COPE® for Child Health in Kenya and Guinea: An Analysis of Service Quality

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EXECUTIVE SUMMARY

In 1999, EngenderHealth*—with financial assistance from USAID, the collaboration of the United Nations Children’s Fund (UNICEF), and technical input from several agencies (including the World Health Organization [WHO], BASICS, the SARA Project, and others)—adapted a self-assessment, problem-solving approach to quality improvement (QI) called COPE® (which stands for “client-oriented, provider-efficient” services) for use in child health services (AVSC International, 1999). COPE for Child Health was developed to be compatible with the Integrated Management of Childhood Illness (IMCI) approach and to ensure that providers caring for children, whether trained in IMCI or not, are supported by enabling colleagues and by a facilitative work environment in which they can deliver high-quality care.

This report presents the results of a longitudinal, quasi-experimental study evaluating the introduction and use of COPE and the resulting changes in service quality in two countries, Kenya and Guinea. At the end of a 15-month period, providers’ attitudes, providers’ ability to solve problems, service quality, and client satisfaction were assessed at eight intervention sites and at eight matched control sites, using both qualitative and quantitative methods.

The basis of COPE is a philosophy of participation, teamwork, ownership, and shared responsibility among all cadres, a focus on systems efficiency and on cost-consciousness, and a focus on clients, on staff development and capacity building, and on the engagement of supervisors. Our hypothesis was that by introducing COPE, by sharing simple tools based on standards and guidelines, and by providing some outside assistance with facilitation, training, and supervision, we could help providers and sites undergo personal and organizational changes that would enable them to take action and improve the quality of services provided. The result would be the beginning of a cycle of continuous quality improvement.

Even though the time period of the study was too brief to allow us to see a health impact of such changes, we hypothesize that when staff and institutions make these personal and organizational changes and improve services, the impact on clients’ knowledge, attitudes, and practices will affect health outcomes. For example, when health workers start services on time, treat their clients with respect, take good histories, and give good information, we expect that clients respond to this by being less shy, by providing more information about their problem, and by listening more to what the provider has to say. The overall effect is that clients have more information with which to act appropriately, whether by looking after their own health more, by engaging in more appropriate and timely health-seeking behaviors, by using preventive services (such as family planning, immunization, or antenatal care), or by correctly adhering to treatment recommendations.

INTERVENTIONS

After a baseline survey undertaken in mid-1999, project interventions began at the end of 1999 with the first COPE for Child Health exercise. The COPE process attempts to transfer the power

* In 1999, when the project began, EngenderHealth was known as AVSC International.
of decision making to the site-staff team, by guiding, suggesting, and teaching the use of simple tools that can help staff to identify problem areas. The main tool is a set of self-administered questions or guides, organized within a framework of clients’ rights and providers’ needs. The second tool is a client exit-interview tool, aimed at encouraging staff to talk openly with their clients about the quality of services offered and their ideas for improvement. The third is a tool for measuring how long clients wait for services and how much contact time they have with staff. The last tool is an action-planning tool for helping staff to identify root causes and bring together the results of their information-gathering into a realistic, time-bound plan that assigns responsibility and that can be reviewed at subsequent meetings.

A key aspect of COPE is that apart from the exercises themselves, no other interventions are predetermined and nobody knows what will happen or what might change. Staff at each site were told that they could identify their own problems, decide what they needed, and seek their own solutions, with only minimal outside help. For many staff, this was a new approach: They were more familiar with being reactive than with being proactive, and with having supervisors tell them what is wrong, what needs to happen, and who will do it than with supervisors helping them analyze and solve problems.

As planned, over the course of the next 15 months, four COPE exercises were conducted at each of the eight intervention sites, spaced approximately four to five months apart. A limited amount of training for facility staff focused on facilitative supervision, infection prevention, immunization, and information, education, and communication (IEC).

Besides being trained in facilitative supervision, all district supervisors were encouraged to attend the COPE exercises, to adopt a facilitative style of supervision, and to help program sites address some of the more difficult issues. However, district supervisors did not personally lead COPE exercises.

The impact of the COPE exercises was examined by means of a longitudinal, quasi-experimental evaluation conducted at the eight service sites in Guinea and Kenya, as well as at eight control sites that were matched by size, number of staff, and function. A 1999 baseline survey provided information on such issues as staffing levels, waiting times, prescribing practices, and children’s illnesses. In addition, process data were obtained during the course of the project from COPE exercises and action plans, from routine site visits and informal discussions with staff, and from reviews of service-utilization records for the period 1998–2000. In 2001, the baseline survey was repeated, focus groups were held with 88 staff at intervention sites in the two countries, and interviews were conducted with 157 intervention clinic staff—77 in Kenya and 80 in Guinea. One hundred sixty adult clients in each country who cared for sick or well children were interviewed at the conclusion of their visit. Finally, evaluators observed 160 interactions between a caregiver and a provider in each country.

RESULTS

Only 15 months after these low-key interventions began, significant and unambiguous differences could be seen between the intervention and control sites on almost every indicator of service provision. There was evidence of a whole range of improvements that derived from the sites themselves. Some were not directly observed by researchers (greater community support
sought and achieved, wider service outreach, better use of community funds, and the solution of previously intractable problems) but were reported by our evaluators as a result of having discussions, reading reports, and conducting interviews. At the intervention sites, we observed greater availability of services provided in cleaner, more pleasant, more private settings. From staff, we heard about their new knowledge and awareness of QI issues and of clients’ rights and expectations, and about their newfound awareness of their ability to effect change.

We also observed at intervention sites (and had confirmed by clients) that staff treated clients with more respect, provided clients with more information and privacy, and demonstrated improved personal communication skills, improved diagnostic skills, improved home care instructions, somewhat improved prescribing practices, and improved immunization practices. We measured some consequences of these changes and found more-informed clients (in many subjects), better immunization coverage for first polio shots and tuberculosis vaccination (BCG), and more-satisfied clients, who acknowledged that change had occurred over the past year. On almost every quality indicator, whether it was reported by staff, observed by evaluators, or reported by clients, the intervention sites performed significantly better than the control sites.

