following three

criteria: (i) easy for the beneficiary to comply with, (ii) easy for the FLW to verify, and (iii) linked to the availability of services.

The experts we interviewed raised several concerns in relation to the conditions included in the existing cash transfer programs. For instance, Odisha's Mamata program and the Bihar Child Support Pilot program include conditions related to exclusive breastfeeding and introduction of age-appropriate complementary feeding. However, verifying compliance for these conditions relies on self-reported data, which may not be error free. Besides this, fulfillment of these conditions is also not within the control of the woman and depends on the household decision-making. Similar concerns were raised for conditions associated with family planning.

Similarly, conditions linked to the receipt of IFA tablets may not be ideal for two reasons. One, they impose certain cost on beneficiaries. The experience of BCSP suggested that beneficiaries were reluctant to consume due to side-effects and taste considerations. Two, unavailability of IFA tablets may also hamper beneficiary's ability to comply with it. In BCSP, only 14 percent of the AWWs reported having IFA tablets in stock.

Besides this, the number of conditions included also matter as conditions place a burden on both beneficiaries as well as program administrators. For instance, under IGMSY to avail the first instalment of Rs4,000 women need to provide a letter from a local official stating she only has two children, a certified copy of her registration at the anganwadi or health center and a certificate from the AWW or ANM that she made three ante natal visits. This places a huge burden on beneficiaries. Similarly, for Dhanlakshmi program, there are 18 conditions (and an associated payment), which not only makes it onerous for beneficiaries but also program administrators (Shekhar 2015).

An unrelated but important point on the choice of conditions is to do with the incentives for FLWs for providing the services. If a cash transfer is conditioned on receiving a service that is not available because FLWs do not offer it, errors of exclusion will be very high, limiting the impact of the program. This means that the decision of what conditions to impose may take into consideration the incentives that FLWs face in providing the services. A few of our experts suggested that FLWs are more likely to provide those services for which they received an incentive, suggesting that conditions for beneficiaries and incentives for FLWs may need to be designed jointly.

Weak design of the monitoring and compliance verification system

Most CCTs have some MIS system in place, but the design of the system may not support effective implementation of the program (Falcao et al. 2015, Duflo et al. 2017). A study on IGMSY across four states found that the systems and processes for recording beneficiary-data varied from state to state. Moreover, FLWs used paper-formats which were complicated and added to their work burden. In many cases, FLW records were found to be incomplete. Besides this, there were no systems in place to verify the information submitted by AWWs (Falcao et al 2015). A study by Dulfo et al. 2017 of a maternity benefit program found that the system did not provide FLWs the flexibility that they needed to effectively monitor program compliance. Specifically, only the FLW belonging to the catchment area of the woman's place of residence was able to access and update her information, which made it difficult to track and monitor women who travelled to their maternal home for delivery or migrated during pregnancy. For such cases, the FLW has to rely on phone calls with either the family members

or her counterpart in the natal village to update the necessary information on the online system. This affected both the timeliness of the data into the system and its quality. FLWs also did not find the system to be user friendly and it added to their work burden.

While most programs are looking at technology-based MIS systems, it is important that such systems are designed keeping in mind the end-user and their needs. Moreover, as the experience of BCSP suggests, FLWs need adequate training and support to use these systems effectively. One expert highlighted in the context of an ongoing CCT-program, "*Anecdotal evidence also suggests that use of tablets provides a sense of empowerment…. I also feel that we managed to do it as our training was very thorough as it included in-class room, field-training and then feedback sessions. We also set up a hotline where they are encouraged to call where their concerns regarding handling of tablets can be handled. So requires investment in not just IT, which we do well, but in the follow-up support that is equally needed. Often governments end with just training, but don't monitor them."* (Anonymous).

Absence of complementary supply-side interventions

In case of the maternity benefit programs included in our review, the conditions are related to the uptake of health services. This requires services to be readily available and accessible, in the absence of which it is either harder for beneficiaries to avail those services or increases their cost of compliance. Evidence suggests that geographical, financial and social barriers tend to either prevent or delay utilization of health services (Falcao et al., 2015; Coffey, 2014; Vellakkal et al, Malini et al. 2008, Nandan et al. 2008). Moreover, these barriers are likely to be much higher for the poor and the marginalized. For instance, difficulty in accessing the AWC due to its location and distance from the beneficiary's home or place of work resulted in late registration into IGMSY (Falcao et al. 2015). In the case of BCSP, conditions were not enforced if services were unavailable; for instance, if the weighing machine was broken at the AWW, then condition associated with weight monitoring was not enforced.

Conditionalities not "strictly" enforced

In case of CCTs, in order to incentivize "desirable behaviour", the transfer is tied to the fulfillment of the condition(s). While conditions can be designed as either "*soft*" (i.e., beneficiaries are not penalized for non-compliance) or "*hard*" conditions, all of the CCTs included in the review but one, have the conditions designed as "*hard*" conditions. Program guidelines for IGMSY, Odisha's *Mamata* program, MRMBS explicitly state that beneficiaries are required to fulfill ALL the conditions associated with a tranche to be eligible for the payment. However, in practice, the conditions operate as "soft" conditions and evidence suggests that beneficiaries can and do receive incentive payments without fulfilling some or all of the associated conditions. For example, a study on the MRMBS CCT program found that 43 percent of the women had received the first instalment in spite of not fulfilling all the conditions associated with this tranche (i.e., completing tests such as Hemoglobin test, blood sugar, urine albumin and others as part of their ANC visits) (Duflo et al. 2017). Similarly, beneficiaries of the former *Dhanlakshmi* program received the cash incentive without having provided the supporting documents to establish that the girl child had at least 75 percent school attendance (as was required by the program) (Shekhad 2015). The soft enforcement of conditionality may help ensure the poor access the cash transfer even if there are insurmountable barriers to the take-up of the behavior. The question then becomes whether having conditions that are not enforced is better than having no conditions. The conditionality, even if not strictly enforced, may still provide a "nudge" and increase

take-up of the service. On the other hand, if the pretense of conditionality imposes an administrative burden, it may increase costs, or having rules that are not enforced might undermine citizens' respect for how well the government runs programs.

Concluding thoughts: Programs should consider having fewer and easily verifiable conditions

The discussion above highlights the challenges associated in the administration of conditional cash transfer programs. In fact, our experts noted that they prefer a UCT over a CCT, and if one were to introduce a CCT, then one with fewer and simple conditions that are easily verifiable is preferable.

In choosing conditions, it is important for policy-makers to consider availability of services. As one expert noted, conditions need to go hand-in-hand with service delivery. Based on our discussion with experts, there seem to be multiple approaches in choosing the "appropriate" program conditions: one view was to choose conditions where there is lack of demand so that the cash incentive can generate the right behaviour, the other view was to design conditions as "soft" conditions and not hard as beneficiaries face numerous challenges in complying with them, and the third view was to choose conditions that are easily verifiable (i.e., not conditioning on behaviour change).

Besides this, programs must also consider ways of reducing the burden arising from "conditioning" benefits. For instance, the Bihar Child Support Program included a combination of soft and hard conditions. More notable designs are seen in cash transfer programs in Sub-Saharan Africa that have tried to reduce costs of compliance for both beneficiaries and administrators by disregarding non-compliance for a select period, and introducing incentives to improve supply of services. This is an area where evidence is needed, and programs would benefit from experimenting with innovative designs for conditioning program benefits.

6.5 Grievance Redress System

It is important for cash transfer programs to have a well-functioning grievance redressal system that allows beneficiaries to escalate any issues in receiving their entitlements or any other aspects related to the program's functioning. This helps to ensure transparency and accountability in the implementation of the cash transfer program. Moreover, for program implementers such a system can shed light on important aspects of the program's implementation, such as issues with beneficiary enrollment, payment delays, and allow them to take the necessary measures.

Of the programs included in our review, only five had some provision for a separate grievance redressal cell. For some programs such as JSY and *Mamata* in Odisha, the program guidelines clearly specify the roles and responsibilities for managing the grievances. For instance, the JSY guidelines require states to set-up a grievance cell in each district, and allow some of the funds under the administrative expense head to be used for meeting any expenses for the cells' functioning. Further, it requires states to display information about the cell and the relevant person's contact details at all health centers and institutions. Similarly, the Odisha's *Mamata* program requires each district to have a toll free number which is widely publicized. Further, the guidelines specify the role of the District Collector and other officials for addressing any grievances. On the other hand, the IGMSY guidelines

give states the flexibility to choose between setting up a separate grievance unit for the program and using the existing Collector's cell at the district level to handle all IGMSY program-related complaints.

Studies and discussions with experts suggest that beneficiaries tend to face problems in accessing benefits, but are unaware of where and how to raise their concerns and complaints. Some of the issues beneficiaries faced are linked to delays in receiving payment, differing transfer amounts, and issues with program enrollment.

In practice, we find that either programs don't have a grievance redressal system, or when they do, it is unclear how well they are functioning. According to our experts, this is one the weakest aspects of cash transfer programs. In the absence of a formal mechanism to raise concerns and file complaints, beneficiaries are forced to voice their issues with the FLW, who is not necessarily in the position to address these in any meaningful way. A study of a Tamil Nadu's maternity benefit CCT found that 45 percent of women reached out to the FLW for complaints regarding their incentive payments, but the FLW was unable to provide them with any actionable information (Dulfo et al. 2017). Similar findings were reported by a study on IGMSY (Falcao et al. 2015).

For programs that have a grievance redressal system, it is unclear how well they are functioning, in terms of the types of issues raised and processes set-up to resolve any complaints. Experience of BCSP suggests that grievance redressal cells that depend on community members to resolve issues and ensure smooth program implementation can be rendered ineffective if the members are not provided with the right incentives. In other programs such as the DBT pilot in the PDS, while the government has set up a toll-free number, no complaint calls were reportedly received (Muralidharan et al. 2017).

Studies suggest that part of the problem is that beneficiaries are unaware of the existence of such a system. A survey administered during September 2009-February 2010 in Rajasthan showed that only a quarter of women knew how and where they could lodge a complaint in case of any difficulty in accessing JSY benefits (Santhya et al. 2011). Similarly, for the PDS reform in Chandigarh, the government has set-up various mechanisms to deal with any grievances (e.g., customer toll-free, website, and citizen service centers), but nearly 89 percent of the beneficiaries were unaware of it (Singh 2016).

Concluding thoughts: Absence of a functioning grievance redressal mechanism compound implementation challenges

Given the inherent challenges in the implementation of a cash transfer program, it is important for such programs to have a well-functioning grievance redressal system. Such a system should not only be readily accessible to beneficiaries and allow them to escalate any issue but also have mechanisms in place to provide feedback to the beneficiary once the issue has been resolved. Some of the recommendations from our experts included, requiring programs to offer multiple avenues for lodging a complaint which take into consideration the local context, setting up call centres/hotlines for beneficiaries to call in, which is independent of the FLW, and exploring the potential for involving Gram Panchayats to mediate and play a role – there would need to be measures in place to account for any power dynamics between the community members and the beneficiaries.

7. FINDINGS FROM JANANI SURAKSHA YOJANA (JSY)

This section focuses on *Janani Suraksha Yojana (JSY)*, Government of India's flagship program launched in 2005. This was done for two reasons, one, it is a large program implemented across states, and so lends itself to cross-state comparisons and, two, there are data available to conduct some descriptive quantitative analysis. *JSY* is a safe motherhood program that provides a cash incentive for institutional delivery with the objective of reducing maternal and neo-natal mortality. Under the program, pregnant women receive a cash incentive for delivering at a government or accredited private institution[32]. With a total budget outlay of close to Rs20 bn (US$296 million[33]) in 2015-16 and over 10 million beneficiaries, JSY is one of the largest conditional cash transfer programs in India.

The program has been implemented across all states and union territories (UTs), with a special focus on states with low rates of institutional delivery (less than 25 percent at the time of the program's launch). Accordingly, ten states namely Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand have been classified as Low Performing States (LPS) and the remaining states/UTs as High Performing (HPS). The program's eligibility criteria vary across these two categories of states and have evolved over time.

7.1 Program Eligibility and Beneficiary Identification

JSY uses a combination of geographic (LPS/HPS, as well as rural/urban), income (Below Poverty Line) and social (SC/ST) criteria to identify eligible beneficiaries. Since 2005, the design of JSY has evolved in terms of its eligibility criteria, which has helped to expand the program's coverage. At the time the program was launched, it limited the benefits to BPL women who were 19 years and above for their first two births in a government or accredited private institution (JSY Implementation guidelines, H&FW) [34]. Thus, high order births among BPL women in public facilities were automatically outside the domain of JSY. As a result, a number of women who would, in principle, have benefitted from the financial assistance did not qualify for the program. As per DLHS-3 (2007-08), nearly 40 percent of women reported birth order of 3 and above. Moreover, the incidence of higher birth order (3 and above) was seen to be more among women belonging to SC/ST/OBC category (approximately 40 percent) as well as those belonging to the lower income category. Northern states and those classified as low performing also reported a greater proportion of higher order births (Uttar Pradesh 55 percent, Bihar 54 percent compared to Kerala 16 percent).

Besides issues resulting from JSY's narrow eligibility criteria, anecdotal evidence suggested that exclusion errors were also high during the initial years, i.e., those eligible were unable to avail the benefits of the program. This was due to the program's design that required the beneficiaries to provide their age and BPL status certification to establish their eligibility, which many women did not possess (one or both). Recognising this as a key impediment to effective JSY implementation, in July 2006 the government issued an order relaxing the eligibility criteria for states categorized as LPS[35].

[32] Since the National Maternity Benefit Scheme (1995-2005) provided a cash incentive to women from BPL families choosing to deliver at home, JSY has continued with this incentive for BPL women (as mandated by the Supreme Court)
[33] Using average exchange rate for 2015-16 at 66.28 (www.x-rates.com)
[34] To avail JSY benefit for delivery in an accredited private institution the woman was required to carry a referral slip from the ASHA/ANM/MO and the MCH-JSY card
[35] http://nhm.gov.in/images/pdf/programs/jsy/imp-govt-orders/bpl_certificate_for_phf_home_del.PDF

Following this, the program's coverage expanded in LPS to all pregnant women delivering in government facilities, irrespective of their age and order of birth but remained unchanged for states classified as high performing. In May 2013, the government issued another order that expanded the coverage in HPS to all BPL/SC/ST women regardless of their age and birth order for delivery in a government or accredited private institution (see Table 7.1 for details).

Table 7.1 JSY eligibility criteria across states

	Launch – April 2005		Apr-06		May-13	
	Eligibility	**Amount**	**Eligibility**	**Amount**	**Eligibility**	**Amount**
High Performing States	All pregnant women from BPL families of age 19 years or above delivering in a government institution for up to 2 live births	Rural- Rs.700 Urban- Nil	All BPL/SC/ST women of age 19 years or above delivering in a government or accredited private institution for up to 2 live births	Rural- Rs.700 Urban- Nil	All BPL/SC/ST women regardless of age and number of children for delivery in government /private accredited health facilities	Rural- Rs.700 Urban- Rs.600
Low Performing States	Pregnant women from BPL families of age 19 years or above, for delivering in a government facility for up to two births*	Rural- Rs.700 Urban- Rs.600	All pregnant women regardless of age and number of children for delivery in government. Only BPL/SC/ST women for delivery in an accredited private institution.	Rural- Rs.700 Urban- Rs.600	All pregnant women regardless of age and number of children for delivery in government. Only BPL/SC/ST women for delivery in an accredited private institution	Rural- Rs.1400 Urban- Rs.1000
Home delivery	All BPL women of age 19 and above preferring to deliver at home for up to 2 live births	All States & UTs- Rs.500	All BPL women of age 19 and above preferring to deliver at home for up to 2 live births.	All States & UTs- Rs.500	All BPL women preferring to deliver at home irrespective of age and number of live births	All States & UTs- Rs.500

*Applicable for the third birth if a woman chooses to undergo sterilization at the place of delivery

7.2 Data and Indicators

We study the variation in *JSY coverage* across states and over time, and try to examine the possible reasons for this variation. In Table 7.2, we define JSY coverage and the related indicators used in the analysis. Due to data limitations, we restrict our analysis of *JSY Coverage* to deliveries in the public facility[36]. Further, we conduct the analysis separately for states classified as LPS and HPS for two reasons: one, the JSY eligibility criteria differs for these two categories, and two, we use different data sets (Annual Health Survey for LPS, and DLHS-4 for HPS)[37]. In addition, we analyze the data separately for urban and rural areas. Since DLHS-4 data is based on deliveries during the reference period 2008-2013 and the AHS data for pregnancies during 2007-2011, we use the eligibility criteria in place starting April 2006.

[36] For both private and home deliveries, we are unable to calculate the '*compliant deliveries*' for LPS and HPS states. For deliveries in private institution, we are unable to ascertain those that took place in an accredited private institution, as is required for LPS and HPS states. In case of home deliveries, we do not have information on the BPL status of women who delivery at home in LPS states.

[37] DLHS-4 did not include the nine states categorized as high priority. In these states, the government initiated the Annual Health Survey to provide annual data on vital health statistics.

