Conditional cash transfer programs and the health and nutrition of Latin American children

Sofía Segura-Pérez,1 Rubén Grajeda,2 and Rafael Pérez-Escamilla3

During the last two decades, Latin American countries began to implement conditional cash transfer programs (CCTs) through their social protection systems with the purpose of lifting their most vulnerable populations out of extreme poverty (1–3). The first national CCT program was launched in Mexico in 1997. Today, 18 countries are operating CCTs in Latin America and the Caribbean and significant reductions in extreme poverty have been attributed to them (1–4). The framework guiding CCTs is conceptually sound as it addresses multiple social determinants of health to break the cycle of poverty. CCTs provide cash benefits to poor families in exchange for meeting certain conditions. These conditions typically involve families keeping their children in school and both mothers and children attending primary health care services. The income transfer is expected to help beneficiaries improve the quality of their diets and other basic needs, while the increased access to health care is expected to promote their health and allow them to live more productive lives. As a result of the

Key words Social welfare; social assistance; child nutrition; Brazil; Colombia; Mexico; Latin America.
programs’ education condition it is expected that children will have better opportunities later in life. Cash benefits are usually given to children’s mothers as they are most likely to invest in their children and because it helps improve women’s empowerment (4, 5). Most CCTs have limits on the number of children for whom cash benefits can be received to avoid increased fertility within families (5). CCTs are considered powerful child nutrition–sensitive interventions as they address the underlying causes of undernutrition and can enhance the effectiveness of nutrition-specific interventions (6). To the best of the authors’ knowledge, no previous reviews have examined, simultaneously, the characteristics of country-level operations and structure of CCTs and their health and nutritional impacts. Therefore, the objective of this review was to 1) describe the benefits, conditions, coverage, funding, goals, governance, and structure of well-established CCT programs in Latin America and 2) identify their health and nutritional impacts among children under 5 years old.

MATERIALS AND METHODS

An integrated realist literature review (7) was conducted in three steps following a priori criteria (Figure 1). The first step was to identify the CCTs to be reviewed—well-established programs in Latin America that met the inclusion criteria—through a Google Scholar search, using the following search string: *conditional cash transfers OR cash transfer OR monetary incentives and social protection OR safety net and child health OR child development OR health services OR nutrition sensitive interventions for malnutrition and food security* AND *Latin America.* The search resulted in 337 citations that led to five reports on CCTs that were reviewed in full (1, 2, 3, 8, 9). The CCT inclusion criteria were as follows: 1) current national-level program; 2) coverage of at least 50% of the target populations; 3) continuous operation at scale for 10+ years; 4) clear description of structure, funding sources, and governance; 5) both health/nutrition- and education-related conditions for program participation; and 6) available impact evaluation studies with health, development, and/or nutrition indicators among children under 5 years old. The second step identified research studies assessing the health and nutrition impacts of the three selected CCTs, using PubMed, Web of Science, and SciELO. The key term *conditional cash transfer* was used in combination with one of the following terms: México, PROGRESA, Oportunidades, Brazil, Bolsa Familia, Colombia, Familias en Acción, child health, health services, malnutrition, nutrition-sensitive interventions, child development, safety net, and social protection. Studies with the following designs were included: randomized controlled, controlled before-and-after, interrupted time-series, cross-sectional using matching techniques, and cross-sectional with comparison group(s). This search produced 591 unduplicated articles, of which 457 were excluded based on the title, and 78 were excluded based on abstract reviews, leaving 56 that were reviewed in full, and a final sample of 17 that met the inclusion criteria for data extraction. The third step consisted of searches for gray literature on the operations and structure of the three selected CCTs, using the following agency/program websites: International Food Policy Research Institute (IFPRI), World Bank, Inter-American Development Bank (IDB), Bolsa Familia, PROSPERA (formerly Oportunidades and PROGRESA), and Familias en Acción. This search generated five reports, and using a “snowball” approach, 18 additional reports were found. Thus this review was based on 17 peer-reviewed research articles and 23 gray literature reports (Figure 1).

FIGURE 1. Process, governance and impacts of Conditional Cash Transfer Programs (CCTs) in Latin America: Literature review search process. Peer-reviewed journal articles (n = 17) and gray literature reports (n = 23) representing three CCTs through a three-step process involving identification of: a) CCTs meeting inclusion criteria, b) peer-reviewed journal articles; c) gray literature reports. Databases searched and keywords used are indicated in the diagram.

RESULTS

The three well-established Latin American CCTs that met the study criteria were 1) PROSPERA in Mexico, 2) Bolsa Familia in Brazil, and 3) Más Familias en Acción in Colombia.

Mexico

Key program characteristics. The selected CCT from Mexico, now known as PROSPERA, was launched in 1997 as the Programa Nacional de Educación, Salud y Alimentación (PROGRESA)—an antipoverty strategy in response to the 1994 Mexican economic crisis. Designed to improve children’s access to schooling and families’ access to primary health and nutrition services, PROGRESA was first implemented in marginalized rural areas with health and education infrastructure. The program was designed to increase its coverage gradually, which allowed for use of an integrated, lagged, randomized controlled impact evaluation component (4, 9). Since its inception, the program has offered cash incentives to the female head of household as long as family members complied with conditions related to health/nutrition (use of preventive health services) and education (school attendance), with the total amount of monthly cash benefits per family determined by the number of
children in the household, and their age, gender, and grade level (4, 5). The health and nutrition preventive services were provided through primary health clinics (4, 9). PROGRESA’s impact evaluation studies found 1) an increase in secondary school enrollment rates; 2) improved preventive care and health outcomes among children under 5 years old; 3) an increase in the number of visits to health care units during the first trimester of pregnancy; and 4) an increase in household food expenditures (4, 9). In 2000, PROGRESA became the Programa de Desarrollo Humano “Oportunidades,” and program benefits were extended to those who met school attendance requirements at the high school level. Between 2001 and 2002, the program was expanded to urban areas, which required that the sampling methodology be adapted to enable identification of eligible households (10). In 2003, the “Jóvenes con Oportunidades” component was added, providing additional cash incentives for high school graduation and continued education or training thereafter. During 2001–2006, the program continued to show positive impacts in school outcomes in rural areas, a reduction in maternal and child mortality, and an impressive 78% increase in preventive medical appointments (11). In urban locations, the program was associated with a 52% utilization of health care services (11). A survey conducted in 2007 among beneficiaries from rural areas found an increase in expenditures on food consumption as well as food production for self-consumption; for every peso spent on food, 32 cents went to self-production activities (12). The latter expenditure was remarkable, especially given the fact that there was little opportunity for savings or investments based on income, even though beneficiary families were using the cash benefit to meet their basic needs (12). By 2013, the program was serving 5.9 million families distributed across 107 337 communities in all 32 Mexican states, and 25% of the families lived in indigenous areas (13). In 2014, Oportunidades was renamed PROSPERA and adopted a priority goal of strengthening social inclusion and ending extreme poverty. Mexico’s plan for social inclusion includes three broad actions: 1) improving the public health care system, 2) expanding the social security system, and 3) increasing access to housing, basic social infrastructure, and land development (14). PROSPERA is part of the National Crusade Against Hunger (Cruzada Nacional Contra el Hambre, CNCH), a government initiative to improve food security for all that has strong links with community development opportunities. Specifically, PROSPERA has added more cash incentives and helps improve beneficiaries’ access to financial services, the labor market, microcredit opportunities, and early childhood education initiatives (14, 15) (Table 1). PROSPERA is a multi-sectoral program under the Mexican Secretariat of Social Development (Secretaría de Desarrollo Social, SEDESOL). PROSPERA’s National Coordination team works very closely with the Secretariat of Public Education (Secretaría de Educación Pública, SEP) and the Secretariat of Health (Secretaría de Salud), which are in charge of providing the education and health services for beneficiaries and verifying their compliance with program conditions. It also works with the Secretariat of Economy (Secretaría de Economía, SE); the Secretariat of Labor and Social Welfare (Secretaría del Trabajo y Previsión Social, STPS); and the Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food (Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación, SAGARPA). PROSPERA also has strong links with state and municipal programs for implementation, with the latter entities helping to organize local committees composed of PROSPERA beneficiary mothers (known as vocales, or “spokespersons” in English). Funding and program norms come directly from the federal government (14, 15). The National Council for the Evaluation of Social Development Policy (Consejo Nacional de Evaluación, CONEVAL) is in charge of conducting PROSPERA’s annual and biannual evaluations (Table 2).