Most problems were solved by site staff without outside assistance. They included:

- **Infrastructure and equipment issues**: small renovations of health facilities, improved working conditions for staff, resolution of equipment and supplies issues related to infection prevention, immunization, and nutrition, and regular staff meetings to discuss quality-of-care issues
- **Human resources issues**: enhanced skills of service providers in counseling, infection prevention, antenatal care, and management of sick children, and significant changes in staff attitudes about how services are delivered and clients treated
- **Service-delivery issues**: increased disease surveillance and community outreach and education, and successful resolution of systemic problems (such as late opening times, long waiting times, poor record keeping, poor referral systems, and poor infection prevention practices, among others)

Clients’ perceptions of services are important indicators of the quality of services being provided, and although one expects courtesy bias overall, we sought to observe any differences between clients at intervention and control sites. Data from exit interviews with clients show significant differences between intervention and control sites in how clients felt they were treated by staff, in their confidence in the services offered, and in whether they had observed any changes in service delivery.

There were statistically significant differences between intervention and control sites in clients’ perceptions of how they were treated by staff. Clients at the intervention sites found staff to be knowledgeable, friendly, and respectful, to explain things well, and to give clients privacy and plenty of time. Clients at intervention sites were also much more likely than those at control sites to report understanding everything they were told, getting all of the information they needed, and being “very satisfied” overall with the visit.

Other measures of clients’ confidence in the services generally showed similar superiority of the intervention sites. Clients at the intervention sites were significantly more likely than those at control sites to report thinking that services were offered at convenient times, that waiting times...
were acceptable, that services were safe, that staff treated clients with privacy, confidentiality, and respect, and that staff helped them to access other services both at the facility and elsewhere. Seventy percent of clients at intervention sites gave services overall a “very good” rating, compared with only 39% at the control sites. We also wanted to know whether clients had observed any changes in service delivery over the past year. Resoundingly, 80% of clients at intervention sites said that services were better than before, compared with 27% of clients at control sites.

Providers underwent profound changes in how they viewed both clients and colleagues, treating clients with increased respect and empathy and markedly strengthening their sense of unity at work, commenting that: “we respect and trust each other,” and “now we are good friends, working in harmony for the satisfaction of the clients.” Teamwork also led to a reduction of hierarchy: “Working as a team made me feel wanted and an equal member of the group, even a cleaner like me.” Perhaps most important, the COPE process affected staff’s sense of empowerment and accountability: “Before, most problems were someone else’s responsibility. But we now see that we ourselves can solve most problems” (Kenya); “COPE has raised our consciousness, and due to this we have become more responsible” (Guinea).

What is interesting about many of these changes is that although the COPE guides suggest what standards of care might be, there was no specific intervention or training associated with them. Nobody told staff that they needed to treat clients better, give out more information, or ensure that no one interrupted their consultations. For example, providers at intervention sites were more likely to do better clinical assessments of sick children than were providers at control sites, yet there was no special effort by supervisors or training in this area. So what triggered these changes, and how did providers know what to do?

IMPLICATIONS
Empowering Staff to Do What They Can Do
EngenderHealth’s experience with COPE, both here and in other settings (where the focus has been on family planning and reproductive health rather than on child health), has shown us that providers already know what needs to be done, either because they were taught in medical or nursing school or because they are clients themselves and know how it feels to receive good or poor services. But even where providers know what needs to be done, they sometimes forget, or may be unable to do a good job because they lack tools, technical expertise, or feedback on their performance, or may be so demoralized that they have given up trying to understand and interact personally with their clients.

Our hypothesis was that three aspects of COPE are important:

- Philosophy—setting a tone of participation, teamwork, and respect, sharing responsibility for actions, focusing on systems rather than on individuals, focusing on cost-consciousness and efficiency, focusing on clients’ rights to quality services, developing staff capacity, and engaging supervisors in the process
- Tools—introducing simple tools to help in problem identification (and solution) and to raise awareness of good standards of practice
- Minimal outside help—providing better supervision, with minimal equipment and training
Further, we hypothesized that an intervention with these three aspects would lead to personal and organizational change: that providers would feel empowered, feel free to act, assume ownership of the problems (and the solutions), have improved morale and commitment, be more reflective, and feel better supported. We expected that these personal changes, coupled with minimal skills enhancement, would start to break down the inertia running through many health services and would provide fertile ground on which organizational change could occur—change that would lead to improved service quality and client satisfaction.

COPE focuses on the processes through which change can take place, by stressing the importance of involving all levels of workplace staff (not just senior management or nurses), by encouraging managers to provide leadership by letting other voices speak, by encouraging outside supervisors to participate and provide much-needed support, and by letting clients and community members have a voice. And limiting the amount of equipment and training provided from the outside to what staff at the sites have defined as their needs (instead of what donors or administrators believe is what they need) responds to some of a site’s most pressing needs without bombarding them with unnecessary or unsolicited initiatives. Evidence presented here from staff focus groups held in both countries shows common threads: that the very act of outsiders not identifying the problems, not suggesting the answers, and not providing the solutions, but instead creating an enabling environment for staff to do those things themselves, is what stimulates action and creates change.

The COPE tools provide a gentle reminder of what needs to be done in practical terms (by posing questions about how services are delivered, based on internationally accepted standards, guidelines, or best practices) and in philosophical terms (by framing those questions within a “rights” and “needs” framework). Again, staff confirmed that these were easy to use, gave them ideas, and yet left up to them choices about what to do. This very ownership of problems and their solutions, although daunting at first, seems to have had a strong impact on staff attitudes toward change in their work environment and their own behavior and interpersonal interactions.

