

# STATE-OF-THE-ART SERIES:

## Health Worker Performance

### Improving the Performance of Facility- and Community- Based Health Workers

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December 2003



THE CHILD SURVIVAL TECHNICAL SUPPORT PROJECT





# Improving the Performance of Facility- and Community-Based Health Workers

**December 2003**

By Peter J. Winch, Ketaki Bhattacharyya, Marc Debay, Eric G. Sarriot,  
Sandra A. Bertoli, Richard H. Morrow,  
and the CORE Monitoring and Evaluation Working Group

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*For further information on the Child Survival Technical Support Project, please contact ORC Macro, CSTS Project, 11785 Beltsville Drive, Calverton, Maryland 20705; Phone: (301) 572-0823; E-mail: [csts@orcmacro.com](mailto:csts@orcmacro.com); Internet: [www.childsurvival.com](http://www.childsurvival.com).*



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## OVERVIEW

The success of nongovernmental organization (NGO) health programs depends on the performance of a wide variety of people who work directly or indirectly with NGOs to implement health interventions. These people include health professionals, NGO employees and field staff, community volunteers, as well as people working in the private and traditional sectors: pharmacists, ambulatory drug vendors, traditional healers, and traditional birth attendants. For all of these positions actual performance may fall far short of what can be expected.

Managers, trainers, and human resources professionals often find that traditional approaches to training have little impact on these problems. This has contributed to a transition from a focus on training to a focus on performance improvement. The purpose of this paper is to provide health managers with a framework for the development of health worker performance improvement plans within primary health care and community-based child health projects at the district, subdistrict, and community levels.

This paper provides managers of child survival programs with a framework for developing performance improvement plans, including a variety of methods to measure and improve health worker performance. Brief case studies highlight NGO programs that have successfully implemented the methods discussed.





## ACRONYMS

ACS	Agentes Comunitarios de Salud (Peru) = Community Health Workers
AIMES	Annual Impact Monitoring and Evaluation System
ANC	Antenatal Care
ARI	Acute Respiratory Infection
CARD	Center for Agriculture and Rural Development
C-B	Community-Based
CB-HIS	Community-Based Health Information System
CB-SRS	Community-Based Health Surveillance and Response System
CBT	Competency-Based Training
CCF	Christian Children’s Fund ( <a href="http://www.christianchildrensfund.org">www.christianchildrensfund.org</a> )
CEA	Cost-Effectiveness Analysis
CHV	Community Health Volunteer
CHW	Community Health Worker
C-IMCI	The Community Component of Integrated Management of Childhood Illnesses (IMCI)
COPE	Client-Oriented Provider-Efficient Process
CORE	Group Child Survival Collaboration and Resources Group ( <a href="http://www.coregroup.org">www.coregroup.org</a> )
CRS	Catholic Relief Services ( <a href="http://www.catholicrelief.org">www.catholicrelief.org</a> )
CSP	Child Survival Project
CSRA	Consejo de Salud Rural Andino
CSTS	Child Survival Technical Support Project ( <a href="http://www.childsurvival.com">www.childsurvival.com</a> )

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EPI	Expanded Programme of Immunization ( <a href="http://www.who.int/vaccines">www.who.int/vaccines</a> )
HCP	Health Care Provider
HIS	Health Information System
HMIS	Health Management Information System
HW	Health Worker
IEF	International Eye Foundation ( <a href="http://www.iefusa.org">www.iefusa.org</a> )
IMCI	Integrated Management of Childhood Illness ( <a href="http://www.who.int/child-adolescent-health/integr.htm">www.who.int/child-adolescent-health/integr.htm</a> )
IRC	International Rescue Committee ( <a href="http://www.theirc.org">www.theirc.org</a> )
LQAS	Lot Quality-Assurance Sampling ( <a href="http://www.childsurvival.com/connections/LQASart.doc">www.childsurvival.com/connections/LQASart.doc</a> )
MAQ	Maximizing Access and Quality Initiative ( <a href="http://www.maqweb.org">www.maqweb.org</a> )
MOH	Ministry of Health
NGO	Nongovernmental Organization
NOPD	New Outpatient Department Book
ORS	Oral Rehydration Solution
PATS	Performance According to Standards
PHC	Primary Health Care
PLA	Participatory Learning and Action ( <a href="http://www.rcpla.org">www.rcpla.org</a> )
PVO	Private Voluntary Organization
QAP	Quality Assurance Project ( <a href="http://www.qaproject.org">www.qaproject.org</a> )
QOC	Quality of Care
SECI	Sistema Epidemiológico Comunitario Integral = Community Epidemiological Information System

SIVICS	Sistema de Vigilancia Comunal de Salud = Community Health Surveillance System
SS	Supportive Supervision
STD	Sexually Transmitted Disease
TT	Tetanus Toxoid Immunization
TBA	Traditional Birth Attendant
U5MR	Under-5 Mortality Rate
USAID	United States Agency for International Development ( <a href="http://www.usaid.gov">www.usaid.gov</a> )
VA	Verbal Autopsy ( <a href="http://www.who.int/emc-documents/surveillance/whodscsr994c.html">http://www.who.int/emc-documents/surveillance/whodscsr994c.html</a> )
WHO	World Health Organization ( <a href="http://www.who.int">www.who.int</a> )



## 1. INTRODUCTION

The success of nongovernmental organization (NGO) health programs depends on the performance of a wide variety of people who work directly or indirectly with NGOs to implement health interventions. These people include health professionals such as nurses, doctors, midwives, and paramedics working for the Ministry of Health (MOH); NGO employees and field staff working in either program management or service provision; community volunteers; and people working in the private and traditional sectors (e.g., pharmacists, ambulatory drug vendors, traditional healers traditional birth attendants). For all of these positions actual performance may fall far short of what can be expected.

- Government health personnel who have completed the 11-day Integrated Management of Childhood Illness (IMCI) course for first-level health workers may fail to apply standard treatment guidelines once they return to their health facilities, and some improvements resulting from training may decline over time (1, 2).
- Community health workers (CHWs) may continue to use a stern lecturing style with little interaction when conducting health education sessions, despite repeated training emphasizing more participatory approaches.
- NGO field staff may go through the motions of performing their work, while neglecting to carry out the activities in the community that were assigned to them.
- Traditional birth attendants (TBAs) trained to use birth kits and tie and cut the umbilical cord using sterile thread and a new blade may nevertheless continue to use nonsterile material to perform this task.
- Shop owners trained by an NGO to sell only full courses of malaria treatment and to explain to parents how to give the drug to their sick children may continue to sell one or two pills at a time and not explain how to administer the drug.

Each of these different types of personnel has a different relationship to the NGO: Some are employees of the NGO, some are employees of partners the NGO works with (such as the MOH), and others are volunteers or in private practice. This affects the approach the NGO needs to take as it seeks to influence the person to follow recommended practices. At the same time, these problems have a wide range of causes, including the profit motive for practitioners in private practice, inadequate and irregular salaries, lack of supervision, and inconsistent incentives for good performance in the public sector.

**What the practitioner will find in this document**

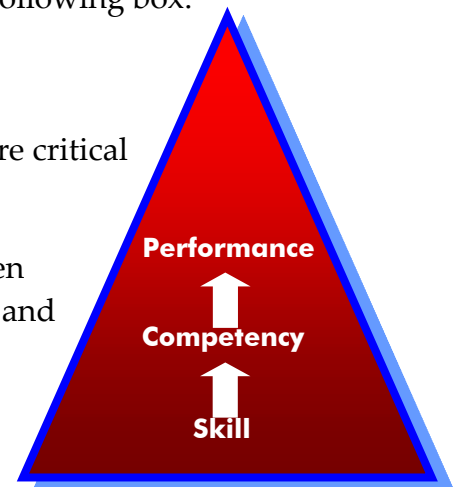
1. A framework for the development of health worker performance improvement plans from the district to the community levels
2. Examples and application of this framework in first-level primary health care activities (where it was developed), but also to community volunteers and traditional care providers
3. A systematic presentation of tools and methods to assess and monitor performance
4. A review of the most appropriate solutions for primary health care projects in resource-limited settings (1, 6)

Managers, trainers, and human resources professionals often find that traditional approaches to training have little impact on these problems. This has contributed to a transition from a focus on training to a focus on performance improvement (3). The purpose of this paper is to provide health managers with a framework for the development of health worker performance improvement plans within primary health care and community-based child health projects at the district, subdistrict, and community levels. While this framework has traditionally been applied to health workers working in first-level primary health care activities (1, 2, 4–6), many of the concepts are also applicable to community volunteers and health workers in the informal and traditional sectors who have limited or no technical training (7). An overview of what the document offers to practitioners is presented in the following box.

**Definitions used in this paper**

The following three definitions are critical for the discussion in this paper:

1. **Skill:** Ability to perform a task or group of tasks, which often requires use of motor functions but also specific knowledge and attitude.
2. **Competency:** Skill acquired through training, education, and experience and performed to specific standards under specific conditions, as demonstrated through a variety of tests or simulations; indicates capacity to perform according to standards. An individual may have the necessary skills but not understand or never have been told the conditions (when, where, for whom) the skill is to be applied or performed. For example, a health worker may have the skills to perform a cesarean section but not fully understand the situations that call for a cesarean section to be performed and the standards of care to be maintained when one is carried out. Thus, this health worker does not yet possess the competency related to the performance of cesarean sections.
3. **Performance:** Actual conduct of activities to meet responsibilities according to standard; indicates what is actually done and how well it is done.



## 2. HEALTH WORKER PERFORMANCE IN A HEALTH SYSTEMS FRAMEWORK

The purpose of a health system at any level (community, district, nation) is to provide health services and interventions in partnership with communities, families, and individuals to achieve the best possible health status of the population, fairly distributed, with the available resources. The improved health status occurs in response to the outcomes of the planned high-priority health program interventions. High-priority interventions are those that provide the most healthy life per dollar expended under the circumstances in the area of concern. Examples include immunization; nutrition education; maternal care including antenatal, delivery, and postnatal care; family planning; and the IMCI (8, 9).

A useful framework for examining the determinants of health system performance and the role of various health providers within that context is the systems approach (Table 1). This approach starts by specifying the work to be done—in this case the high-priority health care interventions.

### **The work to be done: High-priority health improvement interventions**

Then it specifies the inputs and prerequisites to do the interventions, the procedures and steps to follow, the intermediate outputs and desirable outcomes, and the impact on health status.

**Inputs → Processes → Outputs → Outcomes → Impact: Improved health status of the population**

To achieve the improved health status of the population to be expected from the selected interventions requires the following for each of the high-priority interventions:

1. The coverage of the population as planned. Coverage is the proportion of the target population that receives the intervention. The target population consists of all those who will benefit from the intervention.
2. The conduct of the intervention processes according to standard.

The effective provision of these interventions directly depends on the **ability** and the **willingness** of health providers and community volunteers to carry them out, in active cooperation with the patients, families, and the community.

**Table 1. Logical framework for the steps in implementation of high-priority health interventions**

Inputs	Processes	Outputs	Outcomes	Impact
<p>Include health workers with</p> <ul style="list-style-type: none"> <li>• The required competencies</li> <li>• Essential drugs and vaccines</li> <li>• Buildings and equipment</li> <li>• Community and district governance systems</li> </ul>	<p>Refer to the actions that health providers and community volunteers take to carry out the interventions.</p> <p>Emphasis is placed on health workers to perform these processes according to <u>standards</u> and to ensure population coverage.</p>	<p>The immediate result of performing the processes, which may or may not directly affect outcomes.</p> <p>For example, an output can be the number of nurses, shop owners, or community health workers trained, but it does not necessarily measure the extent to which this training has improved health outcomes.</p>	<p>The completion of specific health-related interventions that should have an impact on the health status, may lead to a reduction in morbidity and mortality, and may increase healthy life.</p> <p>An example of an outcome is the mothers' knowledge of how to administer a drug to a child, increased after counseling by a health worker in a health center, a shop owner, or a community health worker. Another example is the immunization status of a child that protects him or her from common childhood infectious diseases.</p>	<p>The change in health status because of the intervention.</p> <p>This can be a decrease in incidence or prevalence of specific diseases, a decrease in the prevalence of malnutrition, or a decrease in mortality.</p>



### 3. THE PERFORMANCE IMPROVEMENT PROCESS

Figure 1 presents the main steps of the performance improvement process as a continuous cycle of activities. It reflects an extensive collaborative work by a consortium of agencies that are funded by the U.S. Agency for International Development (USAID) and that primarily work in reproductive health to adopt a common model and terminology for collaborative purposes. It is adopted here for the same reason and because it appears appropriate for any primary health care and child survival program in developing countries.

This section details each step of the performance improvement process represented in Figure 1.

#### 3.1 Stakeholder agreement

Any health project or service involves various stakeholders with different interests, motivations, and resources in support of its objectives: the community members and committees, the sponsors and donors, the MOH, the health workers, the community health workers and volunteers, and so forth. The performance of health workers concerns them all. Their agreement is critical to the development of performance standards and the monitoring and evaluation of the health workers.

In the public sector, it is often a mistake to expect that roles are clear and agreed upon. Even when job descriptions exist (and they often do not, as discussed later in this section), both workers and managers may have drifted considerably from the explicit or assumed responsibilities described in an official document.

In the informal sector or in volunteer-based interventions, the apparent informality of the relationships between “neighbors” can be deceiving. Bringing the stakeholders around the table and agreeing on roles and duties will be essential if performance is to be supported and maintained over the long run.

