Evaluation for Program Decision Making: a Case Study of the Oportunidades Program in Mexico

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Abstract

Although evaluation is now an integral part of the design and implementation of public programs in many countries, there is growing recognition that the utilization of evaluation results for improving implementation and decision making, particularly in developing countries, is limited. The objective of this paper is to describe the process by which the external impact evaluation has been used to increase the potential of Oportunidades to improve nutritional outcomes of the beneficiary population through modifications to its design and operation. We will summarize a series of studies that have guided this process and focus on key aspects that have facilitated the utilization of evaluation results for decision making in the program. Implementation of research to document the impact of programs and the publication of such findings in peer reviewed journals, although vital for improving our evidence base and for the advancement of researchers within the current academic system, is not enough to ensure that the program itself will benefit from the evaluation. The use of evaluation results as a basis for modifications to the design and implementation of the nutrition component of Oportunidades was favored by open dialogue among all sectors involved in the program and the evaluation team and a long-term commitment on the part of all those involved. We think that the lessons learnt from this process are relevant for other programs, even where resources may be limited.

Introduction

Although evaluation is now an integral part of design and implementation of public programs in many countries, there is growing recognition that the utilization of evaluation results for improving implementation and decision making, particularly in developing countries, is limited (1). Mexico’s Program for Human Development, Oportunidades, a conditional cash transfer program, began in 1997 with the name Progresa (for simplicity, we will refer to the program by its current name, Oportunidades). Oportunidades has been extensively evaluated; process and impact evaluation were included as an integral part of the program from its inception in the 1990s. In addition to its influence on the design of social protection programs, Oportunidades has demonstrated the vital importance of rigorous impact evaluation for accountability and program sustainability (2).

The objective of this paper is to describe the process by which the external impact evaluation was used to increase the potential of Oportunidades to improve nutritional outcomes of the beneficiary population through modifications to its design and operation. We will: 1) briefly describe the program; 2) summarize key studies conducted to strengthen evidence of impact and to highlight aspects of design and performance that required strengthening; 3) briefly describe the operation of Oportunidades and how this might influence capacity to implement needed modifications; 4) analyze the context in Mexico that facilitated the implementation of research for the purpose of decision making in Oportunidades; 5) reflect on the implications that this process has had for the researchers involved and the program; and 6) examine the relevance of the experience outside the Mexican context.
Program Design and Investment in Evaluation

The goal of the Oportunidades program is to break the intergenerational cycle of poverty by favoring the development of human capital through providing incentives for families to invest in their own future through education, health, and nutrition. As of 3rd grade of primary school, families are provided with financial incentives to keep their children in school as long as they maintain a minimum attendance. In the same manner, all families are provided with an economic incentive conditional on the use of preventive health services, the extent of which depends on family demographics. For example, women are required to regularly attend antenatal clinics and take their children to regular well-child clinics. A health and nutrition education component accompanies this, providing workshops to fill a presumed unmet need for health and nutrition information on topics such as chronic disease prevention and treatment in adult women and men and the reduction of adolescent risk behaviors. The program also provides a whole milk-based fortified food targeted to women during pregnancy and up to 1 y postpartum (Nutrivida) as well as to all children 6–24 mo of age and 2–5 y of age with low weight for age (Nutrisano). The food was developed and produced in Mexico by local experts with knowledge of the nutrition situation of the population at the time the program began (3).

Initially implemented in a limited number of rural areas, the program now covers rural and urban areas in all 32 states and metropolitan Mexico City, with a beneficiary population of over 5.5 million families. The evaluation of Oportunidades is divided into two components, internal continual process evaluation and external impact evaluation, which in turn is divided into a qualitative (including a number of anthropological and ethnographic studies) and a quantitative evaluation. The operations component has been used continually to resolve issues related to supply chains, service delivery, payment of financial incentives, and improving enrollment, among many other issues. The external impact evaluation includes a clear and extensive internal and external dissemination plan (4).