Impacts on child health and nutrition outcomes. The seven PROGRESA, Oportunidades, and PROSPERA studies found impacts on the health of children less than 5 years old using experimental or quasi-experimental designs (Table 3). A PRORESA evaluation conducted in 1998–2000 found that newborns whose mothers were receiving benefits while pregnant and children exposed to the program between 0 and 3 years of age at baseline were 25.3% (P = < 0.005) and 23.3% (P = 0.001) less likely respectively to be ill during the month preceding the survey. This effect was stronger among those exposed to the program for 24 months versus those exposed for 18 months. In addition, beneficiary children 12–36 months old were almost 1 cm taller than those from the control group (P = 0.004), and during the first year of the program, beneficiary children were also 25.5% less likely than their counterparts in the control group to have anemia (P = 0.012) (16). A second analysis of the same study found that infants < 6 months old from the poorest families who were exposed to the program were 1.1 cm taller compared with the control group (17). Hemoglobin levels among children 12 months or older at baseline were significantly higher after one year of program exposure compared to the unexposed control group (11.12 g/dL versus 10.75 g/dL; P = 0.01) (17). Another study using PROGRESA’s baseline and a follow-up survey conducted in 2003 found that higher cumulative cash transfer was significantly associated with increased height-for-age Z-scores; lower prevalence of stunting and overweight; and improved gross motor development long-term memory, visual integration, and language development. However, no association was found with number of sick days or hemoglobin concentration (18).

A study assessing the impact of PROGRESA on reproductive health outcomes found that being born to a beneficiary mother at the time of birth was significantly associated with a higher birth weight (127.3 g) and a 4.6% reduction in low birth weight (19). Urban children exposed to Oportunidades when they were less than 6 months old grew 1.5 cm taller and gained 0.76 kg more than children from control families (20). In rural areas, PROGRESA was associated with a lower incidence of diarrhea and respiratory infections among children less than 5 years old (21). Another study found a large decline (17%) in rural infant mortality among PRORESA beneficiaries (22). Thus, all included studies showed positive impacts of the program on diverse child health and growth outcomes, especially among the youngest and poorest children. As a result, PRORESA’s well-recognized antipoverty effectiveness (23), together with its health and nutrition benefits, has played a key role in the expansion of CCTs in Latin America and beyond.
### TABLE 1. Benefits and conditions of Conditional Cash Transfer Programs (CCTs) in Mexico, Brazil, and Colombia

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mexico</th>
<th>Brazil</th>
<th>Colombia</th>
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<tbody>
<tr>
<td><strong>Benefits</strong></td>
<td>PROSPERA</td>
<td>Bolsa Familia</td>
<td>Más Familias en Acción</td>
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<td><strong>Nutrition:</strong></td>
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<td>• Monthly cash benefit to support the nutrition of the entire family; Basic household benefit for buying foods MN$335 (US$20.25); Food inflation supplement: MNS$140 (US$8.46); Birth to 9-year-old children support MNS$120.00 (US$7.25) per child for up to 3 children; Older adults ≥70 years old MNS$370.00 (US$22.37); Maximum monthly cash nutrition benefit per family: MNS$1,710 (US$103.38); high school or equivalent MN$2,765 (US$167.16); Free nutritional supplement for children under 5 years old, and for pregnant and lactating women;</td>
<td>• Basic benefit for families living in extreme poverty basic benefit R$77 (US$20.38) independent of household size and composition; Variable benefit for families with monthly incomes per person between R$77 ($20.38 US) and R$154 ($40.83 US); Total monthly cash benefits depend on household size, number of children under 18 living in the household, pregnancy or nursing status of the women; Variable benefit of R$35 per person (US$9.24) up to 5 individuals in the family. Based on:</td>
<td>• Monthly cash incentives paid bimonthly; Amount depends of the zone where people live ranging from: US$63 to US$74; for families with children &lt;7 years old benefit is independent of the number of children within this age range</td>
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<td><strong>Education:</strong></td>
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<td>• Monthly cash scholarships paid bimonthly for each child attending 3rd grade–12th grade; Higher amounts for higher school grade and for girls. Additional funds for school supplies; Maximum monthly education cash scholarships per family: primary through secondary school, MNS$1,265 (US$76.49); high school or equivalent, MN$2,320 (US$140.28); Jóvenes con Oportunidades: monetary incentive for completion of high school education before they turn 22 years, MN$4,599 (US$278.05);</td>
<td>• Total monthly cash benefit of R$35 per person (US$9.24) up to 5 individuals in the family. Based on:</td>
<td>• Variable benefit for families with teenagers; R$42 (US$11.09) for families with children between 16–17 years (up to two per family); It requires school attendance</td>
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<td><strong>Health:</strong></td>
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<tr>
<td>• Access to a basic health package of 27 preventive care actions for the family that includes: Monitoring health and nutritional status through regular growth and nutritional status assessment; Nutritional care of pregnant and lactating women; Reproductive health; Infectious disease management and prevention; Prevention and control of chronic diseases; Health and Nutrition education classes</td>
<td>• Access to a basic health package of 27 preventive care actions for the family that includes: Monitoring health and nutritional status through regular growth and nutritional status assessment; Nutritional care of pregnant and lactating women; Reproductive health; Infectious disease management and prevention; Prevention and control of chronic diseases; Health and Nutrition education classes.</td>
<td>• Access to a basic health package of 27 preventive care actions for the family that includes: Monitoring health and nutritional status through regular growth and nutritional status assessment; Nutritional care of pregnant and lactating women; Reproductive health; Infectious disease management and prevention; Prevention and control of chronic diseases; Health and Nutrition education classes</td>
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<td><strong>Links to job training/opportunities and microcredit programs.</strong></td>
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<tr>
<td>• Improved access for women to credit with low interest rates and other financial services.</td>
<td>• Higher access for PROSPERA youth to work training and employment.</td>
<td>• Support from more than 15 Salidas Productivas programs to initiate small business projects.</td>
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*Conditions*