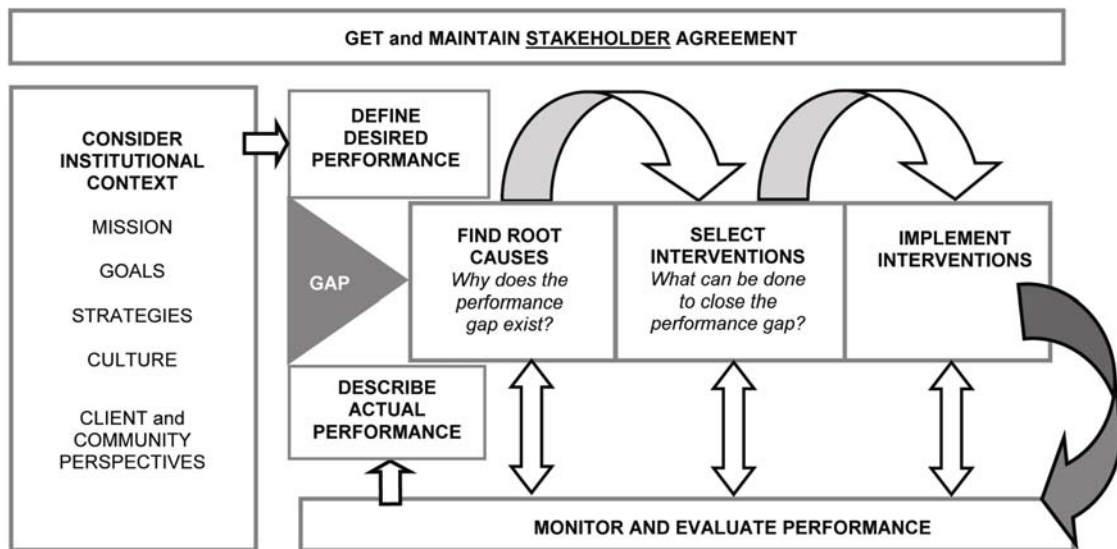
#### **What the practitioner will find in this section**

This section introduces the reader to the steps and terms used to describe the performance improvement process. The reader will find a rather formal presentation of the performance improvement process, which has the advantage of delineating the successive steps that health managers should follow to ensure that the activities undertaken to improve health workers' performance are consistent with the causes of the gap in performance. One specific model for the process is presented. This section does not review the wide range of models that exist.

The main steps presented below are

1. Stakeholder agreement
2. Considering the context
3. Conducting a performance analysis, including defining desired performance
4. Finding root causes of the performance gap
5. Selecting the best solutions
6. Implementing the solutions
7. Evaluation

**Figure 1. Diagram of the Performance Improvement Process Developed by the USAID Performance Improvement Consultative Group**



Source: USAID Performance Improvement Consultative Group, 2000.  
<http://www.jhpiego.net/global/pi.htm>

### 3.2 Consider the context

The health systems framework clearly demonstrates the importance of understanding the mission and objectives of the health program, and these should be carefully taken into consideration during the performance improvement process. The high-priority interventions are defined in a particular context. Ideally, these objectives and interventions are adopted within a collaborative process with the clients and the community, which ensures that the desired performance is appropriate to the cultural setting and community perspective.

The contextual assessment and the stakeholder agreement are strongly intertwined concepts: When NGO projects work with stakeholders to develop a greater understanding of the context through a variety of methods (e.g., Participatory Learning and Action, Appreciative Inquiry, planning workshop, formative evaluation), they create the conditions to also establish agreement on goals and responsibilities among these stakeholders.

### 3.3 Conduct a performance analysis: Define the desired performance

The first step in the performance improvement process is to define the gap(s) between the desired and the actual performance (between what should be done and what is actually done).

In many situations, however, this analysis requires clarification on what is the **desired performance**, that is, on the specific evidence-based standards according to which health providers and community volunteers are expected to conduct their duties and responsibilities. It is likely that the lack of clarity about the desired performance is in itself a cause of poor performance. However, at an initial needs assessment stage, it is usually possible to consult with key stakeholders, refer to internationally recognized standards and guidelines, and define a preliminary agreement on the desired performance, which allows the completion of a performance analysis.

#### **Example: Job descriptions and competencies for health care providers and community volunteers**

One of the first steps in putting together a plan to improve performance is to produce written job descriptions and/or descriptions of competencies for each class of personnel or each type of volunteer. The former are not only appropriate for health workers who are employees of an MOH or an NGO, but also for volunteers and sometimes even for practitioners in the private and traditional sectors. The following should be specified in a job description:

1. The role of the health worker or volunteer (position)
2. The responsibilities
3. The competencies required to carry out the responsibilities.

The role of a health worker in a particular position clarifies the function and relationship within the health system, which includes the public, private, and traditional sectors. The specific duties and responsibilities are the activities that the health worker is expected to carry out to fulfill this role. Each position usually assumes that the person meets a minimum set of requirements or qualifications, such as a certain level of education or a specific degree, a minimum number of years of experience in a similar position, and some social attributes such as a language capability and cultural compatibility. It is also important to give value and meaning to a role. A clear job description with identified responsibilities will help health workers value their work and be valued (and supported) by their community or hierarchy. It will also help

formal care providers recognize the role and importance of volunteer health workers in the community. The following example provides a sample job description of a community health worker.

**Box 1. Illustrative job description of a community health worker**

**Position**

Community health worker for village X

**Role**

To care for the health of the community members, take part in community health projects, and maintain regular contact with the supervisor and the health center.

**Responsibilities**

- 1) The CHW gives advice to anyone who comes to see him/her. He/she gives special care to those who have or may have the following diseases or conditions: malaria, diarrhea, respiratory diseases, and malnutrition.
- 2) Together with the community nurse, midwife, and other community workers, the CHW organizes discussions with mothers of young babies on immunization, oral rehydration solution (ORS), and good nutrition.
- 3) The CHW maintains the stock register for medicines and supplies.
- 4) The CHW keeps records of his/her work and of the key events happening in the community, according to specific instructions.
- 5) The CHW reports to both the community committee and the medical officer/assistant in charge of the health center.

**Requirements**

CHWs are men and women chosen by the community, and they are trained to deal with the health problems of individuals and the community and to work in close relationship with the local health center. They should either have already completed literacy training or be willing to attend a 1-month basic literacy course provided by the project prior to their training to become a CHW.

The job description is an important document because it tells the health worker and the various persons involved in the health system, including colleagues, supervisors, and the community members, what he/she is expected to do. It should be agreed upon by both the community leaders and the CHW's supervisor.

In addition to the job description, it is important to specify the competencies required to carry out the responsibilities according to standards. These are typically not included in the job description but are critical to the management of a health program and, in particular, to the planning, training, and evaluation of the individual workers and the program itself. Each competency is defined by one or several observable standards that combine scientific and community-defined criteria. A checklist of these standards may be used for competency-based training and for evaluating performance. The next example provides specific competencies and related standards that may be defined for the first responsibility in the job description above.

**Box 2. Illustrative competencies required from a community health worker**

**Responsibility:** The CHW gives advice to anyone who comes to see him/her. He/she gives special care to those who have or may have the following diseases or conditions: malaria, diarrhea, respiratory diseases, and malnutrition.

- The CHW communicates clearly and respectfully with community members.
  - Explains clearly
  - Uses appropriate language and greetings
- The CHW demonstrates compassion with clients.
  - Listens actively and inquires to deepen understanding
  - Expresses appropriate feelings
- The CHW recognizes the danger signs of diarrhea.
  - Asks relevant questions such as frequency, duration, presence of blood
  - Examines patient for dehydration
- The CHW demonstrates proper preparation of ORS.
  - Uses appropriate container (size, cleanliness, material)
  - Uses clean water
  - Uses correct amount of water

Competence alone is not sufficient to ensure performance. Health care workers may be well trained and competent, but they also must work in a supportive and enabling environment. The importance of other inputs directly related to personnel and performance is often overlooked. These other inputs include

- Specified conditions (terms) of service, including monetary and nonmonetary incentives, and performance criteria for advancement (and dismissal)
- Standards and guidelines for the conduct of each intervention
- Supportive supervision with an emphasis on coaching and problem solving as the principle means of regular interchange with the health system
- Regular communication with the community through an established forum for exchange, ideally in liaison with the support supervisor
- Appropriate environment, including work space, tools and equipment, supplies, access to information, and supportive colleagues and community.

A systematic analysis of the performance of health workers encompasses all of these determinants. The performance improvement approach addresses the multiple causes

of poor health worker performance as an alternative to isolated in-service training events. While recognizing the importance of the technical knowledge and skills of health workers, other reasons why health workers frequently poorly perform their tasks may be much more important than deficiencies in technical competencies.

The job description and specific competencies as described above are the desired performance for the position of CHW for the specific program in that particular community. If such a job description is lacking, typical questions to ask to conduct a performance analysis would be

- What are the objectives of the program or services?
- What is the provider expected to do (tasks)?
- How well (quality indicators)?
- Under what conditions?
- With what frequency?

### 3.4 Conduct a performance analysis: Assess the actual performance and identify the gap between desired and actual performance

The second component of the performance analysis is to assess the **actual performance** of the health workers. There are many ways to collect this information, including casual conversations, formal interviews, direct observations, work samples, written records, surveys, tests, focus groups, and feedback from community members. Some of these techniques can be done relatively easily and in a short period of time, but others require collecting data over a long period of time and are more appropriate to monitor and evaluate performance improvement plans. They all must be adapted to the particular context and take into account the specific standards of performance. Selected performance measurement techniques and tools are described in later in section 4.

The key point in the performance analysis stage is the identification of the **gap between the desired and the actual performance**. This implies clarity about the expected performance (goals) and a good knowledge of the current situation (baseline). In other words, this ensures that the performance improvement plan will be based on baseline data and related objectives and indicators.

### 3.5 Find the root causes of the gap in performance

Once the gap between the actual and expected performance is defined, a clear understanding of the **root causes** of this gap is necessary to select the most relevant and

the most effective interventions. Indeed, any intervention that does not address one or several of these root causes of poor performance is likely to be ineffective.

The simple questions below may help discover possible causes that can then be investigated further.

- Why are health providers or community volunteers not working up to standard?
- Have they ever performed the job correctly?
- Where and when do the problems occur?
- Has anything changed recently that might have instigated the problem?
- How do the best and worst performers compare?

There are many other tools (cause and effect diagram, interrelationship digraph) and methods (team problem solving) that can be used to help in the analysis of the causes of a gap in health workers' performance, some of which are described in the sections below (10–13).

The root cause analysis may be a complex exercise, but often some very common causes appear, such as unclear job expectations, poor motivation, or clear deficiencies in knowledge or skills. In facilitating the selection of the best solutions, the main cause identified by the root cause analysis should be clearly formulated and listed.

The process of identifying the root causes of low performance can make all the difference in a health program, as shown in the following example in rural Bolivia.



**Box 3. NGO example: Using mortality analysis workshops to identify the root causes of gaps in performance in the rural Altiplano of Bolivia (14)**



Curamericas ([www.curamericas.org](http://www.curamericas.org)) and its local affiliate, Consejo de Salud Rural Andino (CSRA), have used mortality analysis to identify the root causes of performance gaps in the rural Altiplano of Bolivia (14). Health staff, MOH and community representatives, village leaders, Community Surveillance Committee members, and community health volunteers come together twice each year to participate in a mortality analysis workshop. These workshops are part of the Census-Based, Impact-Oriented methodology used by CSRA, but they also fit into the national health information system. During the workshop, the target population is divided into age groups, and with statistical data and verbal autopsies, workshop participants work to identify the key risk factors for each group. As participants review the data, they focus on the deaths they deem avoidable and look closely at the biological cause of death, as well as the obstacles the patient faced in receiving appropriate health care. At the end of the workshop, participants make recommendations to avoid similar deaths in the future and to incorporate these recommendations into staff work plans and program implementation plans.

As a result of these workshops, 1) health workers have an increased ability to diagnose and treat pneumonia and diarrhea, 2) health staff are better able to provide health education and counseling, and 3) health logistical systems have improved because of changes such as establishing referral chains. These mortality analysis workshops clarify root causes of avoidable deaths and put into action strategies to prevent future deaths. They also give a wide range of stakeholders the opportunity to reflect on the community's health and on the barriers to health care. In order to make certain the recommendations have the intended impact on health, followup with the health workers and community is essential.

Source:

**Castro, H.** Decision-making in PHC Projects Based on the Monitoring and Analysis of Mortality Data in the Bolivian Rural Altiplano. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

### 3.6 Select the best solutions

Each cause of poor performance calls for one or several different solutions. In most situations, poor performance is likely to be due to several interrelated causes calling for various solutions. Some causes may not be within the sphere of influence of the private voluntary organization (PVO) or NGO. The process of selecting the best interventions in a particular context may therefore be complex.

Table 2 proposes in the right-hand column one or several possible solutions to each factor that may be a cause of poor performance. A similar table can be constructed by analyzing the performance of health workers in a particular context by listing clear statements of the root causes of the gap in performance and, in front of each cause, clear statements of the priority solutions that could realistically be included in a performance improvement plan.