**Specific Training Needs**

Although we found that COPE could effect change in many areas, a few indicators showed few or no observable differences between the intervention and control sites. For example, prescribing practices were generally poor at both intervention and control sites and in both countries. While COPE can identify such problems and staff can become more receptive to change, some problem areas are associated with specific technical skills and knowledge that may be beyond the areas covered in COPE discussions. These problem areas are probably best addressed through specific training, supported by external monitoring and supervision and perhaps by IMCI training and supervision support, with its defined medical regimens and protocols. Once a specific training need is addressed, then the systems support inherent in the COPE or other QI processes will effectively ensure that new knowledge and skills can be applied and new practices institutionalized in the workplace. Certainly, to improve diagnostic and prescribing practices and to have these supported by a smoothly functioning facility, one can envisage a successful marriage of COPE and IMCI training.

**The Critical Role of External Support for Facilitating and Sustaining QI Efforts**

There are clearly other areas where staff are constrained in their ability to take action, through no fault of COPE (or problem identification) but through a lack of external support for problem
solution. The data showed that except where the project specifically supplied drugs and equipment, there was little observable difference between the intervention and control sites in terms of the availability of drugs and equipment, even though many intervention sites had taken steps to work with local health committees to make funds available from community coffers for purchases of prescription drugs and equipment. The important role of district management committees, supervisors, and community health councils in ensuring the availability of both consumable and nonconsumable items (such as infection prevention supplies, emergency drugs, IEC materials, needles, and syringes) is evident.

At the end of the day, COPE needs a good leader, and it is very important that senior staff at sites are encouraged and trained to take on a role of sustaining QI efforts in a more facilitative way. Furthermore, supporting senior staff at the district level is crucial to continued success. It is very important for COPE to become institutionalized in a larger context, not only because many sites may have rapid turnover of management and senior staff, but also because providers need to be reminded by senior staff that they are doing a good job. Our respondents felt very keenly that the new approach to supervision introduced with this project was of great benefit to them: At most sites, they began to regard external supervisors as part of their team and saw the benefit of their involvement.

A Quality Culture

An important finding in this study, although one that is difficult to interpret, is that differences in quality of services between intervention and control sites seemed to be far greater in Guinea than in Kenya. We suggest that a critical factor in explaining this difference is the organizational commitment to QI efforts within the respective ministries of health. Overall, we sensed a great enthusiasm for quality issues within the Ministry of Health in Guinea, which in fact had to be held back from instituting many additional initiatives.

This issue points once again to the sustainability of QI efforts: The more senior-level staff who are trained and the more that the Ministry of Health incorporates COPE into its standards of practice, the more likely it is that COPE can be sustained at individual sites. We think that only when a quality culture is fully legitimizied and supported at national, district, and local levels will staff know that it is an essential part of their job, rather than see it as an extra burden.
COPE® FOR CHILD HEALTH IN KENYA AND GUINEA: AN ANALYSIS OF SERVICE QUALITY

In 1998, EngenderHealth (then known as AVSC International), USAID-Africa Bureau, and the United Nations Children’s Fund (UNICEF) began to adapt a self-assessment, problem-solving approach for child health services. EngenderHealth has experience in such approaches in its work in family planning and reproductive health service delivery.¹ A process called COPE® (client-oriented, provider-efficient services) has been used in EngenderHealth-supported programs in more than 35 countries, and its effectiveness in solving service-delivery problems has been documented (Bradley, 1998a; Lynam et al., 1993). In 1999, EngenderHealth, with the assistance of USAID-Africa Bureau and UNICEF and technical input from several agencies (including the World Health Organization [WHO], BASICS, the SARA Project, and others), began to adapt the COPE tools for use in child health services (AVSC International, 1999). COPE for Child Health was developed to be compatible with the Integrated Management of Childhood Illness (IMCI) approach² and to ensure that those service providers caring for children, whether trained in IMCI or not, are supported by enabling, collegial staff and by a facilitative work environment in which they can deliver high-quality care.

STUDY HYPOTHESIS

Previous qualitative research on COPE has shown that the simple act of creating a nonthreatening forum for discussion of quality issues, focusing on systems and processes rather than on individuals, and making efforts to empower a wide range of staff to look closely at their facility operations creates an enabling atmosphere for staff to make changes in how they provide services and in how they solve problems. Often, staff can make the system function better by being able to talk openly and make suggestions, or by being able to make small changes to, for example, staff work schedules, organization of records, referral mechanisms, infection prevention protocols, or repair of equipment. Evidence from the field of organizational development and from participatory action research suggests that individual or team identification and ownership of problems lead to more effective action than does reporting of issues by external assessors (Bradley et al., 2002; Elkington & Owen, 1996; Fetterman, 1994; Rebien, 1996). The basis of COPE is a philosophy of participation, teamwork, ownership, and shared responsibility among all cadres; a focus on systems efficiency and on cost-consciousness; and a focus on clients, on staff development, and on capacity-building and on the engagement of supervisors. Our hypothesis was that by introducing COPE, by sharing simple tools based on standards and guidelines, and by providing some outside assistance with facilitation, training, and supervision, we could help providers and sites undergo personal and organizational changes

¹ For a description of EngenderHealth’s quality improvement package, see Appendix 1.
² IMCI is an approach to child health services developed by UNICEF, WHO, USAID, and others in response to the problem of suboptimal child survival rates in many parts of the world. Its philosophy is that when health care providers work with children, they need to look at the “whole child,” not an individual condition or disease. Thus, providers are trained to ask children and their caregivers about a range of potential symptoms and signs of illness. Using flow charts, providers then manage the illness by providing treatment according to these symptoms or sets of symptoms and by giving information about home management of the child’s illness (WHO, Division of Diarrhoeal and Acute Respiratory Disease Control, 1995).
### Figure 1. COPE Intervention: Addressing Staff and Service-Site Issues through Participatory Self-Assessment