Table 7.2 Key Definitions

Variable	*Definition*	*Low Performing States*	*High Performing States*
Entitled deliveries	*Total deliveries among women who meet JSY's eligibility criteria*	*Total deliveries among women (private/ government/home), irrespective of age and birth order*	*Total deliveries among SC/ST/BPL women (private/ government/home), 19 years or above and delivered their first or second child*
Compliant deliveries	*Of the entitled deliveries, all deliveries that fulfil JSY's conditions*	*Of the entitled deliveries, total deliveries by women in a government facility, irrespective of age and birth order*	*Of the entitled deliveries, total deliveries by women in a government facility (i.e., total deliveries by SC/ST/BPL women who are 19 years and above, and delivered their first or second child in government facility)*
Benefitted deliveries	*Of the total compliant deliveries, those who received JSY incentive*	*Of the total compliant deliveries, those who received JSY incentive*	*Of the total compliant deliveries, those who received JSY incentive*
JSY Coverage	*The proportion of entitled deliveries that benefitted.*	*The proportion of entitled deliveries that benefitted*	*The proportion of entitled deliveries that benefitted*
Implemen-tation Coverage	*The proportion of benefitted deliveries to compliant deliveries*	*The proportion of benefitted deliveries to compliant deliveries*	*The proportion of benefitted deliveries to compliant deliveries*
Inclusion error	*The proportion of women not entitled to JSY who deliver in a public institution and receive JSY incentive*	*NA*	*The proportion of women not entitled to JSY who deliver in a public institution and receive JSY incentive*

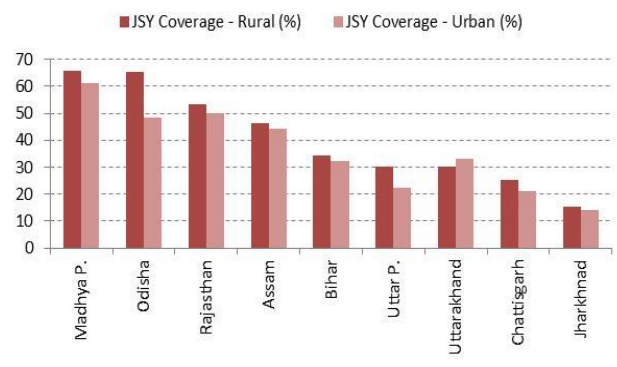
7.3 JSY Coverage

We find significant variation *in JSY coverage* across the states, as measured separately for LPS and HPS, as well as for urban and rural areas. Among the states initially classified as Low Performing, we find that with the exception of Odisha and Madhya Pradesh, JSY coverage in all other states is less than 50 percent, and it falls to less than 30 percent in three states (Bihar, Uttarakhand, and Uttar Pradesh). In each state, we find that *overall coverage of JSY* is lower in urban areas compared to rural areas; the relative ranking of states is similar across the two regions (see Chart 7.1).

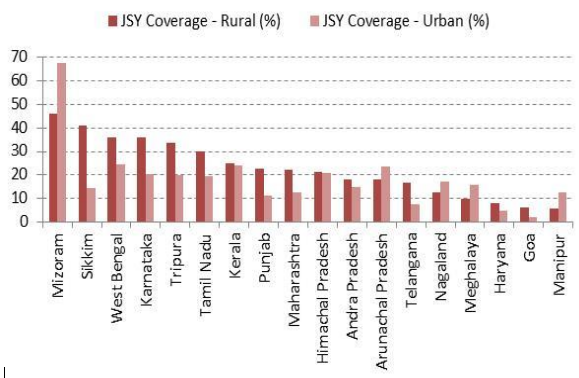
In states initially classified as High Performing, we find that with the exception of Mizoram, JSY coverage is lower than that seen in the LPS states. In urban areas, JSY Coverage is less than 25 percent across all states, and falls below 10 percent in Telangana, Haryana and Goa[38]. JSY Coverage is marginally better in rural areas, ranging from 20 percent to 40 percent in most states. Among the HPS, Mizoram is an outlier with 67 percent of entitled deliveries in urban areas and 46 percent in rural areas receiving JSY benefits.

Chart 7.1: JSY Coverage in states classified as low performing	Chart 7.2: JSY Coverage in states initially classified as high performing

[38] For HPS, we include all women who responded that they had received JSY financial assistance for delivery to estimate coverage.



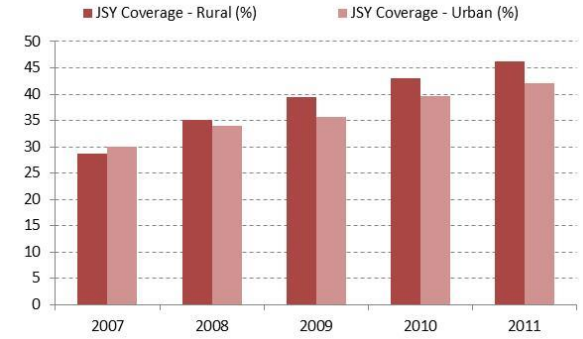
Source: AHS 2012-13



Source: DLHS-4 (2012-13)

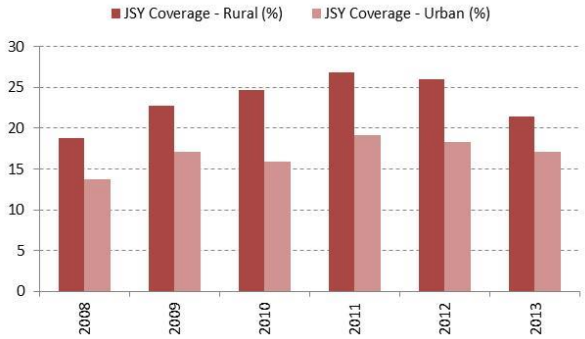
In terms of JSY Coverage over time, we find that in LPS there has been an upward trend in JSY Coverage over the period 2007-11, with more than 40 percent of entitled deliveries in 2011 receiving the JSY incentive. However, in HPS states, JSY Coverage is seen to have improved only marginally over time – from 19 percent in 2008 to 21 percent in 2013 in rural areas (see Chart 7.3 and 7.4).

Chart 7.3: JSY Coverage over time in states classified as low performing



Source: AHS 2012-13

Chart 7.4: JSY Coverage over time in states initially classified as high performing



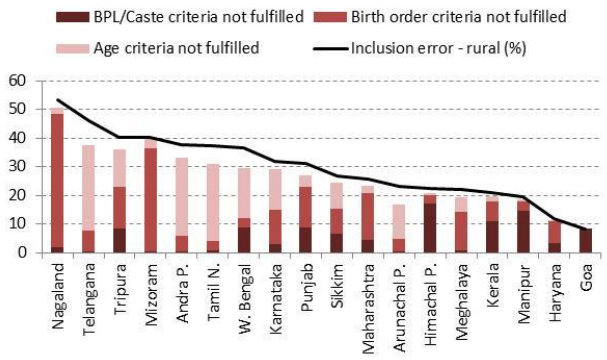
Source: DLHS-4 (2012-13)

7.3.1 Inclusion errors

We estimate the extent to which there are errors of inclusion in JSY's implementation, i.e., non-entitled deliveries in public institutions receiving JSY incentives. Since in LPS, all deliveries in public institutions are eligible for JSY, we limit our analysis of inclusion errors to HPS. From Charts 7.5 and 7.6 it can be seen that the magnitude of inclusion errors varies considerably across states, and is much higher in rural areas than in urban areas. In some of the north-eastern states such as Nagaland, Tripura, Mizoram, more than 40 percent of deliveries in public institutions in rural areas not entitled for JSY receive the cash incentive. In the remaining states (other than Haryana and Goa), anywhere between one-fifths to one-third of non-JSY entitled deliveries in public facilities receive JSY incentive. In urban areas, the inclusion error ranges from 15 percent to 35 percent in most states. We examine which aspect of the eligibility criteria are not satisfied by these women, and find that, except for the outlier case of Himachal Pradesh, in most states the inclusion errors come from the allocation of benefits to women who either don't meet the birth order criteria (i.e., have more than two children) or don't fulfil the age criteria (i.e., are less than 19 years). This suggests that the inclusion errors are not due to "leakage" to the less poor, but instead, due to weak enforcement of the criteria that

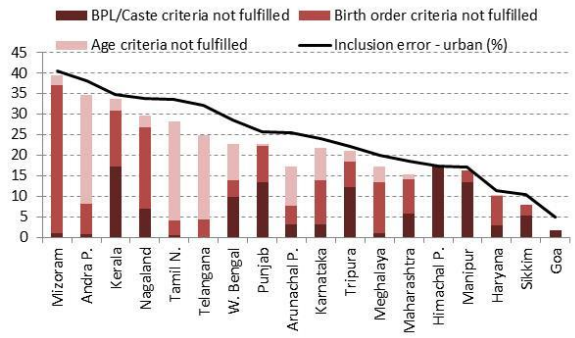
penalizes those arguably most marginalized or needy – young mothers and large families. The social welfare cost of these targeting errors may thus be very low (if not negative).

Chart 7.5: Inclusion error – rural areas



Source: DLHS-4

Chart 7.6: Inclusion error – urban areas



Source: DLHS-4

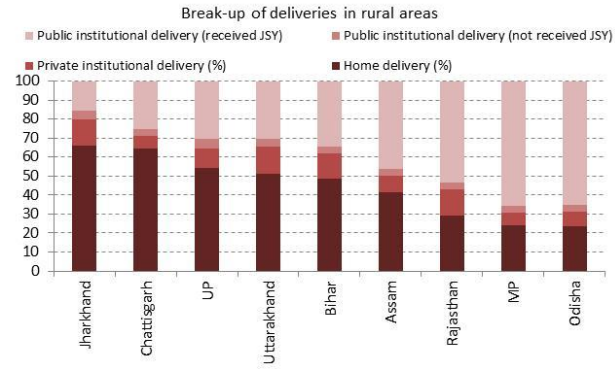
7.3.2 Reasons for variation in JSY Coverage

Next, we investigate the plausible reasons for the above variation in *JSY Coverage*, i.e., whether this is a result of low compliance (fewer women entitled to JSY are delivering in public institutions) or implementation gaps (among women complying with JSY's eligibility criteria, fewer women are receiving JSY benefit). Our analysis suggests that the low JSY Coverage seen in the states initially classified as low performing is largely due to low rates of institutional deliveries: conditional on delivering in a government institution, almost 90 percent of women receive JSY, but few women deliver in a government institution. Jharkhand is the only exception, where both implementation gaps and low rates of institutional deliveries collectively affect the program's reach.

i. Compliance with JSY's eligibility criteria

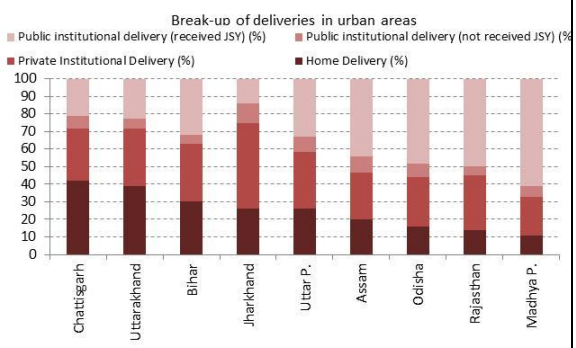
Low compliance – i.e. women entitled to JSY but not delivering in public facilities - could contribute to lower JSY Coverage rate, and may be explained by women delivering either at private facilities or at home. In general, we find compliance is low in most states, with the exception of Madhya Pradesh and Odisha. In Jharkhand, Uttarakhand and Chattisgarh, more than 70 percent of entitled deliveries in both urban and rural areas are outside the public health care system, and 50 to 65 percent of these are at home. In urban areas, we see a greater proportion of non-public sector deliveries taking place in the private sector, with no significant change in the proportion of entitled deliveries in public sector. In contrast, in Madhya Pradesh, Rajasthan and Odisha, less than 40 percent of the entitled deliveries are taking place outside of the public sector. While in urban areas, about 30 percent of the entitled deliveries are taking place in private facilities, in rural areas more women are delivering at home (See Charts 7.7 and 7.8).

Chart 7.7: Break-up of deliveries in rural areas in states initially classified as low performing



Source: AHS 2012-13

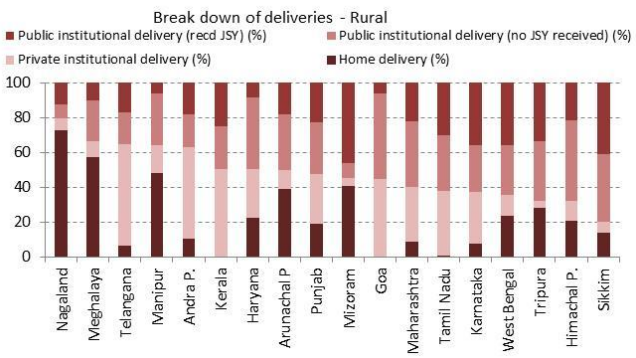
Chart 7.8: Break-up of deliveries in urban areas in states initially classified as low performing



Source: AHS 2012-13

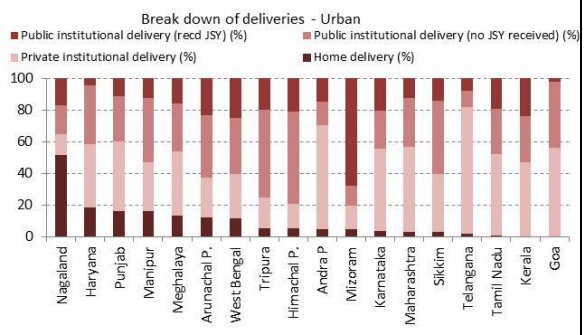
Coming to HPS, we find compliance is low in these states as well. In ten states, 50 percent or more of the entitled deliveries in urban areas are taking place outside of the public sector, mostly in the private sector. The only exception is Mizoram, where close to 80 percent of urban deliveries are in the government sector of which nearly 85 percent are covered by JSY. In rural areas, compliance with JSY's criteria is better with 50 percent or more of deliveries taking place in the public sector in all but six states. In the remaining states, a majority of the entitled deliveries are either taking place in the private sector (for instance in Andhra Pradesh, Kerala and Telangana), or at home (for instance in Nagaland, Meghalaya, Manipur and Mizoram) (See Charts 7.9 and 7.10).

Chart 7.9: Break-up of deliveries in rural areas in states initially classified as high performing



Source: DLHS-4

Chart 7.10: Break-up of deliveries in urban areas in states initially classified as high performing

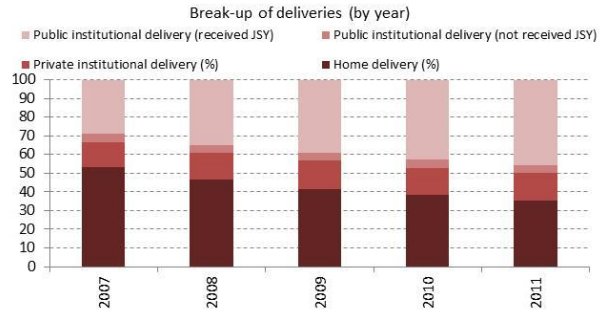


Source: DLHS-4

A year-wise analysis of the location of entitled deliveries in LPS shows that over time (Chart 8.11), compliance with JSY's criteria has improved with nearly 50 percent of the entitled deliveries taking place in public health facilities in 2011 versus 33 percent in 2007 (soon after JSY was introduced). The total entitled deliveries taking place in private facilities is largely constant during this period (13-15 percent). The shift seems to be driven by women moving away from delivering at home to delivering in a public facility. This is in line with existing evidence that suggests that the introduction of JSY has led to an improvement in public institutional delivery rate (Lim et al. 2010). Even then, a large proportion of deliveries in LPS continue to take place at home (NFHS-4). This may be a result of prevailing customs and norms, and decision-making power of influential family members (i.e., mother-in-law) as was found by Vellakal et al. 2015, in their qualitative study of JSY in Jharkhand, Madhya Pradesh and Uttar Pradesh.

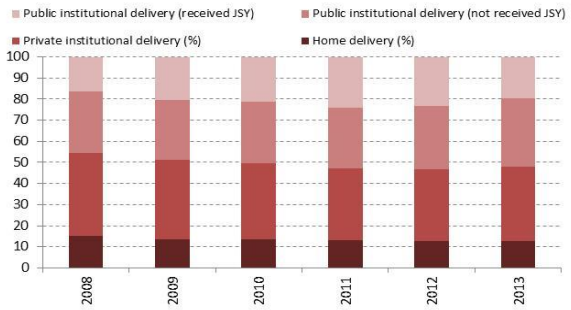
In HPS, there was only a small increase in entitled deliveries, from 46 percent in 2008 to 52 percent in 2013 which appears to be driven by a marginal reduction in deliveries taking place at home and in private facilities. The DLHS-4 data suggests that households choose not to avail medical care at public health facilities due concerns related to the quality of care. In particular, long wait time, poor quality of care and lack of trust in government facilities were reported as reasons for not availing public health care. In Andhra Pradesh, Chandigarh, Karnataka, Maharashtra, Punjab, Telangana and West Bengal, 50 percent or more respondents cited these as reasons for not availing government health care for institutional birth[39].

Chart 7.11: Break-up of deliveries over time in states initially classified as low performing



Source: AHS (2012-13)

Chart 7.12: Break-up of deliveries over time in states initially classified as high performing



Source: DLHS-4

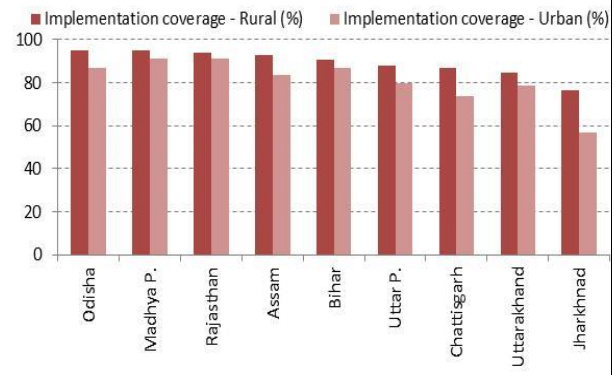
ii. Implementation coverage

Poor implementation coverage – i.e. low probability of receiving the benefit despite compliance with program requirements – is a marker of weak state capacity to ensure complete benefit transfer and may be another factor that contributes to low JSY coverage. We find significant variation in implementation coverage across the LPS and HPS, with LPS outperforming the HPS in terms of JSYs implementation. Moreover, the program appears to be implemented better in rural areas compared to urban areas. In general, JSY implementation coverage is relatively high across the states initially classified as Low Performing. This is partly due to the fact that greater emphasis was placed on the program's implementation in these states. In all but one state (i.e., Jharkhand), 85 percent or more of deliveries in public facilities in rural areas receive JSY benefit. In fact, in Odisha and Madhya Pradesh, JSY implementation coverage in rural areas is 95 percent (see Chart 7.13). Among the LPS, JSY's implementation is the weakest in Jharkhand with only 75 percent of the public institutional deliveries in rural areas and 56 percent in urban areas receiving JSY incentive.