**Table 2. Factors of performance and possible performance-improving solutions**

Factor of performance	Possible solutions to low performance (below standards)	
	Solutions typically implemented through management structure of the formal health system	Additional solutions seen in PVO and NGO health programs
<b>1. Leadership</b>	<ul style="list-style-type: none"> <li>▪ Communicate the mission, goals, and priorities of the NGO to health workers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Obtain and demonstrate support for facility and community-based health workers from community leaders and organizations</li> </ul>
<b>2. Job expectation and selection</b>	<ul style="list-style-type: none"> <li>▪ Develop written job descriptions for each position</li> <li>▪ Work planning and scheduling</li> </ul>	<ul style="list-style-type: none"> <li>▪ Obtain input into community expectations of the content and quality of services</li> <li>▪ Maintain community support for continued recruiting and motivation of volunteers</li> </ul>
<b>3. Standards and guidelines</b>	<ul style="list-style-type: none"> <li>▪ Develop and distribute written protocols and instruction manuals for key duties and responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Obtain community input into standards and have community review selected guidelines</li> </ul>
<b>4. Knowledge and technical skills</b>	<ul style="list-style-type: none"> <li>▪ Competency-based training</li> <li>▪ On the job training</li> <li>▪ Written protocols, instruction manuals, flip charts, and other job aids</li> </ul>	<ul style="list-style-type: none"> <li>▪ Vendor-to-vendor training for drug vendors</li> <li>▪ Job aids created with health worker and community input</li> </ul>
<b>5. Communication skills</b>	<ul style="list-style-type: none"> <li>▪ Training in interpersonal skills</li> </ul>	<ul style="list-style-type: none"> <li>▪ Training in interpersonal skills and group communication methods</li> </ul>
<b>6. Motivation</b>	<ul style="list-style-type: none"> <li>▪ Provide monetary and nonmonetary incentives</li> <li>▪ Provide conducive work environment</li> <li>▪ Recognition of good work, certificate award, regular feedback by supervisor, incentives</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nonmonetary incentives, such as housing provided by community</li> <li>▪ Feedback of mortality data and discussion of ways to address causes of mortality</li> <li>▪ Involvement of providers in informal and traditional sectors in developing solutions</li> </ul>
<b>7. Facilities, equipment, and supplies</b>	<ul style="list-style-type: none"> <li>▪ Ensure the regular availability of supplies and materials</li> <li>▪ Ensure that facilities and equipment are functional at all times</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ensure the availability of necessary supplies (medications, birth kits) for community-based providers</li> <li>▪ Ensure quality of medications used by community-based providers</li> </ul>
<b>8. Performance feedback and supervision</b>	<ul style="list-style-type: none"> <li>▪ Ensure that the supervisory system is operational</li> <li>▪ Provide supervision and coaching</li> <li>▪ Provide summary performance report based on HMIS monthly reports</li> <li>▪ Regular feedback of data from small sample LQAS surveys</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integration of community-based providers into formal system of management and supervision</li> <li>▪ Supportive supervision</li> <li>▪ Feedback of data collected through community-based HIS</li> <li>▪ Feedback from communities on communication skills of providers</li> <li>▪ Regular feedback of data from small sample LQAS surveys</li> <li>▪ Participatory appraisal of reasons for poor performance</li> </ul>
<b>9. Referral system</b>	<ul style="list-style-type: none"> <li>▪ Ensure that the referral system is established and functional</li> </ul>	<ul style="list-style-type: none"> <li>▪ Systems of referral from community-based providers (CHWs, TBAs, traditional healers, drug vendors) to formal health facilities, and counter-referral (feedback on diagnosis and need for followup) from formal health facilities to community-based providers</li> </ul>

Simple prioritization tools can then be used for selection of the solutions, preferably with a maximum of eight interventions: matrix diagrams (equal weight usually good enough), weighted criteria decision matrix, and prioritization matrix (11, 15). These tools all require a limited set of selection criteria, preferably three or four, to be considered for each solution. Examples of such criteria follow.

- **Timeliness:** When can the change in performance be expected as a result of the solutions?
- **Feasibility:** Are the human and financial resources to implement the intervention successfully available?
- **Effectiveness:** Are the probability and magnitude of the expected change well known?
- **Cost-effectiveness:** Can another intervention have the same effect at a lower cost?
- **Sustainability:** Will the capacity to sustain the result of the intervention be available locally?

Table 3 is a simple prioritization matrix considering six possible solutions to the problem identified as poor antibiotic prescription practices of a community health worker. Clearly, solutions one and six can be implemented immediately, and positive results can be expected in a matter of weeks. After these two solutions are implemented and the performance of the CHW is reassessed, other solutions may still be needed (and their priority also reassessed).

**Table 3. Illustrative prioritization matrix for selection of performance improvement solutions for the example of poor antibiotic prescription practices by community health workers**

Factor of low performance from Table 2	Possible solution	Selection Criteria				
		Timeliness	Feasibility	Effectiveness	Cost-effectiveness	Sustainability
<b>Standards and guidelines</b> (#3 in Table 2)  <i>There is no written protocol for acute respiratory infection (ARI)</i>	1. Provide written protocols for treatment of pneumonia  2. Provide reference manuals	YES: Protocols and manuals available at the health center	YES: CHW recently trained, only needs a refresher	YES: Protocols guide and give confidence in selecting patients for antibiotics	YES: Protocols and manuals available at the health center	YES: With continuing supportive supervision
<b>Knowledge and technical skills</b> (#4 in Table 2)  <i>CHW has limited ARI assessment and classification skills</i>	3. Formal retraining of the CHW  4. CHW to work for a week at the health center with medical officer	NO: Depends on other variables (seasons, availability of trainer and other participant); must wait for opportune time	NO: The CHW is the only health worker for the village—absence not feasible	YES/NO: Only in the short term	NO: Training is expensive and requires lots of travel time away from daily work	NO: Training is a recurrent cost with low retention of learning if conducted only once
<b>Communication skills</b> (#5 in Table 2)  <i>CHW feels pressure from mothers to receive antibiotics</i>	5. Provide flip charts to educate mothers about ARI	NO: There is no such material in the health center	NO: There is no such material in the country	YES: Mothers accept and material can be designed to be very user-friendly	NO: Initial development cost, especially if high language/cultural variations	YES: No recurrent cost for ongoing use, and high potential for use if developed in a culturally appropriate manner
<b>Performance feedback and supervision</b> (#8 in Table 2)  <i>The CHW is not confident that she correctly identifies cases of ARI</i>	6. Regular supportive supervisory visits	YES: Supervisor can schedule visits to the CHW	YES: Support supervision is part of regular activities	YES: Has shown to be a good coaching and motivation tool	YES/NO: Yes if involves communities in administrative supervision and MOH committed to field supervision	YES: Support supervision is part of regular activities; leads to high retention of learning (and volunteers) through iteration and problem solving

The following example illustrates how the effective use of selection criteria by the International Eye Foundation ([www.iefusa.org](http://www.iefusa.org)) and CEPAC, a Bolivian NGO, dramatically improved service delivery.

**Box 4. NGO example: Using cost-effectiveness analysis (CEA) to improve delivery of childhood immunization and vitamin A distribution in Bolivia (16)**



The International Eye Foundation (IEF; [www.iefusa.org](http://www.iefusa.org)), along with CEPAC, a Bolivian NGO, used CEA to improve delivery of immunizations (EPI) and vitamin A distribution (16). Because CEPAC used different methods (a mobile team, health festivals, and a clinic) to serve different populations, a cost analysis of their services could not be directly compared.

However, the analysis does offer useful information about how cost-effective each method was, which can then inform future decisions.

The results of the analysis showed that the mobile team's cost per contact was very high, yet the EPI/vitamin A coverage rates were extremely low in the rural areas served by the mobile team. On the basis of this analysis, CEPAC decreased the frequency of visits the mobile team made to each community and, therefore, increased the number of communities they visited. At a 6-month followup, the number of communities visited had increased from 28 to 42, and the number of immunizations given had almost doubled from 556 to 1,172.

In order to reduce costs, CEPAC also reduced the number of staff on the mobile team. Originally, the mobile team consisted of a doctor, three nurses, and a driver. CEPAC decided that the doctor would divide his time among the three municipalities CEPAC served, and the nurses learned how to drive, thereby eliminating the need for a driver. These changes in staffing reduced salaries expenditures from \$28,000 to about \$15,000.

Further evaluation of the changes made showed that the CEA, initiated by the IEF, was very useful for assessing programmatic effectiveness while allowing CEPAC to maintain ownership of the process and a positive relationship with IEF. CEPAC assisted in the development of the CEA, and they took the lead in making successful programmatic changes based on the results of the CEA.

Source:

**Riva-Clement, L. & O'Donnell, G.** Using Financial Analysis to Inform Operating Strategy in Public Health Programs: A Case Study from Child Survival. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

### 3.7 Implement the solutions

Each solution calls for different activities that need to be carefully detailed in a written performance improvement plan. Such a performance improvement plan ensures that the activities conducted correspond to the findings of the performance analysis; constitutes a communication tool between the managers, health workers, and possibly the stakeholders; and provides the baseline information needed for monitoring and evaluation purposes.

Leadership and accountability must be explicitly included in a performance improvement plan, along with the description of activities, responsibilities, a timeline, and a budget. The overall leadership is assigned to one person who then ensures the continuing progress toward the agreed upon improvement objectives and reports to the higher level of management and stakeholders. The performance improvement leader also ensures that the performance improvement plan is adequately communicated to

the various persons accountable for it and that these persons also maintain adequate motivation.

### 3.8 Evaluate

Besides the immediate benefits from the implementation of the performance improvement plan, perhaps the most important results of the process described here are to monitor change and obtain data to better describe actual performance.

### 3.9 Getting started

An extensive assessment could show many gaps that one could then attempt to address with a series of solutions. In most situations, however, it might be best to start with one performance deficiency or problem evident to all. The causes of the particular deficiency can then be analyzed, and specific solutions can be identified, implemented, and evaluated. Such an approach can begin while other activities in the project or clinic are under way. What matters most is that the project managers and the performance improvement team develop and maintain a well-articulated understanding of the processes in their work place, which takes into account the multiple aspects of poor health system performance. The implementation, monitoring, and evaluation of each solution are opportunities to gather new data that can feed into the next attempt to analyze performance.



## 4. PERFORMANCE MEASUREMENT

### **What the practitioner will find in this section**

The previous section introduced the reader to the steps and terms used to describe the performance improvement process. This section discusses the measurement of performance, a key action in the process. This section also briefly discusses the role of monitoring in an overall strategy of performance improvement. Monitoring does not fit neatly into the previous section on performance measurement or the following section on performance improvement, because it plays both roles. Monitoring can indicate to the program manager which areas have suboptimal performance and, by extension, potential problems with health worker performance. Involvement of health workers in monitoring can also be a powerful tool for motivating better performance.

This section describes the following methods for the measurement and monitoring of performance:

1. Direct observation of the health worker while conducting work
2. Review of records in the health facility or community-based organization or of those retained by the patient or mother/caretaker
3. Interview of the health worker
4. Interview of patient or mother/caretaker after a home visit by a community health worker or after a consultation at the clinic
5. Identification of supervision areas with low performance
6. Community- and facility-based monitoring systems.

All of the performance measurement methods can be implemented as part of an evaluation or research process; however, a facilitative and supportive supervision system is the principal way to ensure that health workers conduct their work in accordance with established clinical guidelines. At one time, the focus of supervision was on controlling health workers' activities, then it shifted to assessment of health workers' activities. The current trend is toward performance management, which requires a supervisor to act as a coach and mentor to his/her supervisee, rather than as an evaluator or disciplinarian.

### 4.1 Direct observation

Direct observation is considered the "gold standard" for assessing health worker performance. This can be either structured or unstructured, depending on the objectives and the circumstances. Through observation, a supervisor can see the state of the infrastructure, equipment, and supplies; how health workers are relating with patients; or how a particular procedure is being carried out. Unstructured observation is sometimes referred to as "management by walking around." By walking through a health facility, for instance, one may pick up different situations that need the attention of managers.

Observation can be conducted in a structured way by observing how a procedure is being performed and relating this to a standard; this is generally a more useful approach for assessing performance according to specific standards. The critical steps of a procedure should first be listed, often as a flowchart or checklist that the observer can refer to. Observations require a trusting relationship between supervisors and health workers; a safe environment fosters good morale, but it also reduces reactivity, the way in which being observed affects the behavior of the provider being observed. Before the conduct of the observation, it is important to provide assurance that, although individuals will be observed at their work, the purpose is to get a general picture and no single individual will be victimized for the way he/she is doing his/her work. The observation should then be conducted in a discreet manner and without interference. Such structured observation yields information on which particular guidelines health workers are using or not using, and reasons for this. Analysis of the findings may consistently show that certain specific steps in a procedure are being missed or done wrongly. On the basis of this information, new guidelines might be formulated, action can be taken to explain the steps during support supervision, or a decision may be made to include the topic in an in-service course. The next example highlights how observational checklists can be an important supervisory and monitoring tool, as well as a useful structure for planning program activities.

**Box 5. NGO examples: Performance assessment using a checklist in Uganda and the Philippines (17, 18)**



Freedom from Hunger ([www.freedomfromhunger.org](http://www.freedomfromhunger.org)) and its local partners use progress tracking, a successful and relatively low-cost monitoring system (17, 18). Program managers and staff use the information generated to boost program activities, resulting in improved programs and increased organizational capacity. Observational checklists are one tool used in the system to assess performance. A simple format and simple scoring allow supervisors to monitor key activities and provide feedback quickly to field agents. Field staff are given an opportunity to review the checklist and suggest changes during a participatory session. Once the checklist is finalized, staff (individually and as a group) are assessed every quarter. The goal (and the challenge) of the system is to use it to engage and motivate staff rather than simply monitor performance. The checklists have been helpful as a monitoring aid, but field staff have also found them useful for planning their work.

Observational checklists have been used in a variety of ways, but the following examples illustrate their importance in the field. In Uganda, the FOCCAS organization has used these checklists to effectively reassign job responsibilities, which has enabled branch managers to spend more time supporting the field agents they supervise. In the Philippines, the training manager at the Center for Agriculture and Rural Development (CARD; [www.cardbankph.com](http://www.cardbankph.com)) has used the checklists to identify topics on which health workers need improvement, such as working respectfully with clients.

More information on using observational checklists is available from the following resources:

**MkNelly, B.** Progress Tracking of *Credit with Education*. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002*.

**MkNelly, B. et al.** Supervision and Support of High-Quality Group-Based Nonformal Education Services: The Use of Observation Checklists. Davis, CA, Freedom from Hunger, 2002 ([www.ffhtechnical.org/publications/summary/fantataskord3mar02.html](http://www.ffhtechnical.org/publications/summary/fantataskord3mar02.html)). (Or visit [www.ffhtechnical.org](http://www.ffhtechnical.org).)