<table>
<thead>
<tr>
<th>COPE Philosophy</th>
<th>Simple tools</th>
<th>Outside Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation, ownership, and teamwork</td>
<td>Guides to problem identification</td>
<td>Better supervision</td>
</tr>
<tr>
<td>Focus on systems</td>
<td>Client interviews</td>
<td>Facilitation</td>
</tr>
<tr>
<td>Focus on cost-consciousness and efficiency</td>
<td>Client-flow analysis</td>
<td>Minimal equipment</td>
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<tr>
<td>Focus on clients</td>
<td>Record reviews</td>
<td>Minimal, relevant training</td>
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<tr>
<td>Engagement of supervisors</td>
<td>Action plans</td>
<td></td>
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<tr>
<td>Staff capacity-building</td>
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</tbody>
</table>

#### Personal and Organizational Change

- Shared responsibility and ownership
- Reduction of hierarchy and bureaucracy
- Raised morale and commitment
- Skills enhancement
- Empowerment
- Supervisor support

#### Actions to Improve Quality

- Skills enhancement
- Empowerment
- Supervisor support

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### Figure 2. How COPE Can Work to Improve Health through Organizational Change

<table>
<thead>
<tr>
<th>Personal and Organizational Change</th>
<th>Staff Actions</th>
<th>Clients’ Responses</th>
<th>Clients’ Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Shared responsibility and ownership</td>
<td>• Come to work on time</td>
<td>• Are attracted to facility</td>
<td>• Utilize antenatal, family planning, and child health services</td>
</tr>
<tr>
<td>• Reduction of hierarchy and bureaucracy</td>
<td>• Discuss issues with co-workers</td>
<td>• Feel at ease and trust staff</td>
<td>• Take care of their own health more</td>
</tr>
<tr>
<td>• Raised morale and commitment</td>
<td>• Make facility attractive</td>
<td>• Give more complete information</td>
<td>• Seek care more promptly and attend for follow-up</td>
</tr>
<tr>
<td>• Skills enhancement</td>
<td>• Stock facility well</td>
<td>• Listen to staff</td>
<td>• Comply with treatment regimens</td>
</tr>
<tr>
<td>• Empowerment</td>
<td>• Show clients respect</td>
<td>• Learn about preventive services</td>
<td>• Tell their friends about services</td>
</tr>
<tr>
<td>• Supervisor support</td>
<td>• Ensure greater privacy</td>
<td>• Understand treatment regimens</td>
<td>• React quickly when children’s health is in danger</td>
</tr>
<tr>
<td></td>
<td>• Take proper histories</td>
<td>• Understand warning signs in sick children</td>
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<tr>
<td></td>
<td>• Give quality information</td>
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<td></td>
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<tr>
<td></td>
<td>• Follow up appropriately</td>
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<td></td>
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<tr>
<td></td>
<td>• Take care with safety issues</td>
<td></td>
<td></td>
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</tbody>
</table>
that would enable them to take action and improve the quality of services provided. The result would be the beginning of a cycle of continuous quality improvement (Figure 1).

Even though the time period of the study was too brief to allow us to see a health impact of such changes, we hypothesize that when staff and institutions make these personal and organizational changes and improve services, the impact on client knowledge, attitudes, and practices affects health outcomes. Figure 2 suggests some of the ways in which this might happen. For example, when health workers start services on time, treat their clients with respect, take good histories, and give good information, we expect that clients will respond to this by being less shy, by providing more information about their problem, and by listening more to what the provider has to say. The overall effect is that clients have more information to act appropriately, whether by looking after their own health more, by exhibiting more appropriate and timely health-seeking behaviors, by using preventive services (family planning, immunization, or antenatal care), or by correctly adhering to treatment recommendations. Similarly, if providers make proper referrals and ensure that clients understand the reason for and the importance of attending the referral, they will be more likely to attend. One of the main reasons clients give for not attending some facilities (an important issue often raised during COPE) is the shortage of supplies and drugs. While this is often a larger systemic issue that is difficult to address, staff can make significant changes to ameliorate the situation. Attracting clients to the facility to use properly prescribed drugs is far preferable to people’s utilizing the informal sector (such as drug peddlers) for treatments, and has an effect on reducing drug resistance and improving health. Lastly, satisfied clients can have an effect on increasing attendance at the facility by others, for both preventive and curative services, leading to a wider impact on the community’s health.

This report presents the results of a longitudinal, quasi-experimental study to evaluate the introduction and use of COPE, changes that took place, and what this meant for the quality of services in Kenya and Guinea (Figure 3). At the end of a 15-month period, providers’ attitudes, providers’ ability to solve problems, organizational changes, service quality, and client satisfaction
satisfaction were assessed at these sites, as well as at eight matched control sites, using both qualitative and quantitative methods.

**STUDY METHODOLOGY**

A total of eight intervention sites and eight matched (by size, number of staff, and function) “control,” or nonintervention sites were included in the study, four of each type in each country (Kenya and Guinea). In both countries, we selected the types of sites in which UNICEF might later train staff in IMCI (at the health-center level), but where none had yet been trained, as well as sites that had enough staff (at least 10) for us to interview. In Kenya, all of the facilities were rural health centers (although two are about to be designated as hospitals); in Guinea, some of the rural sites had too few staff, and ultimately we selected larger sites in periurban settings. In Kenya, the project was implemented in four districts in Western Province (each with either two intervention or two control sites). In Guinea, we selected one health center in each of eight different préfectures (districts), each with either one intervention or one control site.

