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Monograph No. 3

Setting Quantitative Objectives in Health Sector Programs

Lessons Learned from the Philippine Child Survival Program

SETTING QUANTITATIVE OBJECTIVES IN HEALTH SECTOR PROGRAMS

PN-ABR-933

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Lessons Learned from the Philippine Child Survival Program

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List of abbreviations used

APBHP - Area Program-Based Health Planning
ARI - Acute Respiratory-Tract Infection
BHS - Barangay Health Station
CPR - Contraceptive Prevalence Rate
CSP - Child Survival Program
DOH - Philippine Department of Health
EPI - Expanded Program on Immunization
FHSIS - Field Health Services Information System
FP - Family Planning
FPS - Family Planning Service
IUD - Intrauterine Device
MCHS - Maternal and Child Health Service
MHO - Municipal Health Officer
OPD - Outpatient Department
ORS - Oral Rehydration Salts
ORT - Oral Rehydration Therapy
PHN - Public Health Nurse
RHM - Rural Health Midwife
RHU - Rural Health Unit
TBA - Traditional Birth Attendant
TT2 - Tetanus Toxoid, 2nd Dose
UPPI - University of the Philippines Population Institute
USAID - United States Agency for International Development
VSC - Voluntary Surgical Contraception
WHO - World Health Organization

Executive summary

Clear and measurable objectives are an important management tool, particularly in health sector programs. This paper examines the effect of setting such quantifiable output objectives (for example, increasing the number of fully immunized children from 65 percent of infants to 85 percent) on the Philippine Child Survival Program (CSP) and what can be learned from the experience.

For the concerned organizations quantitative objectives can: 1) get staff to focus on important aspects of service delivery, 2) help managers pay more attention to quantitative information, 3) provide a common vision, and 4) allow managers at all levels to make course corrections.

Some problems may arise from having quantifiable targets if: 1) the objectives are not causally linked with the desired impact, 2) the organizations are fearful of committing themselves to targets, 3) quantity is stressed over quality, and 4) the targets lead to vertical and centralized program management.

The CSP quantitative objectives were output, rather than impact, indicators because the former are easier to measure and are more directly related to the health system's efforts. Defining the output objectives in a measurable and programmatically important way took a considerable amount of time. The final definitions were accepted more than two years after the CSP began.

The Department of Health (DOH) and the United States Agency for International Development (USAID) focused attention on certain key areas of service

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delivery by choosing only nine target objectives. The establishment of quantitative indicators of success had a positive effect on managers' collection and use of data. For example, a new way of doing household surveys was created to measure the contraceptive prevalence rate.

The CSP indicators did not appear to give a common direction to DOH staff, because they were not widely known. The targets were infrequently used to make course corrections because baseline data were not readily available, and because there were few occasions on which they were discussed by top management.

The problems that could have arisen from the use of quantitative targets did not materialize. There were no contentious arguments about the actual target figures because they were derived from pre-existing directional plans. There was no evidence that quantitative targets lead to a lack of attention being paid to qualitative aspects of service delivery. On the contrary, issues of quality were explicitly addressed in revised definitions of the targets and were the subject of special studies. The measurable objectives did not interfere with decentralization, because nothing explicit or implicit in them specified the means by which they should be accomplished.

Overall, it appears that trying to set clear and quantitative objectives is feasible and can have important advantages. The experience during the CSP suggests that:

1) Much time and effort is needed at the beginning of any project or program to establish a few easily measured, epidemiologically valid, output indicators.

2) It is important to spend the small sums of money required to establish accurate baseline figures for the selected targets.

3) For objective targets to lend a common direction to an organization they need to be widely circulated and discussed.

4) Quantitative indicators need to be measured regularly, at least annually, and preferably more often.

5) The review of progress toward accomplishing targets should take place at all levels of the organization, starting with top management. ■

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Introduction

Establishing clear and measurable objectives has long been advocated as an important management tool in all settings. Such objectives may be particularly important in the social sector, where "profit" or "internal rate of return" does not have much meaning in assessing the success of a project. This paper examines the lessons learned from setting quantifiable output objectives during a large donor-assisted health project in the Philippines.