## 4.2 Record review

This method provides information that is of both a qualitative and quantitative nature. Record reviews do not generate the same amount or the same quality of information offered by direct observations, but they can be a valuable adjunct to provider interviews when direct observation is not possible. A review of a variety of records can generate important information, such as whether proper treatment was prescribed to a specific patient. An advantage of record reviews is that they require the least amount of time to carry out (19). If records are not complete, the validity of any information gained from them depends on whether there is a pattern to which patients are excluded; only if records are randomly left out will the data be valid. Record reviews are particularly effective when they are part of a comprehensive performance measurement plan. The types of records that can provide useful information include the following:

1. *Staff lists*—If the staff list is up to date, this is a good source of information on staffing ratios, which can be calculated for all staff and by cadre. These can be compared to recommended levels and can provide valuable information on the health workers' workload and possibly the need to hire more staff.
2. *Patient registers*—The functional catchment area of a health facility can usually be determined to highlight possible cultural or geographical barriers to utilization that may be related to health workers' performance. The list of households or registers of community health workers can also give information on the work conducted, the actual coverage of the household he/she is in charge of, or coverage of the targeted individuals. Rational drug use can be assessed by the review of a sample of records over a representative time period (to minimize bias due to seasonal variation in disease pattern). Among indicators commonly used are the proportion of adequate treatment of a particular conditions (e.g., ARI, malaria), the proportion of prescriptions in which injections are given, the proportion of prescriptions that include an antibiotic, the average number of drugs per prescription, and the proportion of prescriptions written in generic names.
3. *Prescription forms*—During patient exit interviews, the investigator asks for the prescription form as the patient exits the clinic, and the investigator asks the patient (or caregiver) how the drugs that have been prescribed will be administered. This can provide information on how well the health system is providing drug counseling (both as a result of counseling in the facility and as part of general information through the media). Another possibility is in assessing whether health workers are performing according to standards, by looking at dosages and relevance for diagnosis, or patient's age.

4. *Drug stock cards*—Each drug or pharmaceutical item kept in the district or central drug store has a card for tracing the stock levels of that item (hence the name “stock card”). Well-kept stock cards are an important source of information for decisionmaking regarding pharmaceutical supplies. It can also provide information on the causes of poor health worker performance, such as lack of appropriate drugs, and on the performance of the health workers in charge of the management of the drug supply.

The following example shows how the IEF and Christian Children’s Fund (CCF; [www.christianchildrensfund.org](http://www.christianchildrensfund.org)) have used record review to monitor and improve service delivery in Ethiopia.

**Box 6. NGO example: International Eye Foundation/Christian Children’s Fund monitoring of health services data in Ethiopia (20)**



IEF/CCF staff in Ethiopia routinely use health services data for ongoing monitoring of EPI. Their evaluation reports that coverage data is collected from the various health facilities from routine work as well as from the campaigns. The compiled data are then reported back to health offices and discussed. Feedback is given to community-based service providers and then jointly assessed when they come to the project office every 15 days to submit their reports. The information is also discussed with the respective Woreda Health Offices. Various actions were taken on the basis of the routine reporting system, such as organizing immunization campaigns where coverage was found to be very low.

Source:

**IEF-CCF.** Mid-Term Evaluation and Final Report: PVO Partnership for Child Survival, Basonaworena and Debrebirhan Woredas of North Shewa Zone of the Amhara National Regional State. Bethesda, MD, International Eye Foundation in partnership with Christian Children’s Fund, 2000.

### 4.3 Health worker interview

Whatever tool and method of performance measurement (and performance improvement) are used, the interview between health worker and supervisor will be a central part of the supervision encounter. This interview is so essential that it remains so even when it does not take place, as the absence of this vital interaction will indeed communicate something—possibly negative—to the health worker.

In a study of supervisor-provider interactions during supervision visits, Tavrow and others (21) conducted an assessment of 11 discrete aspects of the interaction. Almost all aspects were related in part or in whole to the interview between the supervisor and health worker:

- Developing rapport
- Discussing previous visit
- Promoting participation of health worker
- Problem identification with health worker
- Problem solving with health worker
- Giving feedback to health worker
- Providing on-the-job training
- Discussing meaning and use of data
- Making suggestions/being proactive
- Seeking client input
- Discussing the next visit.

The structure of the interview will vary with the task at hand. Health workers can be interviewed in informal or formal settings. Interviews may be planned in advance, with questions written down that correspond to specific areas of concern of the supervisor/evaluator. Interviews can also be unstructured to allow maximum freedom in probing for information and providing feedback. In most instances, there will be a range of informal discussions during and around a supervision encounter. Specific time can be dedicated to a more formal interview.

Interviews can be used to assess knowledge, attitudes, or practices. They can be used to review steps taken after previous supervision visits or at a distance from training. They can initiate a problem-solving activity and serve as a stepping stone toward defining performance improvement steps. They are essential to clarify understanding about standards of performance, gaps, and remedial steps, for both the health worker and the supervisor.

In a supervision context, the priority should be a one-to-one interview with the health worker to help build confidence while helping the supervisor to better understand the health worker and his/her level of performance. This will be more productive if supervisors work with the assumption that workers themselves know more about their performance than they are aware, that they can identify their area of weak performance, and that they can identify remedial steps. This process can be helped by the use of the range of performance measurement tools already discussed (self-assessment, direct observation, checklists, document review, client interviews). At times, a supervisor may want to use a formal approach to point to performance gaps identified through

observation or client interviews and help the health worker understand why it is important and what needs to be done about it.

Performance management is the central purpose of formal and informal interviews, which will be of increased value as supervisors demonstrate leadership and coaching skills and build trust and rapport. This does not mean that hierarchical distinctions are abolished, but performance issues can be addressed more constructively and usually without involving disciplinary measures, which still remain impractical measures in many development settings.

Whether the performance assessment taking place during an interview is conducted in a formal or less formal way, the trust built between supervisor and worker will be essential in ensuring that valid information is discussed and that remedial steps are honestly discussed. Most of the health worker's time is spent away from supervisors, and supervision encounters are subject to reactivity on the part of the worker. Trust in the supervisor and confidence that the supervision activity is genuine and not a token exercise will reduce the reactivity and improve the quality of the interview interaction. Supervisors need to develop good interpersonal skills, along with their technical knowledge and problem-solving abilities, to learn to listen, decode workers' uneasiness with certain tasks, provide feedback, build confidence, and motivate. These steps can easily be missed and can diminish the impact of the supervision encounter. A coaching approach can be very beneficial. In this approach, a supervisor will guide the worker through his/her own assessment process, actively listen to the perspective of the worker, and be ready to share his/her own experience(s), positive and negative, to motivate and encourage the supervisee.

#### 4.4 Interviews of patient or mother/caretaker

Exit interviews are brief interviews conducted with clients as they leave the health facility. Exit interviews are commonly used to assess the quality of a range of services provided in fixed facilities and by mobile teams, including antenatal care, assessment and treatment of sick children, mass immunization campaigns, mass treatment campaigns, and family planning. Exit interviews with clients of health services serve a number of purposes:

1. *Assessing patient satisfaction*—This is usually done along with the assessment of other aspects of quality. From a predetermined set of questions, the patient or caretaker is asked about different aspects of the services such as waiting time, health workers' attitude and communication with the patient, or satisfaction with the treatment they

received. Some of the determinants of the customer satisfaction are closely related to the health worker performance.

2. *Assessing patient/caretaker recall*—During the consultation, the patient or caretaker will have been given instructions on how to take medications at home or generally how to treat the condition at home. Success or failure of the prescribed treatment or advice given will depend on the extent to which instructions were given correctly and on whether they are followed or not. Using a set of questions designed to check for understanding or recall of information that was provided during counseling, the interviewer asks the respondent how he/she will continue the therapy at home.

It should be noted the extent to which the patient or caretaker will recall instructions will only partly depend on the counseling, which is best assessed by direct observation of the process. Other factors likely to be significant include the person's own educational background, socioeconomic status, previous exposure to similar messages from the health system or from neighbors, personal reading or listening to mass media, or even on whether she/he was paying attention and not being distracted by, say, a crying child during the counseling.

**Box 7. Using exit interviews to improve client satisfaction in an NGO clinic in Peru (22)**

From September 1998 to July 2000, the Quality Assurance Project (QAP; [www.qaproject.org](http://www.qaproject.org)) conducted a study in Peru at the Max Salud Institute for High Quality Health Care, a nonprofit organization in Chiclayo, Peru, on the client feedback system at two of the institute's clinics, Balta and Urrunaga (22). The goals of the study were to review client satisfaction data and data collection methods and to evaluate the usefulness of the data by the institute's quality assurance committees. Exit interviews were used to collect client satisfaction data, along with followup visits, focus groups, and community meetings. Data were collected at two separate periods for two different clinics. In September 1998, the first stage of data was collected to assess how information gained via various client feedback methods was passed to quality committees and then used to improve services. The second stage took place in July 2000 to assess the changes made in response to client feedback.

In 1998, the Balta clinic was a small clinic in a busy, downtown location offering primary health care services, 24-hour emergency services, and pediatrics and gynecology services to about 12,500 people. The Urrunaga clinic sat in a peri-urban, lower income community of about 7,500 people; it was open for half of a day, 6 days a week, and did not offer specialty services such as the pediatrics and gynecology available at Balta. It did, however, implement more community outreach and health promotion programs than the Balta clinic.

On different days and at different hours, data collectors interviewed clients using questionnaires that required mostly open-ended questions. These data were then entered into a database used to summarize the results. In addition, data collectors highlighted clients' comments addressing barriers to services, any comparison made between the Max Salud Institute and other health services, or suggestions for improvement.

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The results of the study show that the two Max Salud clinics were generally held in high regard by clients. The results usually did not separate information collected via exit interviews from other methods of feedback collection; however, some results specific to exit interviews were included. Exit interviews are generally not useful in gaining clients' comments on effectiveness of services, as they usually do not know the outcome of their visit when they are leaving the clinic. In 1998, 28 percent of Urrunaga clients reported that the waiting time was excessive, but in 2000, this fell to 11 percent, a result of clinic management working to address this issue based on information collected through this client feedback system. One step they took was to add staff, but their data showed that some of the perception of long waiting times was due to the clinic's failure to communicate clinic hours or emergency care staffing procedures.

During exit interviews, clients stated that what they liked most about the clinics were the interpersonal skills of clinic staff. Seventy percent of clients reported that they had no problem accessing the clinics' services. More than 90 percent of both clinics' clients felt that the service fees were either average or low. Ninety-eight percent of clients reported that providers respected their privacy by asking their permission before allowing other staff to enter the examining room. Ninety-five percent responded that they would return to the clinic for future services, and 100 percent stated that they would recommend the clinics to others. Exit interviews showed that comfort and cleanliness of the physical space were important to clients. In Balta, there were reports that the size of the waiting room was too small, particularly during busy periods; increasing the size was the number one suggestion for improvement at this clinic.

All three quality committees found the information passed to them through the client feedback system useful for improving services and addressing any client misunderstandings, such as clinic hours of operation or qualifications of providers. The Balta clinic committee could see a need to address child care needs for mothers who visited the clinic, and they made sure that clinic staff better explained operating procedures to clients in order to reduce confusion and frustration. The director of the clinic presented the results of the feedback system to all of the clinic staff to make them aware of clients' preferences and concerns. The Urrunaga clinic staff wrote down the levels of satisfaction they believed their clients felt about various areas of service and then compared their beliefs with actual client feedback. Staff closely assessed client satisfaction in a number of areas, such as fee levels, provider friendliness, and respectfulness. Other areas saw a significant difference. For instance, clinic staff estimated that 80 percent of clients would report having no difficulty visiting the clinic, compared to 58 percent of clients who actually reported no difficulty. Similarly, clinic staff estimated that 90 percent of clients would say that they waited less than half an hour to receive services, and only 66 percent reported as such. By July 2000, the actual number reporting a wait time of less than half an hour rose to 80 percent, and 99 percent responded that their wait time was either regular or short.

QAP staff felt that the client feedback system was used effectively in the Max Salud clinics. It should be noted that exit interviews were only one part of this system and that QAP recommends using a variety of methods of feedback collection in order to "maximize the use of that information" and to limit the disadvantages inherent in each method when it comes to issues of validity, utility, and feasibility/cost. QAP suggests that the best use of resources would be to select a mix of data collection methods over a long period of time rather than a costly set of methods used for a one-time assessment. QAP also emphasizes that any client feedback system is useless without dedicated health care staff and management.

Source:

**Santillán, D. & Figueroa, M.E.** Implementing a Client Feedback System to Improve the Quality of NGO Healthcare Services in Peru. *Operations Research Results* (2001). (Can be downloaded from [www.qaproject.org](http://www.qaproject.org).)



## 4.5 Identifying supervision areas with low performance

In addition to looking directly at health worker performance, programs can monitor the results of their work at the population level. Programs can also identify supervision areas or specific health workers in high need of performance improvement relative to all program intervention areas through a quality-control derived methodology. Lot quality-assurance sampling (LQAS) can identify supervision areas (or specific staffs) most in need of attention and can allow supervisors to conduct time-intensive tasks, such as observation of performance and mentoring of individual health workers (23–27). Those unfamiliar to LQAS may be discouraged by unfamiliar terminology and procedures. Manuals now exist to lead people without prior experience through the process of LQAS:

- Valadez, J. J., W. Weiss, et al. (2002). *A Trainers Guide for Baseline Surveys and Regular Monitoring: Using LQAS for Assessing Field Programs in Community Health in Developing Countries*, NGO Networks for Health.
- Valadez, J. J., W. Weiss, et al. (2002). *A Participant's Manual for Baseline Surveys and Regular Monitoring: Using LQAS for Assessing Field Programs in Community Health in Developing Countries*, NGO Networks for Health.

