



Discussion Paper BRIEFS

Food Consumption and Nutrition Division of the International Food Policy Research Institute

Discussion Paper 187

The Use of Operations Research as a Tool for Monitoring and Managing Food-Assisted Maternal/Child Health and Nutrition (MCHN) Programs: An Example from Haiti

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The public health community increasingly recognizes that the lack of progress in reducing childhood malnutrition and mortality is not due to a lack of knowledge or technology, but rather to inefficiencies in program delivery, implementation, and utilization. A powerful but underutilized tool to evaluate and strengthen program delivery and implementation is operations research. This manuscript summarizes the experience of an IFPRI-Cornell University research team in applying the methods of operations research to a Title II food-assisted Maternal and Child Health and Nutrition (MCHN) program implemented by World Vision-Haiti in the Central Plateau region of Haiti.

The manuscript and methods employed aim to help program managers, researchers, and development professionals apply operations research methods to evaluate and strengthen similar programs in developing countries. Given the size of budgets allocated to food-assisted MCHN programs (e.g., the U. S. Agency for International Development spends roughly \$165 million per year on these programs), it is critical to ensure their effectiveness. Operations research holds promise for helping achieve this goal. Effective programs, in turn, can help accelerate progress towards improved child nutrition, health, and survival.

Purpose of this Study

Operations research aims at studying the processes by which programs are implemented and interventions are delivered. The ultimate goal is to identify operational constraints and bottlenecks, and to identify, test, and scale-up potential corrective actions to improve programs' performance. In Haiti, the specific objectives of the operations research were to assess (1) the *effectiveness* of implementation of the program, (2) the *quality* of service delivery, and (3) the *perceptions* of beneficiaries and front-line service providers regarding the program, and the *motivational factors* that may affect workers' satisfaction and performance.

Methodology

The research team used qualitative and quantitative

methods, including structured observations at different program delivery points, structured and semistructured interviews with beneficiaries and staff, and focus group discussions with program staff. The program service delivery points studied included

1. 19 "rally posts" (RP), which identify beneficiaries, provide health education, monitor and promote child growth, and provide other preventive health care services;
2. 20 "mothers' clubs" (MC), where participants gather for peer group discussions of health and nutrition topics as part of the program focusing on changing behavior; and
3. 10 "food distribution points" (FDP), where beneficiaries receive their monthly food rations.

Key Findings

The assessment found that the rally posts generally operated according to plan, but experienced some organizational and logistical problems due primarily to crowding, high participant-staff ratio, long waiting times, bottlenecks at registration, and lack of supplies and staff transport. The assessment also highlighted the need to improve the general education sessions and communication between health staff and caregivers to improve service quality. The team found that minimizing measurement errors in weighing children and plotting correctly the child's weight on the growth chart (which determines the child's nutritional status and eligibility for program benefits) would improve the program's targeting and cost-effectiveness.

Mothers' clubs are the key venue for the program's new education and Behavior Change and Communication (BCC) strategy. The research showed that staff training and the development of new education materials in 2003 resulted in marked improve-

ments in the quality of the education, both with regards to the technical content of the sessions and the health staff's facilitation and teaching skills. A continued challenge to maximizing the effectiveness and impact of the BCC strategy is ensuring that mothers attend the club that best

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corresponds to their physiological status (whether pregnant or lactating) or to the age or nutritional status of their child. The research team recommended continued emphasis on staff supervision and regular retraining to sustain educational quality, and staff and beneficiary motivation.

The food distribution points are characterized by logistical and distributional problems, such as limited transport facilities, fuel scarcity, and other structural problems, such as poor roads, which are largely beyond program control. The sheer number of beneficiaries—averaging 240 recipients—contributes to excessive crowding and long waiting times. The research team also found that beneficiaries often did not receive the amounts of food commodities they were entitled to: some received more and others less. Solving food allocation problems is important for fairness and to ensure that resources are used efficiently. A further problem is that beneficiaries commonly share food commodities intended for mothers and children with other household members, friends, or neighbors. Although the program provides an *indirect* ration specifically to address this problem, it does not prevent the sharing of the ration specifically intended for program beneficiaries (i.e., mother or young child). The research team recommends that the program continues to educate recipients in the appropriate use of the rations, especially the fortified commodities such as wheat-soy blend, which are specifically formulated to help young children meet their daily nutrient requirements.

Focus group discussions from five categories of program implementers (including frontline workers from the health and commodity side and their supervisors) assessed their perceptions of the work environment and supervision. Staff at all levels felt they were engaged in important activities, leading to improvements in the lives of the people and communities served by the program. As one community volunteer said, “Our motivation is the

community development.” Another volunteer observed, “Facing my responsibilities in the program, I feel proud. I have the information on how a child develops, how the child should eat, and what a pregnant woman should do.” Discussions also identified issues—especially low pay, heavy workloads, and (largely unavoidable) logistical constraints—that diminished their satisfaction with their work. Overall, however, the results point to high levels of staff motivation and commitment, and satisfaction with the level of supervision received.

Using Research Findings to Strengthen Program Operations

After presenting the results, the research team held a two-day workshop with program staff to generate an action plan for addressing some of the operational constraints identified through the research. The team developed a decision tool to guide the discussions, and to facilitate prioritization of constraints and of potential solutions to be implemented to strengthen by the program. The main criteria used for the prioritization of constraints to be addressed were (1) the possibility of identifying a solution (or corrective measure); (2) the feasibility of implementing the solution, given the program’s current financial and human resources; and (3) the estimated impact of implementing these corrective measures on program operations and effectiveness. The tool proved very useful for decisionmaking and prioritization and led to the development and implementation of a manageable action plan. A follow-up operations research is planned to monitor progress and to document improvements in program operations.

Keywords: operations research, maternal/child health, nutrition, food aid programs, Haiti

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