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## *Latin America: Cash Transfers to Support Better Household Decisions*

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### *Highlights*

Conditional cash transfers (CCTs) in Latin America have been effective at increasing the use of preventive health services, increasing knowledge, improving attitudes and practices, enhancing nutritional status, and reducing morbidity, mortality, and fertility.

Rigorous impact evaluations suggest that improved health results can be attributed to demand-side performance incentives.

Better choice of health conditionalities in future CCT programs could strengthen the impact on health.

Poor families in the developing world face significant constraints in accessing essential health care. Distance to health facilities, lost wages associated with illness, care taking and care seeking, facility fees, and other out-of-pocket costs all contribute to limiting the access of poor families to health care, particularly

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preventive care. These costs also affect their financial security because out-of-pocket spending can drive them deeper into poverty.

Counteracting these constraints requires a multipronged strategy aimed at both the supply and the demand sides of a health system. Here we focus on a demand-side program known as a conditional cash transfer (CCT). CCT programs are spreading rapidly through the developing world. Since 1997, seven countries in Latin America and the Caribbean have implemented and evaluated CCT programs with health and nutrition components. These include the Bolsa Alimentação/Bolsa Família in Brazil, Familias en Acción (FA) in Colombia, the Bono de Desarrollo Humano in Ecuador, the Family Allowance Program (PRAF) in Honduras, the Poverty Alleviation through Health and Education (PATH) in Jamaica, Progresá and Oportunidades in Mexico, and the Red de Protección Social (RPS) in Nicaragua. Others are being developed in Argentina, Chile, Costa Rica, El Salvador, Panama, Paraguay, and other countries around the world.

CCTs aim to stimulate demand for health services by transferring cash to poor mothers conditional on their seeking services at clinics and attending health education talks. Because the transfers are conditional, CCT programs also are designed to induce changes in health and nutrition behavior; they are demand-side payments for performance, where performance is healthy behavior.

The central objective is to reduce poverty. A second set of objectives relates to increased food consumption, school attendance, and use of preventive health care among the poor. In the longer term, CCT programs are expected to contribute to increasing human capital and the associated returns in the labor market by reducing malnutrition and improving health and schooling completion rates. Although we focus on the impact of these programs on health and nutrition, the impacts on poverty, inequality, and schooling are also critical to consider when calculating the costs and benefits of CCTs.

A key feature of CCT programs is the rigor with which they have been evaluated. First undertaken in Mexico, an experimental evaluation design showed that significant impacts on social welfare could be attributed to conditional cash transfers to poor families. They have been adopted widely in part because there is solid evidence of their success.

## **Program Effect Model**

Understanding the causal pathways of an intervention is critical to evaluating how it works and what should be modified to improve its effectiveness.

### *Demand- and Supply-Side Factors*

Whether people use health services is determined by a combination of demand-side and supply-side factors.<sup>1</sup> Illness reduces productivity, the time available for production, and individual well-being. To minimize these effects, individuals tend to invest in their health to be healthy or at least to regain their health after an illness.<sup>2</sup> The extent to which the desire to invest results in demand for health care depends on whether an individual identifies illness and is willing and able to seek appropriate care (Ensor and Cooper 2004). Identifying illness may depend on both the type of illness and the individual's knowledge. Willingness to seek care is affected both by knowledge and perceptions (social norms) and by the costs of seeking treatment, household income, quality and availability of substitute products and services, and decisionmaking within the household.

As Eichler (2006) noted, the supply of health care services is determined by a combination of structural inputs (staff time, infrastructure, drugs, supplies, and land, for example) and the processes that transform these inputs into outputs (that is, available technology and the management capability of the provider). Central to this transformation is the behavior of the health care provider. At the individual level, providers have a desire to make money and have leisure time as well as to cure patients. Deficiencies in the quality of care are thus associated with inappropriate incentives for providers, along with inadequate resources, organizational rigidities, and lack of knowledge.

### *Assumptions*

At least nine implicit assumptions underlie the design of CCT programs. The first is that the poor underuse existing health services. The decision to condition payments on having regular checkups at a health clinic is based on this assumption.

Baseline documentation of health and nutrition in countries with CCT programs indicated significant inequalities in the use and fiscal impact of health care by socioeconomic strata. Poor and rural households were much less likely to

1. The typical CCT program in Latin America has tended to include little in terms of direct supply-side interventions (Nicaragua is the exception) and has involved intersectoral agreements with ministries of health to provide services to program beneficiaries. In some countries, this commitment is made more explicit by tagging the budget line going to the health sector so that it is earmarked for CCT program beneficiaries.

2. These ideas were presented in an article by Mushkin (1962) and formalized by Grossman (1972).

identify illness and seek care than their better-off counterparts. Out-of-pocket spending on health was a larger proportion of total expenditures among the poor than among the wealthy. In addition, costs associated with seeking care were frequently cited as a reason for not using services. Even in systems with strongly progressive public spending on health, the poor displayed lower use rates.

Little analysis, however, has been conducted to test the proposition that inequities are due primarily to demand-side factors versus supply-side factors. Even if both are shown to be important, the question remains as to which is the more cost-effective (Handa and Davis 2006).

Two studies have attempted to estimate this in improving schooling enrollment in developing countries (Coady and Parker 2002; Handa 2002). Although no similar health or nutrition study has been undertaken to date, Handa and Davis (2006) noted that health care—particularly preventive health care—differs from education in that asymmetries in information are more acute and poor households may be less likely to seek care due to a lack of information, which would justify government intervention to correct this market failure.<sup>3</sup>

A second assumption is that poor women do not have adequate health education or knowledge. The inclusion of educational health talks as a condition for the cash transfer (mainly targeted toward the women of beneficiary households) is based on this assumption.

The third is that a population needs to be incentivized to make use of health services. By conditioning the transfer on certain types of desired behavior, CCT programs assume that increases in household income from monetary transfers alone will not be enough to induce major changes in human capital investment. This assumption may not hold. There may be a level of transfer that would induce the desired behavior without setting a condition. In that case, the relative cost-effectiveness of a conditioned and nonconditioned transfer scheme should each be calculated. A possible major source of inefficiency in CCT programs is paying people for what they would do in the absence of a payment (Sadoulet, Finan, and de Janvry 2002). Modeling the probability that a given beneficiary will use the conditioned health services under different transfer scenarios is a worthwhile endeavor.

A fourth assumption is that the program will have an effect only if conditionality is monitored and compliance is enforced. Program designers have

3. According to Handa and Davis (2006), “The demand for quality health care is difficult to model because it is hard to measure (and control for) the exogenous price of different alternatives, but there is evidence that both quality and access are also important determinants of utilization.”

feared that in the absence of monitoring compliance with the conditions and establishing disincentives for noncompliance (such as docking transfers when conditions are not met), CCT beneficiaries will not comply with program conditions. Two important aspects may counter this assumption. The first is that the mere signaling by the authorities (or program officials) that compliance will be monitored sends the beneficiaries a message stressing the importance of the activity. Second, the presence of conditions implies that there is a risk of losing the transfers.