In addition, the LQAS approach has been summarized in several documents that can be downloaded from the Web site [www.childsurvival.com](http://www.childsurvival.com):

- Sarriot, E., Winch, P., Weiss, W., Wagman, J. *Methodology and Sampling Issues for KPC Surveys*. Johns Hopkins School of Public Health; Department of International Health; November 30, 1999. <http://www.childsurvival.com/kpc2000/kpc2000.cfm>: Methodology and Sampling Appendix.
- *Monitoring Community Health Workers' Performance through Lot Quality-Assurance Sampling* ([www.childsurvival.com/connections/LQASart.doc](http://www.childsurvival.com/connections/LQASart.doc)).
- *Child Survival Connections, Special Issue on LQAS, Winter 2001* (<http://www.childsurvival.com/connections/start.cfm#Issue2>).

In Nepal, Bolivia, and the Philippines, as described in the following box, a project area-wide monitoring system has been used to identify low performance, allowing staff teams to generate solutions to the problems. This system enhances supervisory and peer relationships on the project.

**Box 8. NGO example: Identifying supervision areas with low performance**



LQAS has been a useful tool in monitoring the performance of Terai health workers as part of the Plan Nepal Child Survival Project (28). Plan Nepal chose LQAS as its monitoring system because it: 1) provides necessary quantitative data; 2) is relatively inexpensive, quick, and simple to collect and analyze data; and 3) is easily scaled-up.

In each field area (FA), data are collected twice a year to assess the progress resulting from a particular intervention and to identify the FAs that need increased technical and managerial support. All of the FA teams participate in analyzing the data, generating solutions to any problems, and sharing approaches that have resulted in positive area indicators. Then, all of the FA teams meet to fully explore the problems faced by all of the field areas and to create a 6-month plan to address the problems.

At the end of 4 years, all indicators selected to monitor control of diarrheal disease, pneumonia case management, child spacing, and maternal and newborn care showed an increase in coverage proportion. As a next step, Plan Nepal intends to shift the responsibility of data collection to the local health facility staff to ensure that LQAS continues to be an informative and effective tool for improving performance.

For more information on the use of LQAS by Plan Nepal, see Espeut, D. (2001). "Effective Monitoring with Efficient Methods: PLAN/Nepal's Experience with LQAS in Project Monitoring." *Child Survival (CS) Connections* ([www.childsurvival.com](http://www.childsurvival.com)).

Freedom from Hunger uses LQAS in Bolivia and the Philippines to monitor performance because the results can be interpreted quickly and the process allows for significant staff participation and ownership (17). Each FA sets a goal to reach for "client knowledge and practice in education topic areas," and the LQAS data indicate whether or not these goals have been met and can compare the field areas' performance. LQAS was also used to compare client knowledge and practice in project areas providing education programs to areas not receiving these services.

Sources:

**Devkota, B.R. et al.** Using Biannual LQAS Data to Improve Child Survival and Safe Motherhood in Nepal: Program Results from 1999–2001. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002*.

**MkNelly, B.** Progress Tracking of Credit with Education. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002*.

As shown in this section, there are a number of possible methods for assessing health worker performance: direct observation, record review, health worker interviews, exit interviews, community- and facility-based monitoring systems, and LQAS. With this variety of available methods, it is very important to combine them according to each method's advantages and disadvantages, such as cost, time, and personnel needed to carry out the method, as well as the quality of information the method can provide. Direct observations are considered the gold standard of assessment methods, although they are costly in comparison to others such as health worker interviews, which are the least expensive method. For many activities, exit interviews can give reliable data and require fewer resources than direct observation. Health worker interviews have been shown to be the least reliable of methods, as compared to direct observation, exit interviews with patient/caretaker, and record reviews (19). Community-based



monitoring systems have the potential to motivate community members and health workers to play an active role in identifying performance barriers, as well as generating community-appropriate solutions. The LQAS approach assesses programs at the population level and identifies areas that require focused support.

#### 4.6 Community- and facility-based monitoring systems

Community-based monitoring systems, also known as community-based health information systems (CB-HIS), build the capacity of communities, including health workers, to improve community health status. They do not directly impact health worker performance, but they can motivate health workers in a number of ways, thereby improving their performance.

Community health workers are responsible for collecting data on vital events and illnesses from the community and then consolidating this information with the data collected at the health facility. Through this process, health workers are involved at all stages of the process and, with a supportive supervisor, can see what information is important to collect and what methods of collection will maintain the integrity of the system; they also can contribute their own ideas on how to improve the system. A CB-HIS not only can motivate community health workers by generating a sense of ownership and allowing them to witness the positive impact of their work, but it also can greatly improve the relationship between community health workers, as well as other informal health care providers (HCPs), and facility-based health workers. Thus, improving the relationship between community HCPs and facility HCPs can lead to an improved relationship between the community, in general, and the facility, which can result in more frequent visits to the health facility when necessary. More information on CB-HISs is available in work by Debay and others, "On the Design of Community-Based Health Information Systems" (available at [http://www.childsurvival.com/documents/CSTS/C-HIS\\_Final.pdf](http://www.childsurvival.com/documents/CSTS/C-HIS_Final.pdf)).

The next example illustrates the value of combining household level data with facility data for a more complete picture of the community's health status and needs. With a better picture, communities and facilities have been able to take important steps to improve the community's health.

**Box 9. NGO example: CARE Peru SIVICS monitoring system (29)**



SIVICS (Sistema de Vigilancia Comunal de Salud), a community-based health surveillance and response system (CB-SRS) developed by CARE Peru ([www.care.org](http://www.care.org)), is an example of a successful partnership between communities and the MOH health facility (29). By collecting data at the household level, SIVICS was designed to provide important information that the MOH HIS was unable to capture, specifically health information from the communities, such as illnesses, births, or deaths not seen at the health facility.

The system has enabled three key activities: 1) short- and long-term programmatic decisions and action plans can be made on the basis of data from the communities as well as data from the health care facility; 2) communities and facilities can use SIVICS as a “practical structure” for organizing essential services such as prenatal care and emergency transport; and 3) “strong and trusting relationships” have been developed between the facility staff and community health volunteers (CHVs), which has in turn been critical to the success of SIVICS. Health worker performance is addressed throughout the system by creating structures and technical tools for them to use and also by encouraging the development of supportive, trusting relationships among health workers at various levels. For example, CHVs created maps of their community for tracking household data; facility-based staff adjusted referral forms and facility reports for use by CHVs by using pictures and symbols; CHVs met with facility-based health workers to coordinate activities; CHVs formed an association in order to support each other, as well as to advocate for more support from the facility and local government; and a style of “supportive supervision” was used with CHVs (supportive supervision is discussed in section 4).

During the 4 years after SIVICS was introduced, prenatal care at MOH facilities increased from 38 to 73 percent. Similarly, obstetric emergencies treated by facility health workers increased from 45 to 93 percent. Furthermore, of those needing facility-based care, more than 70 percent were referred with referral slips, and about 50 percent of those clients were later counter-referred to the CHV to receive followup care.

CARE Peru has helped MOH facilities to install and learn to use Epi Info software to track monthly reports submitted by health promoters. The system allows the MOH to track whether or not the case management provided by local health promoters was appropriate (i.e., whether an educational session was given or a referral to a health facility was made). This information is used in monthly meetings with promoters to reinforce training on appropriate management. In addition, the MOH health providers use this information to plan extramural visits. Using monthly health promoter reports, the health personnel can make specific monitoring and followup visits to high-risk patients in the community accompanied by the health promoter in each sector, thus making extramural work more efficient and effective.

Source:

**Milla, J. & Tam, L.** Using Information to Improve Health: CARE Peru’s Experience with a Community-Based Health Surveillance and Response System. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002*

The wide range of methods for assessing health worker performance can be confusing to the program manager. There has been little guidance on how program managers should select assessment methods. One of the few studies to directly compare these methods was carried out by the QAP in Malawi and Guatemala. The results of the Malawi study are summarized in the following text box.

**Box 10. Comparison of methods for assessing quality of health worker performance in Malawi (19)**

This study compared the strengths and weaknesses of four methods for assessing the quality of health worker performance for management of sick children: observation of provider-patient encounters, exit interviews with patients/caretakers, record review, and interviews with patients. The data were collected in 14 health facilities in Lilongwe District in Malawi. With direct observation of health workers as the gold standard, record review had generally poor agreement, provider interview data had fair agreement, and exit interview data had fair to good agreement. Exit interview data were particularly good for those concrete activities that caretakers of young children were able to see or hear. The authors conclude that exit interviews can provide reliable data about the patient-provider encounter, while the reliability of provider interviews and record reviews is very limited. However, provider interviews appear to be the least expensive method, and record reviews take the least time and are easier to schedule.

Source:

**Franco, L.M. et al.** *Malawi Field Study: Comparison of Methods for Assessing Quality of Health Worker Performance Related to Management of Ill Children*. Bethesda, MD, published for USAID by the Quality Assurance Project, 1996.

Whichever methods are chosen, it is important to remember that the process of performance measurement is iterative and will need to be reviewed and refined in an ongoing manner. The next step, after measurement, is improvement. In the following section, various approaches to performance improvement are discussed.



## 5. PERFORMANCE IMPROVEMENT SOLUTIONS

### What the practitioner will find in this section

This section examines assessment of performance and the dual role of monitoring in assessment and performance improvement. This section examines ways to move from assessment of performance to taking action to improve performance. Methods of performance improvement that are briefly reviewed include the following:

- Better selection of health workers
- Dissemination and encouragement to use evidence-based guidelines
- Competency-based training
- Job aids
- Improving communication and counseling skills of health care providers
- Providing sustainable and appropriate monetary and nonmonetary incentives
- Ensuring the availability of required equipment and supplies
- Supportive supervision and coaching
- Team problem solving
- Institution of functional referral systems.

Once the current level of performance has been determined and gaps in performance have been identified, the next step is choosing performance improvement strategies. Many tools are available, and whatever combination of methods is selected, it is essential that the strategy is comprehensive, well-planned, and clearly thought out and that it acknowledges and addresses the various environments that impact health worker performance. According to Woodward (30), there are nine different environments that affect health worker performance, including a health worker's personal environment (which refers to his/her preferences, values, and personal relationships) and sociocultural and political environment. A program that addresses the individual health care worker, the local context, and the regional and national situation is more likely to affect permanent change.

Woodward addresses individual health worker behavior change (resulting in improved performance) by assessing how the health worker sees the problem (30). For instance, if the health worker is not aware of the problem, "predisposing strategies" would be explored, such as attending seminars or conferences, or a manager or peer might conduct outreach visits to observe whether the gap in performance is particularly problematic with a particular type of patient or clinical problem. Another strategy is self-assessment, which involves an individual assessing his/her own performance and practices and identifying ways to improve.

“Enabling strategies” are appropriate when a health worker is aware of the problem and has already learned new skills necessary to improve performance, but has yet to apply them in the workplace. Activities that might be included are rehearsing new skills or developing guidelines. These are intended to provide support to the health worker in integrating the new skills and behaviors.

Once a health worker has incorporated new practices into his/her work, “reinforcing strategies” work to make the changes in practice permanent. Such strategies rely on feedback systems, either by a supervisor or a peer. The way in which the health worker being assessed perceives the feedback has a big impact on the effectiveness of the feedback system; a system that is supportive rather than threatening seems to be more useful.

While individual health worker behavior and perceptions are the focus of performance improvement, committed supervision and management are essential. Commitment from senior management is the foundation of strong leadership for improved performance and quality health care. Then another set of managers will need to work with key stakeholders to set priorities, and they must motivate health care staff and volunteers to improve the quality of their services.

Regional and national level areas that impact health worker performance include structural factors such as policies and regulations of health workers and health care institutions. Increasingly, programs address enabling and reinforcing strategies at the regional and national levels as part of an approach to improve health worker performance.

A series of potential interventions to improve health worker performance is presented below. Again, most of these approaches probably should be combined, and what should be added or strengthened first depends on what is presently in place and what resources are available. In challenge the traditional approach to improving health worker performance by relying exclusively on training, the nonlearning approaches are presented before the learning interventions. The solutions directed at the following factors of poor performance listed in Table 2 will now be described and discussed. In order to improve performance, health workers need to have appropriate knowledge and skills, as well as inner motivation, the ability to learn, and a willingness to implement change. Supervisors can ensure that health workers have appropriate knowledge and skills by carefully selecting health workers and by having reasonable job expectations. Standards and guidelines, performance feedback, and access to proper facilities, equipment, and supplies also contribute to health workers’ knowledge and skills. Motivation, the ability to learn, and the willingness to change can be

encouraged through effective and strong leadership, a coaching style of supervision, and an enabling environment including access to needed facilities, equipment, and supplies, as well as a working referral system.

Most, if not all of these tasks will be conducted through supervision. Traditional approaches, to improving health worker performance, such as training, may not be as effective as newer approaches, such as supportive supervision and coaching (18, 21), which can better ensure that health workers are not only skilled, but motivated as well. Both skill and motivation are necessary to provide quality services.

### 5.1 Job expectation and health worker selection

Choosing the health providers and educators with whom to work closely is an important first step. An example of gender sensitivity comes from a study by CARE Peru on breast feeding. Focus groups were conducted to determine the best ways to develop mothers' breast feeding support groups in communities. The results were used to design and develop a community support system in breast feeding. An important unexpected result was the discovery of how important it is to women to have other women give them information on health. Up until then, the great majority of health promoters were men, and their role of discussing women's health issues was little accepted by either the women or the male promoters themselves. These findings encouraged the CARE project to develop the strategy of "Women Leaders," which found high acceptance among both men and women in the communities.

Once health workers have been selected, it is essential that both the health worker and his/her supervisor have a reasonable and mutual understanding of what the job entails. Once an initial job description has been crafted, the health worker and supervisor need to regularly review and redesign the job and work conditions as needed in order to ensure efficient use of resources, as well as to maintain the health worker's morale and motivation. Unreasonable job expectations will result in lower quality services and lower health worker motivation.