Summary of Key Studies Conducted to Strengthen Evidence of Impact of Oportunidades on Nutritional Outcomes and to Strengthen Program Design and Implementation

Evaluation results in urban and rural areas of Mexico demonstrated that Oportunidades had a positive impact on child linear growth (5,6); beneficiary children from the poorest families grew ~1 cm more than children from comparison areas among those who were incorporated into the program from the first 6 mo of life. There was also a 10 percentage point reduction in the prevalence of anemia in rural areas (5) and some evidence of impact in a small subsample of children 6–36 mo of age in urban areas (7). Despite these positive effects, the prevalence of stunting and anemia remains high in the beneficiary population, even after 10 y of existence in rural areas (8). In pregnant women, the prevalence of anemia is also high, but at the same time, the prevalence of overweight and obesity in adult women beneficiaries is similar to the national average (well over 60%) (8,9). Furthermore, great diversity exists in the distribution of these nutritional problems in the beneficiary population, particularly stunting, which ranges from ~10% in urban areas of some central and northern states to over 30% in rural areas of some southern states (8).

In rural Mexico, a randomized effectiveness evaluation design was used that took advantage of the staged implementation of the program (5). This permits direct causal inferences for the impact of the program (10). In urban Mexico, a quasi-experimental or plausibility design was used. In both settings, a series of surveys was conducted at baseline before implementation then 1/2 for the following 2 y and outcomes were assessed on longitudinal (e.g., growth in children 0–24 mo of age at baseline) or cross-sectional samples (e.g., anemia in children 0–24 mo of age at each survey time). Because Oportunidades is an integrated program, it was not possible with this design to explore the mechanism by which the program affected nutrition or health (11) or whether there are specific components that required strengthening to accelerate progress in improving nutrition. In recognition of this limitation and in the interest of improving program design and implementation to influence nutritional outcomes, Oportunidades invested evaluation funds in a series of in-depth studies exploring the impact of the program on potential mediating factors (e.g., child feeding practices) and on diverse aspects of program design and performance in relation to the nutrition situation. The studies focused mainly on direct determinants of poor nutrition (12), specifically dietary intake, consumption of the fortified foods provided by the program, and feeding practices (Table 1). The bioavailability of the type of iron used in the fortified food was found to be low and research resulted in the modification of the product to improve it (13). Much of this work would fall into the category of adequacy evaluation (10), e.g., whether specific components of the program's performance complied with predefined objectives and whether the behavior changes expected of the population as a result of the program actually occurred. Information related to infectious disease, the other direct cause of poor nutrition, is limited partly due to limitations of occasional large surveys to document this adequately. Some underlying and basic causes of poor nutrition were also explored, such as maternal mental health and care giving, household food security, poverty, and education of the household family members.

No evidence of an impact of the program on child complementary feeding practices was found, and feeding practices unfavorable for adequate child growth and micronutrient status are common. For example, liquids such as teas and broths are introduced as early as 2 mo of age and on average, solid foods are introduced late (7,8). In urban areas, beneficiary children had a shorter total duration of breast feeding than nonbeneficiary children by 1.5 mo, although on average both groups were still breastfed into the second year of life (14). The fortified food for children, Nutrisano, was found to be highly acceptable (15,16) and reportedly consumed by more than one-half the population (3,8). As part of the internal operations research, issues related to supply and distribution of the fortified foods were resolved by the program at an early stage (Oportunidades, unpublished data). Even with issues related to availability of the food in the communities resolved, in a longitudinal follow-up of children in urban areas, it was found that only 33% of children consumed the fortified food regularly (>4 times/wk) and even when consumed, the quantity consumed was less than one-half the recommended amount, likely due to sharing with other household members (17). Although a similar longitudinal quantification of consumption was not done in rural areas, evidence suggests that similar issues of intra-household sharing exist (16,18). Children whose mothers reported that they did consume the fortified food on a
regular basis had higher serum zinc and ferritin concentrations than those who did not regularly consume the supplement (7).

The quality of the health education component, particularly in relation to the use of the fortified food for children, was found to be weak (18). A communication strategy was developed using formative research to improve utilization of the fortified food and when tested under controlled conditions, was found to improve utilization, including appropriate targeting of the food to children 6–24 mo of age and preparation in the proper form (pap instead of liquid) (18). This strategy was never successfully implemented at scale and the pattern of complementary feeding and use of the fortified food, specifically use as liquid instead of pap and sharing among household members, persists (8).