Schady and Araujo (2006) examine the education component of Ecuador's CCT program, in which beneficiaries were told that compliance would be monitored (but no verification was done). Their findings seem to imply that the mere suggestion of conditionality was sufficient to induce a significant change in the behavior of poor households.<sup>4</sup> Similar work has not yet been done for health. There is also limited knowledge about how long the mere threat of monitoring compliance can substitute for actual compliance.

A fifth assumption in the design of conditional cash transfer programs is that information induces behavioral change. Perhaps by default rather than deliberation, the educational health talks have tended to expose beneficiaries passively to health information. Expecting that such interventions will have an effect assumes that information in and of itself will induce behavior change.

Sixth is the assumption that how CCT resources are allocated within the household depends on who is the official recipient. The transfer, it is argued, should be made to mothers or female caretakers, based on the assumption that they are more likely to invest in the welfare of the children. This assumes, in turn, that the recipient also decides on how the money is used.

Seventh is the assumption that the supply side of services is in place or will follow demand. With the exception of those that include supply-side strengthening, such as RPS in Nicaragua, most CCT programs assume that existing supply-side capacity is adequate to meeting the demand of beneficiaries. If the problem is on the supply side, the thinking goes, then the transfer needs to be made to the supply side, and if the problem is low use of services because beneficiaries do not understand the benefits of preventive care or know

4. Schady and Araujo (2006) reported effects on enrollment that are two and a half times as large as those observed in Progreso and attributes this difference to the much lower baseline level of school attendance and enrollment in Ecuador than in Mexico. A similar phenomenon is observed across other impact evaluations; countries that start with lower baselines see larger effects, which may indicate the appropriateness of CCT programs in poorer countries and areas without the need for intensive monitoring of conditionality.

that services are available, then the transfer should be made to the demand side (the beneficiaries). The hope is that governments and providers will increase supply-side inputs if beneficiaries begin to demand services and hold providers accountable.

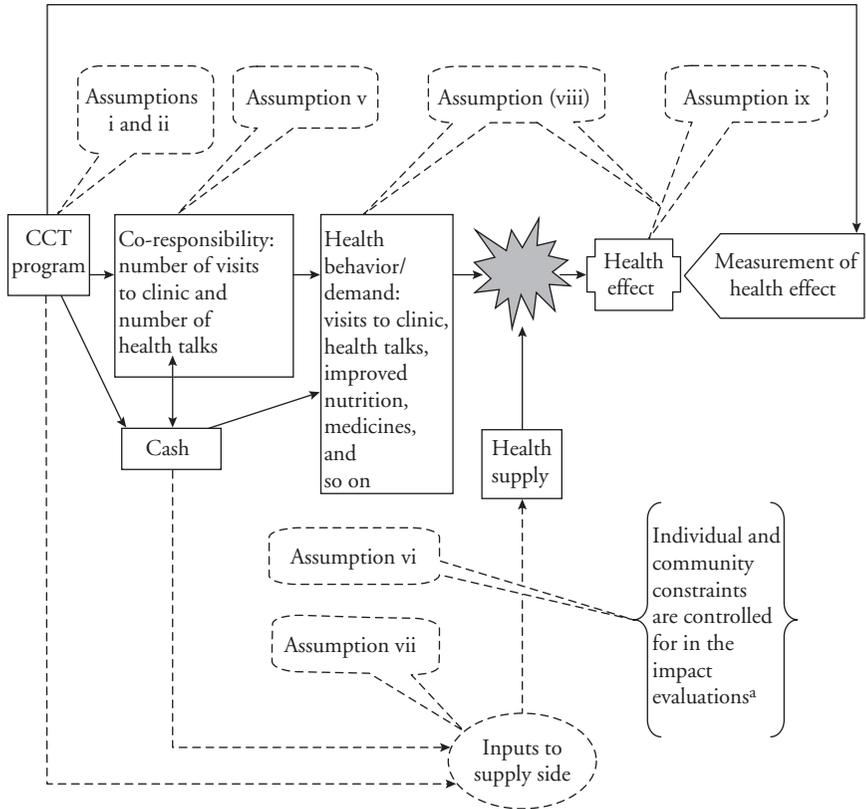
A reflection on available alternatives to increase use is needed. First, policy-makers should determine whether a budget-constrained government should focus on quantity (increasing use) rather than on quality (improving the effectiveness of existing services to existing users). Second, they should consider whether there are alternative interventions to increase use.

The eighth assumption is that use of (public) health services will improve the health of those receiving the services. By conditioning transfers on the use of preventive services, primarily in public sector clinics, CCT programs clearly assume this to be the case. The assumption relates both to the quality of the services provided and to the quality and effectiveness of substitute products and services.

The ninth assumption is that measured health impacts are those that can be expected to improve and are measured appropriately. This assumption holds if the program addresses the factors that affect both decisions and outcomes. CCTs, for example, target the reduction of infant and maternal mortality. Depending on the context, however, these outcomes may be influenced more by the availability and use of a quality hospital during birth than by maternal nutritional status. In addition, the evaluation instruments used to gauge program effectiveness are assumed to be appropriate to capture the changes that arise because of the intervention. In poor regions, where a significant portion of births occur outside health facilities, the fact that CCT programs evaluate infant and maternal mortality based on facility reports rather than on sample surveys may lead to underestimating mortality measures.

The program effect model—that is, the health change attributable to participation in and compliance with a CCT program—and the underlying assumptions are represented schematically in figure 6-1. The programs in Colombia, Mexico, and Nicaragua modeled the effects that the programs were to have on poverty, inequality, consumption, and school attendance to provide a framework for assessing the results of the evaluations.

Few programs—save those dealing with the demand for health services in Honduras and nutrition effects in Mexico and Nicaragua—have modeled health effects. Although the general omission could be related to the lack of linkages between data sets for some types of outcomes (such as nutritional status or use of specific types of preventive care), in most cases, the health and

Figure 6-1. *Evaluation of Program Impact*

Source: Author.

a. Individual constraints and resources: income, education, information, genetic endowment, preferences, and so on. Community resources and constraints: prices, provider location, disease environment, cultural norms, laws, and the like.

nutrition objectives were essentially afterthoughts not meriting more in-depth analysis.

## Design Features

Existing literature provides numerous analyses of the design and implementation features of CCT programs (Handa and Davis 2006; Rawlings and Rubio 2003). We therefore only summarize these findings and present them as basic background information (see box 6-1).

### Box 6-1. *The CCT Program Cycle*

The CCT program cycle involves a rough sequence of activities:

- Select program areas (geographic targeting) and coordinate with health and education sectors,
- Identify beneficiary households (household targeting),
- Enroll beneficiaries (involving beneficiary meetings in each community to inform participants of their rights and responsibilities under the program),
- Organize supply responses in advance of generating demand (and supply transfers where relevant),
- Verify conditionality involving the distribution, collection, and processing of clinic and school attendance records,
- Deliver demand transfers (including calculating transfers based on compliance levels, informing beneficiaries about scheduled transfers, and ensuring that the disbursement and payment of transfers through banks or post offices are conducted in a timely and orderly manner), and
- Monitor and evaluate the program internally, including supervision, spot checks, audits, and so on.