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<thead>
<tr>
<th>Mexico</th>
<th>Brazil</th>
<th>Colombia</th>
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<tbody>
<tr>
<td><strong>Health and Nutrition:</strong></td>
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<tr>
<td>• Children between birth and 60 months get immunizations, attend regular well baby care, and grow monitoring appointments; nutritional supplement for children 6-23 months, and for older children 24-60 months old if undernourished.</td>
<td>• Children between 6-17 years old get their vaccination schedule and attend grow monitoring health visits.</td>
<td>• Children &lt;7 years old get their vaccination schedule and attend grow monitoring health visits.</td>
</tr>
<tr>
<td>• Pregnant women attend all medical appointments for prenatal care, get nutritional supplements and attend health and nutrition classes.</td>
<td>• Pregnant and lactating women attend all prenatal and monitoring of their health and baby health care visits.</td>
<td>• Pregnant and lactating women attend all prenatal and monitoring of their health and baby health care visits.</td>
</tr>
<tr>
<td>• Lactating women attend all medical appointments for post-partum care, get nutritional supplement and attend health and nutrition classes.</td>
<td>• Education: 6-15-year-old children must be enrolled at school with a minimum monthly attendance of 85% for children 16-17 years old a minimum of 75% attendance is required.</td>
<td>• School-age children must be enrolled at school with a minimum monthly attendance of 80%, and no more than 2 years of grade repetition between 1st and 11th grade.</td>
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<td>• All family members visit clinics once a year for their annual checkups.</td>
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<td>• Female head of household attends bi-monthly education workshops.</td>
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<tr>
<td><strong>Education:</strong></td>
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<tr>
<td>• Certification of children school enrolment and adequate attendance.</td>
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1. This table was developed by the authors for this article based on sources listed below. **Sources:** References: (13, 15, 24, 27, 41, 42, 43, 44, 50).

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<table>
<thead>
<tr>
<th>Characteristic</th>
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<th></th>
<th>Brazil</th>
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<th>Colombia</th>
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<tbody>
<tr>
<td><strong>Name(s)</strong></td>
<td>PROSPERA</td>
<td></td>
<td>Bolsa Familia</td>
<td></td>
<td>Más Familias en Acción</td>
</tr>
<tr>
<td><strong>Target group and poverty classification</strong></td>
<td></td>
<td>Families living in extreme poverty.</td>
<td>Poor and extremely poor families. Extremely poor families: monthly per capita income &lt; R$77.00 ($20.38 US)</td>
<td>Families with children &lt;18 years old living in poverty and extreme poverty based on the Selection System of Beneficiaries of Social Programs (SISBEN)</td>
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<td></td>
<td></td>
<td>• Consejo Nacional de Evaluación Multi-dimensional Poverty Index based on six social goods (education, health, social security, housing, utilities, and food) and basic income to satisfy basic needs or well-being</td>
<td>• Families with monthly per capita incomes between R$77 ($20.38 US)* and R$154 ($40.83 US)</td>
<td>• Special registry for displaced families</td>
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<td>• 2012 Poverty Line (PL) set at: US$2.9 per day (rural areas); US$4.0 per day (urban areas)</td>
<td>• Poverty classification: Poor: income &lt; PL and deficient on one or social goods; Extreme poverty: income &lt; PL and deficient in three or more social goods</td>
<td>• Indigenous families</td>
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<tr>
<td><strong>Initiation date</strong></td>
<td>1997</td>
<td></td>
<td>2004</td>
<td></td>
<td>2001</td>
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<tr>
<td><strong>Sectors &amp; Coordination</strong></td>
<td>Centralized and multi-sectorial</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC), are responsible for the management, monitoring and supervision</td>
<td>Inter-sectorial decentralized coordination</td>
<td>• Social Prosperity Department (DPS) within its Social Income Office (Dirección de Ingreso Social)</td>
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<td></td>
<td>The program is under the Ministry of Social Development (SEDESOL)</td>
<td>• Registry (Cadastro Único) is used to identify and register eligible low-income families</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC)</td>
<td>• Decentralized system; municipalities in charge of program implementation and monitoring</td>
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<td></td>
<td>The National Coordinator of PROSPERA (NCP) is an organism coordinating actions across sectors.</td>
<td>• MDS-SENARC works very closely with other social programs and to conduct outreach with civil society</td>
<td>• It works in coordination with other childhood and youth initiatives, with the food security network, productive inclusion strategies from the labor department and housing programs from public services</td>
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<td></td>
<td>Inter-sectorial Advisory Board authorizes program’s policies, defines program’s guidelines and strategies</td>
<td>• State governments provide technical support and training to municipalities</td>
<td>• Other ministries to link beneficiaries to other social programs and to conduct outreach with civil society</td>
<td>• Other ministries to link beneficiaries to other social programs and to conduct outreach with civil society</td>
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<td>Technical Committee supports the work of the National Coordination of PROSPERA, formed by representatives of the Mexican Institute for Social Security and Health (IMSS), and directors working with all the ministries represented at the Advisory Board (Finance, Education, Health, Economy, Agriculture, and Labor)</td>
<td>• Municipalities implement the program through a local coordinator responsible for program monitoring and implementation at the local level and organization of social control councils</td>
<td>• MDS-SENARC works very closely with other ministries to link beneficiaries to other social programs and to conduct outreach with civil society</td>
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<td>NCP works very closely with other SEDESOL programs such as Programas de Escuela de Calidad (PES) (Quality Schools Program), Tutores Comunitarios de Verano (CONAFE), (Summer tutors)</td>
<td>• The National Coordinator of PROSPERA (NCP) is an organism coordinating actions across sectors.</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC)</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC)</td>
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<td></td>
<td>NCP and technical committees work with state-level delegations</td>
<td>• NCP technical committees work with state-level delegations</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC)</td>
<td>• The Ministry of Social Development and Hunger Eradication (MDS), and The National Secretaria of Citizenship Income, (Secretaria Nacional de Renda de Cidadania, SENARC)</td>
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<td>State delegations have a coordinator and municipal liaison</td>
<td>• State delegations have a coordinator and municipal liaison</td>
<td>• MDS-SENARC works very closely with other social programs and to conduct outreach with civil society</td>
<td>• MDS-SENARC works very closely with other social programs and to conduct outreach with civil society</td>
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<td>Community Participation Committees, formed by representatives of PROSPERA beneficiaries from a community or neighborhood. These representatives or vocals are beneficiary mothers elected by other mothers, working voluntarily for the program.</td>
<td>• Community Participation Committees, formed by representatives of PROSPERA beneficiaries from a community or neighborhood.</td>
<td>• Community Participation Committees, formed by representatives of PROSPERA beneficiaries from a community or neighborhood.</td>
<td>• Community Participation Committees, formed by representatives of PROSPERA beneficiaries from a community or neighborhood.</td>
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<tr>
<td><strong>Coverage</strong></td>
<td>In 2014: 25.7 million individuals; 6.1 million families; 116.025 communities; 2,456 municipalities</td>
<td>13.8 million households; about 50 million individuals</td>
<td>2.6 million families; 1,102 municipalities</td>
<td>2.6 million families; 1,102 municipalities</td>
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<tr>
<td><strong>Administration &amp; Governance</strong></td>
<td>The program’s operational norms are published in the Diario Oficial and available to the public online. Budget approved by the federal government and allocated to the Ministry of Social Development (SEDESOL), the Ministry of Education (SEP) and the Ministry of Health (SSA), including the Mexican Institute of Social Security (IMSS)</td>
<td>• MDS uses the Decentralized Management Index to monitor the quality of the program implementation at the state and municipal level.</td>
<td>Payment of cash incentives through the Agrarian and Davivienda Banks. Point of payment system through local retailers for areas without a bank there.</td>
<td>Payment of cash incentives through the Agrarian and Davivienda Banks. Point of payment system through local retailers for areas without a bank there.</td>
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<td>• MDS-SENARC work with the Caixa Econômica Federal, a government owned financial institution, as the operating agent for making payments to beneficiaries through the electronic benefit cards.</td>
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<td>• MDS-SENARC work very closely with the Ministry of Health and Education implementing and monitoring the health and education conditions.</td>
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<td>Three control agencies: The General Controllers Office, the Federal Audits Court, and the Office of The Public Prosecutor.</td>
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<td>• Regular cross checks to the Cadastro internally and externally.</td>
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(Continued)
### Table 2. Continued