### Table 1

<table>
<thead>
<tr>
<th>Themes evaluated</th>
<th>Population group (study design)</th>
<th>Years evaluated (rural)</th>
<th>Years evaluated (urban)</th>
<th>Select references</th>
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<tr>
<td></td>
<td>Hemoglobin concentration, prevalence of anemia, micronutrient status</td>
<td>Children &lt;2 y of age (rural); 0–4 y (urban) (impact evaluation surveys)</td>
<td>1999–2000</td>
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<td></td>
<td>Weight gain, prevalence of overweight and obesity, hemoglobin concentration, prevalence of anemia</td>
<td>Women, mothers of children &lt;4 y of age (impact evaluation surveys)</td>
<td>N/A</td>
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<td>Direct determinants of poor nutrition</td>
<td>Acceptance and consumption of fortified complementary food (Nutrisano)</td>
<td>Children 6–24 mo (impact evaluation surveys; qualitative research; 1-y longitudinal follow-up)</td>
<td>1998–2000, 2008</td>
<td>5,16,18,17,25</td>
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<td></td>
<td>Breast and complementary feeding practices; dietary intake</td>
<td>Children 6–24 mo (impact evaluation surveys; 1-y longitudinal follow-up)</td>
<td>2008</td>
<td>8,14,17</td>
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<td></td>
<td>Morbidity, health status, and utilization of health services</td>
<td>Children &lt;4 y of age (impact evaluation surveys)</td>
<td>2008</td>
<td>40</td>
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<td></td>
<td>Acceptability and use of fortified food; dietary intake</td>
<td>Pregnant and lactating women; mothers of children &lt;4 y of age (impact evaluation surveys; qualitative research; 1-y longitudinal follow-up)</td>
<td>2007–2008</td>
<td>17,29</td>
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<td>Indirect and underlying determinants of poor nutrition</td>
<td>Food security</td>
<td>Household (impact evaluation surveys)</td>
<td>2008</td>
<td>14 (urban report forthcoming)</td>
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<td></td>
<td>Economic status, maternal and paternal education</td>
<td>Household (impact evaluation surveys)</td>
<td>1998, 1999, 2000, 2007</td>
<td>Included in all publications</td>
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<tr>
<td>Additional studies to document program performance and strengthen design and operation</td>
<td>Bioavailability of iron in fortified food supplements with different iron compounds</td>
<td>Children 6–24 mo of age (controlled efficacy trial)</td>
<td>–</td>
<td>2006–2007</td>
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<td></td>
<td>Efficacy of Nutrisano and Nutrivida to improve nutritional outcomes in children and pregnancy and lactating women compared to other micronutrient only supplements</td>
<td>Children 6–12 mo of age and women &lt;25 wk pregnant at baseline (controlled efficacy trial)</td>
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<td>2005–2009</td>
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<td></td>
<td>Design and testing of a modified education strategy to improve utilization of the fortified complementary foods</td>
<td>Mothers of children 6–24 mo of age (formative research)</td>
<td>2003–2004</td>
<td>2004</td>
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<td>Effectiveness of EsiAN in the Oportunidades Program to improve nutritional outcomes in children and women</td>
<td>Children 0–5 y of age at baseline and their mothers; pregnant and lactating women (randomized effectiveness trial)</td>
<td>2008–present²</td>
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<td>Impact of adding early childhood stimulation to the benefits of the Oportunidades program on child health, nutrition, and development</td>
<td>Children 0–18 mo of age at baseline (randomized effectiveness trial)</td>
<td>2008–present²</td>
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1 This group of women was chosen partly because they are the main focus of the health and nutrition educational component of the program, because they were at the time of the survey or recently receiving the fortified complementary food (provided during pregnancy and until 1 y postpartum).