### *Conditions for Payment*

To receive transfers each month, households must comply with conditions related to using preventive health services and attending health education sessions. None of these relates explicitly to improved nutrition, but improved nutrition is expected to come as a result of the higher income and greater knowledge about nutrition attained by participants in the program's education and training components.

Conditionality seems to work, although there are few documented studies comparing conditional and unconditional transfers. A comparative impact evaluation by Davis and his colleagues (2002) of Mexico's Progresa program (precursor to Oportunidades) and an unconditioned transfer to poor farmers finds that although overall increases in food consumption were comparable, the effects on health and schooling were significantly greater under Progresa, suggesting that conditionality did make a difference.

Conditions were stated, but compliance was not necessarily monitored. When effective monitoring was in place (Colombia, Mexico, Nicaragua, and Jamaica), compliance was generally extremely high, ranging from 99 percent in Mexico (Behrman and Todd 1999) to 94 percent in Jamaica (Mathematica Policy Research 2005). In cases without monitoring, the evidence was mixed.

In Honduras, for example, women were required to deposit a bar-coded, certified attendance slip in an urn for every required visit to a health center, but no

beneficiary was ever suspended for noncompliance (Morris and others 2004). In addition, payments were also irregular and may be responsible for the absence of observed effects. In Ecuador, Schady and Araujo (2006) found that the announcement of conditionality, even if not enforced, was enough to induce a large and significant change in behavior with respect to school attendance. Table 6-1 presents the conditions for payment in each program.

CCT conditions are politically appealing, but administratively challenging and costly to monitor and enforce. Handa and Davis (2006) reported that up to 20 percent of Progresa program costs could be related to enforcing conditionality, raising the issue of whether these costs are worth the added benefits associated with a conditional transfer, given that conditional transfers add value only if the effect on outcomes is significantly greater than that of unconditional transfers.

### *Transfer Design*

Transfers related to health and nutrition conditions are generally lump sum, but in other respects they vary in design. In Colombia, Jamaica, and Mexico, the amount represents the difference between the consumption level of the average extremely poor household and the food poverty line (with some variations). The goal is both basic and political: to move households living in indigence to a minimum level of consumption. In addition, minimum consumption is considered a prerequisite to investing in human capital. Another approach, used in Honduras, is to base the amount of the transfer on the costs of accessing health care.

For this chapter, it is important to note that the lump-sum structure favors smaller families and that the combined amount of the transfer (representing both schooling and health-nutrition subsidies) is what influences the results achieved. On average, payments range from 10 to 25 percent of total consumption among beneficiary households. Table 6-2 summarizes the criteria for determining monthly benefits and the amount of the monthly transfers for each program.

### *Eligibility and Targeting*

Because CCT programs are directed to poor families—generally those with children—a central feature is explicit targeting to determine eligibility for benefits. PRAF and RPS apply geographic targeting strategies only. Poor localities are identified using an index of well-being usually based on census and survey information. Program localities are selected randomly up to a program budget constraint, and all households within the selected localities are eligible to enroll in the program. Progresa and Oportunidades, FA, and Bolsa Familia apply a first

Table 6-1. *Conditions for Payment in CCT Programs*

<i>Country and program</i>	<i>Condition</i>
Brazil (Bolsa Familia)	Children from birth to six years old must have an updated immunization card Pregnant and breastfeeding women must make “regular” visits to health centers Children from birth to fifteen years of age must make “regular” visits to health centers
Colombia (Familias en Acción)	Children ages birth to four years must attend growth-monitoring visits according to a Ministry of Health protocol (six a year for ages birth to one year, two a year for ages one to three, and one a year for ages three to four) Mothers must attend bimonthly health education workshops
Honduras (PRAF)	Children must attend growth-monitoring visits according to Ministry of Health protocol Pregnant women must keep at least four prenatal care visits
Jamaica (PATH)	Children ages birth to six must attend checkups every two months during ages birth to one and twice a year thereafter
Mexico (Progresas, Oportunidades)	Children ages birth to twenty-three months must be fully immunized and attend growth-monitoring visits every two months <sup>a</sup> Children ages twenty-four to sixty months must attend growth-monitoring visits every four months Pregnant women must keep at least four prenatal care visits Breastfeeding women must keep at least two postpartum care visits Other family members must have physical checkups once a year Adult family members must attend health talks (female heads of household every two months; other adults once a year)
Nicaragua (RPS)	Mothers must attend bimonthly health education workshops Children ages birth to one year must be up-to-date on their vaccinations (not enforced due to supply failures) Children under two years of age must attend monthly growth-monitoring or well-baby visits Children between two and five years of age must attend bimonthly medical checkups

Source: Authors.

a. Visits include measurements, nutrition supplements equivalent to 100 percent of the recommended daily allowance for micronutrients and 20 percent for protein, and education for parents on nutritional health and hygiene.

Table 6-2. *Payment Amounts in CCT Programs*

<i>Country and program</i>	<i>Monthly monetary benefit</i>	<i>Average monthly transfer (U.S. dollars)</i>	<i>Average transfer as a percent of poverty line</i>	<i>Percent of pretransfer household consumption</i>
Brazil (Bolsa Familia)	\$18 per household; \$5 per child (up to three children)	24	12	n.a.
Colombia (FA)	\$20 per household; \$6 per child of primary school age; \$12 per child of secondary school age	50	n.a.	30
Honduras (PRAF)	\$4 per household; \$5 per child	17	8	10
Jamaica (PATH)	\$9 per eligible household member (child, elderly, disabled)	45	16	20
Mexico (Progresa and Oportunidades)	\$13 per household; \$8–\$17 per child of primary school age; \$25–\$32 per child of secondary school age; \$12–\$22 per child for school supplies (one-time grant)	20	23	25
Nicaragua (RPS)	\$18 per household (additional \$9 per household with school-age child); \$20 per year per child for supplies	25	18	20

Source: Reprinted with permission from Handa and Davis (2006).  
n.a. Not available.

round of geographic targeting followed by direct income testing (proxy means) to identify individual households eligible to participate in the program. Other conditions are sometimes established. For example, the FA program requires that participating municipalities have a bank available within a given geographic reference area as well as an adequate supply of health and education services to meet expected increases in demand.

With the exception of Mexico's Progresa and Oportunidades programs, CCT programs are open exclusively to poor households with young children, school-age

children, and pregnant women; all other households do not qualify. Categories of eligible children vary depending on the country's nutrition strategy, which sets certain age groups as targets, establishes the official starting age for school, and determines whether the objective is to create human capital or to balance consumption.

In reviewing the efficiency of different targeting strategies, Coady, Grosh, and Hoddinott (2004) found that although performance in a means test strategy varies significantly based on implementation capacity, these instruments display the best results on errors of inclusion and exclusion and can be cost-effective in specific settings. The Mexican targeting strategy reportedly generated social conflict related to targeting individual households within poor communities (Adato, Coady, and Ruel 2000; Coady 2000).