<table>
<thead>
<tr>
<th>Characteristic Name(s)</th>
<th>Mexico PROSPERA</th>
<th>Brazil Bolsa Família</th>
<th>Colombia Más Familias en Acción</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management &amp; Evaluation System</strong></td>
<td>• Computerized management information system; interconnects local and state networks to the national central system; information system used by enrolment centers.</td>
<td>• Online Datos Unico accessed on-line by MDS and municipalities. Data entered at the local level is transferred to the central database managed by the Caixa, where it is consolidated into the national database. The Caixa verifies the information and for new enrolments produces a unique identification number.</td>
<td>• Sistema de Información Familias en Acción, is the information system used to register the families and to monitor conditionalities</td>
</tr>
<tr>
<td><strong>Evaluation:</strong></td>
<td>CONEVAL in charge of the evaluation of the program based on the fulfillment of the program’s goals and objectives. CONEVAL can contract external consultant(s) to conduct evaluations but it has to be announced using a bidding process. Evaluations must be annual or multiannual. Results must be published in the official diary.</td>
<td>The Secretariat for Information Management and Evaluation (Secretaria da Avaliação e Gestão da Informação) evaluates the process and impact of the program.</td>
<td></td>
</tr>
<tr>
<td><strong>Annual Budget</strong></td>
<td>In 2014: MPS91.5 billion (US $5.6 billion)</td>
<td>In 2013: R$24 billion (US$10.5 billion)</td>
<td>US$980 million</td>
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</tbody>
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| Table 3. Mexican CCT Studies Assessing the Health and Nutrition Impacts among Children Under Five |
|---|---|---|---|
| **Source** | **Outcomes and Study Design** | **Outcomes** | **Results** | **Conclusions** |
| Gertler (16) | Objective: To assess the impact of PROGRESA on child health outcomes. Study Design: Randomized longitudinal study • Household eligibility: first, choosing underserved villages, and second choosing low income households within those villages that meet program’s inclusion criteria • 905 rural villages located within 7 Mexican states were randomly assigned to 2 groups: • Treatment group: Eligible families currently receiving program's benefits (320 villages) Control group: Eligible families not receiving benefits (185 villages) Control communities matched to treatment community based on population size, socio economic index, location and infrastructure | Child morbidity: • Mother's report of child's illness during the last 4 weeks prior to survey | Morbidity: CCT associated with: • Newborns being 25.3% less likely to be ill during the previous month p<0.05 • Children between 0-3 years-old being 22.3% less likely to be ill during the previous month p<0.05. • 24 month olds being 39.5% less likely to be ill during the previous month | • CCT had a positive impact in the health of children • Dose-response effect. The longer the children had been exposed to the program the higher the health benefit • Difficult to assess independent effects from different program components |
| Rivera et al. (17) | Objective: To assess the short term impact of PROGRESA on nutritional outcomes Study Design: Randomized 2 year longitudinal study PROGRESA RCT sub-study: families with children <3 years; cohort of infants <12 months old randomly selected (461 intervention and 334 control) SES Score • Household possessions, household characteristics and materials, and household services related to water access and sanitation | Growth Outcomes Measures • WI. n. (<2 years) and standing ht. (2–4 years) | Growth • Infants < 6 months old living in the poorest households had a higher age and length adjusted height (intervention group was 1.1. cm taller) | • Program showed improvements in growth among the poorest infants <6 months. • Lower levels of anemia were found among the children receiving the intervention for one years when compared with those children not yet receiving intervention. • Difficult to assess the impact of the supplement on nutritional status since some control families also received the supplement, and the bioavailability of the iron in the supplement was low. • Limitation: High attrition rates among children <12 months |
| | | Anemia Outcome Measure • Hemoglobin levels measured from blood samples taken from children at ≥12 months. Anemia: Hb <11 g/dl | Anemia • One year of exposure to program linked with higher Hb levels (11.12g/dl;95% confidence interval CI)10.9–11.3 g/dl) vs. those not receiving the intervention (10.75 g/dl;10.5–11.0 g/dl) (p<0.01). | |
| | | Supplement Consumption • Maternal report of weekly frequency of consumption at one year follow-up. Four or more days of weekly consumption was considered high supplement consumption | Supplement • 57% of the children on the intervention group consumed the nutrition supplement ≥4 days | |
| Harari et al. (18) | Objective: To assess the impact of PROGRESA on child health outcomes. Study Design: Randomized 2 year longitudinal study PROGRESA RCT sub-study: families with children <3 years; cohort of infants <12 months old randomly selected (461 intervention and 334 control) SES Score • Household possessions, household characteristics and materials, and household services related to water access and sanitation | Growth Outcomes Measures • WI. n. (<2 years) and standing ht. (2–4 years) | Growth • Infants < 6 months old living in the poorest households had a higher age and length adjusted height (intervention group was 1.1. cm taller) | • Program showed improvements in growth among the poorest infants <6 months. • Lower levels of anemia were found among the children receiving the intervention for one years when compared with those children not yet receiving intervention. • Difficult to assess the impact of the supplement on nutritional status since some control families also received the supplement, and the bioavailability of the iron in the supplement was low. • Limitation: High attrition rates among children <12 months |
| | | Anemia Outcome Measure • Hemoglobin levels measured from blood samples taken from children at ≥12 months. Anemia: Hb <11 g/dl | Anemia • One year of exposure to program linked with higher Hb levels (11.12g/dl;95% confidence interval CI)10.9–11.3 g/dl) vs. those not receiving the intervention (10.75 g/dl;10.5–11.0 g/dl) (p<0.01). | |
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### TABLE 3. Continued