2 End-line surveys are anticipated for 2011.
to excess weight (20). In urban areas, beneficiary women who were already overweight or obese gained more weight than matched controls over the 2-y observation period (14). Among pregnant women, consumption of the fortified food was extremely low; only 20% reported consuming any in the urban longitudinal study (17) and it seems unlikely that at this level of consumption, the fortified food could be contributing to increased weight among women. Nonetheless, it may be questioned whether a whole-milk based, sweetened food is the most cost-effective product to address the nutrition problems in pregnancy in this population, predominantly micronutrient deficiency and anemia.

In consideration of this situation and the large expense that the purchase and distribution of the fortified food implies for the program, a cluster randomized community trial was implemented to answer 3 strategic questions: 1) For children, does regular consumption of the fortified food provide benefits for child growth or development over and above those that could be attributed to its micronutrient content? And for women, does regular consumption of the fortified food result in greater weight gain and retention associated with pregnancy than a micronutrient only supplement? 2) Could alternative, micronutrient-only supplements be better targeted to children 6–24 mo of age and could compliance in children and women be improved? 3) What is the comparative cost of providing the fortified food rather than a micronutrient only supplement to children and women? The trial was implemented as an efficacy study in 54 small urban communities and included intensive data collection on supplement consumption (observed daily), dietary intake, and morbidity recall as well as regular follow-up of growth, gross motor milestone and language acquisition, anemia prevalence, and micronutrient status in children and weight gain and retention and anemia and micronutrient status in women through pregnancy and to 3 mo postpartum. Communities were assigned randomly, 18/supplement type, and all beneficiary women <24 wk pregnant and children 6–12 mo of age at baseline were recruited. Children were supplemented to 24 mo of age and women until 3 mo postpartum. Given the high rates of micronutrient deficiency and anemia and that in the program rules of operation (21) all beneficiaries are entitled to receive a nutritional supplement during these critical periods, it would have been unethical to include a placebo control group. Alternative supplements, syrup, and micronutrient powder for children and tablets and micronutrient powder for women were specifically developed for the study and contained the identical micronutrient content of Nutrisano and Nutrivida, respectively. The main results of this trial have been presented at scientific meetings (22–27), some have been published (28,29), and others are forthcoming. The bottom line conclusion for the program was that micronutrient-only supplements would be equally and possibly more efficacious than Nutrisano and Nutrivida in urban areas to improve nutritional outcomes in children and women and would have lower cost and higher potential for appropriate targeting to the intended groups.

The study also highlighted that for young children, supplementation alone is inadequate to address stunting in the population and the program should focus on an integrated approach to appropriate nutritional follow-up, including effective growth monitoring linked to counseling on appropriate breast and complementary feeding and infection control (e.g., hygiene, vaccination). The extent to which these results might be applicable in rural areas also was explored through diverse analyses (30), but the possibility that food insecurity in more isolated poor areas might result in insufficient macronutrient intake in young children could not be ruled out.

Based on the results of this study and previous evaluations, concrete recommendations were made to strengthen the nutrition component of Oportunidades, focusing on an integrated strategy to promote appropriate breast and complementary feeding practices, promote healthy eating habits, and link growth monitoring with effective counseling to improve nutrition (Oportunidades, unpublished data). Based on evidence of impact (22–24,27,28), acceptability, potential to be effectively targeted to the intended stages (6–24 mo of age and pregnancy and lactation) (25), and cost (31), a recommendation was also made to modify the type of nutritional supplement provided to children in urban areas, replacing Nutrisano with a micronutrient powder (Oportunidades, unpublished data). A switch from the fortified food Nutrivida to a micronutrient tablet was also made for all pregnant and lactating beneficiaries in rural and urban areas. The program, in conjunction with the health sector, reviewed these recommendations with the assistance of a national panel of experts in nutrition and health and developed the Integrated Strategy for Attention to Nutrition (referred to as EsI An). The EsIAN includes an integrated communication strategy to improve breast and complementary feeding practices according to the current recommendations (32) in children 0–5 and 6–23 mo, including the use of nutritional supplements and healthy eating for children 2–5 y of age. As part of the EsIAN, the supplementation scheme varies for urban and rural areas, continuing provision of fortified foods for rural areas and changing to the micronutrient powders in urban areas. For pregnant and lactating women, the communication strategy focuses on health eating, appropriate weight gain and identification of risks during pregnancy, promotion of breastfeeding, and use of the multiple micronutrient tablets to prevent anemia and micronutrient deficiency. A comprehensive communication strategy was developed using formative research and program health sector personal were trained in this strategy, appropriate methods for length, height, and weight measurement, and use of the modified supplementation scheme. The strategy is currently being evaluated on a pilot scale in urban and rural areas. Two additional modifications are also being tested: the addition of early childhood stimulation to the program benefits in highly marginalized communities where the prevalence of malnutrition in children is particularly high, and modifications to adjust the program to the reality of large urban centers. For example, in large urban areas there are likely higher rates of employment among women and the transportation and opportunity cost of participation in the health and nutrition component of the programs may be greater than the value of the monetary transfer. The probability of enrollment in urban areas was, in fact, found to be positively associated with the amount of transfer that could potentially be received (33). Modifications that would help overcome barriers to participation in urban areas are being explored.