The Child Survival Program (CSP) was a four-year effort, starting in 1989, supported by a US$45-million grant from the United States Agency for International Development (USAID) to the Philippine Department of Health (DOH). The desired impact of the CSP was an overall reduction in infant and child mortality rates as well as a reduction in the variance of these rates among the regions of the country.

While decreases in infant and child mortality constituted the program goals, nine intermediate, output objectives were developed by the DOH and USAID. Called "service delivery targets," they included indicators such as increasing the percentage of infants who were fully immunized by their first birthday from 65 percent to 85 percent.

The service delivery targets had two major advantages over the CSP impact indicators:

1) They were easy to measure through routine statistics or simple and inexpensive household surveys. By comparison, tracking mortality rates was more technically difficult, time-consuming and expensive.

2) Besides being easier to measure, the service delivery targets also had the advantage of being more directly related to the performance of the health care system. Levels of immunization coverage were unlikely to improve without increased efforts by the DOH. Mortality rates, by

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contrast, could have declined (the so-called secular trend) for poorly understood reasons that were unrelated to the efforts of the DOH.

In the Child Survival Program the annual disbursement of funds to the DOH was contingent on the accomplishment of "benchmarks," which were input or process measures. For example, one benchmark involved the implementation of an area program-based health planning (APBHP) process. According to the logical framework used in designing the CSP (see Appendix), the benchmarks were meant to lead to the achievement of the service delivery targets and assure their sustainability. Significantly, the accomplishment of the service delivery targets was *not* a prerequisite for the release of funds to the DOH. The relationship between the service delivery targets and the program goals and benchmarks is described in Table 1.

The accomplishment of the service delivery targets will be assessed in 1994, but it already appears that some of the targets have been achieved. It is unclear, however, to what extent their accomplishment was due to the CSP and its efforts at objective target setting. Hence, this paper will explore the process by which the service delivery targets were developed, examine what advantages the DOH and USAID gained from them, and look at any problems that arose from their use. ■

Table 1: Relationship of CSP service delivery targets to program goals and benchmarks

Type of indicator	*Process or input*	*Output*	*Impact*
Terminology used in CSP	Benchmark	Service delivery target	Program goal
Example	Implementation of an area program-based health planning procedure at all levels	Increase in immunization coverage from 65 percent to 85 percent of all infants	Decline in infant mortality rate

PUTATIVE CAUSATION

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1
Developing the service delivery targets

Devising the original definitions

The nine service delivery targets were selected primarily by the DOH, with USAID input, and came from existing five-year directional plans. All programs within the DOH are expected to develop these medium-term plans and state their expected accomplishments in quantitative terms. Some of these indicators were selected to be service delivery targets based on discussions between an undersecretary and program managers. While there were no explicit criteria used in deciding which indicators should be service delivery targets, an important consideration was that the indicators should not be outside of DOH's control. For example, an indicator on decreasing the number of moderately and severely malnourished children was not included on the list of service delivery targets, because it was felt that this was not solely, or even primarily, dependent on actions of the DOH.

The original definitions of the service delivery targets appear in the left-hand column of Table 2. According to the DOH staff involved in the process, one of the most difficult aspects of developing the service delivery targets was getting agreement on the baseline values for each indicator.

Revising the definitions

After the Child Survival Program began, DOH and USAID realized that some definitions of the service delivery targets needed to be changed or clarified in order to be able to measure

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Table 2: Definitions and methods for measuring the nine service delivery targets