Unlike in LPS, in HPS we find that only Mizoram has an implementation coverage ratio of 84 percent. In most other states, only in 50 percent of those fulfilling JSY's criteria and delivering in public facility receive JSY incentive. Moreover, JSY's implementation is relatively weaker in urban areas of select states (Sikkim, Tripura, Punjab, Himachal Pradesh, Manipur, Haryana and Goa), with less than a quarter of eligible beneficiaries receiving the incentive amount.

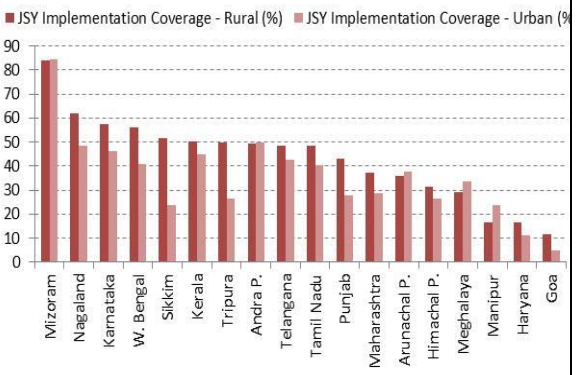
[39] We are cautious in interpreting this data due to a large number of missing data

Chart 7.13: JSY Implementation Coverage in states initially classified as low performing



Source: AHS-4 (2012-13)

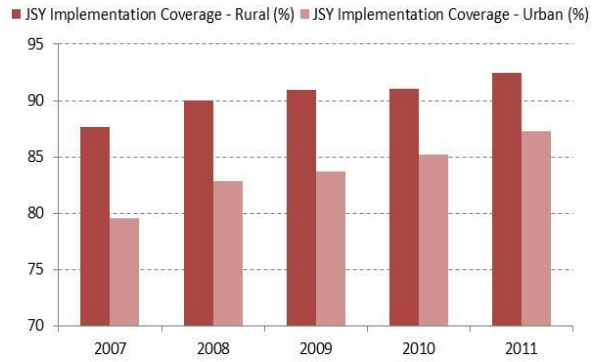
Chart 7.14: JSY Implementation Coverage in states initially classified as high performing



Source: DLHS-4 (2012-13)

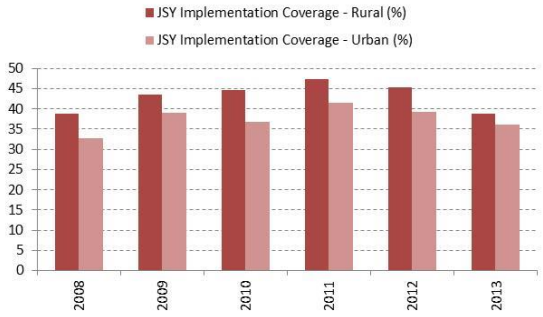
The program's implementation seems to have improved over time in LPS with 92 percent of deliveries in the public sector in rural areas receiving the incentive in 2011 (i.e., six years after the program's launch) compared to 88 percent in 2007 (see Chart 7.15). This is in contrast to HPS where JSY implementation coverage remains low (see Chart 7.16).

Chart 7.15: JSY Implementation Coverage over time in states initially classified as low performing



Source: AHS 2012-13

Chart 7.16: JSY Implementation Coverage over time in states initially classified as high performing



Source: DLHS-4 (2012-13)

7.4 Quality of JSY Implementation

Having assessed variation in JSY's coverage and its implementation, we are interested to understand the quality of JSY's implementation and its variation across states. We use timeliness of receipt of JSY payment as a measure of JSY's implementation quality[40]. JSY guidelines mandate states to disburse the incentive at the time the beneficiary is discharged from the public facility or within a week from being discharged[41]. To aid this, ASHAs are required to share the beneficiary's bank account details, JSY registration number issued at the time of ANC registration, and other relevant details with the health

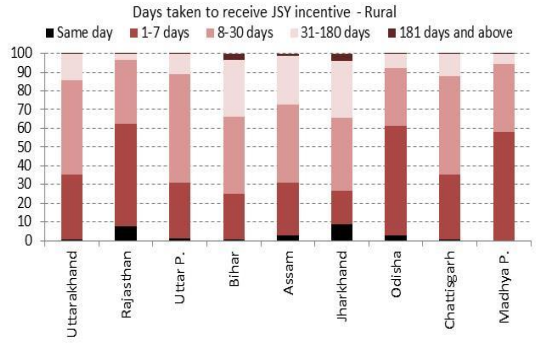
[40] We would have liked to measure JSY quality in terms of amount received vis-à-vis amount entitled to, but given the huge variation in the incentive amount (from Re1 to nearly Rs10,000) we do not include this variable

[41] Government Order D.O.Z.14018/39/2006-NMBS; Dated October 8, 2007. Note – the disbursal timelines are different for deliveries at home and in an accredited private institution.

facility referred for delivery close to the delivery date (at least two weeks prior to expected delivery date[42].

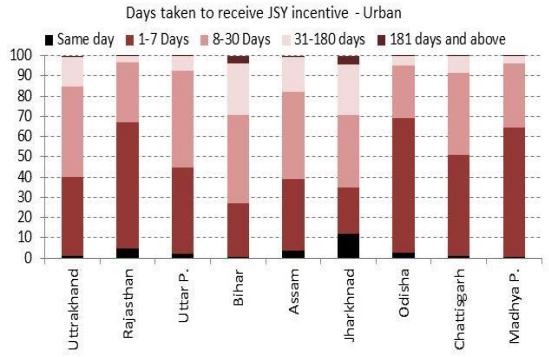
We find that in almost all the states, very few women reported receiving the cash incentive on the same day. Among the states classified as low performing, in Rajasthan, Odisha and Madhya Pradesh, about 60 percent of women in rural areas and 66 percent of women in urban areas reported receiving JSY incentive within a week from the time of delivery. The most significant delays in disbursement were seen in the states of Assam, Bihar and Jharkhand where nearly 30 percent of the women reported having received their incentive between 1 to 6 months after delivery.

Chart 7.17: Days taken to receive JSY incentive in LPS states (rural areas)



Source: AHS 2012-13

Chart 7.18: Days taken to receive JSY incentive in LPS states (urban areas)



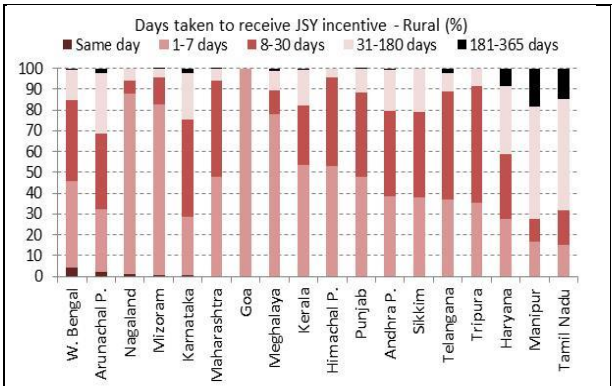
Source: AHS 2012-13

Across urban and rural areas in High Performing States, we find that hardly any women receive the cash incentive at the time of delivery. However, most women receive the JSY incentive within the first week after delivery, and if not, then the first month. Only in some states, such as Manipur and Tamil Nadu do we find significant delays in the disbursement of the cash incentive.

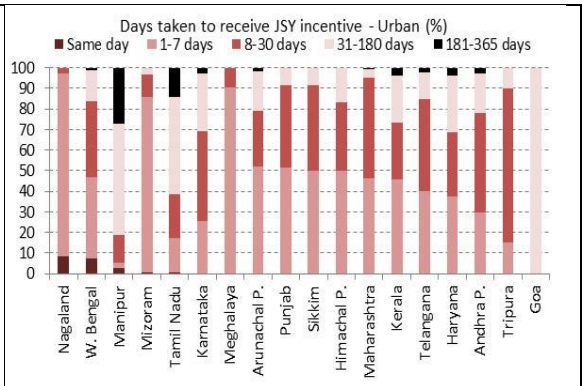
Chart 7.19: Days taken to receive JSY incentive in HPS states (rural areas)

Chart 7.20: Days taken to receive JSY incentive in HPS states (urban areas)

[42] As per JSY guidelines, ASHAs are required to complete the formalities to facilitate payment of JSY incentive and have to submit the information to the health facility referred for delivery at least two weeks ahead of the expected due date for verification by the Medical Officer/other authorized personnel. This includes identifying eligible beneficiaries during ANC registration, filling beneficiary details in the JSY card (including bank account details), ensuring the necessary documentation (BPL card, if needed)



Source: DLHS-4



Source: DLHS-4

Concluding thoughts:

Our case study on JSY highlights some of the common issues in the design and administration of existing cash transfer programs that significantly affect their implementation quality and overall effectiveness. We find significant variation in the program's reach across states, with the program functioning better in the nine states initially categorized as low performing vis-à-vis the remaining states. Even six years after the program was introduced, we find several gaps in the program's implementation. To begin with, not all those who fulfilled the program's conditions, received the transfer. In other words, some beneficiaries are excluded from the program. Second, weak enforcement of the criteria meant that some women who did not meet the program's eligibility criteria were seen to have benefitted from the program. Finally, the program's implementation suffered from delays in transfer payments.

PART III
WAY FORWARD

8. DIRECTIONS FOR FUTURE CASH TRANSFER RESEARCH IN INDIA

Our India implementation review provides some important insights on the experiences of cash transfer programs, which can inform the design and implementation of future programs in India. In general, it is important for each component of the cash transfer program to be aligned with overall goals and objectives of the program. Moreover, the design should be flexible enough to account for variation in the contexts across states and geographies – a one size fits all approach, as is the case with many national programs, is unlikely to be effective in the Indian context.

Moreover, it will be crucial to rigorously evaluate new cash transfer programs, preferably using a randomised controlled methodology, to tease out important information on aspects of program design related to benefit structure, conditions, and targeting. Such measures must be accompanied by programme monitoring and process evaluation data so as to continue to strengthen the program's implementation. The global review points to some questions that a new evaluation of cash transfer programs in India can study.

Given the breadth of designs that CT programs can and have employed and the wide range of child health outcomes that may be of interest, there are several directions future research could take. We highlight a few.

8.1 Design Variations Within the Same Context

Variations in program design and in program contexts make systematic comparison across studies difficult. Studies that explicitly test variation in design features of interest such as eligibility criteria, transfer amounts, duration, and conditions within a single program context will make it easier to isolate the costs and impacts of these variations. While there are numerous design elements that require further testing, there are some that may be particularly relevant to CTs in India, given its specific health problems and the typical design of CT programs in the country.

One example is testing the effects of varying eligibility and conditions on the incentivized behavior as well as inclusion. The use of conditions to incentivize behavior change may, in some cases, exclude the most vulnerable from income support if they don't meet the conditions (Baird, McIntosh, and Özler 2011). For example, maternity benefit schemes in India often require women to be over 18 years old and not have had a child to be eligible for transfers. While the objective is to reduce perverse incentives to have children young, these criteria may effectively exclude young and poor mothers who are most likely to fail to meet the conditions (Raghunathan et al. 2016). However, conditions can also effectively select-in poorer households (Álvarez, Devoto, and Winters 2008). Better evidence on the potential tradeoff is critical to ensuring that CT programs in India are not excluding the most vulnerable populations.

Another example is examining the effects of frequent and sustained transfers. There is evidence that households spend monthly versus lump sum transfers in different ways (Haushofer and Shapiro 2013). The CTs reviewed in this report that have large effects on child health outcomes typically provide monthly transfers. Longer duration of transfers is also associated with better child outcomes, particularly in critical areas like height and child development, but whether the marginal return to the

transfer changes over time is unclear. Most programs in India have had erratic or lump sum payments, but innovations in payment mechanisms may allow testing of different benefit structures within the same program context.

8.2 Timing of cash transfers within the life cycle

Decisions and investments made at different points in the life cycle influence affect child health in very different ways. For example, decisions during adolescence to delay child bearing can affect maternal and child birth outcomes as well as parental inputs during childhood; decisions on nutritional and health care inputs during pregnancy can affect child nutrition in utero and birth-related mortality; and decisions on nutrition, parenting, and appropriate health care during the first two years of life, a critical developmental period, may affect cognitive and physical development (Almond and Currie 2011). There may also be complementarities between health status improvements in each of these periods (and across generations) that could make transfers targeted earlier in the life cycle more effective. This suggests that the timing of CCTs, UCTs, and supplementary interventions over the lifecycle may have significant, different, and nuanced consequences for child health, but there is very little evidence on this. For example, a medium-term follow-up to an RCT of UCTs provided to adolescent women in Malawi finds that children born to them during receipt of the transfers (thus exposed in utero and early childhood) were significantly taller more than two years after transfers ended, but children born after their mothers stopped receiving transfers saw no effects (Baird, Mcintosh, and Özler 2016).[43] In the Indian context, where early child-bearing, low pregnancy weight, and early life stunting are all problems, research to understand the differential effects of CTs targeting different points in the lifecycle on child health may be important.

8.3 Synergies between CTs and targeted supply side interventions

Whether people take up health services and how effective this is in improving child health outcomes depends on the quality of the health care system. Studies suggest that CTs interact importantly with the local health system (Evans, Holtemeyer, and Kosec 2016). While systemic changes are important, more targeted interventions, such as performance incentives for health workers or facilities, have the potential to make improvements as well. Several programs in India already bundle CTs with provider incentives. For example, the national *Janani Suraksha Yojana* (JSY) pays community health workers if they accompany a woman to a health facility for delivery, in addition to a transfer to the woman. However, there is very little evidence on the relative effectiveness of household incentives and health care provider incentives, or whether there are important complementarities between the two.

8.4 Larger studies powered to examine health outcomes

Assessing impacts on final health outcomes with confidence requires adequately large studies. The number of studies of CTs has expanded rapidly, in part because evaluation components are increasingly built into programs, adding to the evidence base for the effects of CTs on indicators like food intake, morbidity, and health care utilization. However, there are relatively few studies reporting effects on important outcomes, such as birth weight and mortality, in part because they are not statistically powered to measure them. The lack of significant effects on certain outcomes in some studies (for example the equivocal results on anthropometric status and cognitive development), may also be due to a lack of statistical power rather than a true absence of effect. Large studies explicitly

[43] Among girls that received CCTs conditional on schooling attendance during adolescence, those that complied with the requirement and delayed child-bearing also had children that were slightly taller.

powered to study these outcomes could identify the full range of effects of CTs on important final health outcomes.

8.5 Considerations for Research Design

In addition to differences in program design – transfer amounts, durations, conditions, enforcement of conditions, and complementary interventions – the considerable variation in the indicators used to report each outcome, how effects are reported, age groups studied and reported, full sample or subgroups reported, and duration of exposure to the program make systematic compilation of results difficult (Bastagli et al. 2016; L. Fernald, Gertler, and Hidrobo 2012; Glassman et al. 2013; Pega et al. 2017). Most studies also provide little or no cost data or cost-effectiveness analysis, making policy-relevant comparisons of different CT designs difficult. More systematic reporting of program details, program context (particularly the disease environment and health care quality), outcomes/results, and cost estimates, would make systematic review of CT effects clearer and facilitate cost-effectiveness analyses. As effects for different types of outcomes can diminish, increase, or persist over time, studies that plan longer term follow-up during and after program exposure can help capture these dynamics (Evans, Holtemeyer, and Kosec 2016; Kandpal et al. 2016; Macours, Schady, and Vakis 2012). Accounting for spillovers may be important in assessing the range and true impact of CT programs. An impact evaluation of the PKH CCT in Indonesia documents positive spillovers in health care utilization: neighboring households that did not receive transfers significantly increased prenatal and child growth monitoring visits (Alatas 2011). Studies of nutrition related BCC interventions combined with CTs in Bangladesh also find broader improvements in child feeding knowledge and practices (Hoddinott, Ahmed, Ahmed, et al. 2017).

REFERENCES: PART I

Ahmed, A U et al. 2016. "Which Kinds of Social Safety Net Transfers Work Best for the Rural Ultra Poor in Bangladesh? Operation and Impacts of the Transfer Modality Research Initiative." http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/129248.

Aker, Jenny C, Rachid Boumnijel, Amanda Mcclelland, and Niall Tierney. 2014. "Payment Mechanisms and Anti-Poverty Programs: Evidence from a Mobile Money Cash Transfer Experiment in Niger." (August).

Akresh, Richard. 2016. "Evidence from a Randomized Evaluation of the Household Welfare Impacts of Conditional and Unconditional Cash Transfers Given to Mothers or Fathers." *Policy Research Working Paper* (June).

Alatas, Vivi. 2011. *Program Keluarga Harapan: Main Findings from the Impact Evaluation of Indonesia's Pilot Householeold Conditional Cash Transfer Program*.

Alderman, Harold, Ugo Gentilini, and Ruslan Yemtsov. 2018. World Bank *The 1.5 Billion People Question: Food, Vouchers, or Cash Transfers?* Washington, DC: https://openknowledge.worldbank.org/bitstream/handle/10986/27907/9781464810879.pdf.

Almond, Douglas, and Janet Currie. 2011. 4 Handbook of Labor Economics *Human Capital Development before Age Five*. Elsevier B.V. http://dx.doi.org/10.1016/S0169-7218(11)02413-0.

Álvarez, Carola, Florencia Devoto, and Paul Winters. 2008. "Why Do Beneficiaries Leave the Safety Net in Mexico? A Study of the Effects of Conditionality on Dropouts." *World Development* 36(4): 641–58.