**Operation of the Oportunidades Program and Implications for Modifications**

To understand the complexities of the Oportunidades program and what this has meant for the efforts to implement modifications that might favor progress to improve nutrition, it is important to review how the program actually operates. Oportunidades is a federal program of the Mexican Secretary of Social Development managed and implemented by the National Coordination of the Oportunidades Program. Service delivery for health and education components of the program, however, relies on existing services through the Secretaries of
Health and Education, respectively (Fig. 1). As well as providing health and education services, each sector monitors the associated co-responsibilities; in this manner the program is not directly responsible for service delivery (except benefit payment) and does not play a role in the training, supervision, or quality control of services. Furthermore, although policies are set nationally, the Health and Education Secretariats are decentralized under the direction of state governments. This results in variability across states in diverse aspects of service delivery and quality and implies that to be effective, operations research to improve delivery and quality must focus at the state level, whereas questions of design and impact can be done centrally.

The initial evaluation of Oportunidades in rural areas was paid for and managed by the Evaluation Division of the National Coordination, but an additional nutrition evaluation, not linked with that overall evaluation, was commissioned by the Secretary of Health. Thus, both sectors were actively involved in the evaluation from the outset, but the planning and financing of evaluation activities was independent within each sector and lacked adequate coordination with clear identification of corresponding roles and responsibilities.

As the evaluations into the nutrition component evolved, the importance of “ownership” of the results within both the program itself and the health sector became evident. Issues related to the design of the program and the definition of co-responsibilities are under the jurisdiction of the program, but any recommendations related to service provision, quality, or verification of the co-responsibilities come under the health sector. To facilitate coordinated efforts as the studies progressed required fostering joint planning and design of the overall research agenda and the specific studies and joint funding of research. As of the planning for the cluster randomized trial, this model was successful and continues to be as the health sector and the program jointly explore alternatives for strengthening the program based on the study results. All reports and recommendations related to modifications to the nutrition component of the program were delivered to both the program and the health sector, regardless of which had funded specific components. Follow-up to the pilot testing of the EsiGAN strategy is a collaboration among the program, the health sector, and the research team.

The Context for an Effective Collaboration between the Mexican Government and the Research Community in Mexico for Decision Making in Oportunidades

Cost and design considerations made it impossible to design the evaluation in such a way that outcomes would be causally attributed to specific components of the program. Despite this limitation, all stages of the evaluations were designed to measure impact on multiple mediating factors, thus permitting the type of in-depth analysis of potential pathways of impact, and to explore modifications that might be required to strengthen impacts in nutrition as described above. This research agenda, designed not only to document impact of the program but to explore potential routes of impact and areas where the program could be strengthened, evolved as a collaboration among the external evaluators of the program, the program operators, and the health sector over the past 12 y since the program began.