Individual household targeting also has limitations, which may be important if the program is to serve as a safety net. Selecting households based on determinants of poverty tends to prioritize families with small children and exclude poor ones without small children or with elderly heads. Problems have also been detected around the use of point-specific eligibility cutoffs, which somewhat arbitrarily exclude some households, leading to the adverse community effects observed in the Progresá evaluation. Finally, although individual household targeting can improve program efficiency in more heterogeneous settings, in small, rural, and highly marginalized communities, the Mexican experience suggests that geographic targeting alone is sufficient and that the more precise targeting strategy employed by the program is not cost-effective.<sup>5</sup> Table 6-3 presents the characteristics of beneficiaries in each country studied.

The process of beneficiary requalification varies from country to country. Mexico applies the means test questionnaire to existing and potential beneficiaries on a periodic basis. Colombia and other countries initially set limited terms of eligibility generally associated with the expected duration of available financing, but they have since modified the strategy to one more similar to that of Mexico.

With the exception of Oportunidades (as of 2005), most CCT programs have been scaled up gradually and do not reach the universe of their intended beneficiaries. This approach was adopted to test operational procedures and measure the results of the program using impact evaluation methods, but it also is attributable to budget limitations.

5. There are other motivations for the use of formula-based individual (proxy) means testing, such as the reputation of the program for impartiality and transparency. In Mexico, technical people believed in the transparency and impartiality of the approach, even while beneficiaries complained that they could not understand how eligibility was determined; both are probably important.

Table 6-3. *Characteristics of CCT Beneficiaries*

<i>Country and program</i>	<i>Number of beneficiary households</i>	<i>Proportion poor</i>	<i>Year started</i>
Brazil (Bolsa Familia)	An estimated 2 million–5 million (2004) <sup>a</sup>	n.a.	2003
Colombia (FA)	362,000 (2005)	87 percent poor; 44 percent indigent	2001
Honduras (PRAF)	30,000 (2006)	5 percent extremely poor	2000
Jamaica (PATH)	180,000 (2005)	n.a.	2001
Mexico (Progresa and Oportunidades)	5,000,000 (2006)	100 percent extremely poor	1997
Nicaragua (RPS)	30,000 (2004), now closed	n.a.	2000

Source: Authors.

n.a. Not available.

a. Bolsa Familia's administrative records indicate 5.04 million beneficiaries. Household survey data show approximately 2.09 million beneficiaries (Soares and others 2006). The discrepancy is mostly unexplained, although it is attributed to a period of transition from Bolsa Escola/Alimentação to Bolsa Familia.

### *Program Costs*

Little has been done on the comparative costs of programs (for a review of Progresa, PRAF, and RPS, see Caldés, Coady, and Maluccio 2004). In 2000 Mexico's Progresa cost \$41 million. The most recent estimates note that, in most cases, program costs amount to less than 1 percent of gross domestic product (Handa and Davis 2006). In 2004 Brazil used \$2.1 billion to cover more than 8 million households, and Mexico used \$2.8 billion to cover 5 million. Also in 2004 Colombia used \$125 million to cover 400,000 households, and Nicaragua used \$6.37 million to cover 22,000. In 2005 Honduras used \$25 million to cover more than 400,000 households, and Jamaica used \$16 million to cover 220,000.

### *Operational Arrangements*

CCT programs have tended to be implemented by specially created entities linked directly to presidential offices or other semiautonomous units. As such, they are institutionally separate from local governments and line ministries. This seems to have contributed to the rapid pace of implementation observed in most programs, but it also has generated institutional and bureaucratic friction among implementing partners.

### *Supply Conditions*

In some countries, minimum supply conditions have had to be met before implementing the demand-side component. In Colombia, this took the form of a minimum ratio of infrastructure provider to beneficiary and the availability of space to produce more visits with respect to a standard ratio. In Mexico, minimum distances to facilities were established. In Honduras and Nicaragua, supply-side strengthening was built into the program to respond to the pressures associated with increased demand for services and the possibility that quality might decline with higher productivity. In both cases, implementing the supply-side components brought substantial delays, which were greater than those associated with an entirely new program.

### **Evaluation Results**

CCT programs in Latin America include impact evaluation components, which are unprecedented in the region. This is attributable primarily to four factors:

—As a first implementer, Mexico's ProgresA program carried out a state-of-the-art evaluation that led to extensive documentation and dissemination of program results, which in turn led to program durability and generated demand for similar evaluations in countries that followed the Mexican model.

—Because cash transfers as a safety net were relatively new in most countries, policymakers found it necessary to use other methods, such as in-kind subsidies.

—The rapid expansion of the programs and the size of the beneficiary populations created a need for the evaluations as an accountability tool for government, and the use of independent evaluators has helped to protect the programs from charges of politicization.<sup>6</sup>

—The participation of the Inter-American Development Bank and the World Bank appears to have encouraged the inclusion of impact evaluation, making the experience particularly interesting to examine in light of low evaluation rates of other programs.

### *Objectives and Characteristics*

The evaluations sought to confirm the existence of expected impacts, measure the extent of those impacts, identify unanticipated effects, understand beneficiary and

6. However, there is evidence of preelectoral expansions of the beneficiary populations in Colombia and Mexico, although always applying the same targeting criteria.

stakeholder perceptions of the program, and verify that program benefits were delivered cost-effectively.

To achieve these objectives, the CCT evaluations have either experimental designs (Honduras, Mexico, Nicaragua) or quasi-experimental ones (Colombia, Ecuador, Jamaica), with repeated observations from large samples of households in treatment and control groups gathered in surveys conducted before and after program implementation. In general, the experimental evaluations represent the best attempt to measure the impact of CCT programs given that random assignment limits sample selection bias. Quasi-experimental designs must overcome the selection issue, but when handled carefully they can limit bias. Only rarely can an evaluation estimate impacts for the full population of intended beneficiaries.

The design of the sample for each evaluation determined the type of analysis that could be conducted on the data, and each questionnaire determined what results were measured and reported. In general, difference-in-differences estimates of impacts are reported here unless otherwise noted (for more information on the design and implementation of the evaluations, see IFPRI 2001, 2003; Mathematica Policy Research 2005; Behrman and Todd 1999; Maluccio and Flores 2004; Unión Temporal IFS, Econometría S.A., and SEI 2000). Table 6-4 summarizes the characteristics of the evaluation data by country. Results are reported for only a subset of programs that have completed and reported on at least one postprogram round of data collection: Colombia, Honduras, Mexico, and Nicaragua.

### *Selected Results*

Information currently available in the literature on the health- and nutrition-related outputs and outcomes of the CCT programs includes changes in the use, supply, and quality of services; health knowledge, attitudes, and practice; household consumption; vaccination rates; nutritional status; and changes in morbidity, mortality, and fertility.