Amarante, Veronica, Marco Manacorda, Edward Miguel, and Andrea Vigorito. 2016. "Do Cash Transfers Improve Birth Outcomes? Evidence from Matched Vital Statistics, Social Security and Program Data." *American Economic Journal: Economic Policy* 8(2): 1–43.

Araujo, M. Caridad, Mariano Bosh, and Norbert Schady. 2016. "Can Cash Transfers Help Households Escape an Inter-Generational Poverty Trap?" *NBER Working Paper Series*. http://www.nber.org/papers/w22670.

Attah, Ramlatu et al. 2016. "Can Social Protection Affect Psychosocial Wellbeing and Why Does This Matter? Lessons from Cash Transfers in Sub-Saharan Africa." *The Journal of Development Studies* 52(8): 1115–31. http://www.tandfonline.com/doi/full/10.1080/00220388.2015.1134777.

Attanasio, Orazio, Erich Battistin, and Alice Mesnard. 2012. "Food and Cash Transfers: Evidence from Colombia." *Economic Journal* 122(559): 92–124.

Attanasio, Orazio, Luis Carlos Gómez, Patricia Heredia, and Marcos Vera-Hernández. 2005. "The Short-Term Impact of a Conditional Cash Subsidy on Child Health and Nutrition in Colombia." *Report Summary: Familias 03*: 14. http://lafabricacreativa.es/pruebas/impacto/sites/default/files/informes_evaluacion/170_THE WORLD BANK_nutricion salud Colombia.pdf.

Baird, Sarah, Craig Mcintosh, and Berk Özler. 2016. "When the Money Runs Out: Do Cash Transfers Have Sustained Effects?" *Development Workshop, Otago International Health Research Network* (December): 1–2.

Baird, Sarah, Craig McIntosh, and Berk Özler. 2011. "Cash or Condition? Evidence from a Cash Transfer Experiment." *Quarterly Journal of Economics* 126(4): 1709–53.

Banerjee, Abhijit Vinayak, Esther Duflo, Rachel Glennerster, and Dhruva Kothari. 2010. "Improving Immunisation Coverage in Rural India: Clustered Randomised Controlled Evaluation of Immunisation Campaigns with and without Incentives." *BMJ (Clinical research ed.)* 340(9655): c2220. http://www.ncbi.nlm.nih.gov/pubmed/20478960%5Cnhttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC2871989.

Barber, Sarah L., and Paul J. Gertler. 2010. “Empowering Women: How Mexico’s Conditional Cash Transfer Programme Raised Prenatal Care Quality and Birth Weight.” *Journal of Development Effectiveness* 2(March): 51–73.

Barham, Tania. 2011. “A Healthier Start: The Effect of Conditional Cash Transfers on Neonatal and Infant Mortality in Rural Mexico.” *Journal of Development Economics* 94(1): 74–85. http://dx.doi.org/10.1016/j.jdeveco.2010.01.003.

Barham, Tania, Logan Brenzel, and John A Maluccio. 2007. The World Bank *Beyond 80%: Are There New Ways of Increasing Vaccination Coverage? Evaluation of CCT Programs in Mexico and Nicaragua*. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=993760.

Barham, Tania, Karen Macours, and John A Maluccio. 2013. “Boys’ Cognitive Skill Formation and Physical Growth: Long-Term Experimental Evidence on Critical Ages for Early Childhood.” *The American Economic Review* 103(3).

Barham, Tania, and John A. Maluccio. 2009. “Eradicating Diseases: The Effect of Conditional Cash Transfers on Vaccination Coverage in Rural Nicaragua.” *Journal of Health Economics* 28(3): 611–21.

Barrera-osorio, Author Felipe et al. 2011. “Improving the Design of Conditional Transfer Programs: Evidence from a Randomized Education Experiment in Colombia.” *American Economic Journal-Applied Economics* 3, No 2(April): 167–95.

Barry, Oumar, Ali Mory Maidoka, and Patrick Premand. 2016. “Promoting Positive Parenting Practices in Niger through a Cash Transfer Programme.” : 56–60. https://bernardvanleer.org/ecm-article/promoting-positive-parenting-practices-niger-cash-transfer-programme/.

Bassani, D G et al. 2013. “Financial Incentives and Coverage of Child Health Interventions: A Systematic Review and Meta-Analysis (Structured Abstract).” *BMC Public Health* 13(Supplement 3): S30. http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12013065542/frame.html.

Bastagli, Francesca. 2011. “Conditional Cash Transfers as a Tool of Social Policy.” *Economic & Politcal Weekly* 46(21): 61–66.

———. 2016. “Cash Transfers: What Does the Evidence Say? A Rigorous Review of Programme Impact and of the Role of Design and Implementation Features.” (July): 300. https://www.odi.org/sites/odi.org.uk/files/resource-documents/10749.pdf.

Brauw, Alan De et al. 2012. “The Impact of Bolsa Familia on Child, Maternal, and Household Welfare.” *IFPRI. Washington, DC.* (Jan).

De Brauw, Alan, and Amber Peterman. 2011. “Can Conditional Cash Transfers Improve Maternal Health and Birth Outcomes? Evidence from El Salvador’s Comunidades Solidarias Rurales.” *IFPRI Discussion Paper* (April): 1–25.

Buser, Thomas et al. 2016. “The Impact of Positive and Negative Income Changes on the Height and Weight of Young Children.” *The World Bank Economic Review*: lhw004. http://wber.oxfordjournals.org/content/early/2016/03/07/wber.lhw004.short?rss=1.

Cecchini, Simone, and Fábio Veras Soares. 2015. “Conditional Cash Transfers and Health in Latin America.” *The Lancet* 385(9975): e32–34.

Coffey, Diane. 2014. “Costs and Consequences of a Cash Transfer for Hospital Births in a Rural District of Uttar Pradesh, India.” *Social Science and Medicine* 114: 89–96. http://dx.doi.org/10.1016/j.socscimed.2014.05.035.

Cohen, Jessica et al. 2017. “Measuring The Impact Of Cash Transfers And Behavioral ‘Nudges’ On Maternity Care In Nairobi, Kenya.” *Health Affairs* 36(11): 1956–64. http://www.healthaffairs.org/doi/10.1377/hlthaff.2017.0537.

Cohen, Jessica, Katherine Lofgren, and Margaret McConnell. 2017. “Precommitment, Cash Transfers,

and Timely Arrival for Birth: Evidence from a Randomized Controlled Trial in Nairobi Kenya." *American Economic Review* 107(5): 501–5.

Crookston, Benjamin T. et al. 2013. "Postinfancy Growth, Schooling, and Cognitive Achievement: Young Lives 1-4." *American Journal of Clinical Nutrition* 98(6): 1555–63.

Cunha, Jesse, Giacomo De Giorgi, and Seema Jayachandran. 2018. "The Price Effects of Cash Versus In-Kind Transfers." *Review of Economic Studies* (1156941). http://www.nber.org/papers/w17456.pdf.

Cunha, Jesse M. 2014. "Testing Paternalism: Cash versus in-Kind Transfers." *American Economic Journal: Applied Economics* 6(2): 195–230.

Evans, David, Brian Holtemeyer, and Katrina L. Kosec. 2016. "Cash Transfers and Health : Evidence from Tanzania." *World Bank Policy Research Working Paper No. 7882* (November).

Fenn, Bridget et al. 2017a. "Impact Evaluation of Different Cash-Based Intervention Modalities on Child and Maternal Nutritional Status in Sindh Province, Pakistan, at 6 Mo and at 1 Y: A Cluster Randomised Controlled Trial." *PLoS Medicine* 14(5): 1–24.

———. 2017b. "Impact Evaluation of Different Cash-Based Intervention Modalities on Child and Maternal Nutritional Status in Sindh Province , Pakistan , at 6 Mo and at 1 Y : A Cluster Randomised Controlled Trial." : 1–25.

Fernald, L, P Gertler, and M Hidrobo. 2012. "Conditional Cash Transfer Programs: Effects on Growth, Health, and Development in Young Children." *The Oxford Handbook of Poverty and Child Development* (January 2016): 569–602. http://scholar.google.com/scholar?as_q=&as_epq=Oxford+handbook+of+poverty+and+child+development&as_oq=&as_eq=&as_occt=title&as_sauthors=&as_publication=&as_ylo=&as_yhi=&btnG=&hl=en&as_sdt=0,9.

Fernald, L, and M Gunnar. 2009. "Poverty-Alleviation Program Participation and Salivary Cortisol in Very Low-Income Children." *Social Science and Medicine* 68(12): 2180–89. http://dx.doi.org/10.1016/j.socscimed.2009.03.032.

Fernald, Lia C H et al. 2016. "Promoting Child Development Through Group-Based Parent Support Within a Cash Transfer Program: Experimental Effects on Children's Outcomes." *Developmental Psychology* 53(2): No-Specified. http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=psyc13&NEWS=N&AN=2016-49566-001.

Fernald, Lia C H, and Melissa Hidrobo. 2011. "Effect of Ecuador's Cash Transfer Program (Bono de Desarrollo Humano) on Child Development in Infants and Toddlers: A Randomized Effectiveness Trial." *Social Science and Medicine* 72(9): 1437–46. http://dx.doi.org/10.1016/j.socscimed.2011.03.005.

Fernald, Lia C H, Elizabeth Prado, Patricia Kariger, and Abbie Raikes. 2017. *A Toolkit for Measuring Early Childhood Development in Low- and Middle-Income Countries*.

Fink, Gunther, and Peter C. Rockers. 2014. "Childhood Growth, Schooling, and Cognitive Development: Further Evidence from the Young Lives Study." *American Journal of Clinical Nutrition* 100(1): 182–88.

Fiszbein, Ariel, and Norbert R Schady. 2009. 1 World Bank Policy Report *Conditional Cash Transfers*.

Gaarder, Marie M., Amanda Glassman, and Jessica E. Todd. 2010. "Conditional Cash Transfers and Health: Unpacking the Causal Chain." *Journal of Development Effectiveness* 2(1): 6–50.

Garcia, Marito, and C Moore. 2012. *The Cash Dividend*.

Gentilini, Ugo. 2014. "Our Daily Bread : What Is the Evidence on Comparing Cash versus Food Transfers ?" (1420): 56. file:///C:/Users/Lana/Desktop/Our Daily Bread.pdf.

———. 2016. "Revisiting The 'cash versus Food' debate: New Evidence for an Old Puzzle?" *World Bank Research Observer* 31(1): 135–67.

Gertler, Paul J. 2004. “Do Conditional Cash Transfers Improve Child Health ? Evidence from PROGRESA’s Control Randomized Experiment.” *The American Economic Review, Papers and Proceedings*: 336–41.

Gilligan, D et al. 2013. “Impact Evaluation ofCash and Food Transfers at Early Childhood Development Centers in Karamoja, Uganda.”

Gilligan, Daniel O, and Shalini Roy. 2016. *The Effect of Transfers and Preschool on Children’s Cognitive Development in Uganda*. Washington, DC:

Glassman, Amanda et al. 2013. “Impact of Conditional Cash Transfers on Maternal and Newborn Health.” *Journal of Health, Population and Nutrition* 31(4 SUPPL.2).

Goodman, Sherryl H, Dante Cicchetti, and Elaine Walker. 2003. “Genesis and Epigenesis of Psychopathology in Children with Depressed Mothers: Toward an Integrative Biopsychosocial Perspective.” In *Neurodevelopmental Mechanisms in Psychopathology.*,.

de Groot, R, T Palermo, and S Handa. 2015. “Cash Transfers and Child Nutrition: What We Know and What We Need to Know.” *UNICEF Office of Research Working Papers* (August). http://www.unicef-irc.org/publications/pdf/Social protection and nutrition_layout.pdf.

Haushofer, Johannes, and Jeremy Shapiro. 2013. “Policy Brief: Impacts of Unconditional Cash Transfers.” *Abdul Latif Jameel Poverty Action Lab (J-PAL)*: 1–38.

———. 2016. “THE SHORT-TERM IMPACT OF UNCONDITIONAL CASH TRANSFERS TO THE POOR: EXPERIMENTAL EVIDENCE.” : 1973–2042.

Hidrobo, Melissa et al. 2014. “Cash, Food, or Vouchers? Evidence from a Randomized Experiment in Northern Ecuador.” *Journal of Development Economics* 107: 144–56. http://dx.doi.org/10.1016/j.jdeveco.2013.11.009.

Hoddinott, John, Akhter Ahmed, Naureen I. Karachiwalla, and Shalini Roy. 2017. “Nutrition Behaviour Change Communication Causes Sustained Effects on IYCN Knowledge in Two Cluster-Randomised Trials in Bangladesh Nutrition Behaviour Change Communication Causes Sustained Effects on IYCN Knowledge in Two Cluster-Randomised Trials in Bang.” : 1–31.

Hoddinott, John, Ishita Ahmed, Akhter Ahmed, and Shalini Roy. 2017. “Behavior Change Communication Activities Improve Infant and Young Child Nutrition Knowledge and Practice of Neighboring Non-Participants in a Cluster-Randomized Trial in Rural Bangladesh.” : 1–13.

Hunter, Benjamin M., Sean Harrison, Anayda Portela, and Debra Bick. 2017. 12 PLoS ONE *The Effects of Cash Transfers and Vouchers on the Use and Quality of Maternity Care Services: A Systematic Review*.

Kandpal, Eeshani et al. 2016. “A Conditional Cash Transfer Program in the Philippines Reduces Severe Stunting.” *The Journal of Nutrition* 146(9): 1793–1800. http://jn.nutrition.org/lookup/doi/10.3945/jn.116.233684.

Kusuma, Dian, Jessica Cohen, Margaret McConnell, and Peter Berman. 2016. “Can Cash Transfers Improve Determinants of Maternal Mortality? Evidence from the Household and Community Programs in Indonesia.” *Social Science and Medicine* 163: 10–20. http://dx.doi.org/10.1016/j.socscimed.2016.06.020.

Kusuma, Dian, Margaret McConnell, Peter Berman, and Jessica Cohen. 2017. “The Impact of Household and Community Cash Transfers on Children’s Food Consumption in Indonesia.” *Preventive Medicine* 100: 152–58. http://dx.doi.org/10.1016/j.ypmed.2017.04.020.

Lagarde, Mylene, Andy Haines, and Natasha Palmer. 2009. “The Impact of Conditional Cash Transfers on Health Outcomes and Use of Health Services in Low and Middle Income Countries.” *Cochrane Database of Systematic Reviews* 4(4).

Levere, Michael, Gayatri Acharya, and Prashant Bharadwaj. 2016. “The Role of Information and Cash Transfers on Early Childhood Development: Evidence From Nepal.”

Lim, Stephen S. et al. 2010. “India’s Janani Suraksha Yojana, a Conditional Cash Transfer Programme

to Increase Births in Health Facilities: An Impact Evaluation." *The Lancet* 375(9730): 2009–23. http://dx.doi.org/10.1016/S0140-6736(10)60744-1.

Macours, K, Norbert Schady, and Renos Vakis. 2012. "Cash Transfers, Behavioral Changes, and Cognitive Development in Early Childhood: Evidence from a Randomized Experiment." *American Economic Journal-Applied Economics* 4(2): 247–73. http://www.vanderbilt.edu/AEA.

Maluccio, John, and Rafael Flores. 2005. "Impact Evaluation of a Conditional Cash Transfer Program: The Nicaraguan Red de Protección Social." *IFPRI Research report* (141). http://www.ifpri.org/pubs/abstract/141/rr141.pdf%5Cnhttp://www.loc.gov/catdir/toc/ecip0516/2005018545.html.

Manley, James, Seth Gitter, and Vanya Slavchevska. 2013a. "How Effective Are Cash Transfers at Improving Nutritional Status?" *World Development* 48: 133–55. http://dx.doi.org/10.1016/j.worlddev.2013.03.010.

———. 2013b. "How Effective Are Cash Transfers at Improving Nutritional Status?" *World Development* 48(April 2014): 133–55. http://dx.doi.org/10.1016/j.worlddev.2013.03.010.

Manley, James, and Vanya Slavchevska. 2016. "Are Cash Transfers the Answer for Children in Sub-Saharan Africa? A Literature Review." *Towson University Working Paper #2016-12*.

Margolies, Amy, and John Hoddinott. 2015. "Costing Alternative Transfer Modalities." *Journal of Development Effectiveness* 7(1): 1–16. http://www.tandfonline.com/doi/abs/10.1080/19439342.2014.984745.

Merttens, Fred et al. 2013. *Kenya Hunger Safety Net Programme, Monitoring and Evaluation Component.*

Muralidharan, Karthik, Paul Niehaus, and Sandip Sukhtankar. 2016. "Building State Capacity: Evidence from Biometric Smartcards in Indi." *American Economic Review* 106(10): 2895–2929.

Olken, Benjamin A., Junko Onishi, and Susan Wong. 2012. "Should Aid Reward Performance? Evidence from a Field Experiment on Health and Education In Indonesia." *American Economic Journal: Applied Economics* 6(4): 1–34. http://www.nber.org/papers/w17892.

Paes-Sousa, Rômulo, Leonor Maria Pacheco Santos, and Édina Shisue Miazaki. 2011. "Efectos de Un Programa de Transferencia Condicional En Efectivo En La Nutricion Infantil En Brasil." *Bulletin of the World Health Organization* 89(7): 496–503.

Parker, Susan W, and Petra E Todd. 2017. "Conditional Cash Transfers: The Case of Progresa/Oportunidades." *Journal of Economic Literature* 55(3): 866–915. http://www.aeaweb.org/articles?id=10.1257/jel.20151233.

Paxson, Christina, and Norbert Schady. 2010. "Does Money Matter? The Effects of Cash Transfers on Child Development in Rural Ecuador." *Economic Development and Cultural Change* 59(1): 187–229. http://www.journals.uchicago.edu/doi/pdf/10.1086/655458%5Cnhttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed9&NEWS=N&AN=20821896.