The study was designed to monitor COPE and associated interventions over a relatively short period of about 15 months, and to then examine differences in provider attitudes and practices, in the quality of services, in client satisfaction, and in service utilization between sites where the COPE intervention was initiated and control sites. A baseline survey collected information on some of these issues in Kenya between August and November 1999, and in Guinea between July and September 1999. A full description of the sites and the results of the baseline survey, which focus on differences between the two countries,\(^3\) can be found elsewhere (Bradley et al., 2000) and are summarized in Appendix 2. During the course of the project, process data were obtained from COPE exercises and action plans, from routine site visits and informal discussions with staff, and from reviews of service-utilization records. Project interventions continued through March 2001,\(^4\) after which, in April 2001, the end-of-project evaluation survey was conducted, repeating the baseline survey but with the addition of staff focus groups in the eight intervention sites. We also asked our external evaluators to note other changes or externalities that might confound our results. (The instruments used in the end-of-project evaluation are shown in Table 1.)

Process evaluation was an essential part of this study, because of a need to understand how providers feel about and work with this less-conventional process for improving services. In most development situations or within the hierarchies of administrative institutions like ministries of health, standards are developed, guidelines are issued, and supervisors visit sites and report on what staff need to do to change. In the COPE process, COPE provides some guidance about appropriate service-delivery goals, but by and large what happens next is in the hands of the providers and site management. We hypothesized that by giving the power of change to providers rather than by imposing change from outside, by giving general guidelines about how they might work together rather than about what they might work on, and by giving them some simple tools that reflect quality concerns, staff would take on this challenge. As an

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\(^3\) The analysis of 1999 preintervention data confirmed that there were few differences between intervention and control sites, so we focused on intercountry variability. This report focuses more on differences between intervention and control sites.

\(^4\) Some planned interventions could not be completed before the end-of-project evaluation.
Table 1. Instruments used in the end-of-project evaluation, 2001

- Site descriptions and facility audit (conducted with clinic managers) of all eight intervention and eight control sites—a total of 16 sites
- Interviews with site staff—77 staff interviews in Kenya and 80 in Guinea
- Exit interviews with caregivers\(^5\) of children: 10 well children and 10 sick children at each site (a total of 80 sick and 80 well in each country), for a total of 160 in each country
- Observations of caregiver-provider interactions: 10 sick children and 10 immunizations (of well children) at each site, for a total of 160 observations in each country
- Service-utilization data collected for 1998–2000
- Staff focus groups (a total of 88 staff) at all eight intervention sites, focusing on the COPE process

intervention, COPE, with its general guides raising more than 200 service-delivery issues, is very broad. We can see what issues staff choose to address, and we can see what improvements take place at the site and in the eyes of the clients. Yet, just as important is the need to understand what happens to staff in the process of change, and how staff relate and work together, what stimulates action, how they view their clients, and how they seek change both within their facility and within the wider community.

The study posed several methodological problems, the main one being that because a COPE intervention does not \textit{a priori} determine what problems may exist at a site, nor does it dictate what the solutions (interventions) might be, it is hard to know exactly what to measure. A discussion of methodological issues can be found in Appendix 3.

All quantitative data were entered into a database (the Statistical Package for Social Sciences, or SPPS), where frequency distributions and cross-tabulations were performed. Chi-square tests were undertaken to examine differences between intervention and control sites.

**DESCRIPTION OF INPUTS AND PROCESS**

**COPE Exercises**

The project interventions began at the end of 1999, with the first COPE for Child Health exercise. The COPE process attempts to transfer the power of decision making to the site-staff team, by guiding, suggesting, and teaching the use of simple tools that can help to identify problem areas. The main tool is a set of self-administered questions or guides based on recognized standards or guidelines, organized within a framework of clients’ rights and providers’ needs. The guide on safe services includes a record-review checklist to examine the adequacy of record keeping.\(^6\) The second tool is a client exit-interview tool, aimed at

\(^5\) The words \textit{caregiver} and \textit{client} are used interchangeably in this report to refer to the adult who has accompanied the child to the facility, most frequently the mother of the child.

\(^6\) The record tool is associated with IMCI, and as IMCI had not been introduced at these sites, it was not used in this project.
encouraging staff to talk openly with their clients about the quality of the services offered and their ideas for improvement. The third is a tool for measuring how long clients wait for services and how much contact time they have with staff. The last is an action-planning tool to help staff identify root causes and bring together the results of their information-gathering into a realistic, time-bound plan that assigns responsibility and that can be reviewed at subsequent meetings.

A key aspect of COPE is that apart from the exercises themselves, no other interventions are predetermined and nobody knows what will happen or what might be expected to change. Staff at each site were told that they had the power to identify their own problems, to decide what they needed, and to seek their own solutions, with only minimal outside help. For many staff, this was a new approach: They were more familiar with being reactive than proactive and with supervisors who tell them what is wrong, what needs to happen, and who will do what.

What makes COPE different from other problem-identification exercises is its team self-assessment nature. Initially, outside facilitators (but increasingly, site-level internal facilitators) guide the process, but staff themselves undertake the assessment and subsequent discussion of the facilities and services. Ideally, a supervisor participates, but his or her role is as an observer or facilitator, not as a monitor or problem-identifier. Staff participants are invited from all areas of the facility and should include representatives from grounds staff, records, laboratory, sanitation, and management, as well as staff from wards and clinics. Depending on the numbers involved, staff either work individually or are divided into teams who, over the course of a few days, use one or more of the tools to identify problems and suggest solutions. In the closing session of the exercise, all participants work together to develop an action plan, to guide problem-solving activities over the next several months. The exercises are usually repeated every four to six months.

As planned, over the course of the next 15 months, four COPE exercises were done at each of the eight intervention sites, spaced approximately four to five months apart. (One site in Kenya completed five COPE exercises.) At all sites, the first two exercises were facilitated by EngenderHealth staff or consultants; during the third, a member of the site staff conducted the exercise with coaching and support, and during the last exercise the site staff managed alone. The types of tools used in the two countries varied. All sites used the COPE self-assessment guides and client-interview tool at every session, and in Kenya the client-flow analysis was used once at all sites. In Guinea, client-flow analysis was used at only one site, where waiting time had been identified as a particular problem.