### 5.2 Standards and guidelines

Performance according to standards and guidelines is the foundation for determining the detailed tasks to be carried out and for assessing health worker performance, but there are major issues concerning the establishment, distribution, acceptance, and use of appropriate guidelines (10). At the international level, major efforts have been made toward the consolidation of clinical guidelines such as those incorporated into the IMCI (5, 31), EPI (32), family planning, tuberculosis control, and most other specific high-



priority interventions. Nearly all high-priority preventive and treatment interventions have developed clinical standards and guidelines based upon the ideal randomized trial study circumstances. However, all guidelines and standards must be appropriate at national and local levels; therefore, national authorities/specialists must agree upon a set of guidelines for each important clinical area or work toward their development. The activities of IMCI are an example of the kind of work that must be carried out for all clinical areas (1, 5, 9, 33). In Uganda, a set of clinical guidelines on maternal and neonatal care, somewhat parallel to IMCI, has just been released (34); consolidation of clinical guidelines are being developed in other areas as well. At the local level, the health manager often has to determine the current national standards and guidelines, which may be in development; sometimes significant adaptation and development have to be made locally before they can be used.

There are many barriers to the use of these standards and guidelines. In Uganda, for example, a list of the standards and guidelines that are available to the central ministry has been developed and distributed widely. However, many of the actual standards and guidelines require much work to consolidate, update, and refine. Further, many of the important standards and guidelines are not available at the facility levels, and many health workers are not familiar with some of them. Major efforts must be made to complete the revisions of the standards and guidelines; to distribute them to all hospitals, health centers, and facilities involved in health care; and to be sure that they are used. Experience is being gained in United States and other technically advanced countries in identification of barriers to the use of evidence-based clinical guidelines, and there is a beginning appreciation of the importance of developing innovative ways to developing and disseminating guidelines. This is a new area for research, and answers are not yet available; furthermore, the situation for most developing countries is so different that methods for distribution, acceptance, and use of guidelines for primary health care in developing countries will most certainly require a considerable amount of effort.

In addition to dissemination and encouragement to use the evidence-based clinical guidelines by health workers, the use of standards must be monitored and assessed on a regular basis (35). This requires a strengthening of the supervisory systems to provide support and coaching for health care workers, particularly in rural health centers and small hospitals. Much work is needed in this area, in addition to the monitoring of private practitioners and private facilities, which has been barely touched in most developing countries—an area of great concern. Survey instruments for assessing the extent of health workers' compliance with clinical standards and guidelines may also serve as an alternate outcome evaluation for health services and as a proxy for



reduction in mortality and morbidity. Monitoring of performance according to clinical standards is one key to measuring health system performance.

### 5.3 Knowledge and technical skills

Two primary approaches exist to developing health workers' knowledge and technical skills: competency-based training (CBT) and self-paced or individualized learning. While CBT is considered the best way to teach specific skills to health workers, some training programs (such as computer-based courses) are well-suited to a self-paced learning approach, which offers more individualized training. On-the-job training, a self-paced learning program, has the unique advantage of allowing a health worker to continue work while in training and to practice the new skills in his/her everyday work environment.

#### **Competency-based training**

CBT is widely recognized as the most effective approach to providing specific job-related skills to professionals and possibly to lay adults (36). In CBT, the focus is on the learner to ensure that he/she achieve mastery in one or several competencies that are well defined, verified, and made public in advance. All training materials are closely linked to the specific competencies on which the training is based, and the essential knowledge that directly relates to them is transferred. Training is provided to each individual selected for the course by a facilitator or coach and according to his/her own progress toward mastery. Satisfactory completion of training is based on achievement of all specified competencies. In other forms of training, knowledge and skills are taught to a group of learners according to a predetermined schedule<sup>1</sup> of lectures and possibly practical sessions, and satisfactory completion of the training is assessed primarily through various forms of tests based on knowledge.

The first step in the design of a CBT curriculum is the identification of the specific skills that form the purpose of the program and the definition of standards and conditions under which the skills must be performed (competency). This typically requires detailing all of the steps and sequence involved in the specific skills and defining the related standards. Flowcharting is a common technique used at this stage to standardize the processes involved in a particular skill. The adoption of the standardized procedure to be taught directly leads to the development of the various training materials (checklists, learning guides, reference manuals). Checklists are used

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<sup>1</sup> These other forms of training are sometimes characterized as "time-based" approaches.

for assessing competency during training course's and also during followup visits or any performance assessment (see section 4).

The most common approach to learning new knowledge, attitudes, and skills is the group-based course, in which there is a group of participants and one or more trainers. The trainers deliver interactive presentations and demonstrations based on an existing learning package or curriculum. The participants interact, take notes, participate in classroom exercises (e.g., case studies, role-playing, practice with models), and demonstrate mastery of the learning objectives. In the clinic or other work site, the trainers demonstrate skills and coach and assess participants as they practice and demonstrate competency in these skills while working with clients.

Self-paced or individualized learning is defined as learning directed by the individual in order to meet personal learning objectives. Although self-paced learning and individualized learning have essentially the same meaning, there are some subtle differences. In self-paced learning, the learner controls the pace of the learning process. For example, in a self-paced computer-based course, two clinicians might begin the course on the same day, but one may finish days ahead of the other. By contrast, in individualized learning, there may be some time parameters. For example, a structured on-the-job course may require the individual to reach specific points in the course at specific times. The learning is still targeted to the individual, but the pace of learning may be partially controlled by the trainer or facilitator. For this document, the term "self-paced learning" is used to describe both approaches.

Structured on-the-job training (also referred to as site-based or clinic-based training) is a form of self-paced learning that allows the individual requiring training to acquire the necessary knowledge and develop the required skills while on the job. Knowledge can usually be acquired individually through reading or computer-assisted learning, and qualified trainers can demonstrate specific skills or coach the learners when they are ready to use the skills (just-in-time training). If an effective training program based on the same competencies already exists and qualified trainers are available, a structured on-the-job training combined with support supervision can be a very effective and efficient performance improvement solution. The next example describes such a training program in Indonesia.

More information on self-paced learning is available in the following document, which can be downloaded at [www.jhpiego.net](http://www.jhpiego.net) (37):

Rawlins, B. et al. A Self-Paced Learning Package for Training in the No-Scalpel Vasectomy Technique: The Experience of Trainers and Participants in Nepal, JHPIEGO Corporation, 2002.

**Box 11. NGO example: On-the-job peer training of nurses in Indonesia (32)**



Project Concern International along with the Provincial Department of Health implemented an on-the-job training program for nurses responsible for carrying out immunization programs in the Maluku Province in Indonesia in 1993 (32). A significant obstacle to a successful immunization program is “inconsistent and inadequate performance by health workers,” and this peer-training program addresses this issue by placing a trainer nurse at a health center with another immunization nurse who is less experienced or not performing as well. The two nurses usually know each other from quarterly meetings attended by all immunization nurses, and the trainer nurse might even stay in the house of the less experienced nurse for the 1- to 2-week period. Four performance areas were covered during the training period: 1) care of vaccines to maintain quality; 2) vaccine distribution, such as injection techniques; 3) use of the information system; and 4) strategies for increasing coverage.

The World Health Organization (WHO) conducted a study of the project not only to evaluate the impact on immunization coverage rates, but also to determine if the project’s activities were cost-effective. Out of the 15 health centers that completed the training program, 13 provided sufficient data for the study. Compared to nonparticipating health centers, health centers that participated in the program demonstrated a 39 percent increase in coverage. Furthermore, 2 of the 13 participating health centers had severe transportation problems that significantly affected their coverage rates; if the data from these two centers are removed and coverage rates are recalculated, the increase in coverage rises to 54 percent. It costs approximately \$53 per nurse for the training program, including housing and per diem for 3 to 12 days, not including the nurses’ salaries. An additional 12,745 vaccines were administered by the project sites, compared to the previous year. At \$.05 per additional vaccine, it costs \$.50 for every new fully immunized child. The sustainability of the program is promising, as some district and provincial governments intend to fund such programs in the future, given the success in Maluku.

Not only has this peer-training program been successful in improving immunization coverage, but participants in the program also felt very positively about their experience. Many remarked that they were much more comfortable speaking openly with one other nurse rather than in large groups during “official” trainings. They also felt that the hands-on process and individual attention were easier to understand than the typical lecture format.

Source:

**Robinson, J.S. et al.** Low-cost on-the-job peer training of nurses improved immunization coverage in Indonesia. *Bulletin of the World Health Organization*. 79 (2): 150–158 (2001).

### **Job aids**

Job aids were developed as an alternative to training or as a supplement to training; training is expensive and may not always be an appropriate tool for improving performance. Job aids are a tool to simplify often-complicated processes or information in order to enable a health care provider to provide thorough, safe, and efficient care. According to the QAP (38), an effective job aid will

- Store information, instructions, options, or perspectives in a form that is external to the worker
- Guide the performance of a task in an actual situation in the correct sequence
- Give clear signals for when to take some kind of action
- Call attention to important information, using nonverbal devices when appropriate
- Contain sufficient space for any required written responses.

Examples of job aids used in international settings are critical pathways, clinical guidelines, posters, flowcharts, picture aids, and pocket manuals (31, 38).

There are a couple of common mistakes made when introducing a job aid to a group of health workers. One error often made is developing a job aid when it is not the appropriate tool to address the identified problem. Job aids are most effective if used when the performance issue is health care workers' lack of knowledge, skills, or time or if they are used to address health workers' forgetfulness. This may explain why job aids tend to be used in preventive care situations, in which the work is fairly clear-cut, but the health workers must make use of a large amount of information. Job aids are not appropriate when the root cause of a problem is the work infrastructure and processes or health care worker motivation. A second mistake that is frequently made is developing a job aid and expecting health care workers to use it without any training on why or how to use it. Health care workers must be trained on the use of any job aid he/she is expected to use. In order to prepare health workers and to build their support for the use of a job aid, a training agenda should be developed in a simulated work environment. Often, job aids are introduced and then not used, so it is essential to work with health care workers so that they can easily integrate the new job aid in their work and to ensure that the job aid is practical and beneficial to those using it.

Very little research exists on the use of job aids in developing countries, although some evidence shows that job aids do improve health worker performance (31, 38). Job aids are commonly used to address ARI, IMCI, and sexually transmitted diseases (STDs), but few studies have been conducted to show the impact of their use. There is some evidence, however, to show that manual aids can perform as effectively as the more expensive computerized aids, which makes the use of job aids more suitable to developing country settings.

**Box 12. QAP-CORE Job Aids Symposium**

The Quality Assurance Project ([www.qaproject.org](http://www.qaproject.org)) and the Child Survival Collaborations and Resources (CORE) Group ([www.coregroup.org](http://www.coregroup.org)) cosponsored a symposium on job aids at the International Trade Center in Washington, DC, on May 24, 2001. The purpose of the symposium was “to exchange views and evidence about the state-of-the-art in job aids, to share particular job aids that have been successfully used in international health, and to identify future developments that will make job aids more useful in field applications for child survival and international health.”

Presentations and transcripts of the sessions are available online at <http://www.qaproject.org/methods/resjobaids.html>.

The symposium is summarized at <http://www.qaproject.org/jobaids/presentations/JOB%20AIDS%20SYMPOSIUM%20PROCEEDINGS>.

The example in the following box highlights the value of job aids, as well as the importance of continuous assessment of the effectiveness of a particular job aid.

**Box 13. NGO example: IMCI job aids in Zambia (31)**



For effectively assessing, classifying, treating and counseling families on common childhood illnesses, IMCI clinical guidelines were developed (31). Zambia was one of the first countries to institute IMCI national guidelines. In 1999, a large number of health care providers had been trained in IMCI protocol, and several job aids were in place, including a chartbook, a recording form, an IMCI poster, and a mother's card.

A study was carried out by the QAP to assess the success of the job aids both in improving compliance with the IMCI guidelines and in allowing providers to carry out their work more efficiently and effectively. Data for the study were collected through structured interviews with providers, structured exit interviews with mothers/caretakers, and direct observations of IMCI case management by trained observers.

The results of the study show that while there is not sufficient evidence to prove that the IMCI job aids caused an increase in compliance, there is a strong correlation that they did so in the 16 health centers studied. Furthermore, this correlation is evident across all types of providers studied and across all areas of IMCI management (assessment, classification, and counseling), except treatment of the illnesses. Not only were providers performing better, but they also found certain job aids particularly helpful for saving time, reducing the number of mistakes made, and helping them remember the IMCI guidelines. Although they were concerned that clients would question their competence if they used job aids during visits, 99 percent of mothers/caretakers actually preferred providers to use written job aids. While job aids seemed to enhance providers' effectiveness in IMCI in general for assessment, classification, and counseling, there were certain areas that job aids did not seem to impact, such as assessment for malnutrition, anemia, and fever.

Not all job aids were deemed equally useful by providers; a chartbook and a “new outpatient department book” (NOPD) designed and introduced to the health centers by QAP were found to be particularly helpful and complementary to each other. Health centers and health care providers participating in the study were trained step by step on how to use the NOPD, and after some time, they offered recommendations on how it could be improved, such as by increasing the amount of space for writing notes, increasing the font size, and integrating the NOPD into the supervisory process and IMCI training program. Suggestions offered for all job aids included developing a separate job aid for each common condition (e.g., diarrhea, cough, malaria), inserting more pictures of Africans, and procuring the supplies needed to comply with the guidelines.

The development of useful job aids is an iterative process, and even during the process of refining and adjusting them, job aids can be successful at improving provider performance. This example shows that proper training and provider feedback are essential to job aid effectiveness.

Source:

**Edward-Raj, A. & Phiri, R.K.** Assessing the Functionality of Job Aids in Supporting the Performance of IMCI Providers in Zambia. *Operations Research Results*. Bethesda, MD, Quality Assurance Project, 2002.