Pega, Frank, Yan Sze Liu, Stefan Walter, and Stefan K Lhachimi. 2017. "Unconditional Cash Transfers for Reducing Poverty and Vulnerabilities: Effect on Use of Health Services and Health Outcomes in Low- Andmiddle-Income Countries." *Cochrane Database of Systematic Reviews* (11). http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=coch&AN=00075320-100000000-09717.

Powell-Jackson, Timothy, Sumit Mazumdar, and Anne Mills. 2015. "Financial Incentives in Health: New Evidence from India's Janani Suraksha Yojana." *Journal of Health Economics* 43: 154–69. http://dx.doi.org/10.1016/j.jhealeco.2015.07.001.

Raghunathan, Kalyani, Suman Chakrabarti, Rasmi Avula, and Sunny S. Kim. 2016. *Can Conditional Cash Transfers Improve the Uptake of Nutrition Interventions and Household Food Security? Evidence from Odisha's Mamata Scheme.*

Randive, Bharat, Vishal Diwan, and Ayesha De Costa. 2013. "India's Conditional Cash Transfer Programme (the JSY) to Promote Institutional Birth: Is There an Association between Institutional Birth Proportion and Maternal Mortality?" *PLoS ONE* 8(6).

Ranganathan, Meghna, and Mylene Lagarde. 2012. "Promoting Healthy Behaviours and Improving Health Outcomes in Low and Middle Income Countries: A Review of the Impact of Conditional Cash Transfer Programmes." *Preventive Medicine* 55(SUPPL.): S95–105. http://dx.doi.org/10.1016/j.ypmed.2011.11.015.

Rasella, Davide et al. 2013. "Effect of a Conditional Cash Transfer Programme on Childhood Mortality: A Nationwide Analysis of Brazilian Municipalities." *The Lancet* 382(9886): 57–64. http://dx.doi.org/10.1016/S0140-6736(13)60715-1.

Rivera, Juan A, Daniela Sotres-alvarez, Teresa Shamah, and Salvador Villalpando. 2004. "On Rates of Growth and Anemia in Infants and Young Children A Randomized Effectiveness Study." *Journal of the American Medical Association* 291(21): 2563–70.

Robertson, Laura et al. 2013. "Effects of Unconditional and Conditional Cash Transfers on Child Health and Development in Zimbabwe: A Cluster-Randomised Trial." *The Lancet* 381(9874): 1283–92.

Schady, Norbert, and José Rosero. 2008. "Are Cash Transfers Made to Women Spent like Other Sources of Income?" *Economics Letters* 101(3): 246–48. http://dx.doi.org/10.1016/j.econlet.2008.08.015.

Shei, Amie. 2013. "Brazil's Conditional Cash Transfer Program Associated with Declines in Infant Mortality Rates." *Health Affairs* 32(7): 1274–81.

Shei, Amie, Federico Costa, Mitermayer G Reis, and Albert I Ko. 2014. "The Impact of Brazil's Bolsa Família Conditional Cash Transfer Program on Children's Health Care Utilization and Health Outcomes." *BMC International Health and Human Rights* 14(1): 10. http://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/1472-698X-14-10.

Sinha, N., and J. Yoong. 2009. "Long-Term Financial Incentives and Investment in Daughters: Evidence from Conditional Cash Transfers in North India." *The World Bank Policy Research Working Paper 4860: Washington, DC.* (March): 1–37. http://www.rand.org/content/dam/rand/pubs/working_papers/2009/RAND_WR667.pdf.

REFERENCES: PART II

Balasubramanian P., and Ravindran,T K Sundari, "*Pro-Poor Maternity Benefit Schemes and Rural Women: Findings from Tamil Nadu,*" Economic and Political Weekly, 2012

Bastagli Francesca, Hagen-Zanker Jessica, Harman Luke, Barca Valentina, Sturge Georgina Schmidt Tanja and Pellerano Luca, "*Cash transfers: what does the evidence say? A rigorous review of program impact and of the role of design and implementation features*," Oxford Policy Management, 2016

Bhuvaneswari G., "*Assess the knowledge and utilization of Dr. Muthulakshmi Reddy Maternity Benefit Scheme among women receiving antenatal services in selected urban health centre at Chennai,*" International Journal of Pharma and Bio Sciences, 2017.

Coffey, Diane, "*Costs and Consequences of a cash transfer for hospital births in a rural district of Uttar Pradesh, India*," Social Science and Medicine, 2014.

Coffey Diane, and Payal Hathi, "*Underweight & pregnant: Designing universal maternity entitlements to improve health*", Indian Journal of Human Development, August 2016

D. Jyothi and Rakesh E. S., "*Ascertaining perception of Bhagyalakshmi scheme and the related constraints and suggestions,*" International Journal of Scientific Research, 2015.

Devadasan, Narayanan, Maya Annie Elias, Denny John, Shishir Grahacharya and Lalnuntlangi Ralte, "*A conditional cash assistance program for promoting institutional deliveries among the poor in India: process evaluation results*," Studies in HSO&P, 2008.

Doke P. P., Gawande U. H., Deshpande S. R. and Gadgil M., "*Evaluation of Janani Suraksha Yojana (JSY) in Maharashtra, India: Important Lessons for Implementation*," International Journal of Tropical Disease & Health, 2015.

Falcao, Vanita Leah , Khanuja Jasmeet , Matharu Sonal , Nehra Shikha and Sinha Dipa., "*Report on the study of the Indira Gandhi Matritva Sahyog Yojana: to enhance inclusion and preparedness to implement provisions under the NFSA*," Centre For Equity Studies, 2015.

Fiszbein, Ariel, Schady Norbert, Ferreira Francisco H.G., Grosh Margaret, Kelleher Nial, Olinto Pedro and Skoufias Emmanuel, "*Conditional Cash Transfer- Reducing Present and Future Poverty*", A World Bank Policy Research Report, 2009.

Ganesan S. and Chitra P., *"A Study on Dr.Muthulakshmi Reddy Maternity Benefit Scheme: Comparative Analysis,*" Journal of Exclusive Management Science, 2016.

Ganesan S. and Chitra P., "*A study on Dr. Muthulakshmi Reddy Maternity Benefit Scheme in Mugavanur, Tiruchirappalli district*", International Journal of Management research and Business Strategy, 2016.

Garcia Marito, & Charity M.T. Moore, "The Cash Dividend: The Rise of Cash Transfer Programs in Sub-Saharan Africa", The World Bank,

GoI, "*Annual Health Survey Report*", retrieved from https://nrhmmis.nic.in/hmisreports/AHSReports.aspx

GoI, "*Economic Survey 2016-17*", Ministry of Finance, Department of Economic Affairs, Economic Division, 2017.

GoI, "*Guidelines for Payment of Financial Assistance under Janani Suraksha Yojana to the Beneficiaries and ASHAs*", Ministry of Health and Family Welfare, Nirman Bhavan, New Delhi, 2007.

GoI, "*Janani Suraksha Yojana Features and Frequently Asked Questions & Answers*," retrieved from http://nhm.gov.in/images/pdf/programs/jsy/guidelines/jsy_guidelines_2006.pdf

GoI, "*Results of District Level Household Survey - IV 2012-13 (DLHS - IV)*", retrieved from https://nrhmmis.nic.in/SitePages/DLHS4.aspx?RootFolder=%2FDLHS4%2FUnit%20Level%20Data&FolderCTID=0x012000742F17DFC64D5E42B681AB0972048759&View={F8D23EC0-C74A-41C3-B676-5B68BDE5007D}

GoI, "*Spreading JAM Across India's Economy*", Economic Survey 2015-16, Ministry of Finance, Department of Economic Affairs, Economic Division (50-67).

GoI, "*Wiping every tear from every eye': the JAM Number Trinity Solution*", Economic Survey 2014-15, Ministry of Finance, Department of Economic Affairs, Economic Division (52-65).

GoI, Health Management Information System, Cumulative Date for Financial Year 2013-14, 2014-15, 2015-16, retrieved from https://nrhmmis.nic.in/hmisreports/frmstandard_reports.aspx

GoI, Ministry of Health and Family Welfare, Change in Janani Suraksha Yojana Conditions, retrieved from http://nhm.gov.in/images/pdf/programs/jsy/impgovtorders/bpl_certificate_for_phf_ home_del.PDF

GoI, Ministry of Health and Family Welfare, Change in Janani Suraksha Yojana Conditions, retrieved from http://nhm.gov.in/images/pdf/programs/jsy/impgovtorders/JSY_removal_of_conditionalities_13.5.13.pdf

GoI, National Family Health Survey-4 (2015-16) Factsheets, retrieved from http://rchiips.org/NFHS/factsheet_NFHS-4.shtml

GoI, Press Information Bureau, Janani Suraksha Yojana State Budget, Retrieved form http://pib.nic.in/newsite/PrintRelease.aspx?relid=106950 & http://pib.nic.in/newsite/PrintRelease.aspx?relid=157975

GoI, "Janani Suraksha Yojana Guidelines for Implementation- Ministry of Health and Family Welfare," retrieved from
http://www.ilo.org/dyn/travail/docs/683/JananiSurakshaYojanaGuidelines/MinistryofHealthandFamilyWelfare.pdf

GoI, DBT Mission, Cabinet Secretariat, "The Direct Benefit Transfer"

Hangmi Peter ZM, and Kuki Jamhen., "*Role of JSY in Institutional Delivery A Study in Churachandpur District, Manipur*," Center for Health and Social Justice, 2009.

Indicator for local level health planning, retrieved from
http://www.pbnrhm.org/formulas/health_ indicators.pdf

Malini Shobha , Tripathi R.M. , Khattar Poonam , Nair K.S. , Tekhre Y.L. , Dhar Neera and Nandan Deoki, "*A rapid appraisal on functioning of Janani Suraksha Yojana in South Orissa*", Health and Population: Perspectives and Issues, 2008.

Muralidharan Karthik, Paul Neihaus, and Sandip Sukhtankar, "*Direct Benefits Transfer in Food: Results from One Year of Process Monitoring in Union Territories*", September 2017

Nandan Deoki, Mishra Ashok, Lahariya Chandrakant, Gupta Sanjay, Shivdasani J.P., Datta U. and Adhish Vivek., "*An assessment of the process and performance of the Vijaya Raje Janani Kalyan Bima Yojana, Madhya Pradesh*," National Institute of Health and Family Welfare, 2007-08.

Powell-Jackson T, Mazumdar S and Mills A., "*Financial incentives in health: New evidence from India's Janani Suraksha Yojana,*" Journal of Health Economics 43 (2015) 154–169.

Priya, Neha, Khan Samreen and Khan Zulfia, "*Determinants of Utilization of Janani Suraksha Yojana among Mothers in Selected Communities of Aligarh: A Population-based Cross-sectional Study*", International Journal of Scientific Study, April 2016, Vol4, Issue1.

Sanghera, Alekh, Lokesh Kr. Singh. "*DBT in TPDS – A Midline Assessment: The Road Ahead Seems To Be Long*," Microsave India Focus Note 129, February 2016.

Santhya K.G., Jejeebhoy Shireen J., Acharya Rajib and Zavier A.J. Francis., "*Effects of the Janani Suraksha Yojana on maternal and newborn care practices: Women's experiences in Rajasthan*," Population Council, 2011.

Sinha, Archana, "*New Empirical Evidence for Maternal Health Care: Case of Janani Suraksha Yojana in Uttarakhand, India*", Journal of Health Systems, 2015.

Sivalingam, Isvary and Singh Lokesh Kumar. "*Feeding India's Poor: Plugging Leakages, Without Doing Any Hard*", Microsave Policy Brief 14, May 2016.

Swaminathan Mina, Prasad Vandana, Murugan Ganapathy, Narayanan Rama and Shanmugavelayutham K., "*Towards Universalisation of Maternity Entitlement: An Exploratory Case Study of the Dr. Muthulakshmi Maternity Assistance Scheme, Tamil Nadu,*" Public Health Resource Network, M.S. Swaminathan Research Foundation, Tamil Nadu – Forum for Crèche and Child Care Services, April 2010.

Uttekar BP, Kumar N, Uttekar V, Sharma J and Shahane S: "*Assessment of Janani Suraksha Yojana in Assam"*, Vadodara, Gujarat: Centre for Operations Research & Training, 2007.

Vellakkal Sukumar, Reddy Hanimi, Gupta Adyya , Chandran Anil , Fledderjohann Jasmine and Stuckler David, "*A qualitative study of factors impacting accessing of institutional delivery care in the context of India's cash incentive program*", Social Science & Medicine 178 (2017) 55-65. 2017.

A. APPENDIX A

Table A.1 Existing Reviews of CT Prorams Around the World

No	CT Types	Outcomes / Focus	Year	Citation
1	CCT	Design, implementation, effects on poverty, health and education	2009	Fiszbein, A., Schady, N., Ferreira, F., Grosh, M., Kelleher, N., Olinto, P., & Skoufias, E. (2009). Conditional Cash Transfers: Reducing Present and Future Poverty Washington. DC: World Bank.
2	CCT	Health	2009	Lagarde, M., Haines, A., & Palmer, N. (2009). The impact of conditional cash transfers on health outcomes and use of health services in low and middle income countries. The Cochrane Library.
3	CCT	Child nutrition	2009	Leroy, J. L., Ruel, M., & Verhofstadt, E. (2009). The impact of conditional cash transfer programmes on child nutrition: a review of evidence using a programme theory framework. Journal of development effectiveness, 1(2), 103-129.
4	CCT	Design and implementation	2010	Gaarder, M. M., Glassman, A., & Todd, J. E. (2010). Conditional cash transfers and health: unpacking the causal chain. Journal of development effectiveness, 2(1), 6-50.
5	CCT, UCT	Child health	2012	Fernald, L. C., Gertler, P. J., & Hidrobo, M. (2012). The Oxford Handbook of Poverty and Child Devleopment. Oxford Handbooks Online.
6	CCT, UCT	Design and implementation in Sub-Saharan Africa	2012	Garcia, M., & Moore, C. M. (2012). The cash dividend. The Rise of Cash Transfer Programs in Sub-Saharan Africa. Washington: The World Bank.
7	CCT	Health	2012	Ranganathan, M., & Lagarde, M. (2012). Promoting healthy behaviours and improving health outcomes in low and middle income countries: a review of the impact of conditional cash transfer programmes. Preventive medicine, 55, S95-S105.
8	CCT	Maternal and newborn health	2013	Glassman, A., Duran, D., Fleisher, L., Singer, D., Sturke, R., Angeles, G., ... & Saldana, K. (2013). Impact of conditional cash transfers on maternal and newborn health. Journal of health, population, and nutrition, 31(4 Suppl 2), S48.
9	CCT, UCT	Child height	2013	Manley, J., Gitter, S., & Slavchevska, V. (2013). How effective are cash transfers at improving nutritional status?. World development, 48, 133-155.
10	CCT, UCT (and range of demand side financial incentives)	Child health	2013	Bassani, D. G., Arora, P., Wazny, K., Gaffey, M. F., Lenters, L., & Bhutta, Z. A. (2013). Financial incentives and coverage of child health interventions: a systematic review and meta-analysis. BMC Public Health, 13(3), S30.
11	CCT	Health	2014	Gopalan, S. S., Mutasa, R., Friedman, J., & Das, A. (2014). Health sector demand-side financial incentives in low-and middle-income countries: a systematic review on demand-and supply-side effects. Social science & medicine, 100, 72-83.
12	CCT	Child health	2014	Owusu-Addo, E., & Cross, R. (2014). The impact of conditional cash transfers on child health in low-and middle-income countries: a systematic review. International journal of public health, 59(4), 609-618.
13	CCT	Health in Latin America	2015	Cecchini, S., & Soares, F. V. (2015). Conditional cash transfers and health in Latin America. The Lancet, 385(9975), e32-e34.
14	CCT, UCT	Child nutrition	2015	de Groot, R., Palermo, T., Handa, S., Ragno, L. P., & Peterman, A. (2015). Cash transfers and child nutrition: What we know and what we need to know. New York: UNICEF.
15	CCT, UCT, Voucher, Food transfer	Design and effects on child nutrition	2016	Gentilini, U. (2016). Revisiting the "Cash versus Food" Debate: New Evidence for an Old Puzzle?. The World Bank Research Observer, 31(1).
16	CCT, UCT	Design, implementation, effects on poverty,	2016	Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., Schmidt, T., & Pellerano, L. (2016). Cash transfers: what does the evidence say? A rigorous review of programme impact and the role of design and

		health, education, empowerment		implementation features. London: Overseas Development Institute (www. odi. org/projects/2797-social-protection-literature-review-poverty-impact).
17	CCT	Long term health and education	2016	Molina-Millan, T., Barham, T., Macours, K., Maluccio, J. A., & Stampini, M. (2016). Long-Term Impacts of Conditional Cash Transfers in Latin America: Review of the Evidence. Inter-American Development Bank.
18	CCT, UCT	Child health	2016	Manley, J. & Slavchevska, V. (2016). Are Cash Transfers the answer for children in Sub-Saharan Africa? A Literature Review. Towson University Working Paper 2016-12.
19	CCT	Design and implementation	2017	Ibarrarán, P., Medellin, N., Regalia, F., Stampini, M. (2017). How Conditional Cash Transfers Work: Good Practices after 20 Years of Implementation. Inter-American Development Bank.
20	CCT, UCT (and range of demand side financial incentives)	Maternal and newborn health	2017	Hunter, B. M., Harrison, S., Portela, A., & Bick, D. (2017). The effects of cash transfers and vouchers on the use and quality of maternity care services: A systematic review. PloS one, 12(3), e0173068.
21	CCT, UCT (and range of demand side financial incentives)	Design and implementation of maternal and newborn programs	2017	Hunter, B. M., & Murray, S. F. (2017). Demand-side financing for maternal and newborn health: what do we know about factors that affect implementation of cash transfers and voucher programmes?. *BMC pregnancy and childbirth*, *17*(1), 262.
22	CCT	Health and education effects of PROGRESA	2017	Parker, Susan W., and Todd, P. (2017). "Conditional Cash Transfers: The Case of Progresa/Oportunidades." Journal of Economic Literature, 55(3): 866-915.
23	UCT	Health	2017	Pega, F., Liu, S. Y., Walter, S., Pabayo, R., Saith, R., & Lhachimi, S. K. (2017). Unconditional cash transfers for reducing poverty and vulnerabilities: effect on use of health services and health outcomes in low-and middle-income countries. The Cochrane Library.
24	CCT, UCT, Voucher, Food transfer	Design and implementation of nutrition programs	2018	Alderman, H., Gentilini, U., & Yemtsov, R. (Eds.). (2018). The 1.5 Billion People Question: Food, Vouchers, or Cash Transfers? Washington, DC: World Bank.
25	UCT, CCT	Effectiveness of CTs	2015	Bailey, S., & Harvey, P. (2015). State of evidence on humanitarian cash transfers. Overseas Development Institute Background Note.