**Time spent on COPE**

In this project, the number of days over which the exercises took place was reduced with each subsequent session, as was the amount of time spent on each individual activity. This probably occurred mainly due to the realities of engaging in these activities while simultaneously maintaining service provision, but also both as a result of increasing familiarity with the tools, problem-solving, and action-planning, and because problems were getting solved and therefore
needed less discussion time. For example, in Guinea, the first COPE exercises were spread out over four days, but this decreased to three days; in Kenya, the first exercises lasted over three days, but subsequent sessions usually lasted only two days. During the first COPE exercises, the opening discussions took more than three hours in Guinea and 1.5 hours in Kenya, but with increasing familiarity by the time of the fourth COPE exercise, these discussions were limited to means of two hours and 45 minutes, respectively. The mean time spent on the guides also fell over time from COPE(1) to COPE(4), from four hours to two hours in Guinea and from 2.5 to two hours in Kenya. Similarly, in both countries, the time spent interviewing clients and checking records declined. However, the time taken in action planning remained about the same: In Guinea, the mean time spent on action planning fell slightly with experience, from 4.3 hours to 3.5 hours; in Kenya, in contrast, it stayed the same, at three hours, suggesting that staff felt this amount of time continued to be needed to be able to address all issues properly.

**Observed staff participation**

EngenderHealth facilitators kept an account of what happened during these COPE exercises and reported on such issues as participation, teamwork, and ability to get at the root causes of problems, to reach consensus, and to set realistic goals and timelines. Management at all sites invited and included junior and nonprofessional staff and community members (in Guinea) and always tried to involve district staff. Our facilitators reported good participation and teamwork at all sites, although the logs of participant numbers revealed a mean reduction at the Kenyan sites over time (from 22 to 13), though not in Guinea (usually 14 to 15 per session). In Kenya, we also noted that participation by clinical officers declined somewhat over time. They also reported an apparent increase over time in staff willingness and empowerment to take on hitherto intractable problems. More problematic was the staff’s ability to identify the root causes of problems and to set realistic goals and timelines.

**On-site facilitators**

The on-site facilitators were largely selected by their colleagues and were a mix of senior and not-so-senior staff. Our facilitators reported a mix of skills and skill levels in the on-site facilitators they trained, and there were a few problems with the selected staff being transferred to other sites, necessitating starting again with another person. But in general, they observed them doing a good job and being eager to learn, with the biggest hurdle being the need for training in better listening and communication skills. At all intervention sites, the on-site COPE facilitators were supported by newly established quality teams, comprised of a subset of staff, who were responsible for monitoring progress on the action plans.

**Other support**

The national QI movement has in general achieved more momentum in Guinea than in Kenya, with other agencies (such as BASICS and Management Sciences for Health) and the Ministry of Health keen to accelerate QI initiatives. As a result, and despite efforts to standardize the level of effort in both countries, the Guinea sites received a little more attention than those in Kenya from national-level personnel, who formed a national COPE monitoring committee for the

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7 The Guinean Ministry of Health has a semiannual health center monitoring system in place that complements, and may have helped to strengthen, the COPE activities. (This system was also in place at the control sites.)
project sites. Site visits by leaders of the national COPE monitoring committee took place in Guinea on three occasions, once accompanied by representatives from WHO, BASICS, and the Centre Africain d’Études Supérieures en Gestion and once accompanied by the National Director of Public Health. In Kenya, on the other hand, apart from the continued support of one national Ministry of Health person and one visit by senior Ministry of Health staff, activities and responsibility were left principally in the hands of site staff, with support from district personnel.

Training and Other Interventions

Some of the needs of sites expressed through the COPE process were for training and equipment. The project staff had determined beforehand that it would be made clear that there would be limited outside resources available to sites and that if this intervention was ever to be sustainable, the sites themselves would have to seek innovative ways to address those needs. Although we had planned to support several training events and supply equipment to the sites, in fact very little was actually disbursed before the end-of-project evaluation (Table 2).

Table 2. Training funded by the project as a result of COPE action plans

<table>
<thead>
<tr>
<th>Kenya</th>
<th>Guinea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>Training</td>
</tr>
<tr>
<td>• Eight staff from four sites (two from each) in facilitative supervision and quality management. Four district personnel (two from each district) also attended this one-day event.</td>
<td>• Facilitative supervision training for 23 central, district, and health center staff</td>
</tr>
<tr>
<td>• Immunization update at all four intervention sites for selected staff</td>
<td>• Infection prevention training held at each site, for a total of 63 staff</td>
</tr>
<tr>
<td>• Continuous on-the-job training in infection prevention for all personnel at all four intervention sites</td>
<td>• Training in IEC and counseling held at each site for a total of 44 staff</td>
</tr>
</tbody>
</table>

The training for district and site supervisors was complemented by a strong emphasis on engaging supervisors in the COPE process at all sites. The EngenderHealth staff encouraged all district supervisors to attend the COPE exercises, to adopt a facilitative style of supervision, and to help sites address some of the more difficult issues.

RESULTS

The results section looks at all of the issues around the COPE for Child Health project:
• Staff perspectives on using COPE (how it worked, and how they felt about it)
• What changed for staff—staff perspectives on clients, management, supervisors, training, and themselves

8 The monitoring committee tried not to give increased attention to the project sites, for fear of study contamination, but members were very enthusiastic. They even planned a Cercle d’Or competition for the site where quality improved the most, but this was cancelled so as to make the Kenya and Guinea interventions comparable. The mandate of the monitoring committee was to keep the Ministry of Health interested and involved and to plan for replication of the project if results were favorable.
What types of problems were identified and how staff had addressed them
External observations of staff practices, compared against standards for performance
Clients’ perspectives on the quality of services offered
Changes in service utilization

Staff Perspectives on Using COPE

How well did it work? Using the tools

The COPE process centers on problem solving and offers a method that helps staff to hone and systematize their problem-analysis skills. In staff focus groups at the intervention sites, the mechanics of the problem-solving process were discussed: how easy or difficult it was to solve problems and to think specifically about the different steps in a problem-solving process.