Original definition	*Revised definition**	*Method for measuring indicator*
1) Percent of all children under age one who are fully immunized increases from 70% (1988) to 90%.	Percentage of all children at age one who are fully immunized increases from 65% (1988) to *85%* (1993).	Data will come from the FHSIS. Numerous cluster surveys have shown good agreement between the routine reporting system and survey results.
2) Percent of pregnant women with tetanus toxoid immunization increases from 37% (1988) to 80%.	Percentage of pregnant women with *at least 2 doses* of tetanus toxoid increases from 50% (1991 household survey) to 80% (1993).	The data will come from the 1993 household survey. Monitoring of progress toward accomplishing the indicator can be done using the FHSIS and employing the following formula: $\frac{TT2 + TT3 + TT4 + TT5}{\text{Population} \times 3.5\%}$
3) Percent of all births attended by trained personnel, including trained traditional health personnel, increases from 62% (1988) to 80%.	Percentage of all births attended by trained personnel, *whether private or public* including trained TBAs, increases from 76% (1991) to 85% in 1993.	To be consistent, the data will come from a follow-on household survey in 1993. FHSIS could be used to monitor progress toward the target based on the formula: $\frac{\text{Births attended by trained } hilot \text{ or DOH personnel}}{\text{Total population} \times 3\%}$
4) Percent of all pregnant women served by DOH with at least three prenatal visits increases from 40% (1989) to 80%.	Percentage of all pregnant women served by DOH with at least three prenatal visits increases from 48% (1991 household survey) to 80% by 1993.	The data will come from the 1993 household survey. FHSIS can be used to monitor progress employing the following formula: $\frac{\text{No. of women receiving third prenatal visit}}{\text{Population} \times 3.5\%}$

* Parts in italics indicate changes from the original definition

Original definition	*Revised definition**	*Method for measuring indicator*
5) Percent of all DOH outreach workers trained to deliver a wide range of FP services increases from 24% (1989) to 75%.	Percentage of DOH outreach workers trained to deliver a wide range of FP services increases from 59.5% (1990 FPS survey analyzed by UPPI) to 75% by 1993. *"Outreach workers" refers to midwives, public health nurses and physicians working in BHSs, RHUs and district hospitals* *According to the type of health facility, the worker is considered "trained" if she is able to:* *For BHSs: Provide pills and condoms, information and referral on NFP, information and referral for IUD insertion and VSC.* *For RHUs: Same as for BHSs but including provision of IUD insertion* *For district hospitals: Same as RHU but including provision of either Bilateral Tubal Ligation (BTL) or vasectomy.*	Data will come from follow-on health facility survey in 1993, using the same method as the 1990 survey. The percentage of health workers trained would be calculated as the average of the following percentages: No. of trained RHM x 100 / All RHMs No. of trained PHN x 100 / All PHNs No. of trained MHO x 100 / All MHOs No. of hospitals with 1+ trained MDs / All district hospitals
6) Percent of DOH health centers delivering a broad range of Family Planning services increases from 82% (1989) to 97%.	Percentage of DOH health facilities delivering a broad range of FP services appropriate to the type of facility increases. *a. BHS: from 1.9% (1990) to 40% in 1993* *b. RHU from 0.5% (1990) to 50% in 1993* *c. District hospitals from 0% (1990) to 25% (1993)* *"Delivering a broad range of FP services" is defined as meeting all of the following criteria:*	Data will come from follow-on health facility survey in 1993, using the same method as the 1990 FPS survey analyzed by UPPI.

* Parts in italics indicate changes from the original definition

Table 2 continued

Table 2 — continued

Original definition	*Revised definition**	*Method for measuring indicator*
	1. At least one of the full-time personnel working in facility has completed the minimum training requirement appropriate to the type of facility. *2. Have an adequate stock of FP supplies. For BHS and RHUs, this would mean having enough for two months, given the number of current users in the catchment area. District hospitals should have three months' supply.* *3. Are routinely reporting FP services rendered.*	
7) Percent of all midwives and district hospital doctors and nurses with DOH training in new ARI case management and provided with adequate ARI management drugs/ supplies increases from 0% (1989) excluding Bohol Province demonstration program to 40% (midwives) and 70% (doctors and nurses) respectively.	Percentage of all midwives, nurses and doctors working at, or below, the level of the district hospital trained in new ARI case management, increases from 0% (1989) excluding Bohol to 40% in 1993. *"Training" is defined as follows:* *Midwives should be able to:* *a) diagnose and correctly classify cases of pneumonia* *b) differentiate early pneumonia from severe pneumonia* *c) know how to adequately treat early pneumonia through oral antibiotics and home care management* *d) understand the procedure for referring cases of severe pneumonia.* *Doctors and nurses in RHUs and OPD and emergency rooms of hospitals should be able to:* *a) correctly diagnose and classify ARIs* *b) Adequately and properly manage early pneumonia through oral antibiotics at home and refer more severe cases to hospitals* *c) Attend to other ARI problems such as wheeze, sore throat and ear problems*	Data will come from reports from training centers and the provinces. The percentage will be calculated in the following manner: Numerator = cumulative number of midwives, nurses and doctors trained until 1993 Denominator = Total number of midwives, nurses and doctors working at or below district level as of 1991.