Table A.2 List of Studies Included

Table A.2 includes most of the studies covered by the review. Several additional studies are discussed in the text. Studies included in other meta-analyses and reviews that we summarize in this report are not listed.

No	Country	Program	CT Type	Study	Methods	Outcomes Reported
1	Bangladesh	Transfer Modality Research Initiative	Cash, Food, Nutritional Information	Ahmed*, 2016	RCT	Height, Weight
2	Bangladesh	Shombhob	CCT	Ferre and Sharif, 2014	DID, RDD	Height, Weight
3	Brazil	Bolsa Familia	CCT	de Brauw et al, 2012	DID, PSM	Birth weight, Immunization, Prenatal Care
4	Brazil	Bolsa Familia	CCT	Rasella et al, 2013*	Panel with community variation in coverage and fixed effects (mixed ecological)	Child Mortality

5	Brazil	Bolsa Familia	CCT	Shei et al, 2013*		Infant Mortality
6	Brazil	Bolsa Familia	CCT	Shei et al, 2014*	Pooled time-series exploiting time variation in rollout and municipality fixed effects	Infant Mortality, Neonatal mortality
7	Burkina Faso	Nahour Cash Transfers Pilot	CCT	Akresh et al, 2016	RCT	Height, Morbidity, Preventive care, Weight
8	Burkina Faso	MAM'Out	UCT	Houngbe et al, 2017	RCT	Morbidity, Weight
9	Burkina Faso	MAM'Out	UCT	Tonguet-Papucci et al, 2017	RCT	Food Consumption
10	Chile	Chile Solidario	CCT (no health conditions)	Galasso, 2011*	Matching, variation in rollout coverage	Prenatal Care, Preventive care
11	Colombia	Familias en Accion	CCT	Attanasio et al, 2005	DID, PSM	Birth weight, Food Consumption, Height, Immunization, Morbidity, Preventive care
12	Ecuador	Bono de Desarrollo Humano	CCT (unenforced)	Fernald and Hidrobo, 2011*	RCT	Caregiver Mental Health, Height, Hemoglobin, Language, Parenting, Preventive care
13	Ecuador	Bono de Desarrollo Humano	UCT	Paxson and Schady, 2010*	RCT	Behavioral Problems, Caregiver Mental Health, Caregiver Stress, Caregiver physical health, Fine Motor, Height, Hemoglobin, Language, Memory, Parenting, Preventive care, Visual Motor
14	El Salvador	Comunidades Solidarias Rurales	CCT	de Brauw and Peterman, 2011	RDD, DID	Institutional Delivery, Postnatal Care, Prenatal Care, Skilled Birth Assistance
15	Ghana	Livelihood Empowerment Against Poverty (LEAP)	UCT	Handa et al, 2014	PSM	Morbidity, Preventive care
16	Honduras	Bono 10,000	CCT	Benedetti et al, 2016*	RCT	Preventive care
17	Honduras	Programa de Asignación Familiar	CCT	Morris et al, 2004*	RCT	Immunization, Postnatal Care, Prenatal Care, Preventive care
18	India	Basic Income Pilot in MP	UCT	Beck et al*, 2015	RCT + PSM to address imbalance	Immunization
19	India	Janani Suraksha Yojana	CCT	Carvalho et al*, 2014	PSM	Immunization, Infant and young child feeding, Postnatal Care
20	India	Janani Suraksha Yojana	CCT	Joshi and Sivaram, 2014*	DID comparison of eligibile and ineligible women before/after program	Institutional Delivery, Postnatal Care, Prenatal Care
21	India	Janani Suraksha Yojana	CCT	Lim et al, 2010*	Matching, DID	Maternal mortality, Neonatal mortality, Perinatal mortality, Prenatal Care, Skilled Birth Assistance

22	India	Janani Suraksha Yojana	CCT	Powell-Jackson et al, 2015*	DID	Fertility, Infant and young child feeding, Neonatal mortality, Perinatal mortality, Prenatal Care, Skilled Birth Assistance
23	India	Janani Suraksha Yojana	CCT	Powell-Jackson et al, 2016*	Quasi-experimental, exploiting variation due to administrative problems	Caregiver Depression
24	India	Mamta Scheme	CCT	Raghunathan et al, 2017	Nearest-neighbor matching	Immunization, Postnatal Care, Prenatal Care
25	India	Apni Beti Apna Dhan	CCT	Sinha and Yoong, 2009	Triple difference comparing eligible and non-eligible girls and boys over time across 3 cross-sectional surveys	Height, Immunization, Infant Mortality, Neonatal mortality, Weight
26	Indonesia	Unconditional cash transfer to mitigate the effect of the removal of a fuel subsidy	UCT	Bazzi et al, 2012	Matching, Exploiting Variations in Rollout	Care seeking
27	Indonesia	Program Keluarga Harapan (PKH); Generasi	CCT	Kusuma et al, 2016*	RCT, DID	Institutional Delivery, Postnatal Care, Prenatal Care, Skilled Birth Assistance
28	Indonesia	Program Keluarga Harapan (PKH); Generasi	CCT (initially weakly enforced)	Kusuma et al, 2017*	RCT	Weight
29	Indonesia	Programme Keluarga Harapan (PKH)	CCT	World Bank, 2011	RCT	Immunization, Postnatal Care, Prenatal Care, Preventive care
30	Jamaica	Programme for Advancement Through Health and Education (PATH)	CCT	Leroy and Ohls, 2007	RDD	Immunization, Perceived health, Preventive care
31	Kenya	Pilot program	LCT + CCT	Cohen et al, 2017*	RCT	Institutional Delivery
	Kenya	Hunger Safety Net Programme (HSNP)	UCT	Merttens et al, 2013	RCT	Height, Weight
32	Lesotho	Child Grants Programme	UCT	Pellerano et al, 2014	RCT	Care seeking, Food Consumption, Morbidity
33	Malawi	Social Cash Transfer Program	UCT	Abdoulayi et al, 2016	RCT	Care seeking, Height, Infant and young child feeding, Morbidity, Weight
34	Malawi	Zomba Cash Transfer Programme	CCT and UCT	Baird et al, 2016	RCT follow-up	Height
35	Mexico	PROGRESA/ Opportunidades	CCT	Barber and Gertler, 2010*	RCT	Birth weight, Prenatal Care
36	Mexico	PROGRESA/ Opportunidades	CCT	Barham, 2011*	Exploiting rollout variation with municipality/time fixed effects	Infant Mortality, Neonatal mortality

37	Mexico	PROGRESA/ Opportunidades	CCT	Fernald and Gunnar, 2009*	Matching	Caregiver Mental Health, Stress
38	Mexico	PROGRESA/ Opportunidades	CCT	Fernald et al, 2008*	Cross-section 5yr follow-up to RCT	Gross Motor, Height, Hemoglobin, Language, Memory, Morbidity, Visual Motor, Weight
39	Mexico	PROGRESA/ Opportunidades	CCT	Fernald et al, 2009*	Cross-section 10yr follow-up to RCT	Behavioral Problems, Height, Language, Weight
40	Mexico	PROGRESA/ Opportunidades	CCT	Fernald et al, 2016*	RCT	Compositve Cognitive Measure, Memory, Perceptual, Quantitative, Verbal
41	Mexico	PROGRESA/ Opportunidades	CCT	Gertler and Boyce, 2001	RCT	Height, Hemoglobin, Morbidity, Preventive care
42	Mexico	PROGRESA/ Opportunidades	CCT	Gertler, 2004*	RCT; Matching	Height, Hemoglobin, Morbidity
43	Mexico	PROGRESA/ Opportunidades	CCT	Leroy et al, 2008*	PSM, DID	Height, Weight
44	Mexico	PROGRESA/ Opportunidades	CCT	Ozer et al, 2009*	Matching	Behavioral Problems
45	Mexico	PROGRESA/ Opportunidades	CCT	Ozer et al, 2011*	Matching	Caregiver Depression, Caregiver Mental Health, Caregiver Stress
46	Mexico	PROGRESA/ Opportunidades	CCT	Rivera et al, 2004*	RCT	Height, Hemoglobin
47	Mexico	PROGRESA/ Opportunidades	CCT	Urquieta et al, 2009*	RCT, DID	Skilled Birth Assistance
48	Nepal	Pilot program	Information	Levere et al, 2016	RCT	Compositve Cognitive Measure
49	Nepal	Safe Delivery Incentive Programme (SDIP)	CCT	Powell-Jackson and Hanson, 2012*	PSM	Institutional Delivery, Skilled Birth Assistance
50	Nicaragua	Red de Protección Social	CCT	Barham and Maluccio, 2009*	RCT	Immunization
51	Nicaragua	Red de Protección Social	CCT	Barham et al, 2013*	10-year follow-up to RCT	Compositve Cognitive Measure
52	Nicaragua	Atención a Crisis	CCT (weakly enforced)	Macours et al, 2012*	RCT	Behavioral Problems, Caregiver Mental Health, Child Stimulation, Fine Motor, Food Consumption, Gross Motor, Height, Language, Leg Motor, Memory, Morbidity, Parenting, Preventive care, Social Personal, Weight
53	Nicaragua	Red de Protección Social	CCT	Maluccio and Flores, 2005	RCT	Food Consumption, Height, Hemoglobin, Immunization, Preventive care, Weight
54	Niger	Niger Safety Nets	UCT + Parent Counseling	Barry et al, 2016	RCT	Compositve Cognitive Measure, Infant and young child feeding
55	Pakistan	Benazir Income Support Programme	UCT	Cheema et al, 2014	RDD	Height, Weight
56	Pakistan	Benazir Income Support Programme	UCT	Cheema et al, 2016	RDD	Height, Immunization, Morbidity, Weight

57	Pakistan	Women and Children/Infants Improved Nutrition in Sindh (WINS)	UCT, Food vouchers	Fenn et al, 2017*	RCT	Hemoglobin
58	Peru	Juntos	CCT	Perova and Vakis, 2012*	IV, Matching	Immunization, Morbidity, Preventive care, Skilled Birth Assistance
59	Phillipines	Pantawid Pamilyang Pilipino Program	CCT	Kandpal et al, 2016*	RCT	Care seeking, Height, Immunization, Institutional Delivery, Postnatal Care, Prenatal Care, Preventive care, Skilled Birth Assistance, Weight
60	South Africa	South African Child Support Grant	UCT	Plagerson et al, 2011*	Non-experimental comparison of treated and untreated with controls	Caregiver Mental Health
61	Tanzania	Tanzania Social Action Fund	CCT	Evans et al, 2016	RCT	Morbidity
62	Turkey	Conditional Cash Transfer Program	CCT	Ahmed et al, 2007	RDD	Fertility, Immunization
63	Uganda	World Food Programme (WFP) Karamoja cash transfer pilot	CCT (weakly enforced)	Gilligan et al, 2016	RCT	Compositve Cognitive Measure, Fine Motor, Height, Hemoglobin, Language, Visual Reception
64	Uganda	Social Assistance Grants for Empowerment (SAGE) consisting of Vulnerable Family Support Grant (VFSG) and Senior Citizens Grant (SCG)	UCT	Merttens et al, 2016	PSM, DID	Care seeking, Morbidity
65	Uruguay	Plan de Atención Nacional a la Emergencia Social	CCT (unenforced)	Amarante et al, 2016*	RDD, DID	Birth weight, Prenatal Care, Skilled Birth Assistance
66	Zambia	Child Grant Program	UCT	American Institutes for Research, 2014	RCT	Preventive care
67	Zambia	Child Grant Program	UCT	Handa et al, 2015*	RCT, DID	Prenatal Care, Skilled Birth Assistance
68	Zambia	Child Grant Program	UCT	Handa et al, 2016*	RCT	Compositve Cognitive Measure, Infant and young child feeding, Morbidity
69	Zimbabwe	Harmonised Social Cash Transfer Program (HSCTP)	UCT	Seidenfeld and Handa, 2014	Non-experimental comparison of treated and untreated with controls	Care seeking, Height, Morbidity, Weight

70	Zimbabwe	Pilot	UCT/CCT	Robertson et al, 2013*	RCT	Immunization, Preventive care
Note that this does not include many studies included in other meta-analyses and reviews that we summarize in this report						
****Studies published in an academic journal***						

Table A.3 List of Indicators Reported for Child Development Outcomes

Child development outcomes are multidimensional and a variety of indicators and measurement tools have been used in the studies reviewed here. Future studies could benefit from using tested and standardized indicators (L. C. H. Fernald et al. 2017).

Child Development Domains	Indicators / Measures
Language	Denver Developmental Screening Test - Language subscale
	MacArthur-Bates Communicative Development Inventory score (Spanish) - language subscale
	Mullen - expressive language score
	Mullen - receptive language score
	PPVT (Spanish version)
	Wechsler III Scale - abbreviated
Verbal	McCarthy Scale - verbal subscale
Quantitative	McCarthy Scale - quantitative
Memory	McCarthy Scale - memory subscale
	McCarthy Scale - short term memory
	Woodcock-Johnson-Munez - associative memory
	Woodcock-Johnson-Munez - longterm memory subscale
	Woodcock-Johnson-Munez test - short term memory subscale
Visual / Perceptual	McCarthy Scale - perceptual
	Mullen - visual reception score
	Woodcock-Munoz test - visual integration subscale
Composite Measures	Ages and Stages Questionnaire
	McCarthy Scale - general cognitive index (GCI)
	Mullen - total raw score
Fine Motor	Denver Developmental Screening Test - Fine motor subscale
	Fine motor control (pegboard exercise)
	Mullen - fine motor score
Gross Motor	Denver Developmental Screening Test - Gross motor subscale
	McCarthy Scale - gross motor subscale - endurance component
	McCarthy Scale - gross motor subscale - skill component
Leg Motor	McCarthy Scale - leg motor development
Behavioral / Social Personal	Behavior Problem Index
	Strengths and Difficulties Questionnaire (SDQ) - adapted
	Denver Developmental Screening Test - Social-personal subscale
Stress	Change in salivary cortisol in response to stress
	Mean salivary cortisol concentration

B. Appendix B: Additional Resources

- Toolkit for Measuring Early Childhood Development in Low and Middle-Income Countries https://openknowledge.worldbank.org/handle/10986/29000
- Food Policy, October 2017 issue focused on measuring food consumption and expenditures https://www.sciencedirect.com/science/article/pii/S0306919217306802

C. APPENDIX C

C.1 Description of Data Set Used

i. District Level Health Survey (DLHS)-4

The Ministry of Health and Family Welfare, Government of India has undertaken four rounds of District Level Household and Facility Survey (DLHS) (Round- I in 1998-99, Round-II in 2002-04, Round-III in 2007-08 and Round IV in 2012-13) with the main objective of providing reproductive and child health related database at district level in India. The latest round of DLHS was conducted during 2012-13 and the government appointed International Institute for Population Sciences (IIPS) as the nodal agency for this purpose. DLHS-4 provides information on family planning, maternal and child health services, reproductive health of ever married women, utilization of maternal and child health services at the district level in India. Further, this round included information on clinical, anthropometric and Bio-Chemical tests.

DLHS-4 was conducted in 3 Union Territories (Andaman & Nicobar, Chandigarh and Puducherry) and 18 States (Andhra Pradesh, Arunachal Pradesh, Goa, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Sikkim, Telangana, Tamil Nadu, Tripura and West Bengal).

The review looks at the fourth round of DLHS survey, and focuses on the ever-married women's questionnaire looking at the birth outcomes.

The data is retrieved from https://nrhmmis.nic.in/SitePages/DLHS4.aspx?RootFolder=%2 FDLHS4%2FUnit%20Level%20Data&FolderCTID=0x012000742F17DFC64D5E42B681AB0972048759&View={F8D23EC0-C74A-41C3-B676-5B68BDE5007D}

ii. Annual Health Survey (AHS)

The Annual Health Survey (AHS) was initiated in 2010-11 to provide annual data on vital health statistics in the nine states categorized as high priority (i.e. Assam, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttarakhand, Uttar Pradesh). In these nine states, the Annual Health Survey was launched in lieu of the DLHS-4 round. The survey was implemented by the Office of the Registrar General, India, and the first round was conducted in 2010-11 followed by two update rounds (Round-I in 2011-12 and Round-II in 2012-13). The survey was discontinued in 2013. The survey provides key information on household demographics, vital health statistics and other NRHM program details. The survey covered a total of 284 districts, and it is considered to be one of the largest household sample survey in the world with a sample size of over 4.1 million for first update, 4.2 million for second update and 4.3 million for third update.