#### USE OF SERVICES

As noted earlier, preventive health care is considered an important input for better child health and is often strongly correlated with family background indicators such as parental education. Thus a major expected output of the CCT programs is to mitigate the advantage of socioeconomic background. All of the programs stipulated the use of preventive health services as a condition for transfers. These indicators were measured by all programs using administrative and household surveys.

Table 6-4. *Summary of Evaluation Data for CCT Programs, by Country*

<i>Characteristic</i>	<i>Mexico</i>	<i>Honduras</i>	<i>Nicaragua</i>	<i>Colombia</i>
Evaluation period	Rural, 1997–99; urban, 2002–03	2000–02	2000–02	2002–03
Targeting level (method)	Locality and household (marginality index)	Locality (priority index)	Municipality (70 with lowest half of first graders)	Locality (meet four criteria) and household
Evaluation design	Rural: experimental; urban: quasi-experimental	Experimental	Experimental	Quasi-experimental
Main evaluation methodology	Difference-in-differences; propensity score matching (urban)	Difference-in-differences	Difference-in-differences	Difference-in-differences; propensity score matching
Sample or panel size	Rural: about 22,000 (about 110,000 households or individuals); urban: 17,201 (76,002 households or individuals)	5,096 (25,777 households or individuals)	1,396 (about 8,500 households or individuals)	10,742 (64,500 households or individuals)

Source: Authors.

As expected, use increased significantly on average among the poor because of the programs. The extent of this increase varied, but use was generally larger in rural areas and among the poorest households. Using evaluation survey data, Gertler and Boyce (2001) suggested that Progresa increased the use of public clinics by 53 percent overall. Some findings on the age distribution of service use are surprising, with effects in some programs more pronounced in the older age group (older than three years). Table 6-5 summarizes program effects.

Although data on the use of general preventive care for children in the Mexican program show little effect, use by households appears to have increased dramatically. Overall, Oportunidades increased the average number of preventive health care visits by members of beneficiary families by 20 percent and reduced the likelihood of hospitalization by 2.5 percent (Gutiérrez and others 2005; Gertler and Boyce 2001). When they were hospitalized, Oportunidades beneficiaries were likely to have a stay that was 1.35 days shorter than that of their

Table 6-5. *Program Effects on Use of Health Services, by Country*<sup>a</sup>

<i>Indicator</i>	<i>Mexico, 1998–2000</i> <sup>b</sup>	<i>Honduras, 2000–02</i> <sup>c</sup>	<i>Nicaragua, 2000–02</i> <sup>d</sup>	<i>Colombia, 2001–03</i> <sup>e</sup>
Public clinic visits for children (reference period)	Rural: for birth to two years old, 1.5 percent decrease; for three to five years old, no impact (last six months)	For birth to three years old, 20.2 percent increase (last thirty days)	For birth to three years old, 11 percent increase (last six months)	For birth to two years old, 30 percent increase; for two to four years old, 50 percent increase (completed age-appropriate visits)
Prenatal care visits (number of visits; details)	Rural: no impact; urban: <sup>f</sup> 6.12 percent increase (four or more; Kessner index) <sup>g</sup>	18.7 percent increase (five or more; last pregnancy)	n.a.	n.a.

Source: Authors.

n.a. Not applicable.

a. Each evaluation's sample design determined the type of analysis that could be conducted on the data. In general, difference-in-differences estimates were used to report the impacts.

b. In Mexico, use was not included in the baseline survey, requiring first-difference estimates of impact. Estimates of impact were conducted using difference-in-differences with clinic-level administrative data available before and after the program. Administrative data confirmed an increase in use in program communities, but these statistics were not disaggregated by age group. For children's use of public clinics, Gertler and Boyce (2001). For prenatal care visits, Prado and others (2004).

c. Impact refers to the household package only (demand-side subsidies only) as reported in Morris and others (2004).

d. Maluccio and Flores (2004).

e. Unión Temporal Institute for Fiscal Studies, Econometría, and Sistemas Especializados de Información (2004).

f. Reference period is 2002–03 for urban areas.

g. Index of care received is determined by the number of visits and the timing of each visit; does not include any measure of quality of care received at each visit (Prado and others 2004).

counterparts. Although these analyses have not yet clarified whether decreases in hospitalization are attributable to more or better preventive services or to the effects of better knowledge along with the overall increase in preventive care, it appears that the program is successful in reducing the frequency and severity of morbidity.

Although CCT evaluations assess changes in beneficiary care-seeking practices with respect to total number of visits, particularly well-child visits, the analyses

published to date provide only limited information on some of the assumptions and causal pathways. This limits the interpretation of the findings.

First, the motivation for increased use of services may be related to program conditionality, but it could also be attributable to any number of the factors that the programs influence.

Second, net increases in use remain difficult to measure given that some programs, such as those in Colombia and Honduras, do not report on what happens in the private sector. In addition, Mexico's Oportunidades yields no effects on use among the youngest age groups.

Third, the age patterns of changes in use remain difficult to interpret. Some hypotheses on this phenomenon have been offered, but better exploration of the relationship between patterns of use by age and decreases in morbidity and mortality would help to disentangle which parts of the CCT health package influence impact and whether there is a link between service use and health outcomes.

Fourth, although the increases observed in preventive care visits are inherently positive, it is also possible that above a certain number of visits, nonbeneficiary clients may be crowded out or the quality of service may drop. Understanding what the social and individual optimal levels of use are will strengthen future program design.

#### KNOWLEDGE, ATTITUDES, AND PRACTICE

Health education components are included in all programs, but evaluations have generally not measured health knowledge and attitudes directly. There are, though, a few exceptions. In Mexico, Progresa evaluators have found an increase in dietary quality and calorie consumption. After controlling for the income effect associated with increased calorie consumption, the increase in consumption of more diverse, high nutritional quality foods such as fruits, vegetables, and animal products indicates a possible effect of the nutritional education provided through health education talks (Hoddinott, Skoufias, and Washburn 2000). Prado and his colleagues (2004) reported both increased knowledge of family planning methods in both urban and rural areas and higher use of modern family planning methods in rural areas among program beneficiaries than in the control group.

Evaluators found that Colombia's FA program not only increased the time that children are breastfed but also improved the quality of food consumed by children, increasing the average number of days per week that various proteins, grains, and fruits and vegetables are consumed. The program also increased overall house-

hold consumption of high-quality foods (Unión Temporal IFS, Econometría S.A., and SEI 2004).

### CONSUMPTION

CCT beneficiary communities and households were, for the most part, poor or extremely poor before the start of the program. The extremely poor, by definition, do not have enough household income to buy basic foodstuffs. In addition to improved quality of foods consumed, increased food consumption is considered the vehicle for achieving improved nutritional status, which is linked to better cognitive and social development, higher levels of educational attainment, and other outcomes. Table 6-6 summarizes program effects on household consumption.

In Mexico, Hoddinott, Skoufias, and Washburn (2000) found that mean household consumption increased significantly among Progresa beneficiary households, a difference of almost 11 percent, and that this effect was more pronounced among the poor.