* Parts in italics indicate changes from the original definition

Original definition	*Revised definition**	*Method for measuring indicator*
	Doctors and nurses attending to inpatients in hospitals should be able to: *a) correctly manage severe and very severe pneumonia cases with parenteral antibiotics and oxygen. Doctors and nurses attending to inpatients and outpatients in hospitals should properly refer to RHU or BHS staff cases seen in the hospital.*	HS with WHO assistance will carry out a dy to determine the effectiveness of the raining. This will indicate whether health workers have learned what is expected of them.
8) Use of public and private supplied ORT in all diarrhea cases in children aged 0-5 increases from 22% (1989) to 60%.	ORT use rate in all cases of diarrhea among children aged under five increases from 25% (1991 household survey) to 60% in 1993. *"ORT use rate" is the percentage of caregivers who spontaneously mention giving ORS, am, soups, coconut water, or fruit juices to their children with diarrhea.*	The data will come from a 1993 household survey. The ORT use rate will be calculated from children with diarrhea in the last 24 hours.
9) Total public and private supplied Contraceptive Prevalance Rate for all married women aged 15-44 increases from 47% (1988) to 55.4%.	Total Contraceptive Prevalence Rate for *all program methods*, provided by the public or private sector, increases from *22% (1988 Contraceptive Prevalence Survey, UPPI)* to 35%. *"Program methods" are pills, condoms, IUDs, Natural Family Planning (symptothermal, basal body temperature, cervical mucus) and voluntary surgical contraception.* *"Nonprogram methods" include rhythm, withdrawal, abstinence, foams and spermicides.*	Data will come from the National Demographic and Health Survey scheduled for early 1993. Monitoring of progress will be done using provincial-level cluster surveys following the EPI model. The survey method is being developed by Family Planning Service and UPPI.

* Parts in italics indicate changes from the original definition

them properly, and in a way that would make programmatic sense. Starting in early 1991 discussions were held within the DOH to clarify and refine the definitions of the service delivery targets. These discussions took many months, since many of the issues came back to basic objectives of the programs, technical details of program implementation, and the method of measurement.

The example of tetanus toxoid coverage

The service delivery target concerning tetanus toxoid coverage (Table 2, indicator 2) needed to be changed so that it specified that a pregnant woman should have received two *or more* doses of tetanus toxoid by the time she gave birth. This clarification reflected more accurately what the program wanted to accomplish, i.e. lifetime protection of women and all their babies. Tetanus toxoid must be given five times to a woman over the course of at least three years to ensure lifetime immunity. Hence, focusing on only two doses was not in keeping with the goals of the Expanded Program on Immunization.

During discussions with the Maternal and Child Health Service, the question also arose whether pregnant women alone should be the target group for tetanus immunization or whether the target should be expanded to include all women of child-bearing age. This very important issue was raised as a result of discussing the service delivery target. At that time the decision was made to focus only on pregnant women because of a vaccine shortage.

The method used to measure the tetanus toxoid coverage also required much discussion. Women in the Philippines had rarely received an immunization card, making it difficult to know how many lifetime doses they had been given. Partly as a result of the discussions about the service delivery target, an immunization card for women was developed and distributed nationwide.

Changes in definitions

Overall six of the nine service delivery targets (indicators 2, 5, 6, 7, 8, 9) needed substantial changes or clarifications for them to be measurable and meaningful operationally.

Measuring the baseline

Three of the nine service delivery targets (indicators 3, 5, 6) needed substantial changes in the baseline figures used in the definitions. The biggest change was needed in indicator 6, the percentage of DOH facilities that were providing a "broad range"

of family planning services. The baseline originally used, 82 percent, turned out to be much too high as the DOH's own data subsequently showed. A health facility survey found that only 1.9 percent of Barangay Health Stations and 0.5 percent of Rural Health Units were judged by the DOH to be meeting the operational definition of providing a "broad range" of services.