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</table>
| Fernald et al. (18)         | **Objective:** Explore the relationship between cumulative cash transfers received and child growth, health, and development outcomes.  
**Study design:** Quasi experimental  
- Random subsample from the original 506 communities with children under 5 years old  
- early CCT exposure: 24-68 months old children (n=1681); 5 years of exposure  
- late CCT exposure: 24-50 months old children (n=768); 3-5 years of exposure  
**Exposure variable:** Cumulative Cash Transfers defined as the total amount of cash that the household received over the entire period participating in the program  
- Cumulative cash transfer data obtained from program’s records | **Anthropometry**  
- Height and Weight  
- Ht-Age z scores WHO  
- BMI percentiles calculated  
**Health**  
- Hemoglobin assessed using a capillary sample.  
- Mothers were asked to report the number of child’s sick days during the last month.  
**Development > 36 mo**  
- Gross Motor; McCarthy scale of children’s abilities.  
- Cognitive development & language assessed with the “Peabody Vocabulary and Images Test”  
**Birthweight:**  
- determined by maternal retrospective report and whenever possible confirmed with medical records.  
**Health Care:**  
- Utilization was determined as the total number of prenatal visits determined by medical records.  
- Non-beneficiaries had more prior pregnancies (5.1) than beneficiaries (4.7)  
- Program associated with:  
  - 127.3 g higher birthweight (95% confidence interval CI: 21.3, 233.1; P=0.02)  
  - 4.6 % point decrease in LBW  
**Cumulative cash transfers associated with:**  
- Increase in Ht for age Z score (p<0.0001).  
- Lower prevalence of stunting (p<0.0001).  
- Lower prevalence of overweight (p<0.0001).  
- Improvements in gross motor development (p=0.001), long term memory (p=0.002), short term memory (p<0.0001), visual integration (p=0.02), and language development (p=0.0001)  
**Conclusions**  
- Oportunidades associated with higher birthweight and lower incidence of low birthweight.  
- Limitation: retrospective maternal recollection of birthweight.  |
| Barber & Gertler (19)       | **Objective:** to assess the impact of Oportunidades CCT program on birthweight  
**Design:** Quasi-experimental  
- A fertility survey was applied on a random stratified subsample of women of reproductive age (15–49 years old) from PROGRESA/ Oportunidades randomized evaluation  
- Two groups:  
  - Beneficiary (n=666): births that occurred after the household received their first cash transfer  
  - Non-beneficiary: births that occurred prior to receiving the first cash transfer (n=174)  
- Date of first transfer received by beneficiary households obtained from administrative records  
- Program exposure intensity based on the number of months between the date of receiving the first cash transfer and the birth date  
**Study Design:** RCT, longitudinal study.  
- stratified sample of 149 urban blocks located in 17 Mexican’s states were chosen to evaluate the program.  
- groups:  
  - intervention: children from eligible families receiving program’s benefits (n=574).  
  - control: children from eligible families not receiving benefits (n=159)  
- Enrollment in the program was self-reported and confirmed with administrative records  
- Households matched using a household propensity score, and baseline maternal height, child sex, gender, weight and height | **Growth**  
- Maternal and child anthropometric data collected at baseline and follow-up.  
- Wt and recumbent length for children<24 mo., and standing Ht for children >24 mo.  
- Child linear growth:  
  - Comparison of baseline and follow-up Ht/Age Z scores.  
  - Child weight gain:  
  - Comparison of baseline and follow-up Wt/Ht Z scores data.  
- Children in intervention families <6 mo grew 1.5 cm more than children from control families (P<0.05). This association was not found among 6-24 months old children.  
- Children <6 mo in intervention families gained an additional 0.76kg (p<0.01) or 0.41 weight for height Z-score (p<0.05).  
- Program had a positive impact on linear growth and weight gain among infants.  
- Limitation: High attrition rate.  |
| Leroy et al. (20)           | **Objective:** Evaluate the impact of Mexico’s CCT Program on the growth of children <24 mo of age living in urban areas.  
**Study design:** RCT, longitudinal study.  
- stratified sample of 149 urban blocks located in 17 Mexican’s states were chosen to evaluate the program.  
- groups:  
  - intervention: children from eligible families receiving program’s benefits (n=574).  
  - control: children from eligible families not receiving benefits (n=159)  
- Enrollment in the program was self-reported and confirmed with administrative records  
- Households matched using a household propensity score, and baseline maternal height, child sex, gender, weight and height | **Anthropometry**  
- Height and Weight  
- Ht-Age z scores WHO  
- BMI percentiles calculated  
**Health**  
- Hemoglobin assessed using a capillary sample.  
- Mothers were asked to report the number of child’s sick days during the last month.  
**Development > 36 mo**  
- Gross Motor; McCarthy scale of children’s abilities.  
- Cognitive development & language assessed with the “Peabody Vocabulary and Images Test”  
**Birthweight:**  
- determined by maternal retrospective report and whenever possible confirmed with medical records.  
**Health Care:**  
- Utilization was determined as the total number of prenatal visits determined by medical records.  
- Non-beneficiaries had more prior pregnancies (5.1) than beneficiaries (4.7)  
- Program associated with:  
  - 127.3 g higher birthweight (95% confidence interval CI: 21.3, 233.1; P=0.02)  
  - 4.6 % point decrease in LBW  
**Cumulative cash transfers associated with:**  
- Increase in Ht for age Z score (p<0.0001).  
- Lower prevalence of stunting (p<0.0001).  
- Lower prevalence of overweight (p<0.0001).  
- Improvements in gross motor development (p=0.001), long term memory (p=0.002), short term memory (p<0.0001), visual integration (p=0.02), and language development (p=0.0001)  
**Conclusions**  
- Oportunidades associated with higher birthweight and lower incidence of low birthweight.  
- Limitation: retrospective maternal recollection of birthweight.  |
| Huerta (21)                 | **Objective:** to assess the effect of PROGRESA in reducing diarrhea and respiratory infectious diseases among children under 5 year old.  
- Morbidity data collected from three surveys  
**Design:** Quasi-experimental  
- Multivariable models used to compare morbidity change overtime of children between 0–23 months and 24–59 months controlled for confounding factors at the individual, household and community level  
- Morbidity data from the second and third follow up since; data not collected on baseline  
- Baseline data and 2nd and 3rd 6 months follow-ups.  
- Incidence of diarrheal diseases two weeks prior to the survey  
- Incidence of respiratory infections two weeks prior to the survey  
- The program reduce the prevalence of diarrhea by 5.2 percentage points among children under 5. This effect is higher among children between 0–23 months (7.1 percentage points) than children between 24–59 months (4.3 percentage points)  
- Program reduced prevalence of acute respiratory infection 3.6 percentage points for children 0–59 months and 4.4 percentage points for children 24–59 months old  
- Biggest impact on diarrhea  
- For both diseases the highest morbidity decreases were seen among children 24–54 months  
- Author recommends to increase preventive health investments targeting young children  
- Study limitation: baseline morbidity data not available  |
### TABLE 3. Continued