## 5.4 Communication skills

Communication by health workers is a key dimension of quality. In assessing quality of counseling in an encounter between a health worker and a patient in a clinical setting or communication with a community member outside of a health facility, two different aspects of this interpersonal communication are commonly assessed:

1. The technical content: Was the correct information given in an understandable and appropriate manner?
2. The affective or emotional content: How was the person treated by the health worker? What nonverbal communication/body language was used (such as nodding of the head and maintaining eye contact)?

Both aspects are key determinants of community perceptions of quality, although it is common to hear community members stress the latter: “I am not returning to that clinic because they are rude to us” or “They are not really interested in what we have to say.” Both aspects of communication can affect satisfaction with health services, adoption of recommended behaviors, and health status itself (39, 40). Currently, there is great interest in promoting compliance with treatments for malaria, tuberculosis, AIDS, and other diseases. Clear, understandable, and appropriate communication about how to administer treatment has often been cited as an important strategy to improve patients’ compliance with treatment (41–43) and lack of specific information about how to administer treatments has been associated with poorer compliance (44). The next example summarizes the results of operations research carried out by Save the Children and Johns Hopkins University in Bougouni District, Mali, to improve the quality of counseling by community health workers who manage village drug kits.



**Box 14. NGO example: Improving communication skills of CHWs managing village drug kits in Bougouni, Mali (45)**



Village drug kits are an innovative approach in Mali to give villagers easy access to treatment for malaria, diarrhea, and eye infections and to first aid supplies. Starting in 1995, Save the Children sponsored the establishment of village drug kits in Bougouni District, Mali. The CHWs who manage the kits are villagers with little or no education who first take a 30-day literacy course, then undergo further training on financial management of the kits. Although the kits were successful in making medications more available to Malian villagers, a final project evaluation conducted in 1999 indicated that drugs sold through the kits were not being administered correctly to sick children in the home and that extremely sick children were not being referred by kit managers to health centers (46).

A collaborative study starting in 2001 that involved Save the Children, the Malian Ministry of Health, and Johns Hopkins University developed and tested a new training course for the managers of the kits. The course shows kit managers how to communicate more effectively with parents of sick children and teaches them when and how to refer sick children to health facilities. Visual aids were developed by the National Centre for Information, Education and Communication for Health (CNIECS) of Mali for the CHWs managing the drug kits. The aids help the CHWs explain to caretakers of young children how to administer chloroquine to children in various age groups.

The effect of the intervention on the quality and content of the counseling received from the manager of the village drug kit was assessed through direct questions during followup in the home 5 days after the visit to the village drug kit manager. Caretakers in the intervention group were significantly more likely to be told the name of the disease the child had and how to administer the prescribed medication. In the intervention group, 82.2 percent of respondents reported being told the dose to give to the child at each administration of the drug, the number of days of treatment, and how to administer the drug, compared to 63.4 percent of respondents in the comparison group ( $p=0.016$ ). The intervention was associated with significant increases in the proportion of caretakers who administered the dose of chloroquine exactly per IMCI norms and who administered for the full 3 days.

Source:

**Winch, P. et al.** Increases in correct administration of chloroquine in the home and referral of sick children to health facilities through a community-based intervention in Bougouni District, Mali. *Transactions of the Royal Society of Tropical Medicine and Hygiene* (accepted for publication).

The SECI Project in Bolivia addressed the importance of health worker communication skills. The following example describes how the project was able to improve provider communication styles through a system of community feedback.

**Box 15. NGO example: Feedback on communication styles of providers through a community-based health information system in Bolivia (47)**



Empirical data collected as part of a health information system can also contribute to improving relationships between facility-based staff and community members, as evidenced by Save the Children's project in Bolivia (47). Save the Children developed a community-based health information system called SECI (which stands for Sistema Epidemiológico Comunitario Integral and is translated as Integrated Community Epidemiological System), in the rural township of Oruro, Bolivia. The goal of SECI was to improve family and community health status by empowering community members to work with facility-based health workers. Data collected with SECI are used in district level decisionmaking, as well as at the family and community levels. In response to repeated reports of physician mistreatment during antenatal care appointments, community representatives asked the health district director to replace the offending doctor. SECI provided an avenue for community members to raise concerns about facility staff communication skills to officials who have the decisionmaking power needed to improve these skills and thereby improve the client's experience with facility-based care.

Source:

**Hilari, C.d. & Howard-Grabman, L.** Does a Mayor Need Epidemiology? Data Use by Local Decisionmakers. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

## 5.5 Motivation

In a recent review commissioned by the BASICS II Project, motivation was defined as a “desire to serve and perform effectively” (48). Motivation is important for all levels of health workers and is generated by monetary and nonmonetary incentives. Many nonmonetary incentives work to develop a sense of achievement and pride in the health worker, but some are tangible material items, such as identification badges and supplies. Monetary incentives can come in the form of a salary, stipend, or per diem/travel allowances. Each kind of incentive, monetary and nonmonetary, has its benefits as well as its problems, and the decision regarding which mix of incentives to offer should be made at the local level.

Any incentive program needs to be well thought out, rather than choosing incentives at random. The incentives chosen depend on the health worker's role. The purpose of each incentive should be clear, and it is best to avoid offering too many incentives, as they can have a paradoxically negative effect on health workers' motivation.

Monetary incentives should be established only after thorough consideration of the alternatives. Some advantages of monetary programs include a potentially lower attrition rate, as compared to the use of other incentives, and the ability to ask health workers to work longer hours when needed. Problems can include the following: Payments may not continue after the program ends; workers will inevitably demand more money at some point; they can cause jealousy and resentment among different



kinds of health workers if there is a difference in the amount of compensation; and it may jeopardize the trust the community has in the health worker if he/she is seen as an employee of the government (48).

Nonmonetary incentives can be of great value to health workers, and in fact, some are critical to health worker satisfaction (48). Furthermore, nonmonetary incentives do not have many of the problems of sustainability that frequently accompany monetary incentives. Some important nonmonetary incentives are as follows:

1. Public recognition of the work done by health workers: This boosts the trust and rapport between the health worker and the community, which is usually essential for health worker satisfaction.
2. Quality supervision: This is especially effective if the supervisor is committed to improving the relationship between the health worker and the community and is willing play a mentorship role in enabling the health worker to develop his/her personal and professional skills. A lack of quality supervision is often cited as a cause of job dissatisfaction.
3. Ability to see a positive impact of work: This offers health workers an important sense of accomplishment, which can be a potent motivator.
4. Training: Training is not only a useful incentive, but it is also critical for health workers to be able to do their work effectively, and it can increase the health workers' value in the community.
5. Opportunities to interact with other health workers: Often, programs organize monthly meetings for health workers to meet and attend trainings.

In-kind compensation can be an effective “compromise” between strict monetary and nonmonetary programs and tends to be most successful when the community determines the types of in-kind items provided. Sometimes, NGOs will also contribute items such as backpacks, agriculture tools, or home supplies to community health workers. Additionally, some programs use a system that rewards health workers by allowing them exclusive access to certain credit programs or classes or easier access to other programs, such as bypassing any line at the health post. Of course, it is crucial to make certain that the community does not resent the health workers for receiving such benefits.

The following example describes the ways in which two different projects addressed health worker motivation.

**Box 16. NGO example: Monitoring by health workers, vendors, and communities leads to quality improvement in Zambia and Kenya (49–51)**



In Zambia, the Christian Children's Fund (CCF) inspired health workers and communities by presenting them with disappointing and worrisome under-5 mortality rate (U5MR) data collected as part of an Annual Impact Monitoring and Evaluation System (AIMES).

Furthermore, CCF gave them the opportunity to make a positive and dramatic impact on the children in their communities, a strong internal motivator (51). Health workers and communities took the opportunity, and their success can act as a motivator to improve community health issues in the future.

In 1999, AIMES data from CCF target communities showed that the U5MR was above the national average (243 deaths per 1,000 versus the national average of 202 deaths per 1,000), primarily because of malaria, diarrhea, and vaccine-preventable diseases. Fifteen communities (including the health workers from these communities) requested support from CCF to institute a "comprehensive program to improve basic health facilities and health awareness, immunization, malaria control, and water and sanitation." With such commitment, the U5MR dropped to 155 deaths per 1,000 by the year 2000. CCF continues to use this model to stimulate health workers to improve community health status.

Source:

**Trevant, C.** Use of Data for Action: CCF's Experience in Using AIMES Data for Informed Program Decisions. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

In Kenya, the Ministry of Health and the African Medical & Research Foundation (AMREF) implemented a vendor-to-vendor program to improve dispensing practices of private drug vendors, including following national guidelines on the treatment of malaria. Incentives in the program include 1) distribution of a shopkeeper job aid, a poster of approved antimalarial medications and a client aid, and a brochure with information about malaria treatment given to clients by shopkeepers; 2) vendor training on the purpose and use of the job aids; and 3) T-shirts and caps given to trainees. Through this training, about 600 drug shops (approximately 22 percent of the district's total number of drug shops) stock and sell the correct antimalarial drugs.

The vendor-to-vendor program has a few notable advantages and disadvantages. Some key advantages include the following: 1) each drug vendor sells drugs to about five people every day, hence the program can reach many people in a short period of time; 2) the costs for training and logistical support are small, which makes the program cost-effective; and 3) the program educates community members and health care providers, thereby empowering them to make informed decisions when they purchase drugs. Disadvantages include a high attrition rate of pharmacy attendants and difficulty maintaining vendor motivation.

More information on this innovative approach is available at <http://www.qaproject.org/pubs/PDFs/vendorkenya.pdf>.

Sources:

**Ngugi, H.** Promoting Effective Malaria Treatment at the Community Level Through Drug Vendors, the Bungoma District Experience. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

A manual on the intervention entitled "Vendor-to-Vendor Education to Improve Malaria Treatment by the Private Sector: A 'How-To' Manual for District Managers" has been produced and explains how the intervention was developed, implemented, monitored, and evaluated.

**Tavrow, P. et al.** Vendor-to-Vendor Education to Improve Malaria Treatment by the Private Sector: A “How-To” Manual for District Managers. Bethesda, MD, Quality Assurance Project, 2002.

This useful manual can be downloaded at <http://www.qaproject.org/pubs/pubsvendor.html>.

## 5.6 Facilities, equipment, and supplies

Having appropriate equipment and supplies is an ongoing challenge in developing countries. Access or lack of access to these affects health workers’ ability to provide services, their feeling that they are able to carry out their jobs effectively, and community members’ confidence in the formal health system. In addition to having sufficient and quality facilities, equipment, and supplies, health care staff need to communicate to the community what they can expect from the facility and the health care providers, such as hours of service and use of referrals. The following example illustrates how addressing clients’ concerns regarding supplies, drug availability, and staffing can increase the community’s confidence in the care they receive at the facility.

### **Box 17. NGO example: Community feedback on quality of care at facilities (52)**



Quality of care (QOC) issues emerged in Uganda in an Africare Community-based Integrated Management of Childhood Illnesses (CIMCI) project area (52). The CIMCI project successfully increased mothers’ and caretakers’ visits to health units in the event of a childhood illness. In order to understand the impact of this increase, the project organized a study, involving the collection and analysis of facilities’ monthly reports, as well as interviews with mothers/caretakers.

According to the study, “increased facility utilization resulted in frequent drug stock-outs, long waiting times, and health worker overload.” Clients were concerned that they were not receiving proper care. For instance, they thought that injections were more effective than oral medications, and they thought that a referral indicated incompetence of the health care provider. Their dissatisfaction was so great that mothers and caretakers were beginning to return to their earlier practice of seeking out health care from the informal sector (such as traditional healers) and avoiding the health units.

Africare shared the results of the study with local policymakers and the District Health Team, who then made changes at the district and project levels. At the district level, health units in the CIMCI project area were authorized to hire additional staff and stock greater quantities of drugs. At the project level, messages were created to educate clients about routine and effective health unit practices, such as using oral drugs and referrals. During followup at the facility level, project staff discovered that health care staff in the health units were not using the data to initiate changes. A training program for health providers in “data management and utilization” was developed and implemented.

## 5.7 Supervision, leadership, and performance feedback

Along with organizational and technical abilities, leadership skills are critical to being an effective supervisor, including improving health workers' performance. Leadership skills include, but are not limited, to providing vision and direction to the health team, motivating health workers and communities, resolving conflicts, and taking risks (53). Support supervision and coaching are also considered essential leadership skills.

### **Supportive supervision and coaching**

Supportive supervision (SS) is a process of guiding, helping, teaching, and coaching health workers at their place of work about how to perform their work better through the use of joint problem solving, job aids, and an emphasis on two-way communication between the supervisor and the health worker (54, 55). It is the main method through which health team supervisors can monitor and assess performance according to standards. Most of the interventions discussed are best integrated within a systematic and SS approach. The nature of the supervision system that is developed is essential in providing certain performance-enhancing tools to the health workers, such as team problem solving and coaching. Other terms with meanings similar to SS include quality supervision, support-a-vision, and facilitative supervision. Marquez and Kean, in a publication of the Maximizing Access to Quality (MAQ) Initiative, review the concept of SS and list the following key characteristics (55, p. 13):

- “The focus of supervision is on problem-solving to assure quality and meet client needs.
- The entire team (including the external supervisor) is responsible for quality, so attention shifts from individuals to teams and processes.
- Health providers are empowered to monitor and improve their own performance.
- The external supervisor acts as facilitator, trainer, and coach.
- Health workers participate in supervising themselves and each other.
- Decision-making is participatory.”

The inputs for a good supervision system are guidelines, performance checklists, supervisors trained in coaching and problem-solving techniques, financial resources, and transport. These inputs are organized as an integral component of the organization through a number of steps (e.g., planning, budgeting, preparation, actual visit, reporting, followup) in such a way that supervision leads to desired outputs. These outputs include improved health worker competency, improved motivation, improved

performance according to standards, and improved satisfaction of the patients, caretakers, and communities—the “customers” of health care.