In October 1991 an independent market research firm conducted a large household survey (sample size = 14,400) which provided the first accurate, national estimates for four out of the nine indicators (indicators 2, 3, 4, 8). The survey cost US$70,000, representing 0.14 percent of the total cost of the CSP.

The changes in the definitions of the service delivery targets were finalized by the DOH in October 1991 and officially agreed upon by USAID in May 1992, almost three years after the CSP started. ■

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2
Advantages of the service delivery targets

1. Common direction

Strategic targets may help ensure that managers and health workers have a common idea of what constitutes success. This can provide the health care system with a shared vision that may increase levels of staff commitment. Simply by knowing exactly what is expected of them, health workers can improve their performance greatly. A recent, controlled study in the Philippines showed that supervision which made explicit what the tasks of health workers were, led to a large improvement in objective measures of performance.

In order for strategic objectives to lend a common direction to an organization, they need to be widely known, perceived as being important, and seen to represent the strategic vision of the leadership. In-depth interviews were conducted with different kinds of health workers in four regions of the country to examine the extent to which they knew and paid attention to the service delivery targets. Many had no clear idea of what the nine service delivery indicators were. There had been little orientation of field staff on the service delivery targets and there were no written materials that they could easily refer to.

Most of the health workers interviewed confused the service delivery targets with the indicators used in the Area Program-Based Health Planning (APBHP) method adopted by the DOH. In the APBHP local health managers selected one indicator for each program of the DOH, and some of the indicators chosen were the

same as CSP service delivery targets. In particular, the three indicators on immunization and prenatal care (indicators 1, 2, 4) were often used, but the other indicators tended not to be included in the area plans. It is hard to see how field staff could have considered the service delivery indicators important if they weren't sure what they were.

The situation in the DOH central office was better. Program managers had to be aware only of the service delivery targets of their programs, and the targets came from their own directional plans. Central office staff also had more direct involvement in the CSP, partly because considerable resources were made available to them.

2. Focus

Large development projects often lack focus and may get sidetracked by trying to do too many things. A related problem is the establishment of a large series of indicators, few of which can be achieved or measured. This kind of "indicator inflation" lessens the value of each indicator and means that the organizations involved will likely pay less attention to achieving any of them.

One of the big advantages of the CSP service delivery targets was that there were relatively few of them. The DOH avoided "indicator inflation" by concentrating on just the most important output indices for each program. Formal criteria were not needed in order for top DOH management to limit the number of indicators.

3. Course correction

Another major advantage of objective targets is that they enable managers to make "course corrections" based on the results of baseline and subsequent evaluations. If progress on the selected indicator is not adequate, managers can analyze what the problems are and take action. Traditionally, evaluation of projects has been done at the end, separate from ongoing project management. Well-defined and easily measured targets may help break down the false dichotomy between project management and evaluation.

A few prerequisites are needed for strategic objectives to be used for course correction: Baseline figures must be clear; the data on each indicator must be available regularly to all the managers who need to take action; the indicator must be able to change measurably in the period between reviews; and there must be a regular and influential forum for discussing the current status of each major indicator.

It is difficult to know the

extent to which program managers in Manila and managers in the field used the service delivery targets. But there is circumstantial evidence that the targets were not used to make course corrections. As mentioned earlier, three of the service delivery targets had baseline figures that were substantially revised when better data became available in late 1991.

For four of the service delivery targets, information could have been obtained from the routine reporting system (the Field Health Services Information System, or FHSIS). Of the other five service delivery targets, two (on the number of health workers trained in acute respiratory-tract infection and family planning) could have been measured regularly without much extra effort. Only the indicators on the use rate of oral rehydration therapy, contraceptive prevalence rate, and percentage of health facilities providing a broad range of family planning, needed special surveys.

Although six of the nine service delivery targets could have been readily measured without resorting to surveys, interviews with health workers suggest that data were not regularly sought, or reviewed. Only the indicators on immunization and prenatal care were analyzed annually by field managers.