Table 6-6. *Program Effects on Household Consumption*<sup>a</sup>

<i>Indicator</i>	<i>Mexico, 1997–99<sup>b</sup></i>	<i>Honduras, 2000–02<sup>c</sup></i>	<i>Nicaragua, 2000–02<sup>d</sup></i>	<i>Colombia, 2000–03<sup>e</sup></i>
Mean per capita food consumption and expenditures	10.6 percent increase	No impact	21 percent increase	20.4 percent increase in urban areas; 22.5 percent increase in rural areas (household total)
Mean per capita total consumption and expenditures	n.a.	No impact	13 percent increase	13.9 percent increase in urban areas; 16.9 percent increase in rural areas (household total)

Source: Authors.

n.a. Not available.

a. Difference-in-differences estimates are reported for Nicaragua, Colombia, and Honduras for food expenditures. Cross-sectional estimates (first difference) are reported for Mexico and total expenditures for Honduras. In Mexico, no consumption data were collected at baseline; in Honduras, a difference in the seasonality of the baseline survey across the control and treatment groups affected baseline nonfood expenditures.

b. Hoddinott, Skoufias, and Washburn (2000).

c. Impact refers to the household package only (demand-side subsidies only), as reported in Morris and others (2004).

d. Maluccio and Flores (2004).

e. Unión Temporal Institute for Fiscal Studies, Econometría, and Sistemas Especializados de Información (2004); estimates are reported for difference-in-differences between treatment group without payment and control group and converted to percentages from the log-point estimates.

In Nicaragua's RPS program in 2002, the average effect on per capita annual household expenditures was about 13 percent of the value before the program. The effect was much larger for extremely poor households than for the nonpoor: 40 and 6 percent of initial per capita expenditures, respectively (Maluccio and Flores 2004). RPS evaluators also reported increases in per capita annual food expenditures, reflecting that most of the additional income supplied by the transfer was put toward the purchase of foodstuffs.

In Colombia, the FA program was found to have increased total consumption, consumption of food, and expenditures on children's clothing in both rural and urban areas, as well as expenditures and consumption on schooling in urban areas. Again, the increased consumption was concentrated among high-quality foods.

Thus, with the exception of the Honduran program, the effect of the program on total household consumption was large and significant, but not surprising. More important, the effects on food consumption and diet diversity were significant. The results of this increased caloric quality are evident in some of the nutritional outcomes described.

#### SUPPLY

The CCT program effect model includes two main assumptions related to the supply of health services: (a) the current supply of health services is adequate or an increase in services will follow the increase in demand resulting from the program and (b) use will improve health status (assuming that the quality of care available is enough to result in positive changes in health). Little documentation is available on how the programs have affected the availability and quality of health care services or on how supply-side components of the program have affected the observed outcomes.

Using administrative data, Gertler and Boyce (2001) recorded substantially increased numbers of visits in Progresa localities. Qualitative studies also confirmed increased workloads. In an urban setting, medical staff in beneficiary communities reported 23 to 87 percent more visits (Escobar-Latapí and González de la Rocha 2005), and a focus group of health directors reported staff shortages, saturation of services, and lack of supplies (Meneses and others 2005).

The Mexican social development ministry, SEDESOL, reported an increase in the number of health clinics in program localities and in public budgets for health. Escobar-Latapí and González de la Rocha (2005) reported that urban clinics were built in program areas after the program was introduced and included higher salaries for staff, both of which may indicate a supply response to the program.

The Nicaraguan RPS program financed a scale-up of health supply through contracted nongovernmental organization (NGO) providers. Regalía and Castro

(2006) discussed the related increase in the number of health care facilities, but not quality issues or the effect of the health lectures on health-related behaviors and knowledge. Although dedicated funding for increases in health care facilities, staff, training, equipment, and supplies should translate into improvements in these areas, delays in implementation (in training, hiring, and resource transfers) could result in deviations between planned and actual changes. Thus it is not a trivial exercise to evaluate how well and how quickly the supply-side resource transfers are executed. At this point, researchers have been unable to separate the effects of the various components of the program, especially the differences between impacts attributable to the cash transfers and those attributable to supply-side improvements.

### QUALITY

Quality of services makes the condition of requiring health center visits meaningful: without adequate quality, expected effects will not occur. Because most of the data on quality come from small-scale and qualitative studies, findings cannot be generalized. The few existing studies pertain to Mexico. In spite of these caveats, it is worth noting that although the number of procedures is higher among beneficiaries, the results of the interventions are not encouraging, suggesting that a priority is to strengthen the quality of care.

In Mexico, the availability and quality of medicines appear to be a major issue. A small-scale facility survey found that public health clinics in a group of Oportunidades localities did not have enough medicines to treat the increased number of patients (Escobar-Latapí and González de la Rocha 2002). Beneficiaries reported that the medicines provided by the public clinics were of inferior quality and that many beneficiaries were choosing more expensive higher-quality drugs at private pharmacies. Neufeld and her colleagues (2005) noted that delivery of nutritional supplements to program localities in Mexico was sometimes delayed, resulting in inadequate supply and potentially reducing the frequency of consumption.

In Colombia, the FA impact evaluation included a health facility survey that collected information about various characteristics related to access and quality of care. The surveys collected information about the hours of operation, types of services offered, number of various services provided in the past year, number and type of current staff, stocks of various medicines, interruptions in service due to labor problems, political unrest, or natural disasters, the previous year's budget and revenue, main sources of revenue, participation in and training received for the program, and other details related to the program. However, the sampling

method of facilities is not clear, and this information was not studied or included in the impact evaluation.

### VACCINATION RATES

Although vaccination was a condition for transfers in Honduras and Nicaragua, it was not monitored by the program; only the visit was recorded. As a result, estimates of the impact on vaccination rates came from external evaluation of the programs.

The overall contribution of CCT to vaccination coverage appears marginal. In spite of apparent program-attributable increases during a pilot implemented during 2000 and 2001, the Nicaraguan RPS program produced an insignificant average net increase of 6.1 percentage points in up-to-date vaccination levels between 2000 and 2002 (Maluccio and Flores 2004).<sup>7</sup> In Honduras, the PRAF showed marginally higher rates of diphtheria, tetanus, pertussis (DTP)/Pentavalent for children, but insignificant and small differences for maternal mortality (Morris and others 2004). The Colombian program measured DTP prevalence and found an insignificant difference between program participants and controls (Unión Temporal IFS, Econometría, and SEI 2004).

Vaccination is difficult to impose as a condition because it depends on supply. Unlike growth-monitoring visits, if vaccines are not in stock, vaccination cannot occur. The Honduras experience, where supply was variable, is an example of this phenomenon, and results may relate more to the availability of vaccines at health centers than to a demand effect. However, an indirect effect of the program may be that coordination with the Ministry of Health in program areas may in fact generate more supply of the vaccine (Maluccio and Flores 2004).