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<tr>
<td>Barham (22)</td>
<td><strong>Objective:</strong> Evaluate the impact of PROGRESA on infant and neonatal mortality. <strong>Design:</strong> Quasi-experimental  - PROGRESA randomized evaluation database used. Baseline and follow up (1997–2001)  - Exposure: Percentage of rural beneficiary households in a given year and municipality created with PROGRESA administrative records and 1990–2001 census data  - Mortality data from municipalities datasets from administrative, census and vital statistics data from 1992-2001  - Using municipality and time-fixed models</td>
<td>Infant Mortality Rates (IMR) defined as deaths after the first month of life but before 1 year of age. Neonatal Mortality Rates (NMR) defined as deaths that occur within the first month of life.</td>
<td>PROGRESA produced a 17% reduction in IMR and an average treatment effect of 8%. No overall consistent significant reduction for NMR. Program effective in reducing both IMR and NMR among municipalities with high rates before the program began, and among municipalities with higher levels of illiteracy, and less access to electricity; less effective in areas with poor household sanitation.</td>
<td>PROGRESA associated with significant IMR reduction</td>
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*This table was developed by the authors reviewing the articles described on the table.*

### Brazil

**Key program characteristics.** In 2004, The Bolsa Família Program (BFP) was created by merging four programs (Bolsa Escola, Bolsa Alimentação, Cartão Alimentação, and Auxílio Gás). The Ministry of Social Development and Hunger Eradication (Ministério do Desenvolvimento Social e Combate à Fome, MDS) oversees the program through the National Secretariat of Citizenship Income (Secretaria Nacional de Renda de Cidadania, SENARC), which is responsible for BFP’s management, including its beneficiaries registry (Cadastro Único), and the Caixa Econômica Federal (CEF), the distributor of cash incentives to beneficiaries through an electronic card (24–26). SENARC works with multiple ministries, including the Ministry of Health and the Ministry of Education, on implementation and monitoring of the health/nutrition and education conditions for program participation (24, 25). BFP is implemented using a national decentralized strategy that includes an indicator to assess the quality of implementation across multiple domains (24–26). BFP oversight also relies on an advisory group that includes municipal-level representatives working in health, education, and food security, and representatives from the government and civil society (24, 25). BFP is a well-established program with clear operational rules and processes. BFP outcomes are measured by an autonomous entity, the Secretariat of Evaluation and Information Management (Secretaria de Avaliação e Gestão da Informação, SAGI), which is in charge of implementing a comprehensive evaluation of the program’s impact. Fiscal oversight of the BFP is conducted by the General Controllers Office, the Federal Audits Court, and the Office of The Public Prosecutor (Table 2).

BFP provides two types of monthly cash incentives—a basic benefit to families living under extreme poverty, and a variable benefit based on household size and composition for families that are poor but not extremely poor (27) (Table 1). Initiatives such as Brasil Sem Miséria, launched in 2010 as a national umbrella initiative to address the needs of the 16.2 families still living in extreme poverty, and Brasil Carinhoso, an integrated early childhood development program targeting families with children 0–6 years old, launched in 2014 to increase access to early education and health care, have built upon and strongly complement the BFP (25, 27). BFP currently reaches 13.8 million families representing almost a quarter of the total country’s population (25, 27).

**Impacts on child health and nutrition outcomes.** Nine studies and two literature reviews assessing the impact of BFP on child health and nutrition outcomes were found in this review (Table 4). A study analyzing National Health and Nutrition Survey (Pesquisa Nacional sobre Saúde e Nutrição, PNSN) data found that children under 5 years old enrolled in BFP were significantly more likely to have adequate height-for-age and weight-for-age compared with those not enrolled in the program, and that after adjusting for confounders, this effect was greater among children 36–59 months old (28). Another quasi-experimental cohort study of children 0–72 months old living in three Northeast municipalities found a significantly higher weight-for-age and height-for-age among children exposed to the Bolsa Alimentação program for a whole year compared to those that were never exposed to it (29). A cross-sectional study among children 6–89 months old did not find an association between the BFP and risk of anemia and other malnutrition indexes (30). On the other hand, one cross-sectional study assessing the nutritional status of urban children under 5 years old did not find any impact from BFP on their nutritional status (31). Another cross-sectional study found that children under 3 years old exposed to the BFP had significantly lower weight gain compared with those of the same age excluded from the program due to administrative errors. The authors of that study hypothesized that this result might have stemmed from a misunderstanding among participants that in order to remain eligible their children had to be malnourished (32). A literature review found that BFP beneficiaries had higher food intakes than non-beneficiaries, and three of the cross-sectional studies reviewed found improvements in food security among BFP beneficiaries, while two found better height-for-age and weight-for-age Z-scores and less stunting among BFP beneficiaries, but three other studies reviewed did not find any association between the BFP and child anthropometric outcomes (33). Another literature review examining 12 cross-sectional studies concluded that the BFP was not associated with nutritional status as proxied by anthropometric indicators (34). A prospective study of children under 7 years old found that the BFP had a positive association with vaccinations, attendance at medical checkup and growth monitoring sessions, and psychosocial health (35). Time-series
### TABLE 4. Brazilian CCT Intervention Studies Assessing Health and Nutrition Impacts among Children Under Five

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<tbody>
<tr>
<td>Paes-Sousa et al. (28)</td>
<td><strong>Objective</strong>: Identify factors associated with BFP participation and anthropometric indicators among children under 5.</td>
<td>Outcomes measured: Ht/Age Wt/Age Wt/HH</td>
<td>Children &lt;5 years old participating in BFP were more likely to have adequate: Ht/Age; OR 1.26 (1.16-1.37) p&lt;0.001 [12-35 months old OR1.19 (1.04-1.37); 36-59 months old OR 1.41 (1.20-1.66)] Wt/Age; OR 1.26 (1.10-1.44) p&lt;0.001</td>
<td>BFP improved anthropometric outcomes for children 12-59 months of age</td>
</tr>
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</table>

#### Study Design: Probabilistic population based samples of children <5 years old.
- Four Cross sections
- Sectional Health and Nutrition surveys.
- 22,375 low income children < 5 years old from 419 municipalities with baseline and one year follow up data (9,152 exposed and 13,223 not exposed to BFP).