As might be anticipated in a group process in which staff are expected to discuss work problems openly and explicitly among colleagues and supervisors, focus-group participants in both Kenya and Guinea remembered feeling anxious at the outset of COPE. They mentioned feeling threatened and intimidated at the idea of discussing problems, especially in the presence of superiors, and worried that if they did so, COPE would expose staff weaknesses and incompetence (“Why haven’t you been able to solve such and such tiny problem yourself?”). A common fear was that staff would be “sacked” (fired) for such exposure. By the end of the intervention, though, people thought that the COPE method helped them to systematically attack and resolve problems. Many of the steps in systematic problem solving—identifying issues and problems, analyzing root causes, and coming to consensus on a strategy to solve a problem—were difficult at first, but reportedly became easier in subsequent COPE exercises.

Staff reported that the COPE tools (self-assessment guides, client interviews, and client-flow analysis) made problem identification easy. People already knew that most problems existed, and the use of COPE tools only made staff more aware of the issues. Several groups in Guinea remarked that the process of identifying problems was new, in the sense that they did not usually discuss problems openly, and so in early exercises problem identification was challenging.

Developing action plans was a new skill for everyone and not easy to do at first. In particular, staff had to learn to put a realistic time frame on the plan and decide who could best help them achieve a solution (naming the responsible person). Staff had found that if people outside of the health center staff were identified as responsible, it was sometimes difficult to get these people to play their role in problem solving. Staff at one Kenyan health center reflected on this:

“Initially we left everything to the administration and the big offices to come and solve the small problems. Later we realized that the solution was within ourselves.”

Working as teams

Promoting participation and teamwork are fundamental aspects of COPE, and issues around this were also discussed during the focus groups. In general, COPE seems to have broken down barriers at several levels in the workplace: among colleagues, between supervisory levels, and between providers and clients. The growing sense of teamwork, its advantages in the workplace, and a general appreciation for the added value of taking a team approach to problems figured
prominently throughout the group discussions. People cited very few disadvantages of teamwork compared with the many cited advantages:

“We are working as members of one family. There is teamwork. Colleagues now volunteer to help those who are very busy without being asked. People now appreciate the importance of areas like laboratory without looking at it like a punishment area. We do scraping and cleaning without leaving it to the cleaners alone.”

(Kenyan participant)

Participants cited examples of greater staff cooperation in coordinating the work of different areas, such as between medical records and clinical care services:

“COPE made us stop segregating ourselves into different departments.”

(Kenyan participant)

Participants repeatedly emphasized greater ease of communication between staff and supervisors:

“Before COPE we always felt that there was a big bridge [gaps] between the top administration and us, but during the exercise the bridges [gaps] were not there. We could all sit together and discuss things equally.”

(Kenyan participant)

Teamwork brought about trust among staff, and this permitted a positive exchange of ideas and allowed problems to be identified together. People listened to each other, and the spirit of collaboration was higher than before. Camaraderie was more common among staff:

“We now greet each other when we arrive in the morning...”

(Kenyan participant)

Reflecting on what the experience of working as a team has been like, some people said that they had become more open to criticism, did not take criticism personally any more, and were less afraid to speak up (“I can even talk in front of a Frenchman!” [Guinean participant]). They had become more personally responsible for their behavior, such as being on time and interacting more respectfully with clients:

“Now that we have solidarity at a global level of problem solving, and how to solve them, we work differently. We are all pleased to participate in and be more a part of the health center.”

(Guinean participant)

As summarized by another Guinean participant,

“Now there is a frank collaboration among us, based on better understanding of each one’s (job) category and the ‘spirit of COPE.’”

Teamwork also led people to have a common commitment to improving and providing quality services. One effect of this was that people who went to training events systematically shared information with staff who did not attend the training, as a way to spread information, knowledge, and skills. With teamwork and increased trust, people were more willing to ask
others for help (and implied to us a new sense of permission of being able to admit that one does not know something). A Kenyan participant noted:

“There is more consultation among ourselves. If you have something you are not sure about, you can consult your colleagues.”

Discussion also took place around how teamwork had changed staff. Some explained that relationships had changed because the staff mentality about how work gets done had shifted, in the sense that through group discussion and analysis, everyone was now aware of a variety of problems, their importance, and their role vis-à-vis others. Once all recognized a problem, they could decide to take active responsibility to solve it. Others thought that monthly quality meetings contributed to greater teamwork, as well as facilitative supervision (by the head of the health center, most probably). A Kenyan participant commented:

“We realized that we are important and equal in whatever we do as one team. We don’t have to wait for the ‘boss’ to dictate what to do...”

What Changed for Staff?

Perspectives on clients

COPE’s emphasis on the centrality of clients’ rights in quality of care seems to have been internalized deeply among the participants. A variety of comments related to clients’ right to be treated with respect emerged at several prominent intervals in the focus-group discussions in both countries. And it appears that the COPE client-interview tool played a critical role in that reorientation. All groups felt very positively about conducting client interviews, although members of the Kenya focus groups mentioned some initial trepidation at the idea (similar to that felt about the COPE process overall). Typical remarks included:

“We felt clients were going to expose our weakness....The clients were reporting on us.”

(Kenyan participant)

The process of conducting client interviews enabled staff to become self-reflective, examining their own behaviors toward the clients they serve. As one Kenyan participant said:

“The client interview was interesting... It made me question myself in relation to what the patient was saying even before I took it to the big group.”