The analysis in this study is drawn using the AHS data retrieved from https://nrhm-mis.nic.in/hmisreports/AHSReports.aspx

iii. National Family Health Survey (NFHS)-4

The National Family Health Survey 2015-16, the fourth in the NFHS series, provides information on population, health and nutrition for India and each State/UT. Government of India designated IIPS, Mumbai as the nodal agency to conduct NFHS-4. NFHS-4 fieldwork was conducted from 20 January 2015 to 4 December 2016 and information was gathered from 601,509 households, 699,686 women, and 103,525 men across all the States and UTs of India. For the purpose of this study the analysis has been drawn using the NFHS. State wise Factsheets retrieved from http://rchiips.org/NFHS/factsheet_NFHS-4.shtml

iv. Health MIS

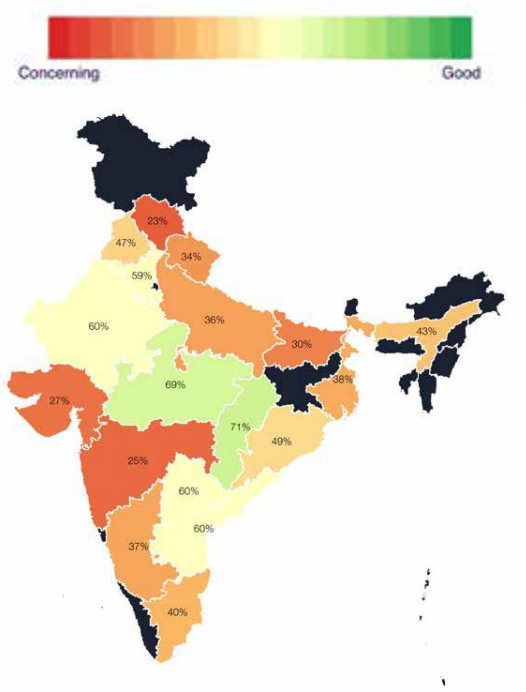
Health Management Information System (HMIS), launched in 2008, is a health statistics information portal used to monitor the performance and quality of the health services being provided under the National Health Mission, the Ministry of Health & Family Welfare, Government of India. This portal carries data from all the districts of the 29 states and 7 UTs of India. HMIS has data from all government and private health centers. HMIS collects real-time facility wise data and maintains data from month-wise sub-district level to cumulative state level data. These data analysis is primarily presented to facilitate the use of this information by District level Program Managers. The database includes facility-wise real time data aggregated, including data from private facilities.

For the purpose of the review, we used cumulative state wise HMIS data for the financial year 2014-15 and 2015-16. We included several key indicators such as estimated annual pregnancies per state, ANC registration, place of delivery, receipt of JSY incentive and other related indicators. However, we found serious limitation in using this data for our analysis. We found that the HMIS data did not have complete reporting of the private sector and suffered from poor quality of data. This rendered the data unusable for policy and/or research purposes. The serious limitations in HMIS data is reflective of the challenges facing states in collecting high quality and timely data that can aid in monitoring of programs.

We retrieved HMIS data from https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx.

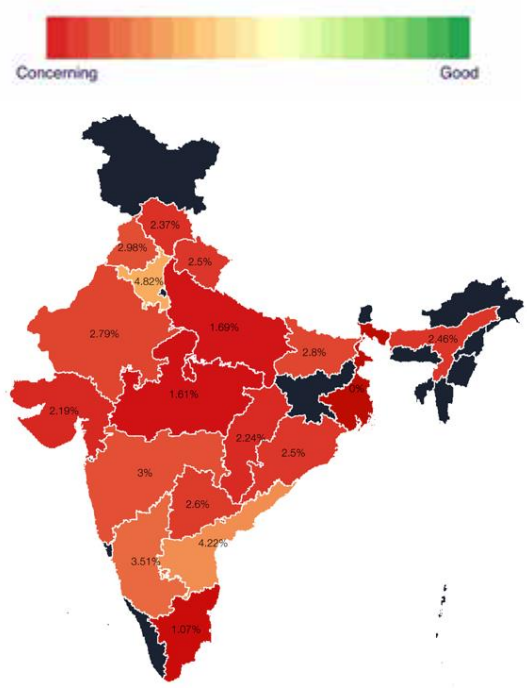
C.2 JAM Preparedness Index

Chart C2.1 – JAM Preparedness Index – Urban



Source: Economic Survey 2015-16

Chart C2.2 – JAM Preparedness Index – Rural



Source: Economic Survey 2015-16

C.3 Cash Transfer Schemes Targeting Under-Five Health

Table C.1 Selected Cash Transfer Schemes Targeting Under-Five Health from across India

S.No	Scheme	Year of Launch	State(s)	Objectives of the Scheme
Conditional Cash Transfer Schemes which are Currently Active				
1	JSY	2005	All states: 10 states categorized as Low Performing (LPS) and rest as High Performing (HPS)	1. To reduce maternal and neo-natal mortality by promoting institutional delivery among pregnant women.
2	IGMSY	2010	53 Districts across India	1. Promoting appropriate practices, care and service utilization during pregnancy, safe delivery and lactation 2. Encouraging the women to follow (optimal) IYCF practices including early and exclusive breast feeding for the first six months 3. Contributing to better enabling environment by providing cash incentives for improved health and nutrition to pregnant and lactating mothers.
3	Dr. Muthulakshmi Reddy Maternity Benefit Scheme	2007	Tamil Nadu	1. To Provide assistance to poor pregnant women to ensure access to nutritional food 2. To compensate for wage losses during pregnancy
4	Mamata Scheme	2011	Odisha	1. To provide partial wage compensation for pregnant and nursing mothers so that they are able to rest adequately during their pregnancy and after delivery. 2. To increase utilization of maternal and child health services, especially antenatal care, postnatal care and immunization. 3. To improve mother and child care practices, especially exclusive breastfeeding and complementary feeding of infants.
5	Ma-moni Scheme	2009	Assam	1.To encourage pregnant women to undergo at least 3 ante-natal check-ups which are helpful in identifying danger signs during pregnancy
6	Meghalaya Maternity Benefit Scheme (MMBS)	2011	Meghalaya	1. To reduce overall maternal mortality & infant mortality rate. 2. To increase institutional delivery 3. Integrate financial/ cash assistance with ANC during pregnancy period. 4. Institutional care during delivery& immediate post-partum period in health centers. 5. Reduce anemia & hemorrhage in pregnant woman
7	Matru Samrudhi Yojana	2011	Daman and Diu & Dadra and Nagar Haveli	1. To increase institutional deliveries
8	Matritva Laabh		Haryana	
9	Bebe Nanki Laadli Beti Kalyan Scheme	2011-12	Punjab	1. To improve sex ratio.

				2. To prevent the female feticide and to provide better education to girls. 3. To provide financial assistance to the families from time to time, so that they are not burdened with the birth of a girl child.
10	Bangaru Thalli	2013	Andhra Pradesh	1. Enhance the social status of the Girl Child and delay her age of marriage. To incentivize institutional delivery, registration of birth, immunization
11	Mamta Scheme	2011	Goa	1. To maintain sex ratio and to take care of the post-delivery nutritional requirements of the mother and child.
12	Mukhyamantri Rajshree Yojana (replaced Shubh Laxmi Scheme)	2016	Rajasthan	1. To secure the rights of the girl child
13	Sukhibhava Scheme	2000	Andhra Pradesh	
14	Bihar Child Support Program	2014	Bihar (Pilot in District Gaya)	1. To improve child nutrition outcomes
15	Thayi Bhagya Plus	2008-09	Karnataka	
Unconditional Cash Transfer Schemes which are Currently Active				
16	Direct Benefit Transfer in Public Distribution System	2015	Chandigarh, Dadra and Nagar Haveli, and Puducherry	1. To improve nutrition and reduce poverty. The direct benefit relative to in-kind, is to avoid pilferages and losses during the transit of food grains
17	Maternity benefit scheme for female beedi, imc, lsdm and cine workers			
18	Maternity Benefit	2012	Odisha	
19	Maternity benefit for women labors and wife of labors (महिला श्रमिकों तथा पुरूश श्रमिकों की पत्नियों को प्रसूति पर वित्तीय हायता)	2009	Haryana	
20	Griha Aadhar Scheme		Goa	1. To provide financial assistance and benefits to married women, divorces and widows in Goa
21	Mother Teresa Asharya Matri Sambel Yojana	2012	Himachal Pradesh	1. To provide financial assistance to widow women for educating and looking after up to two children till they attain age of 18 years.
22	Girl Child Scheme	2010	Tripura	
Conditional and Unconditional Cash Transfer Schemes which are Currently Not Active				
23	Motherhood Maternity Benefit Scheme (Matritva Laabh Prasuti Sahayta Yojana)		Rajasthan	
24	Matrutva Anudhan Scheme	1995	Maharashtra	
25	Vijaya Raje Janani Kalyan Bima Yojana	2006	Madhya Pradesh	1. To promote institutional deliveries and eventually reducing maternal mortality
26	Prasav Hetu Parivahan Evam Upchar Yojana	2005	Madhya Pradesh	1. To reduce infant and maternal mortality rate(Meet the transportation need for the pregnant women)

27	Balri Rakshak Yojana	2005	Punjab	1. To reduce infant mortality rate by declining the number of higher birth order. 2. To promote the cause of the girl child for correcting the skewed sex ratio in the State. 3. To motivate the couples to adopt the terminal method of sterilization in order to stabilize the growth rate of population.
28	Bangaru Thalli	2013	Telangana	1. To enhance the social status of the girl child and delay her age of marriage. 2. To incentivize institutional delivery, registration of birth, immunization
29	Dhanalakshmi Scheme	2008	Andhra Pradesh, Chhattisgarh, Orissa, Jharkhand, Bihar, Uttar Pradesh and Punjab	1. To provide a set of staggered financial incentives for families to encourage them to retain the girl child and look after her well being 2. To change the attitudinal mind set of the family towards the girl – by linking cash transfers to her well-being. This will force families to look upon the girl as an asset rather than a liability since her very existence has led to cash inflow to the family
29	Shubh Laxmi Scheme	2013	Rajasthan	1. To promote the girl child 2. To prevent child marriage 3. To encourage registration of births
30	Kasturba Poshan Sahay Yojana	2012	Gujarat	1. To ensure safe motherhood and institutional deliveries to pregnant women from the grassroots level. 2. To reduce the morbidity and mortality that is linked to malnutrition and anemia in the entire State of Gujarat for BPL mothers.

C.4 Studies for the Selected Cash Transfer Programs

Table C.2 Studies for the selected Cash Transfer Programs

S.No	Study Name	Author(s)	Publication, Year	Methodology	Area of Study State	Data Collection Period	Data Collection Tool	Sample Size
Bihar Child Support Program (Launched 2014)								
1	Bihar Child Support Program Midline Impact Evaluation Report		Oxford Policy Management, 2016	Mixed	Bihar	Aug 2015 to Oct 2015	Interview Schedule	1500 mother-child dyads in each of the four blocks (6023 households) and 210 AWWs
Dhanalakshmi Scheme (Launched in 2008)								
2	Conditional Cash Transfers for Girls in India: Assessment of a Girl Child Promotion Scheme from Beneficiary Perspective	T.V. Shekhar and F. Ram	International Institute for Population Sciences, 2015	Mixed	Andhra Pradesh, Bihar, Jharkhand, Odisha and Punjab	Sept 2013 to Feb 2014	1. Survey-Interview Schedule 2. Focus Group Discussion 3. Informant Interviews 4. Case Studies	2150 Beneficiary Households and 1806 Non-beneficiary Households
Direct Benefit Transfer in Public Distribution System (Launched in 2015)								
	Direct Benefit Transfers: Results from One Year of Process Monitoring in Union Territories	Karthik Muralidharan, Paul Niehaus, Sandip Sukhtankar	2017	Quantitative	Chandigarh, Puducharry, Dadra & Nagar Haveli	Jan 2016 to Mar 2017	Household Survey	1,000 HHs in each UT
3	Baseline Assessment for DBT in TPDS: Will This Small Step Become a Giant Leap	Arshi Aadil, Lokesh Kr. Singh and Rridhee Malhotra	Microsave India, 2016	Quantitative	Dadra & Nagar Haveli, Chandigarh and Puducherry,	Aug-15	Interview Schedule	3,440 beneficiaries, 8 Officials
4	DBT in TPDS – A Mid-line Assessment: The Road Ahead Seems To Be Long	Alekh Sanghera and Lokesh Kr. Singh	Microsave India, 2016	Quantitative	Dadra & Nagar Haveli, Chandigarh and Puducherry,	Nov-15	Interview Schedule	
Dr. Muthulakshmi Reddy Maternity Benefit Scheme (Launched in 2007)								
	Realising the Promise of the Muthulakshmi Reddy Maternity Benefit Scheme: A Pilot Study	Esther Duflo, Girija Viadyanathan, Rema Hanna and Madeline Duhon	2017	Qualitative	Tamil Nadu	Jul-15	1. Semi-structured interviews 2. Field observations	1. 90 Village Health Nurses and 2. 172 Mothers (at different stages of pregnancy)

5	A study on Dr. Muthulakshmi Reddy Maternity Benefit Scheme in Mugavanur, Tiruchirappalli District	S. Ganesan and P. chitra	International Journal of Management research and Business Strategy, 2016	Quantitative	Tamil Nadu		1. Structured interview	1. 112 Women from 19-40 years of age
6	Pro-poor maternity benefit schemes and rural women- Findings from Tamil Nadu	P Balasubramanian and T K Sundari Ravindran	Economic and Political Weekly, 2012	Quantitative	Tamil Nadu	Nov-Dec 2008	1. Cross sectional survey	1. 494 Women who recently delivered
7	Towards Universalisation of Maternity Entitlement: An Exploratory Case Study of the Dr. Muthulakshmi Maternity Assistance Scheme, Tamil Nadu	Mina Swaminathan, Vandana Prasad, Ganapathy Murugan, Rama Narayanan and K. Shanmugavelayutham	Public Health Resource Network, M.S. Swaminathan Research Foundation, Tamil Nadu – Forum for Crèche and Child Care Services, 2010	Quantitative	Tamil Nadu	Oct-Nov 2009	1. Structured interviews	1. 207 Mothers 2. 32 Village Health Nurses/Auxiliary Nurse Midwife and 3. 33 Anganwadi Workers
Indira Gandhi Matritva Sahyog Yojana (Launched in 2010)								
8	Report on the study of the Indira Gandhi Matritva Sahyog Yojana To Enhance Inclusion and Preparedness to Implement Provisions under the NFSA	Vanita Leah Falcao , Jasmeet Khanuja , Sonal Matharu , Shikha Nehra and Dipa Sinha	Centre for Equity Studies, 2015	Qualitative	Bihar, Chhattisgarh, Jharkhand and Madhya Pradesh	Sept-Nov 2014	1. Interviews	1. 42 Beneficiaries, 2. 37 Non-beneficiaries, 3. 37 Front Line Workers and 4. 11 Officials
Janani Suraksha Yojana (Launched in 2005)								
9	A conditional cash assistance program for promoting institutional deliveries among the poor in India: process evaluation results	Narayanan Devadasan, Maya Annie Elias, Denny John, Shishir Grahacharya and Lalnuntlangi Ralte	Studies in HSO&P, 24, 2008	Qualitative	Chattisgarh, Karnataka, Maharashtra and Odisha	Jan-08	1. Semi- structured interview	1. 17 Health workers, 2. 22 Women beneficiaries
10	A qualitative study of factors impacting accessing of institutional delivery care in the context of India's cash incentive program	Sukumar Vellakkal , Hanimi Reddy, Adyya Gupta , Anil Chandran , Jasmine Fledderjohann and David Stuckler	Social Science & Medicine, 2017	Qualitative	Jharkhand, Madhya Pradesh and Uttar Pradesh	Sept -Nov 2013	1. In-depth interviews	1. 112 Women (JSY Users and Non-users)

11	A rapid appraisal on functioning of Janani Suraksha Yojana in South Orissa	Shobha Malini , R.M. Tripathi , Poonam Khattar , K.S. Nair , Y.L. Tekhre , Neera Dhar and Deoki Nandan	Health and Population: Perspectives and Issues, 2008	Qualitative	Odisha	Oct - Nov 2007	1. Focus Group Discussions 2. In-depth interviews 3. Semi-structured interview	1. 120 Utilizers 2. 120 Non-utilizers 3. 21 Health and frontline workers
12	Costs and consequences of a cash transfer for hospital births in a rural district of Uttar Pradesh, India	Diane Coffey	Social Science and Medicines, 2014	Qualitative	Uttar Pradesh	Jan 2012 and Nov 2013	1. Semi-structured interviews	1. 20 women and 2. 3 ASHAs
13	Effects of the Janani Suraksha Yojana on maternal and newborn care practices: Women's experiences in Rajasthan	K.G. Santhya, Shireen J. Jejeebhoy, Rajib Acharya and A.J. Francis Zavier	Population Council, 2011	Mixed	Rajasthan	September 2009 and February 2010	1. Survey 2. In-depth interviews	1. 4770 women
14	Evaluation of Janani Suraksha Yojana (JSY) in Maharashtra, India: Important Lessons for Implementation	P. P. Doke, U. H. Gawande, S. R. Deshpande and M. Gadgil	International Journal of Tropical Disease & Health, 2015	Quantitative	Maharashtra	2010-11	1. Cross-sectional survey 2. Interview	1. 4544 women
15	Financial incentives in health: New evidence from India's Janani Suraksha Yojana	Timothy Powell-Jackson, Sumit Mazumdar and Anne Mills	Journal of Health Economics, 2015	Quantitative		DLHS-2 (2002-04) DLHS-3 (2007-08)	1. Secondary Sources- District Level Household Survey 2 & 3	
Vijaya Raje Janani Kalyan Bima Yojana (Launched in 2006)								
16	An assessment of the process and performance of the Vijaya Raje Janani Kalyan Bima Yojana, Madhya Pradesh	Deoki Nandan, Dr. Ashok Mishra, Dr. Chandrakant Lahariya, Dr. Sanjay Gupta, Mr. J.P. Shivdasani, Dr. U. Datta and Dr. Vivek Adhish	National Institute of Health and Family Welfare, 2007-8	Qualitative	Madhya Pradesh	Oct 2007 to Dec 2007	1. Focus Group Discussion 2. Semi-structured interviews	1. 18 Focus Group Discussions 2. 343 in-depth interviews