Some of the indicators would have been difficult to monitor regularly because the expected changes were small. For example, to measure changes in the contraceptive prevalence rate from year to year would have required fairly large household surveys. Detecting a 3-percentage-point change in the CPR annually would have needed a sample of 3,201 couples, while looking for even a 5-percentage-point change would require surveys of 1,200 couples. Given the difficulties in measuring CPR, some other indicator (e.g. the number of new acceptors of IUD) that could be monitored frequently might have been more useful.

Every year, there was a high-level meeting between officials of the DOH and USAID to discuss the accomplishment of the benchmarks that served as the basis for the release of CSP funds. At none of these meetings was there any discussion of the status of the nine service delivery targets. Besides the annual meetings, lower-level, quarterly meetings were also held to discuss progress toward attaining the annual performance benchmarks. At only a few of these meetings was there any discussion of the service delivery targets.

Overall, data on the service delivery targets did not appear to

be regularly evaluated and used for course correction, even though information on six of them was at hand.

4. Improving the quality and use of data

By getting organizations to deal explicitly with issues of measurement, quantifiable targets may increase the quality, appropriateness and use of data that are collected. This in turn may provide managers with new insights into their programs. For example, the Expanded Program on Immunization (EPI) has used a simple survey technique based on cluster sampling to measure vaccination coverage levels. These surveys have provided program managers with a generally high-quality yardstick against which to compare the routine reporting system. The surveys have also served as a way for managers to learn more about their target audience, their reasons for not getting vaccinated, and where the unvaccinated children are likely to be found.

The service delivery targets were very successful in getting program staff thinking about measurement issues and the generation of high-quality information. For example, discussions about the service delivery target on the contraceptive prevalence rate (CPR) led the DOH to develop a survey method to measure the CPR on a provincial level. This approach, based on the EPI 30 cluster surveys popularized by WHO, was used by provincial and national managers to get a better idea of the actual level of the CPR. Data from the routine reporting system tended to overestimate the real CPR.

Some of the attention paid to measuring the service delivery targets led to better program management. For example, indicator 6 on the proportion of health facilities able to deliver a "broad range" of family planning services forced central office managers to define operationally what this meant. The idea that a health facility had to have trained staff, enough family planning supplies to last at least two months, and be reporting and recording correctly, helped the managers focus on ensuring these basic conditions were met.

The results of a health facility survey showed that few DOH facilities met the criteria for providing a "broad range of services." These data gave family planning managers critical information about their program. Rather than being seen as a threat, the results were readily accepted and used, demonstrating the influence quantitative data can have on managers' perceptions. ■

3
Potential problems with quantifiable output objectives

While there were many obvious attractions to having measurable objectives, there were also some potential problems:

1. Epidemiological validity

One critical issue was whether the target indicators were causally related to the desired impact. For some of the service delivery targets such as infant immunization, immunization of mothers with tetanus toxoid, and increasing the contraceptive prevalence rate, the evidence was fairly compelling. For other targets, such as the indicator on three prenatal visits, the clear evidence linking output and impact was not available. A recent review sponsored by WHO found little evidence that prenatal care was related to a reduction in poor maternal outcomes (there was little evidence one way or the other).

For some of the indicators where a causal link to the desired impact was lacking, program managers ensured that further research was carried out. For example, the manager of the Maternal and Child Health Service wanted to ensure that increasing the number of trained *hilots*, or traditional birth attendants (indicator 3), would make a difference to maternal and child mortality. A survey was done showing that trained *hilots* knew more and had better self-reported obstetrical practices than *hilots* who had never been trained. This only answered part of the question, so a research project was contracted out to a university to examine the effect of attendance at delivery on maternal mortality.

In the absence of clear results from rigorous studies, there will always be some controversy about the epidemiological validity of any indicator. Nonetheless, taken as a whole, accomplishment of the service delivery targets will probably have had an important impact on the health of children and their mothers.

2. Fear of not achieving targets

Another potential difficulty

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was that the organizations involved could have been apprehensive about setting specific targets because they risked being embarrassed publicly if the targets were not met.

The problem that managers at all levels would try to set targets as low as possible in order to avoid being embarrassed was avoided in the CSP. The targets came from five-year directional plans that the services themselves had developed. The services tended to exaggerate their expected accomplishments in order to get a greater call on resources. When resources became more readily available under the CSP, it was difficult for managers to go back on their commitments.