SS uses a problem-solving approach so that information is obtained about the processes through use of tools for assessing Performance According to Standards (PATS). The use of the tools such as checklists is not an end in itself and should be flexible; otherwise the whole supervision exercise will become inspectorial, rather than supportive. As such, good communication and a team approach are essential for effective supervision.

Priority should be given to those activities or services that have the greatest effect on health outcomes. It is not possible to cover all activities in a single SS visit, but visits can be planned to review different aspects on a quarterly or annual basis. The SS visit should be used to identify problems to be discussed with health workers to understand the causes and to agree on a workable solution. Priorities for supervision can be determined by reading previous supervision reports, analyzing routine HMIS data, and by direct observation during the visit itself. The health managers may identify those facilities that may require special attention and assist in defining what further assistance would be most useful to improve their performance.

SS visits are an occasion for on-the-job skill building and training. The health worker being supervised can best learn if feedback is provided not only on what is not done well, but also on what is done well—an important element to maintain motivation. One way to provide feedback is an on-the-spot discussion of problems and a demonstration of how a task should be performed. A written record of the suggestions for improvement with actions to be taken and by whom (supervisor, health worker, head of facility, and or community) should be made, and copies should be provided to all involved. If a problem is so common that it is found in practically every facility, it may be better to address it in an in-service training workshop first, followed by on-the-job demonstration during subsequent supervision. It is a recognized principle in quality management that the focus is on processes, not on individual failures. Problems, when they occur, almost always represent system failure rather than an individual. Blaming health workers will only lead to frustration.

The provision of regular and rapid feedback to health care providers concerning their performance—when done appropriately—and regular posting of health facility and district health team activities/achievements through the use of publicly displayed charts and storyboards for use by all stakeholders have great potential in improving morale and motivation. The health team can decide on a limited set of key indicators, taken from existing service standards, and track these through simple graphs and other data summarization techniques.

A well-functioning supervision system will contain several levels of communication and feedback that include interchange between central headquarters and the District Health Team, between the District Health Team and facilities and services in the district, within facilities, and between the facilities and community services. The supervision system is the glue that keeps the system together. For members of the District Health Team, supervision for support of health providers at the community facility level will be the single most important function that they carry out and may well require up to 50 percent of their time. More information on SS is available from the following sources:

- **Marquez, L. & Kean, L.** Making supervision supportive and sustainable: New approaches to old problems. *MAQ Paper. 4:* 1–27 (2002)  
(<http://www.maqweb.org/maqdoc/MAQno4final.pdf>).
- **MkNelly, B. et al.** Supervision and Support of High-Quality Group-Based Nonformal Education Services: The Use of Observation Checklists. Davis, CA, Freedom from Hunger, 2002  
([www.ffhtechnical.org/publications/summary/fantataskord3mar02.html](http://www.ffhtechnical.org/publications/summary/fantataskord3mar02.html)).

### **Box 18. The Maximizing Access and Quality (MAQ) Initiative**

The Web site of the Maximizing Access and Quality Initiative ([www.maqweb.org](http://www.maqweb.org)) is a good place to find a variety of documents related to quality of health care and health worker performance. MAQ is an initiative of USAID and 22 participating organizations, including several child survival PVOs (e.g., CARE, Save the Children). The initiative seeks to disseminate and apply state-of-the-art methods to maximize access to and the quality of family planning and other reproductive health services.

The MAQ paper by Marquez and Kean is an in-depth treatment of different approaches to supervision, including definitions, comparisons of approaches, and case studies. It can be downloaded from the MAQ Web site at

<http://www.maqweb.org/maqdoc/MAQno4final.pdf>.

The next example shows how supportive supervision of health workers can not only improve performance, but also can build ownership and increase motivation.

### **Box 19. NGO example: Provision of performance feedback by care groups in Mozambique (56)**



World Relief Mozambique developed an effective performance feedback system that has been a key factor in the success of the Vurhonga II Child Survival Project (CSP) HIS (56). Health animators trained approximately 2,300 volunteer mothers to participate in 173 care groups, which are responsible for tracking health events in their communities. The data they collect inform actions taken by community members, district MOH officials, and project staff.



Twice every month, each care group, its care group leader, and a health animator attend health lessons and discuss the health issues affecting their community. Once a month, the volunteer mothers verbally report to the health animator on the households they are tracking. The animator and all care group volunteers discuss and analyze the data. If this analysis is insufficient, the volunteer may return to continue the discussion with the neighbors where the data were collected, or the animator may conduct focus groups. In total, care group volunteers may have three or four opportunities to meet with the animator and receive feedback on their group performance. These meetings provide an opportunity for the health animator to 1) address potential problems early on by offering support and constructive feedback to the care group, 2) build the skills and knowledge of the volunteers, and 3) enable mothers to play an active role in improving the health status of their communities.

While the care groups represent only one level of the information system, their achievements have been essential to the smooth operation of the entire HIS.

Source:

**Ernst, P. et al.** Applications of World Relief's Vurhonga HMIS. In: *Data for Action: Using Data to Improve Child Health, Workshop held in Silver Spring, MD, September 9–11, 2002.*

### **Team problem solving**

Francis and Young define "team" as "a high-performing task group whose members are interdependent and share a common performance objective" (57). The teams should be composed of those who are involved in the performance areas that are the focus of improvement, clients or others who are impacted by the process or performance area, and experts who can provide advice and facilitate the problem-solving process (11).

Addressing performance and process problems through teams has several advantages. First, to ensure quality provision of health care, health workers and others involved in care must seamlessly coordinate their actions; a disruption in services or mistakes can easily occur during the transfer of care or information between providers. Teamwork builds relationships among health workers and provides an opportunity to improve cooperation and coordination. Second, a team that consists of representatives from different points of the process (i.e., providers and customers) can offer a variety of perspectives. As a result, the solutions generated are more likely to be suitable and successful. Third, the process of team problem solving itself can improve morale and commitment to quality and process improvement. These advantages are valuable to any process; however, teamwork often requires significant time and resources (11).

Many approaches to problem solving and quality improvement have been developed, including rapid team problem solving, systematic team problem solving, process improvement, and COPE (client-oriented provider-efficient). Massoud et al. (11) discuss rapid and systematic team problem solving and process improvement. Of these three approaches, rapid team problem solving is the least complex and requires the

least amount of time or other resources; process improvement, by contrast, is the most complex and requires a significant commitment of time and resources.

Rapid team problem solving is appropriate in situations in which there are data available that will give insight into the problem, when a change in the situation needs to happen immediately, and/or when the team has a lot of ideas about how to improve the situation. Systematic team problem solving requires data collection and significant testing of possible solutions before implementing them. Although an investment in time and resources is necessary, systematic team problem solving is more effective than rapid team problem solving when the immediate problem has a more complex or deep-seated root cause. Process improvement adds an additional level of complexity through continuous monitoring and improvement.

COPE is a fourth approach to team problem solving (15). COPE is a process and set of tools used to improve the quality of services through self-assessment. The COPE process draws on many principles of quality improvement and performance improvement. COPE enables supervisors and staff to apply these principles and identify and solve performance problems at a service site level. COPE stresses the definition of good performance, especially in terms of meeting the needs of providers so they can meet the expectations of their client.

The next example shows how team problem solving has been used in a variety of settings to improve health care effectiveness.

**Box 20. NGO examples: Team problem solving in Bolivia (14), Uganda (17), and Guinea (58)**



As mentioned in Box 3, Curamericas/CSRA has worked with partners and communities to improve child survival in Bolivia (14). During mortality analysis workshops, staff thoroughly investigate mortality cases, identify the barriers to health care, and then develop plans to navigate around those barriers in the future. Curamericas/CSRA asserts that both the health staff and the community have been motivated to take positive and effective action as a result of this in-depth investigation of the situations faced by families in the past (14).

Freedom from Hunger ([www.freedomfromhunger.org](http://www.freedomfromhunger.org)) uses Participatory Learning for Action (PLA; [www.rcpla.org](http://www.rcpla.org)) to address problems in their Credit for Education Program (17, 18). The focus of PLA meetings is on the clients; clients share their opinions on the current programs, what they would like to see improved, and what needs must still be addressed. During PLA meetings in Uganda, many community members took the opportunity to raise issues regarding the Credit for Education Program, including loan amount, enforcement of program policy, and education topics. Freedom from Hunger and its Ugandan partner, FOCCAS, were able to take the information shared by the community and adjust the program to more accurately and effectively meet the community's needs.

In Guinea, Save the Children is working on a child survival project, part of which is to prevent neonatal tetanus (58, 59). By conducting a mortality study, it found that those areas that had low rates of tetanus toxoid (TT) immunization of pregnant women had high rates of neonatal tetanus. As a result,



“coordination meetings” were held between Save the Children project staff and partners to look more closely at the findings of the study. With MOH support, participants decided to increase the number of visits made to the areas that had low TT immunization rates of pregnant women. This program has improved the coverage somewhat, but other barriers to receiving the immunization have become apparent, such as insufficient vaccine availability, insufficient number of personnel, and women not receiving prenatal care until late in their pregnancies.

The following complete report on the verbal autopsy study that was the first phase of the work in Guinea is available:

**Schumacher, R. et al.** Mortality Study in Guinea: Investigating the Causes of Death in Children Under 5. Arlington, VA, BASICS II Project and Save the Children/USA, 2002  
([http://www.basics.org/pdf/guinea\\_mort.pdf](http://www.basics.org/pdf/guinea_mort.pdf)).

## 5.8 Referral system

There are a number of benefits to referring sick children from community-based providers (such as CHWs) to first-level health facilities, and from first- to higher level facilities. The quality of care available for sick children at health facilities may be superior to that available in the community, especially in cases of severe disease. Whether this is in fact true depends on the training, availability, and motivation of facility-based health workers and the presence of necessary equipment, supplies, and medications. A functioning referral system can strengthen the link between CHWs and other community-based providers and facility-based health workers, integrating CHWs into the formal health care system. This integration of different levels of the health care system potentially will improve motivation of health workers at all levels, as they sense that they are part of a larger system and others are depending on their performance, although this has not been formally tested. This greater contact with the formal health system could also conceivably decrease the number of CHWs who decide to join the ranks of the unlicensed medical providers and sell a wider and more profitable range of medications, a phenomenon that has been described in a number of African and Asian countries. Finally, referral may be one way of increasing the utilization of health facilities and thereby reaping the benefits of improvements in quality of care in facilities resulting from IMCI training of facility-based health workers or construction of new facilities (60).

As shown in the following example, referral systems are essential to ensure quality health care. Catholic Relief Services, CARE, and the International Rescue Committee have all witnessed the benefits of an effective referral system.

**Box 21. NGO examples: Referral systems improve quality of care in Honduras (61), Peru (29), and Rwanda (62)**



Catholic Relief Services (CRS) in Honduras, CARE in Peru, and the International Rescue Committee (IRC) in Rwanda all have a focus on maternal and newborn care. The three organizations have also developed and used a community-based HIS in order to increase data-based decisionmaking and community health-seeking practices. The importance of a referral system surfaced in all three HISs. Each NGO, along with local partners and the community, developed an information system specifically for the local situation, and each saw an increase in referrals made by traditional birth attendants (TBAs) and community health volunteers to facility-based care.

In Honduras (61), TBAs and members of different community groups are responsible for collecting and analyzing the data generated by the HIS. They then use the information to take action on critical health issues. As a result of this process, TBAs encourage pregnant women to receive antenatal care (ANC) and care for pregnancy-related complications at the local health care facility. The program has been so successful that virtually 100 percent of women with obstetric complications are referred to the facility.

In Peru, the focus is on strengthening the working relationship between community health workers (ACS) and MOH staff (29). ACS collect and analyze data that is relevant to their work and then join with the facility staff to discuss the data and construct a coordinated plan. Together they decided that ACS are responsible for conducting home-based ANC but will refer their clients to an MOH facility if complications arise. In order to support the communication between facility staff and ACS, referral and counterreferral forms with pictures and symbols were developed so that they would be easy for ACS to use.

The Child Survival Project in Rwanda has also focused on communication between the formal and informal sectors (62). At one point in time, when women died at the facility because of obstetric complications, facility staff did not share information about the circumstances of death with the families. Confused and fearful, the community decided that the facility was not a safe place to give birth. With improved channels of communication developed by the project, facility staff now provide a detailed account to the TBA of the events leading up to a woman's death; the TBA then shares the details with the family. Consequently, TBAs have increased the number of referrals they make for women experiencing obstetric complications.

## 6. CONCLUSION

This paper has provided an overview of health worker performance improvement as part of a health systems framework and the essential components of the performance improvement process. It also described some important methods to measure and then improve performance.

Adopting and adapting the approaches described here for an organization or project is a long-term process. Considerable effort may first need to be invested to ensure that there is clarity about what the organization or project is trying to accomplish, to make project staff at different levels and implementation partners aware that quality is a problem at all, and to build an appreciation of its importance and commitment to working to find solutions. In many cases, there has been a tradition of concealing or denying gaps in performance out of fear of retribution on the part of project/organization employees or partners. Confronting such a tradition and leading people to see the value in identifying problems and finding solutions to them may be the most difficult step.

Once a climate where performance improvement is relevant and valued has been created, clear roles in the performance improvement process need to be established, and performance gaps needing to be addressed must be identified. It is important at all times to seek out the client's perspective and to enrich this with the various performance assessment tools described in this document.

The greatest challenge may be to institutionalize whatever solutions are developed. One cornerstone of a sustainable system is supportive supervision that facilitates both identification of problems and discussion of possible solutions. Support needs to be provided at many levels. Supervisors, as well as the front-line workers, need to be supported. Although concern is focused on the community members or users of the services being provided, they are at the end of a long chain of interaction. Time and effort need to be invested at the various links in the chain to ensure that the commitment to quality reaches the very tips of the chain. If quality services are to reach the end users in communities and health facilities, it is vital to be both systematic, consistent, and methodical, but also passionate and committed in assessing performance and supporting its improvement.



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