Multivariate regression analyses. |

| Assis et al. (29) | **Objective**: Evaluate the effectiveness of a Brazilian’s CCT on children’s anthropometric indicators. | Outcomes: Wt/Age Ht/Age Z-scores | Positive increase in weight-for-age Z-score 0.34 (C195%–0.44-0.63) among children exposed continuously to the program compared with those children never exposed. | Children participating continuously in PBA grew better than those who had never been exposed to program. |

#### Study design:
Quasi-experimental prospective study
Four northern municipalities with high levels of poverty. 2,163 0–72 months old were included in baseline, only 1,847 children completed baseline and 12 months follow up. 1,615 exposed and 232 not exposed to PBA. |

| Oliveira et al. (30) | **Objective**: Assess BFP associations with children’s nutritional status. | Outcomes: Anemia (Hb levels <11 g/dl); Anthropometry: Z-scores based on WHO references: Weight-for-age Height-for-age Weight-for-height Food Intake | No differences in anemia or nutritional status among were found among children enrolled in the program and currently receiving benefits or those enrolled but not receiving them yet. |

#### Study design: Cross-sectional study in Zona da Mata, Minas Gerais State
- Groups: registered in program but not receiving benefits (NBF) (n=184 children)
- registered and currently receiving BF benefits (BF) (262 children)
- Probabilistic sampling.
- Socio economic indicators:
  - Family income including and excluding BFP
  - Number of household residents
  - Number of children under 15-years-old
  - Paternal and maternal education |

| Dias-Médici (31) | **Objective**: to assess the health and nutritional impacts of BFP on children under five living in an urban semi-arid area. | Outcomes: Anemia (Hb levels <11 g/dl); Anthropometry: Z-scores based on WHO references: Weight-for-age Height-for-age Weight-for-height Food Intake | No significant differences were found among groups for hemoglobin levels or anthropometric Z-scores. |

#### Study design: Cross-sectional
411 households with 189 children under five participated in the study.
Surveys collected data on environmental, socio-economic, and household sanitation characteristics, and child health, food intake and anthropometric measurements.
Bivariate analysis comparing BFP beneficiaries versus not beneficiaries.
Logistic regression analysis to assess associations of BFP with food consumption |

| Morris (32) | **Objective**: compare the growth of children beneficiaries of Bolsa Alimentación (BA) with eligible children not receiving the benefit due to administrative mistakes | Outcomes: Z-scores for weight-for-age over a 6 month period | BFP did not have an impact on child anthropometry |

#### Study design: Cross-sectional retrospective cohort study from four municipalities in the Northeast.
- Compared beneficiary children versus those eligible but excluded due to administrative errors.
- Individual matched according to municipality, gender, age, socio-economic characteristics.
- Two complementary data sets were used to assess child growth:
  a) Anthropometric data collected after 6 month of the program launching of all children under 7 years old
  b) Weight measurement recorded routinely on each child’s Minister of Health growth monitoring card (no height available) among children < 36 months
  c) Children’s growth trajectories were based on 10 weight-for-age records from the monitoring card
  d) A total of 472 beneficiary children and 158 children under 3 yrs. of age unexposed to program included in the analysis |

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**TABLE 4. Continued**

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<td>Martins et al. (33)</td>
<td><strong>Objective:</strong> analyze the influence of Brazilian CCT’s on diet and nutrition outcomes among beneficiaries.</td>
<td>Data extracted from studies: Sample size, study design, time and place conducted, outcome(s), confounding factors and conclusions</td>
<td>• 7 of 12 studies found a positive effect of BFP on children’s nutrition outcomes&lt;br&gt;• Four studies found positive influence on dietary intake&lt;br&gt;• Three studies suggested a positive influence of BFP on food security</td>
<td>Most studies suggest a positive program effect on child nutritional statuses and on dietary intake and food security&lt;br&gt;Limitations: Cross-sectional analyses and small sample sizes</td>
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</table>
| Wolf et. al. (34) | **Objective:** assess the impact of the BFP on the nutritional status among children under five | Anthropometry<br>• Wt<br>• Ht | |<br>BFP increased under 5 child mortality rates associated with malnutrition and diarrhea
| Rasella et. al. (35) | **Objective:** Assess the effect of BFP on mortality rates of children under 5 years all due to poverty, malnutrition, diarrhea and lower respiratory infections | • Mortality rate among children under 5<br>• Malnutrition related deaths | • Rate ratios (RR) for the effect of the BFP on overall under-5 mortality rate: 0.94 (95% CI 0.92–0.96) for intermediate coverage, 0.88 (0.85–0.91) for high coverage, and 0.83 (0.79–0.88) for consolidated coverage<br>• Effect of consolidated BFP coverage was highest for under-5 mortality resulting from malnutrition (RR 0.35; 95% CI 0.24–0.50) and diarrhea (0.47; 0.37–0.61) |<br>BFP decreased under 5 child mortality rates associated with malnutrition and diarrhea |
| Shei et al., (36) | **Objective:** Documents from official evaluations excluded<br>**Study design:** Cross-sectional study | • BFP participation<br>• Child’s Health Care Utilization data obtained from hospital records<br>• Frequency of Diarrhea, Fever and Cough in the last 3 months, and 2 weeks<br>• Health status measured based on the Quality Metric Incorporated SF-10 | • Among children under seven: BFP increased: odds of any health post visits for growth monitoring (OR=3.1; p=0.001), vaccinations (OR=2.8; p=0.002), medical checkups (OR=1.6; p=0.068) |<br>BFP positively associated with children's visits to health posts for preventive services including growth monitoring and immunizations |

1 This table was developed by the authors reviewing the articles described on the table.<br>2 BFP: Bolsa Familia Program.

analyses corresponding to the 2004–2009 period (n = 2 853) documented a significant decrease in under-5 mortality rates associated with higher BFP coverage (36).

In sum, evidence for the impact of the BFP on child anthropometry are mixed. Two of the studies with positive anthropometric findings were conducted among the poorest areas in Brazil (28, 29). Moreover, studies suggest that the program does improve food security and food intake among young children as well as children’s overall health and survival.

**Colombia**

**Key program characteristics.** *Familias en Acción* (FA), modeled after PROGRESA, was launched in 2000 as a temporary poverty relief program at a time when the country was immersed in an economic recession and experiencing a worsening of internal armed conflicts (37). An external evaluation that documented a positive impact of FA on children’s health and nutrition outcomes led to its stepwise scaling up at the national level (38). FA was initially implemented in 672 Colombian municipalities with 100000 or less inhabitants that had a bank, and program eligibility was determined via the welfare index generated by the Colombian System for the Selection of Beneficiaries of Social Programs (*Sistema de Selección de Beneficiarios de Programas Sociales, SISBEN*), which targeted families living in extreme poverty, who were classified as “SISBEN Level 1” (37, 38). In 2003, the Ministry of Social Protection was created and FA was scaled up to reach the 1.5 million families living in extreme poverty, including 413000 internally displaced families—a goal that was met by 2007 (39). The program became part of the *Red
Unidos (Unidos Network), a complementary government strategy to reduce poverty (40). In 2011, FA was renamed Más Familias en Acción (MFA) and a law was enacted that formally recognized the program as part of the Ministry of Social Protection’s Department of Social Prosperity (Departamento para la Prosperidad Social, DPS), which was responsible for its coordination (40, 41). MFA targeted families living under extreme poverty, families that had been internally displaced, and indigenous and Afro-Colombian communities, and by the end of 2012 was serving 2.1 million families (39). All indigenous and displaced families receive the maximum benefit regardless of number of children (42). Enrollment into the program is always open for displaced families but for other groups is only during specific enrollment periods (42). MFA also has an “income for prosperity” component known as Jóvenes en Acción, a cash incentive program for low-income youth and young adults that wish to continue their post-secondary education (42, 43). In 2013, MFA began working in coordination with the early childhood development government initiative known as De Cero a Siempre (44). Colombia’s CCT evolved from being an emergency response program to becoming the main national program for poverty reduction and child health.