For both central office and field managers, anxiety may also have been allayed because the top management of the DOH treated the service delivery targets as notional rather than exact. A change in tetanus toxoid coverage from 37 percent to 45 percent was not going to be judged acceptable, but an increase from 37 percent to 75 percent would be considered a great success even if the 80 percent target was not reached.

Some field managers at the provincial level were hesitant to commit themselves in writing to accomplishing specific targets. This diffidence was overcome partly by the fact that agreeing on such targets was one of the benchmarks of the CSP. The provincial managers knew that the release of CSP funds depended on achieving this benchmark and that some of the CSP funds would go to them.

3. Quantity over quality

One concern that was expressed explicitly during the mid-term review of the CSP was that quantitative objectives, like the service delivery targets, would reduce the attention paid to qualitative aspects of service delivery. For some of the indicators, such as immunization coverage, this issue did not really arise. But this was certainly a potential difficulty when it came to the indicators on training and on prenatal care.

One of the creative ways the program managers in the Department of Health dealt with this issue was to include in the revised definitions of the service delivery targets explicit delineation of what training was expected to accomplish. For example, the service delivery target concerning training health workers in the new approach to the management of acute respiratory-tract infections (ARI), stipulated exactly the desired outcome of the training. Thus, midwives were expected to be able to classify cases of pneumonia according to the degree of

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severity and know the exact means of treating mild pneumonias. In order to ascertain whether the midwives going through the DOH training program actually knew what they were supposed to, an in-depth evaluation was carried out with assistance from USAID. This showed that 48 percent of health workers receiving the training could correctly classify ARI cases and 76 percent knew the appropriate treatment.

When it came to the qualitative aspects of prenatal visits a different approach was required. Having at least three prenatal visits was in itself a good start, but the question arose about what those visits should include. The Maternal and Child Health Service developed a Home-Based Mothers Record, a card that systematized what was done during prenatal visits. With help from the Child Survival Program, the card has been implemented countrywide.

Given the experience with these two indicators it appears that quantitative targets were *not* the enemy of improvements in quality. On the contrary, service delivery targets may have actually helped managers concentrate on issues of quality of care. By focusing on certain areas of service delivery, the issue of quality became more apparent.

4. Emphasizing vertical programming and hindering decentralization

Another apprehension about selecting a limited number of quantitative targets was that they might lead to excessively vertical programs in which services were not integrated. Similarly, the selection of targets, primarily by the DOH central office, might have centralized decision-making unnecessarily.

If the service delivery targets posed any threat to the integration of health care it was not apparent during the CSP. This may have been because a basic element of the CSP was the promotion of service integration. A CSP benchmark was the development of policies and a manual aimed at increasing integration.

The service delivery targets also did not appear to jeopardize decentralization in any meaningful way. Health staff from each province negotiated with central office staff the actual quantitative targets for their own area. More important, there was nothing explicit or implicit in the service delivery targets that specified the means by which they should be accomplished. This was left to local health officials to decide on. So whether local health workers decided to improve immunization coverage by using health volunteers or by using the mass media was entirely up to them. ■

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Conclusion

The service delivery targets selected by the DOH and USAID bore the characteristics of good output indicators. They were, after some refinement, relatively easy to measure and monitor. They were also selected so that their accomplishment was primarily dependent on the DOH, they were few in number, likely to have a real impact if accomplished, and attainable within the resource constraints faced by the DOH.

The problems that could have arisen from the use of quantitative service delivery targets did not materialize. There were no arguments about the actual target figures, there was no evidence that quantitative targets lead to a lack of attention being paid to qualitative aspects of service delivery, and the service delivery targets did not lead to vertical programming or interfere with decentralization.

The service delivery targets did have a major impact on improving the quality of information, and did give managers insights into their programs that they might otherwise not have had.

Two important advantages of service delivery targets did not materialize. They did not appear to serve as a common direction for the disparate parts of the DOH. The service delivery targets also were not used by managers to make course corrections. ■

Recommendations

1) Much time and effort needs to be invested at the beginning of any health project or program to develop a few easily measured, epidemiologically valid, quantitative output indicators.