C.5 Structure of Benefits and Payments for Select Cash Transfer Programs

Table C.3 Structure of Benefits and Payments for Select Cash Transfer Programs

S.No	Scheme	Year of Launch	State(s)	Target Population/Beneficiaries (Eligibility)	Benefit Value and Conditions Structure
Conditional Cash Transfer Schemes which are Currently Active					
1	JSY	2005	All states: 10 states categorized as Low Performing (LPS) and rest as High Performing (HPS)	1. In LPS, all pregnant women (irrespective of age and #children) for delivery in public/accredited private hospital 2. In High Performing States (HPS) only pregnant women from BPL, SC/ST household (irrespective of age and #children) for delivery in public/accredited private hospital 3. BPL women who deliver at home regardless of age and #children	1. Delivery takes place in government or private accredited institution/health centers (incentive paid in one instalment upon discharge) - In LPS- Cash Assistance of Rs.1400 in Rural areas and Rs.1000 is Urban areas - In HPS- Cash assistance of Rs.700 in Rural areas and Rs.600 in Urban Areas. - For home delivery, cash assistance of Rs.500 to BPL women for delivery at home with referral of ASHA.
2	IGMSY	2010	53 Districts across India	Pregnant Women of 19 years of age and above for first two live births. (State and Centre Government employees are excluded)	The total incentive (Rs.6000) is paid in 2 equal instalments on fulfilment of following conditions- 1. First instalment of Rs.3000 on registration of pregnancy at AWC/Health Centers within 4 months of pregnancy and on completion of 2 ANCs with IFA and TT 2. Second instalment of Rs.3000 after 6 months of delivery on registering birth of the child; Receiving BCG, DPT I, II & III and other OPV doses; Attend at least 3 growth monitoring and IYCF counselling session within 3 months of delivery; Exclusive breastfeeding for 6 months and introduction of complimentary feeding.
3	Dr. Muthulakshmi Reddy Maternity Benefit Scheme	2007	Tamil Nadu	Pregnant women from BPL households of age 19 years and above for up to 2 deliveries	The total incentive of Rs.12000 paid out in 3 equal instalments upon fulfilment of conditions- 1. First instalment during 7th month of pregnancy after having at least 3 antenatal care check-up and TT Immunization. 2. Second instalment on delivery in government health center/hospital. 3. Third instalment on completion of three doses of immunization vaccine
4	Mamata Scheme	2011	Odisha	Pregnant and lactating woman of age 19 years & above, for the first two live births	The total incentive of Rs.5000 paid out in 4 instalments upon fulfilment of conditions- 1. First instalment of Rs.1500- at the end of the 2nd trimester, on fulfilment of all five condition- i. Pregnancy registered at the AWC/Mini AWC. ii .Received at least one antenatal

					check-up (out of optimal 3). iii. Received IFA tablets. iv. Received at least one TT vaccination (out of optimal 2). v. Received at least one counselling session at the AWC/ Village Health and Nutrition Day (VHND). 2. Second instalment of Rs.1500 on completion of 3 months after delivery on fulfilment of conditions- i. Child birth is registered. ii. Child has received BCG vaccination. iii. Child has received Polio 1 and DPT-1 vaccination. iv. Child has received Polio 2 and DPT-2 vaccination. v. Child has been weighed at least two times after birth. 3. Third instalment of Rs.1000- when infant completes six months of age, on fulfilment of the 5 conditions- i. Child has been exclusively breastfed for first six months. ii. Child has been introduced to complementary foods on completion of six months. iii. Child has received Polio 3 and DPT-3 vaccination. iv. Child has been weighed at least two times between age 3 and 6 months (out of optimal 3). v. Mother has attended at least two IYCF counselling sessions between 3 and 6 months of lactation, at the AWC/VHND/Home Visit (out of optimal 3). 4. Fourth instalment of Rs.1000- when the infant completes nine months of age on fulfilment of conditions- i. Measles and Vitamin A vaccine has been given before the child is one year old . ii. Age specific appropriate complementary feeding has started and is continuing. iii. Child is weighed at least two times between six months to nine months of age.
5	Ma-moni Scheme	2009	Assam	Pregnant women in Assam	The total incentive of Rs.1000 paid out in 2 instalments upon fulfilment of conditions pertaining to ANCs- 1. During the second ANC (5th month) the pregnant woman receives an A/C Check of Rs.500 2. During the 3rd ANC (8th month) pregnant women receive Rs.500/- along with a voucher for the referral transport
6	Meghalaya Maternity Benefit Scheme (MMBS)	2011	Meghalaya	Women of age 19years or above from BPL families or families with income less than Rs.1 lakh annually, for up to 2 live births.	The total incentive of Rs.1000 paid out in 2 instalments upon fulfilment of conditions- 1. Rs.2000/- for antenatal component. 2. Rs.2000/- after delivery & stay of 48 hours for post-delivery treatment.
7	Matru Samrudhi Yojana	2011	Daman and Diu & Dadra and Nagar Haveli	Women of these 2 Union Territories for up to 2 live births	1. Total incentive of Rs.5000 on institutional delivery at government institutions.
8	Matritva Laabh		Haryana	Women labor registered with the Labor Department, for up to 2 children or 3 girl child	The total incentive of Rs.36000 paid out in 2 instalments- 1. First instalment of Rs.30000/- for prenatal care (if the woman is member for at least a year) 2. Second instalment of Rs.6,000/- post-delivery for child's nutrition on production of Birth Certificate
9	Bihar Child Support Program	2014	Bihar (pilot in Gaya district, 2 blocks)	Universal scheme, eligible to all pregnant women and mothers of young children	Women receive a monthly sum of Rs.250/month for a period of 30 months, starting from 4th month of pregnancy until child is two years old, conditional on satisfying - Hard conditions: receipt of IFA tablets during pregnancy, birth registration, exclusive breastfeeding for first six months, and measles vaccination

					- Soft conditions: Monthly Attendance at VHND days, weight gain monitoring during pregnancy, child growth monitoring, and correct treatment for diarrhea
10	Bebe Nanki Laadli Beti Kalyan Scheme	2011-12	Punjab	Girl child born after 1 Jan 2011 whose family income is less than Rs.30,000 p.a.	The total incentive of Rs.61,000 paid out on fulfilment of following conditions- On birth of newly born girl child (0 years)- Rs.2100/- On attaining the age of 3 years (after full immunization)- Rs.2100/- On admission to Class -1st (06 years)- Rs.2100/- On admission to Class –9th (14 years)- Rs.2100/- On attaining age of 18 years & qualifying Class- 12th exam- Rs.31000/- Scholarship payable: 1. From class-1st to 6th standard Rs.100/month- Total Rs.7200/- Scholarship payable: 2. From class-7th to 12th standard Rs.200/month- Total Rs.14400/-
11	Bangaaru Thalli	2013	Andhra Pradesh	1. Girl child born within “two live births norm” born on or after 1st May 2013 B. Having White ration card like WAP/RAP/TAP/YAP/AAP C. Institutional delivery in Public or Private hospital (in specific areas, home delivery considered)	1. Upon birth Rs.2500 2. First two years (on birthday) upon completion of immunization (Rs.1000) each year 3. From age 3-5 years, Rs.1500 every year through Anganwadis 4. From class 1-5, Rs.2000 will be given every year for her studies 5. From class 6-8, Rs.2500 each year 6. From class 9-10, Rs.3000 each year 7. For class 11-12, Rs.3500 each year 8. For college, Rs.4000 a year during her graduation. 9. Additional Rs50,000 is paid when girl turns 18years (i.e., completes class 12th) or Rs1lakh is paid after girl completes graduation
12	Mamta Scheme	2011	Goa	All women of Goa who deliver a live girl child (up to 2 deliveries) in public health institutions) 2. The woman should be resident of Goa for at least three years or married to a resident of Goa	Total incentive of Rs.25000 paid out in 5 equal instalments on fulfilment of following conditions 1. At birth, 2. On full immunization, 3. On completion of class 10 4. On completion of class 12 and 5. On completion of college degree
13	Mukhyamantri Rajshree Yojana (replaced Shubh Laxmi Scheme)	2016	Rajasthan	To women who deliver a girl child and family income is less than Rs.2 lakh p.a. (girls born after June1st) (up to 2 children)	Total incentive of Rs.50000 on fulfilment of conditions associated- 1. Upon birth of girl child (institutional delivery) Rs2500 (this is in addition to JSY) 2. On first birthday of girl child, upon completion of required vaccinations - Rs2500 3. On enrolling in grade 1 in public school- Rs.4000 4. On entering class 6- Rs.5000 5. Upon entering class 10- Rs.11000 6. Upon completion of class 12- Rs.25000 (receipt of subsequent instalments conditional on receiving the first instalment)
14	Sukhibhava Scheme	2000	Andhra Pradesh	Rural BPL pregnant women of age 19 years and above (up to 2 deliveries)	Rs.300 paid along with JSY
15	Thayi Bhagya Plus	2010	Karnataka	BPL, SC and ST	Receive Rs.1000 cash incentive for delivering in Non-Thayi Bhagya accredited private Nursing Homes/Hospitals.

16	Prasoothi Araike		Karnataka	Pregnant women of SC, ST, and BPL categories High Priority Districts: No birth order restriction All other districts: Only two live births	Pregnant women receive Rs1,300 (rural) (or Rs1,400 urban) during pregnancy to meet their nutritional needs with an objective of reducing incidence of low birth weight babies and associated risk of IMR and MMR: 1. Rs 1,000 in second third trimester 2. Rs 300 (Rs400 urban) for rural government institutional deliveries (JSY incentive is additional)
Unconditional Cash Transfer Schemes which are Currently Active					
16	Direct Benefit Transfer in Public Distribution System	2015	Chandigarh, Puducherry and Dadra and Nagar Haveli	BPL and Antodaya Families	Cash subsidy calculated using the subsidized value of 5 KGs of food grains per beneficiary per month (based on the minimum support prices in the state)
17	Maternity benefit scheme for female beedi, imc, lsdm and cine workers			A female beedi, IMC, LSDM and Cine Worker (For up to 2 deliveries)	Rs.1,000 on institutional delivery
18	Maternity Benefit	2012	Odisha	Women construction workers	Rs.8,000 on institutional delivery
19	Maternity benefit for women labors and wife of labors	2009	Haryana	Industrial or Commercial sector labors registered with Labor Department, Haryana (for up to 2 children or 3 girl child)	Rs.7,000 on institutional delivery
20	Griha Aadhar Scheme		Goa	1. Permanent resident of Goa for last 15 years 2. Woman age at least 18 years 3. Married women, widowed, divorced 4. Family income does not exceed Rs3lakh per annum 5. Does not receive any other benefits from Government of Goa/Government of India	Rs.1,200 per month
21	Mother Teresa Asharya Matri Sambel Yojana	2012	Himachal Pradesh	BPL single/widow mothers (for up to 2 children)	Rs.3000 per child per annum

22	Girl Child Scheme	2010	Tripura	Girl child from BPL families (till the age of 16 years for up to 2 girl children/family)	Rs.300 per month
Conditional and Unconditional Cash Transfer Schemes which are currently not active					
23	Motherhood Maternity Benefit Scheme		Rajasthan	Pregnant women from BPL families of age 19 years or above	On registration at the nearest health center
24	Matrutva Anudhan Scheme	1995	Maharashtra	All BPL women who opt to deliver in government hospitals	1. Honorarium for ANC is Rs.400/- by cash and Rs.400/- is given for medicine. 2. If the delivery is conducted in the institute, an honorarium of Rs.400/- as cash is given.
25	Vijaya Raje Janani Kalyan Bima Yojana	2006	Madhya Pradesh	BPL families	Rs.1000 cash assistance for institutional delivery in government hospital; Compensation of Rs.50000 in case of death during delivery or causes related to pregnancy.
26	Prasav Hetu Parivahan Evam Upchar Yojana	2005	Madhya Pradesh	Pregnant women in rural Madhya Pradesh	An incentive of Rs.300 is given on registering pregnancy and getting a referral card from AWW
27	Balri Rakshak Yojana	2005	Punjab	Families not in tax payer group. Two children norm. No male child	Parents required to adopt terminal method of sterilization after birth of first girl child (Rs700) or second girl child (Rs500)
28	Bangaaru Thalli	2013	Telangana	1. Girl child born within “two live births norm” born on or after 1st May 2013 B. Having White ration card like WAP/RAP/TAP/YAP/AAP C. Institutional delivery in Public or Private hospital (in specific areas, home delivery considered)	1. Upon birth Rs.2500 2. First two years (on birthday) upon completion of immunization (Rs.1000) each year 3. From age 3-5 years- Rs.1500/year through Anganwadi 4. From class 1-5- Rs.2000/year for studies 5. From class 6-8- Rs.2500/year 6. From class 9-10- Rs.3000/year 7. For class 11-12- Rs.3500/year 8. For college- Rs.4000/year during her graduation. 9. Additional Rs.50000 is paid when girl turns 18years (i.e., completes Std. 12) or Rs1lakh is paid after girl completes graduation
29	Kasturba Poshan Sahay Yojana	2012	Gujarat	Pregnant women form BPL families	An incentive of Rs.600 paid in 3 equal instalments on fulfilment of conditions- 1. First instalment is given at the end of the first-trimester subject to early registration on Mamta Divas. 2. Second instalment is given within one week of delivery in Government institution or Chiranjeevi Yojana facility. 3. Third instalment is given to mother of the infant for nutrition support after completion of full immunization schedule in Mamta Diwas ending with Measles Vaccination along with Vitamin A after 9 months and before infant completes 12 months.

30	Dhanalakshmi Scheme	2008	Pilot basis in 11 educationally most backward blocks of 7 states - Andhra Pradesh, Chhattisgarh, Orissa, Jharkhand, Bihar, Uttar Pradesh and Punjab	All girl children irrespective of their socio-economic status and the number of girl children in the family, who have domicile status in the block	All girl children born after 19 November, 2008 and registered- Rs.5000 1. Immunization In 6 weeks Rs.200 In 14 weeks Rs.200 In 9 months Rs.200 In 16 months Rs.200 In 24 months Rs.200 On completion of full immunization Rs.250 2. Education On enrollment to Primary School Rs.1000 In class 1 + attendance Rs.500 In class 2 + attendance Rs.500 In class 3 + attendance Rs.500 In class 4 + attendance Rs.500 In class 5 + attendance Rs.500 On enrollment to Secondary School Rs.1500 In class 6 + attendance Rs.750 In class 7 + attendance Rs.750 In class 8 + attendance Rs.750 3. Insurance Maturity (if girl unmarried at age 18 years) - Rs1lakh

C.6 Respondents for Semi-Structured Interviews

Table C.4 List of Respondents for Semi-Structured Interviews

S.No	Name	Organisation	Designation	Interview Date	Interview Type	Programmes	Role
1.	Sarath Davala	India Network for Basic Income	Coordinator	Jun 2	Phone	SEWA Madhya Pradesh UCT transfer	Research
2.	Shruti Viswanathan	Oxford Policy Management	Assistant Consultant	Jun 7	In-person	Bihar Child Support Programme	Research
	Sarthak Joshi		Assistant Consultant				
3.	Kalyani Raghunathan	IFPRI	Associate Research Fellow	Jun 8	In-person	Mamata, Odisha	Research

4.	Suresh Mohamed	World Bank		Jun 8	In-person	Janani Suraksha Yojana	Government
5.	Dipa Sinha	Ambedkar University	Economics Faculty	Jun 14	In-person	Indira Gandhi Matru Sahyoh Yojana (IGMSY)	Research
6.	Renana Jhabvala	SEWA Bharat	Chairperson	Jun 14	Phone	SEWA Madhya Pradesj UCT transfer	Implementation
7.	Bhuvana Anand	J-PAL South Asia	Project Director, Payments & Governance Research Programme	June 15	In-person	Pilot of Direct Benefit Transfer in Public Distribution System	Research
8.	Harold Alderman	IFPRI	Senior Research Fellow	Jun 16	In-person		Research
	Purnima Menon		Senior Research Fellow				Research
9.	Avani Kapur	Accountability Initiative	Fellow, Centre for Policy Research & Lead Public Finance	Jun 27	In-person	Janani Suraksha Yojana (JSY) Indira Gandhi Matru Sahyoh Yojana (IGMSY)	Research
10.	Priya Nanda	Bill & Melinda Gates Foundation	Country lead, Equity and Social Change, Research and Evaluation	Jun 30	In-person	Apni Beti Apna Dhan (ABAD)	Research
11.	TV Shekhar	International Institute for Population Sciences	Professor, Dept. of Population Policies and Programmes	Jul 4	Phone	Dhanlakshmi Scheme Bhagyalakshmi Scheme, Karnataka	Research
12.	Diane Coffey	research institute for compassionate economics	Executive Director	Jul 6	In-person	JSY Indira Gandhi Matru Sahyog Yojana (IGMSY) Mamata, Odisha	Research
13.	Harini Kanan	J-PAL South Asia	Post-Doctoral Fellow & Senior Research Manager	Jul 7	In-person	Muthulakshmi Reddy Maternity Benefit Scheme, Tamil Nadu Incentives for Immunisation Study, Haryana	Research
14.	Antara Lahiri	UNICEF, India	Social Policy Specialist	July 7	In-person	Kanyashree, West Bengal	

						Mamata, Odisha	
15.	Mitul Thapliyal	Microsave	Associate Director – Digital Financial Services (DFS)	Jul 10	In-person	Pilot of DBT in PDS Jan Dhan Yojana Ujjwala Scheme	Financial Inclusion Consulting Firm
	Anurodh Giri		Manager – DFS				
	Aishwarya Singh		Senior Manager – DFS				