Impacts on child health and nutrition outcomes. An external quasi-experimental evaluation of FA found that in 2002–2003 the program was associated with an increase in food consumption in both rural and urban areas and that the increase was more pronounced for animal protein food sources such as milk, chicken, and meat (38, 45). The study also found that a higher percentage of beneficiary children < 24 months and between 24 and 48 months old were brought to preventive health care visits compared with children from the same age groups that were not participating in the program (40% versus 17.2% and 66.8% versus 33.6% respectively). Infants exposed to the program ended up being taller than non-beneficiary children, with a 0.44-cm differential reported among 1-year-old boys.

DISCUSSION

The three programs presented in this review began as antipoverty strategies seeking to effectively address the roots of poverty in the context of each country’s economic and political crises. In all three countries, the programs began as small-scale projects with a strong and clear vision, mission, and design and were quickly scaled up due in part to strong political commitment, good focalization of the target population, and their ability to show short-term positive antipoverty, education, and health and nutrition outcomes. All of the CCTs reviewed became part of their countries’ social protection strategies, allowing them to secure funding and develop clear, strong, and transparent structures rooted in rigorous monitoring and evaluation systems and social participation mechanisms. The combination of these factors may explain their political resilience, including their implementation at scale and sustainability (4, 25, 40, 46) despite numerous changes in government administrations. Furthermore, these CCTs evolved over time, based on evaluation data, which has helped strengthen their countries’ social policies. As shown in the current findings, all three programs seek to improve their beneficiaries’ ability to break the poverty cycle and thus become less reliant on the program over time.

CCT benefits, structure, and governance

Unlike previous reviews (47, 48), this review analyzed CCT impacts within the context of the programs’ operations and structure, including governance. This realist review is likely to have generated results more useful to policy-makers than those from previous studies. Although it has not been without challenges overall, the experience with CCTs has demonstrated that it is possible to provide adequate oversight of cash transfers and participant compliance with health/nutrition- and education-related program conditions. This has been accomplished through complex intersectoral coordination based on clear operational principles and processes overseen by transparent governance structures that include the participation of civil society. Brazil’s CCT had the strongest management information system of the three programs. The strength of this system has allowed for strong decentralization of implementation decisions as well as in-depth analyses of process indicators and program impacts from the national to the municipal level, supporting the hypothesis that proper monitoring and evaluation can affect program governance (4, 25, 38). Brazil’s CCT also had the strongest program oversight mechanisms at all levels, including exemplary structures for social participation. The Colombian CCT demonstrated the feasibility of implementing the social protection strategy, even in areas with internally displaced populations. The fact that CCTs have spread rapidly across Latin America and continue to show similar education, health, and nutrition benefits in very diverse contexts indicates that the CCT model is extremely relevant and replicable as a social protection system. The pioneering Mexican CCT generated important know-how on intersectoral program coordination at the national level. The robust, quasi-experimental evaluation component of the Mexican program, included since its inception, has allowed for relatively quick documentation of the health and nutrition impacts and thus very likely contributed to its political resilience. In that way, the Mexican CCTs greatly benefited the design of the CCTs in Brazil, Colombia, and beyond.

CCT impacts on children’s health and nutrition

In agreement with a previous review (7) that did not examine Brazil’s BFP, and a review that examined all CCTs without grouping them by country (48), this review found strong evidence, based on data from the three largest and most long-standing programs in Latin America, that the CCT model for social protection has benefitted health and nutrition outcomes, especially among the most vulnerable children. However, none of the 17 reviewed research studies were able to disentangle the proportion of health and nutrition benefits that can be attributed to the different benefits and conditions of the CCTs. This might be a useful question to consider in future research to 1) help determine program costs per sector (e.g., health/nutrition versus education and/or social development); 2) avoid redundancies across sectors; and 3) identify any gaps.

Implications

These results strongly support the notion that well-designed CCTs that are
launched with strong and sustained political support and include transparent policies and adequate monetary, health, and education resources are effective at improving the health and nutrition outcomes of young children in Latin America.

Limitations

The main limitation of this review was that it only included three of the 18 CCTs in Latin America. However, a small sample was chosen by design, using very specific inclusion criteria, to ensure that the CCTs that were studied were the most mature and stable in the region and would thus generate data that would be most useful to policy-makers.

Conclusions

Analysis of the CCT framework developed in Latin America and now benefiting the rest of the world clearly illustrates that social protection models that are conceptually sound and address social determinants of health can have a positive impact on education, health, and nutrition outcomes among the poorest families in the region. A key future challenge is how to reform these programs in the region so that, together with more equitable economic policies, they can help families escape not only extreme poverty, but any kind of poverty, in order to lead healthy and productive lives, as called for in the post-2105 Sustainable Development Goals.

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REVIEW

Objetivo. (1) Describir los beneficios, requisitos, cobertura, financiamiento, objetivos, gobernanza y estructura de programas bien consolidados de transferencias de efectivo condicionadas (TEC) en América Latina y (2) determinar su efecto en la salud y el estado nutricional de los niños menores de 5 años.

Métodos. Se llevó a cabo una revisión realista. Se incluyeron en ella los programas de TEC que satisfacían los siguientes criterios de inclusión: (1) programa de alcance nacional en curso; (2) cobertura de 50% de la población destinataria como mínimo; (3) funcionamiento en gran escala sin interrupción durante 10 años o más; (4) descripción explícita de la estructura, fuentes de financiamiento y gobernanza; (5) requisitos para la participación basados en criterios de salud y nutrición, así como de educación; y (6) disponibilidad de estudios de evaluación de efectos con indicadores de salud, desarrollo o estado nutricional en niños menores de 5 años. Tres programas de TEC (uno en el Brasil, uno en Colombia y otro en México) satisficieron estos criterios.

Resultados. Hay pruebas contundentes de que los tres programas de TEC seleccionados para la revisión tuvieron efectos favorables en la salud y el estado nutricional de los niños en sus respectivos países. En los tres países los programas se ampliaron y los efectos positivos se documentaron con relativa rapidez. Los tres programas gozaron de un sólido apoyo político y tuvieron estructuras de gobernanza explícitas y transparentes con mecanismos de rendición de cuentas y de participación social, lo cual podría explicar sus buenos resultados y sostenibilidad.

Conclusiones. En América Latina, las TEC han tenido un efecto favorable en la salud de los niños y en el estado nutricional de las familias más pobres. Un reto para el futuro es tratar de reformar estos programas para ayudar a las familias a salir no solo de la extrema pobreza, sino de la pobreza en general a fin de que puedan llevar vidas saludables y productivas, en conformidad con los Objetivos de Desarrollo Sostenible para después del 2015.

Palabras clave
Bienestar social; asistencia social; nutrición del niño; Brasil; Colombia; México; América Latina.