2) It is important to spend the small sums of money required to establish accurate baseline figures for the selected objectives because the figures will be essential for evaluating the program and making course corrections along the way. The very process of trying to measure the indicators will also likely help clarify their definition and assist in the design of the program.

3) To lend a common direction to an organization, service delivery targets need to be widely circulated and discussed. The use of newsletters, circulars and meetings at all levels will ensure there is a consensus that the indicators are important and achievable.

4) The review of progress toward accomplishing service targets should take place at high levels within the organization, and all the way down to the municipal level.

5) For targets to be meaningful, they must receive attention at least yearly, and preferably more often. ■

Appendix

LOGICAL FRAMEWORK

Program Title and Number: Child Survival (492-0406)

Narrative summary	*Objectively verifiable indicators*	*Means of verification*	*Important assumptions*
Program or Sector Goal: The broader objective to which this project contributes: (A-1) To contribute to a reduction in the variance in infant and child mortality and morbidity rates among and within provinces and regions, while simultaneously lowering the corresponding national rates.	**Measures of Goal Achievement: (A-2)** — Lower national infant and child morbidity and mortality rates — Reduced variance in child morbidity and mortality rates among and within provinces and regions.	**(A-3)** GOP health statistics.	**Assumptions for achieving goal targets: (A-4)** — Policy changes and expanded service delivery will lead to low infant/child morbidity and mortality rates. — GOP will continue to provide resources at least equal to its FY 1990 level. — GOP will continue efforts after USAID program has ended. — Other socioeconomic factors that affect child survival rates, such as educational levels, will continue to have a favorable effect.
Program Purpose: (B-1) To increase the availability, use and sustainability of child survival-related service, including child spacing, particularly to underserved and high-risk groups.	**Conditions that will indicate purpose has been achieved: End-of-Program Status: (B-2)** Increased delivery and use of child survival-related services; implementation of health policies affecting child survival-related activities.	**(B-3)** — Midterm and final evaluations. — DOH records and reports. — Consultants' periodic reports. — Special population-based surveys. — Intermittent field monitoring.	**Assumption for achieving purpose: (B-4)** — Identified constraints are the significant barriers to progress. — GOP will agree to and implement needed policy changes. — DOH service delivery system has the capacity to absorb additional resources.

Narrative summary	*Objectively verifiable indicators*	*Means of verification*	*Important assumptions*
Program Outputs: (C-1) 1. Implementation of policy changes to foster efficient delivery, increased availability and use of child survival-related services particularly to underserved and high-risk groups 2. Implementation of policy changes to ensure sustained commitment to, demand for and financing of child survival services through public and private sectors 3. Expansion of child survival-related services at the provincial level	**Magnitude of outputs: (C-2)** 1. Performance indicators as shown in the Policy Implementation Matrix, including priority-ranked list of provinces and cities, prioritized budgets, fund releases; provincial health plans/ HIS operational in all provinces 2. Performance indicators as shown in the Policy Implementation Matrix, including DOH budget levels, national IEC plan; comprehensive IEC strategy, work plan for increased private sector role 3. End-of-program service delivery coverage indicators as shown in the Policy Implementation Matrix, including immunization rates, prenatal visits, and training in ARI management; contraceptive prevalence rate	**(C-3)** -- DOH reports. -- USAID documentation of meetings, etc. -- Independent contractor for monitoring	**Assumptions for achieving outputs: (C-4)** -- IBRD program in place and addressing uneven DOH institutional capacity. -- DOH agreeable to policy changes -- Present DOH initiatives (HIS) in place -- IEC campaigns generate additional demand for services.
Program Inputs: (D-1) AID INPUTS 1. Policy dialogue in areas of efficient delivery, increased availability/ use, sustainability of child survival-related services 2. Technical assistance 3. Monitoring, evaluation and audit **AID TOTAL** GOP INPUTS Estimated GOP expenditures for child survival-related services	**Implementation Target (Type and Quantity): (D-2)** AID GRANT ($000) $45,000 4,250 750 --- $50,000 $72,000	**(D-3)** -- GOP reports of fund use. -- Reports of TA contractor.	**Assumptions for providing inputs: (D-4)** -- Availability of DA funding over life of program.