Program evaluation, often focused on providing the most rigorous evidence of impact possible, does not always adequately take into consideration the full range of information needs of programs (34). In Mexico, the need to overcome the apparent conflicts in priorities between researchers and policy makers had been identified well before the program began. Areas of potential conflict were identified and means to overcome these were clearly articulated with the goal of ensuring high-quality research that is relevant to programs (35). Specifically, researchers and policy makers often differ in the definition of priorities, use different language and forums for the dissemination of results, are governed by differing time limitations, and may give different weight to the importance of methodologies to integrate findings. This approach to research, referred to as “mission-driven,” was and continues to be the modus operandi of the Center for Research on Nutrition and Health of the National Institute of Public Health (36), which has led the nutrition component of the Oportunidades evaluation from the outset.

Lessons Learned and Implications for the Program and Its Evaluators

The fact that the Oportunidades evaluation in nutrition has gone beyond documenting impact to the development and testing of potential program modifications is due in part to the close relationship among the researchers, the program staff at the National Coordination of the Oportunidades Program, and the National Commission for the Protection in Health. Fostering this relationship has permitted a research agenda focused on improving program design and performance. This process has had a number of implications for researchers and the program.

From the perspective of the research community and as identified by Frenk (35), the timeline for delivery of results in research does not always coincide with the needs of policymakers. For example, political pressures exist to deliver results during government terms. Many nutritional outcomes, however, are not expected to change in the short term. Researchers must be clear on what they can feasibly deliver in a given time period. In the case of the cluster randomized trial mentioned previously, >2 y were required before recommendations could be reported. Oportunidades made the decision that the potential relevance of the results of this study warranted the investment and lag time to receive results.

Another important implication for the research community is the need to support the program, resulting in prioritization in reporting to government over other academic responsibilities such as publication in scientific journals. Although publication of program evaluations in the scientific literature is vital for increasing our evidence base, this is not an effective means to
communicate to decision makers. Academic publications are generally brief, focusing on specific results, and are often without the contextual, operational, and other details vital for program improvement. Reports to the program should be prioritized before the scientific publication, include the appropriate level of detail, and use language appropriate to the audience. Although appropriate in scientific publications, technical language is inappropriate for policy makers and will limit the utility of program reports; this can be a challenge to academics trained in scientific writing.

The commitment to inform program modification from research has also had important implications for the Oportunidades program and the health sector. First, the evaluations highlighted a number of issues that were not originally contemplated as key to program success but vital to improving nutritional outcomes, such as health service quality. Given the decentralized health sector in Mexico, recommendations emerging from evaluations imply modifications at multiple levels of control (federal, state, municipal). Unless this complexity is taken into consideration in recommendations, responsibility for their implementation may be vague and at times unviable. Improving the relevance of recommendations in this context would require close involvement of the health sector in the formulation of recommendations, or, at minimum, an in-depth understanding of the sector on the part of the evaluators to ensure that clear roles and responsibilities can be identified at each level. Furthermore, many recommendations have important implications for resource allocation. For example, a lack of functioning equipment in the health centers (e.g., scales and stadiometers) was identified as a limiting factor for regular follow-up of beneficiaries.

The evaluations have demonstrated clearly that the Oportunidades population is not homogenous in the prevalence or severity of nutrition problems or their determinants, implying that the solution to these also requires a diverse set of benefits based on multiple contextual factors. As a result of the series of studies in nutrition, a modified design was recommended with benefits varying by nutritional risk (identified as urban vs. rural areas). Operationalizing these modifications has had major implications for the program, from rewriting rules of operation to budget allocation. For the health sector, there are national and state level implications for procurement, training, service delivery, and budgets. To be useful, recommendations based on the evaluation must take these complexities into consideration. This implies that evaluators must have an in-depth understanding of them, which is difficult without close collaboration with all sectors involved.

**Relevance of the Experience Outside the Mexican Context**

Efforts to improve the design and performance of the Oportunidades program are ongoing in Mexico and as conditional cash transfer programs continue to be implemented around the world, there is still much to be learned about their potential to improve nutritional outcomes. Reflecting on the process by which the Oportunidades evaluation in nutrition has evolved and the lessons learned from it, we identified 4 factors that have been vital to the success of these efforts. We think these same factors apply beyond the context of Oportunidades and Mexico in general and hope that the experience can strengthen evaluation efforts in other programs.