### NUTRITIONAL STATUS

Unlike the unambiguously positive results for food consumption, outcome measures of nutritional status show mixed results. All programs except in Honduras achieved a significant reduction in stunting. Results for the proportion underweight were less consistent: Nicaragua showed a large and significant decline, and Colombia showed an impact only in rural areas for three- to seven-year-olds. No effects on anemia were observed. Table 6-7 summarizes these program effects on

7. Maluccio and Flores (2004) included an interesting footnote regarding the quality of administrative data on vaccination that will be relevant to other payment-for-performance schemes; they found that survey reports are substantially lower than the 100 percent recorded in administrative data. The errors may go in both directions.

Table 6-7. Program Effects on Nutritional Status

Outcomes	Mexico				
	1997–99 <sup>a</sup>	1997–2003 <sup>b</sup>	Honduras, 2000–02	Nicaragua, 2000–02	Colombia, 2001–03
Proportion stunted; height-for-age (haz) $\leq -2.0$	1997–99: a statistically significant decrease from a baseline of 44 percent (point estimate not reported)	1997–2003: for 2 to six years old, 29 percent decrease for girls, 11 percent decrease for boys	For birth to four years old, no impact	For birth to four years old, 5.5 percentage point decrease	For birth to two years old, 6.9 percentage point decrease; for 2 to 6 years, no impact
Proportion under weight; weight-for-age (waz) $\leq -2.0$	No impact	No impact	For birth to four years old, no impact	For birth to four years old, 6 percentage point decrease	For rural, no impact for birth to three years old; 3.4 percentage point decrease for three to seven years old; for urban: no impact
Anemia (prevalence)	No impact	3 percent decrease	For twelve to twenty-three months old, no impact	For six to fifty-nine months old, no impact	Not measured

Source: Authors.

a. Stunting, underweight, and anemia (Behrman and Hoddinott 2000); data collected by Instituto Nacional de Salud Pública 1998 and 1999 were then matched to the evaluation data collected by Progreso.

b. Gertler and Fernald (2004).

nutritional status. A recent paper, however, showed that a doubling of cash transfers in Oportunidades resulted in a highly significant increase in the height-for-age  $Z$  score of 0.20 and a reduction in the proportion of stunting of  $-0.10$  (Fernald, Gertler, and Neufeld 2008).

#### MORBIDITY

Measured morbidity may increase or decrease as a result of the CCT intervention. On the one hand, more preventive care and health knowledge may lead to fewer episodes of illness. On the other hand, higher levels of health knowledge and more frequent visits to health centers may increase the probability that mothers will diagnose illnesses more frequently or more accurately and will seek care when it is required. Moreover, improved health may lead to increased recognition of the symptoms of morbidity, such as respiratory infections, and thus increase the demand for curative care (Oppenheimer 2001). These hypotheses have rarely been explored by the evaluations, but where they have been measured (mainly in Mexico), CCT appears to decrease the incidence and prevalence of morbidity.

The evaluation of Mexico's program found that the program had a negative and statistically significant impact on the probability of child illness for all age groups, but not until a child had been receiving benefits for at least twelve months (Gertler and Boyce 2001). In rural areas a small decrease in sick days was observed only for the productive-age population, whereas a larger effect and wider age range was seen in urban areas. Overall, the number of days lost to illness decreased by 20 percent among beneficiary families (Gutiérrez and others 2005).

An Oportunidades study of the effect of the program on indigenous populations found that the program decreased illness rates from 0.2 to 3.5 percent, with the greatest effects observed among children under three years old (Quiñones 2006). The average estimated program effect differed substantially from Gertler's findings, most likely because of differences in sampling size and approach used. Positive program effects observed for indigenous beneficiaries were similar to those for nonindigenous beneficiaries. On the one hand, this finding could be considered a weakness of the program, as Quiñones argued, given the implicit assumption that the average effect of the program should be larger on poorer and more marginalized groups. On the other hand, it is remarkable that the benefits were equivalent for both groups when one takes into account evidence that indigenous groups have a more difficult time complying with CCT conditions because of language and cultural barriers.

With respect to chronic disease–related morbidity, the required regular checkups and participation in health talks may have a positive effect on household and social norms related to food intake and activity. However, the income transfer to the household could make more affordable some behaviors that increase the risk of chronic diseases (for example, the consumption of junk foods, soft drinks, and alcohol). The single study on this issue from Mexico found encouraging results. Fernald, Gertler, and Olaiz (2005) found that the baseline prevalence of obesity (24 percent), hypertension (39 percent), and diabetes (19 percent) was high among the rural poor in Mexico and that participation in Oportunidades significantly reduced the prevalence of all except diabetes. Symptoms of hypertension and diabetes were also significantly reduced via participation in the program.

These results suggest that if a CCT is implemented to achieve health objectives in countries well into the epidemiological transition, requiring poor adults to seek preventive care and checkups may be an effective strategy.

#### MORTALITY

Mortality was not measured directly by the evaluations. Only the Mexican program used administrative data to analyze program effects. Although infant and maternal mortality were found to have declined significantly in program areas, the reliance on administrative data, particularly in the case of maternal mortality, is problematic.

Hernández and his colleagues (2003) examined the impact of Oportunidades on maternal and infant mortality using data for the period from 1995 to 2002 from the Ministry of Health and the National Institute of Statistics, Geography, and Information Technology. For the entire period, maternal mortality was 11 percent lower in the municipalities with at least one locality incorporated in the Oportunidades program. For the entire period from 1997 to 2003, infant mortality was 2 percent lower in the municipalities incorporated in Oportunidades than in the nonincorporated ones. Estimates of absolute numbers indicate that, thanks to the program, 340 infant deaths a year, on average, were avoided during this period. The impact of Oportunidades on infant mortality at the municipal level increased relative to the proportion of the population participating in the program.

#### FERTILITY

Although the literature on financial incentives in fertility suggests that fertility is declining throughout the developing world and that welfare programs

and state policies have not been enough to generate a positive fertility response, some are concerned that fertility levels might be adversely affected by CCT programs. Data from Colombia, Mexico, and Nicaragua indicate that fertility rates decreased in the presence of the program, but the Honduras program, which applied a different payment incentive structure, observed an increase in fertility.

Stecklov and his colleagues (2006) examined the unintended effects of CCT programs in Honduras, Mexico, and Nicaragua on fertility levels and found that unintentional incentives for childbearing in Honduras (a health-nutrition subsidy that is not lump sum and varies by number of children and pregnant women in a beneficiary household) may have contributed to a 2 to 4 percentage point increase in fertility. This effect (which was not observed in Mexico and Nicaragua, where health and nutrition grants are lump sum) may be related to an increase in marriage rates, the effects of the program on the presence of the partner, or a temporary response to the program's unintended incentives.

Prado and others (2004) found that in rural areas in the Oportunidades program the proportion of women using family planning methods decreased in both intervention and control localities. The average number of children per woman of reproductive age also decreased in both groups. The evaluation of Colombia's FA found a relatively large decline in fertility between baseline and follow-up surveys (among control and intervention groups), but did not explore the reasons behind these changes.