First, program evaluation requires adequate and ongoing budget allocation. In the case of Oportunidades, the original documentation of impact on nutrition and other outcomes was vital to the ongoing commitment of the government to the program (2). An understanding of the mechanisms by which these results occurred was not necessary for that purpose. The question whether that impact was sufficient given the investment made and whether design improvements or performance could accelerate progress in nutrition cannot, however, be answered by evidence of impact alone. For Oportunidades it was the inclusion of mediating factors in the original evaluation (e.g., use of the fortified foods) and the series of studies described above that have permitted the correction of operational issues and the in-depth reflection related to program design. Although this requires a continual commitment of funds, many of the studies implemented to elucidate mechanisms to improve program operation were considerably less costly than the impact evaluations. For the more costly studies, the initial investment from the program was also effective to leverage funds from other institutions inside and outside Mexico.

Prioritization of evaluation research to meet program needs is a second vital criterion for success. Particularly when program funds are used, evaluation should focus on program needs; documentation of impact and information need to strengthen design and performance. For studies of academic interest and importance but without direct relevance to these needs, external funding should be sought. Greater interest in programmatically relevant research from funding agencies and journals could greatly improve our evidence base not only for program effectiveness but also for operations and best practices, without putting undue pressure on limited program funds to generate such evidence. How to prioritize among the many research needs of a program of the magnitude of Oportunidades presents a challenge. Clear research agendas guided by conceptual frameworks and program theory (37,38) is a first step. In Oportunidades, priorities were originally set by the evaluation unit within the National Coordination, which was advised by a group of national and international experts representing the different areas of program focus (poverty reduction, education, health, anthropology, ethnography). That system is still in place but is now complemented in the case of nutrition by close collaboration with the health sector with the goal of meeting the needs of both in a mutually beneficial manner.8 From the experience in Mexico, the importance of multi-stakeholder involvement in establishing research priorities of all sectors directly affected by the program evaluation from the outset cannot be overstressed.

Program evaluation is sometimes imposed by funding agencies and may not always be viewed favorably by program managers. One of the key factors promoting utilization of findings in the case of Oportunidades was the willingness of the program to be subjected to external evaluation. Throughout the 12 y of its existence, evaluators have had full independence in data collection, analysis, and interpretation of findings. This has required flexibility on the part of the Oportunidades program and ultimately the health sector to accept not only the results that reflect favorably on the program but those that are less favorable. This environment favorable to being subjected to

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8 As of 2007, the National Council for the Evaluation of Social Development Policy (CONEVAL) of the Mexican Secretary of Social Development emits evaluation guidelines and oversees all evaluations of social development programs. CONEVAL is a panel of experts on issues related to poverty, health and social development which oversees all program evaluations. This group provides an objective assessment of the extent to which the evaluation agenda put forth by the program is able to respond to its needs. For more information see http://www.coneval.gob.mx.
evaluation and willingness to learn and adjust based on its results is likely in part due to strong positive leadership in the government (2). The creation of the CONEVAL (see footnote) has also fostered the culture of evaluation in Mexico. The evaluators can play an important role in facilitating this by showing their commitment to the evaluation and its use by the program, spending time discussing findings and their implications for the program. For example, evaluators should use a program and implementation theory-based approach to evaluation design (37,38), working with program counterparts to ensure that potential pathways to impact are clearly represented and appropriate indicators included for intermediary variables and program processes. Furthermore, if null or negative results are found, possible reasons for this should be clearly articulated using the program and implementation theory framework, and their potential importance for the program should be discussed.

In summary, the experience in Mexico highlights a challenge to the research community. Implementation of research to document the impact of programs and the publication of such findings in peer-reviewed journals, although vital for improving our evidence base and for the advancement of researchers within the current academic system, is not enough to ensure that the program itself will benefit from the evaluation. It is our obligation, particularly when funding for evaluation has come from the program, to ensure we comply by the principals of relevance as well as excellence in evaluation research (35). In the experience of nutrition in Oportunidades, the modification of program design and implementation based on results from evaluation activities was favored by open dialogue among all sectors involved in the program and the evaluation team and a long-term commitment on the part of all those involved. We think that the lessons learned from this process are relevant for other programs, even where resources may be limited.

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Literature Cited