### *Limitations*

The CCT program evaluations set a high standard for impact evaluation, but major limitations are related to the sampling designs and construction of counterfactual groups. With respect to health in particular, the limitations relate to the use of instruments and questions for studying the relationship between specific components of the program and specific outputs or outcomes.

Evaluations have paid minimal attention to the impact on health-related behaviors, attitudes, and household decisionmaking or how these factors contribute to or limit impacts on outcomes. The majority of the program evaluations have focused instead on the effects on specific outcomes of health indicators (such as incidences of illnesses, child growth) and outputs (such as use rates of public facilities for preventative, curative, and prenatal care).

Improvements in these outcomes and outputs were listed as goals, so determining the program's impact is an important first step. But because many of the

outputs—especially the use of preventive and prenatal care—are conditions for transfers, the program should lead to increases. Furthermore, outcomes such as illnesses and child growth are observed more or less at the end of a black box, and evaluations are little help in understanding exactly how the program operates to bring about such changes in outcomes.

Both Oportunidades and RPS were found to have improved health outcomes among young children, for example, but it is not clear exactly which components were important to the improvements. The impacts could be attributable to the receipt of nutritional supplements, increased use of preventative and prenatal care services, increased food consumption, increased knowledge in topics covered by the health information lectures (such as proper hygiene and food preparation, best practices for breastfeeding, and treatment of diarrhea), or even increased coverage and timeliness of vaccinations. Understanding the role of such factors in influencing outcomes is critical to developing more effective programs.

Finally, although the program's rationale and effect model indicate that the reduction of out-of-pocket and opportunity costs associated with seeking health care is both the principal mechanism to increase use and one of the outcome variables, one would expect to observe impact. No evaluation has analyzed these aspects.

## Conclusions

CCT impact evaluations provided unambiguous evidence that financial incentives increase the poor's use of key services. Further, the evaluations indicated that cash transfers, accompanied by information, social support, weight monitoring, and micronutrient supplementation, can stimulate healthier feeding practices and dramatically improve young children's nutritional status, particularly the incidence of stunting. The Mexican program suggests that adult health may also benefit.

The numerous dimensions of CCT program benefits are an added attraction. Unlike specific demand-side incentives, CCT programs recognize that the barriers to better health and service use are part of a larger problem: scarcity of household resources. Findings suggest that the poorest households must reach a minimum threshold of food consumption before they are able to make other investments in their well-being. Further, better nutritional status improves the effectiveness of health treatments. What is more, the gains associated with both preventive care and schooling are irreversible.

The mixed picture with respect to outcomes—vaccination, nutritional status, and (where there are data) morbidity and mortality—suggest that assumptions might not be accurate and thus that our expectations for impacts may be incorrect.

Financial incentives are a blunt instrument that can have many unintended effects, such as those observed on fertility in Honduras. For this reason, it is important to design incentives carefully. This is particularly important with respect to the health and nutrition components, because the evidence reviewed seems to indicate that these aspects of the programs have been underdesigned.

Several key issues need to be addressed when designing CCT programs. Three are particularly important. One is identifying the marginal benefit of conditioned versus unconditioned transfers. Monitoring conditionality is costly, and it is important to determine whether conditions are necessary and, if so, whether enforcement is critical. A second consideration is the baseline status of outcomes. A low baseline means that a CCT program may be able to achieve better results; a higher baseline means that a CCT program may not have any impact or may not be cost-effective. The third issue is the relative cost-effectiveness of investing in the supply side rather than the demand side of the health system. Supply and demand are jointly determined. Although paying poor households to use preventive services does help to increase use, what happens at the health post is still unclear. If quality declines, or nonbeneficiaries are crowded out, the programs may pay too much for the care that beneficiaries receive. In other words, negative spillovers in service quality from demand-side programs may be greater than the net gain to beneficiaries. Higher demand, however, can encourage improvements in efficiency and quality.

Each of these issues centers on the need to assess the supply side and model the demand for health care before finalizing program design. Cost-effectiveness should also be considered with respect to nutrition: program designers must assess how well a CCT program performs relative to an in-kind transfer or food price subsidy. The effects on use, consumption, and nutrition also should be modeled to determine the burden of conditioned services for an average household.

A final word on evaluation: we have found limited analysis on the health effects of CCT programs outside of Mexico, and even less on the impact of programs on health providers. Expanding the scope of future CCT program impact evaluations to include effects on outputs such as knowledge, behaviors, service access, and service supply can help to improve our understanding of how the program works to achieve improvements.

However, the choice to expand questionnaires or add instruments most likely involves a trade-off of depth in other areas to maintain data quality. Many of the program evaluation surveys already include questions that could be used to expand

the scope of impact evaluations (such as the facility surveys and mother's health knowledge collected for FA), yet the data have not been used. Perhaps giving more researchers access to the data will lead to further studies, the results of which could be used to guide the development and design of future evaluations and instruments.

Probably one of the largest gaps in the impact evaluations discussed is the lack of information about the supply of health care services. The quality and quantity of health care available to poor households could have a large effect on the health status of parents as well as children. Improving the tools and strategies used to measure the quality of service delivery was the topic of a 2006 World Bank workshop, in which participants shared their experiences in collecting and studying a variety of aspects related to the provision of health care services. One of the most common observations was that matching facility-level data on supply and quality to household-level data on health outcomes improved their use. CCT program impact evaluations thus appear to be the most appropriate setting in which to use supply-side instruments and develop approaches for studying the relationship between demand and supply factors of health outcomes.

Taking these factors into account during the design of a CCT program provides a unique and important opportunity to improve the effectiveness of these programs and, given the targeting to the poor, the effectiveness of the health system itself on health and nutrition status (see box 6-2).

#### Box 6-2. *Designing and Evaluating a CCT*

Design and evaluation encompass the following steps:

—*Check whether assumptions hold.* Using existing data, a baseline evaluation survey, or both, assess whether the underlying assumptions of the CCT model hold for the country in which you are working. For example, do the poor underutilize preventive services? What is the principal barrier to access? For instance, are rates of oral rehydration therapy use low primarily because procurement and distribution systems are weak or because the poor face high costs associated with seeking care?

—*Model program effects beforehand.* Model the effects of a transfer in the design phase and set the amount of the transfer based on the effects you want to achieve.

—*Assess the supply situation and design conditions carefully.* Conditions must be just right: not too burdensome, yet not irrelevant. Forcing use of poor-quality primary health clinics in the public sector may not produce the desired results, so where quality is a problem, contract out services for beneficiaries; deal with the health sector implications later.

*(continued)*

### Box 6-2. *Designing and Evaluating a CCT (continued)*

—*Decide whether to enforce compliance, but always evaluate compliance.* Put the information system requirements in place that are necessary to enforce compliance (or decide not to enforce compliance) and evaluate what happens.

—*Target the extremely poor.* Because program effects are most pronounced when directed toward households with the poorest outcomes, it is critical to target the extremely poor, using the most cost-effective targeting method for a given setting.

—*Learn from other programs.* Multilateral development banks and donors should ensure that evaluations and experienced staff are made available to support governments in the development of programs. Refer to existing literature in planning and implementing programs.

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