Staff were impressed and initially surprised by the uniquely honest perspective clients could provide. A Guinean participant commented:

“The client is like a cooking pot: He offers the ‘taste’ of the pot’s ingredients (the quality of services provided at the clinic) received from the cook (service provider).... One will always feel afraid to interview a client if poor-quality services have been offered, because we know that the client will only say what they hear or learned and this reflects on how we provide services.”

In Kenya, one staff member, recounting her experience with interviewing clients, said:

“We started treating clients with respect, spending more time with them, interacting.... Initially, we used to fear talking to the clients and used to hurry them through the process to get rid of them.”
What staff learned from clients during interviews was reflected in site action plans. Some examples of things Kenyan participants said that they learned from clients included that they were too harsh with clients, that there was variable contact time for clients, that waits were often too long, and that privacy was important to clients. (One Kenyan client noted a need for a client bathroom.) Staff learned that clients had expectations of services provided to them, and this was a great surprise; before this, they had thought that clients had very low expectations. In Guinea, participants found that:

“through client interviews, we have learned how critical are clients of services that they receive. We have learned the expectation of clients from us.”

In addition, a Kenyan staff member recognized that they could sometimes:

“discriminate when we were providing service, thus giving preferential treatment to those whom we know or those who look important to us or educated. We allow them to jump the queue. While those who came early wait because they are not known or they are not important.”

The fact that participants were so receptive to discussing client feedback and using it to make changes suggests that the process led to a deeper respect for and attentiveness to clients. This in turn made a large impact on the desire to improve services.

We asked some brief questions about interviewing clients in the formal individual staff interviews at intervention and control sites. In all, 83.1% and 15.0% of respondents at intervention and control sites, respectively, said they had interviewed clients in the previous six months, with over 90% in both groups reporting this as being “very useful.” However, when we asked why this was useful, we obtained a much broader range of answers from the intervention-sites’ staff. Rather than just answering that it gave them feedback, or that it was for self-evaluation, they gave responses such as:

“It identified clients’ needs and problems,” “it helped me improve the quality of services,” “I developed a new orientation,” and “it reinforced my relationship with the clients.”

Staff at both intervention and control sites were asked to consider the statement “clients know what a good-quality service is,” as a measure of how much respect and credit they give to clients to be able to discriminate, rather than just accept whatever service they are given. During the end-of-project evaluation in 2001, there was a significant difference in responses from staff at intervention and control sites: Those agreeing strongly with this statement constituted 42.9% of staff at intervention sites and 22.5% of staff at control sites (p<0.01). And no intervention-site staff disagreed with this statement in 2001, compared with 16.3% of staff at control sites.

**Perspectives on management**

The focus-group participants did not discuss management much (because managers were present), but staff at both intervention and control sites were interviewed individually about their own perspectives on quality and their own attitudes toward management. Our hypothesis was that staff at the intervention sites, with their exposure to COPE, would have more positive attitudes toward facility management.
Staff were asked their opinions about the way the facility is managed and their ability to participate in decision making and to influence decisions about service delivery (Figure 4). In all areas (being valued as a staff person, management taking an interest, being able to make suggestions, feeling part of a team, feeling that management is responsive, and feeling that colleagues have high morale), the staff at intervention sites had significantly (p<0.01) higher morale and were more satisfied with their jobs. When we looked at the countries separately and over time, we saw that improvements in morale, in feeling involved, and in feeling that management had improved occurred at both the Kenyan and Guinean intervention sites. Whereas in 1999 staff seemed somewhat ambivalent or fairly negative toward management, in 2001 staff at the intervention sites had completely changed their views and become much more positive, whereas staff at the control sites appeared to have become more disillusioned and negative. For example, staff responding that they agreed strongly with the question “staff here have high morale” increased from 56% in 1999 to 89% in 2001 at Kenyan intervention sites and fell from 65% to 52% at Kenyan control sites (p<0.01). In Guinea, those agreeing strongly with the same statement increased over time from 52% to 77% at the intervention sites and fell from 48% to 18% at control sites (p<0.01).

Perspectives on supervisors

One of the underpinnings of quality improvement is supportive supervision practiced by facility and district supervisors toward staff that they supervise. In too many situations in Africa, unfortunately, supervisors are known more for their policing and control responsibilities than for the equally important responsibility of enabling different cadres of workers to improve their performance. Because the latter role of a supervisor is critical in supporting facility staff who are embarking upon their own QI initiatives, the COPE process includes training of district and health center supervisors in facilitative supervision skills at about the same time that COPE exercises are introduced at the facility level. It is critical to COPE’s success that supervisors support the QI changes occurring in health centers.
All focus groups but one (in Kenya) agreed that it was important to include district supervisors in the COPE process, since they had jurisdiction to solve some problems beyond the ability of health centers. Participants also widely agreed that there was a better use of supervision after institution of the COPE process than before. (In informal discussions with supervisors and facility staff in both Guinea and Kenya, it was clear that many supervisors were practicing their new skills, had reoriented the way in which they supervised site staff, and were following up on problems identified during COPE.)

Unprompted comments on the value of facilitative supervision by site and district supervisors were sprinkled throughout all of the group discussions (although they were much more pronounced in Guinea than in Kenya); this speaks even more eloquently about the value of facilitative supervision in reinforcing QI changes and effects seen at the facility level at the intervention sites. Facility staff in all groups remarked that their relationship with supervisors had improved since COPE began. In Guinea, participants discussed how COPE changed supervisor-supervisee relationships: “COPE brings about supervision collante [loosely translated as ‘supervision with glue’], a supervision that engages responsibilities of the staff and their supervisor at [the same] time.” With the new style of supervision, staff remarked that there was a focus on problems without trying to blame people and a feeling of joint responsibility to solve problems and address issues. Participants in both countries noticed that if a district supervisor was present at COPE exercises, then it was much easier to resolve some of the problems identified during COPE that needed to be addressed at a higher level in the health care delivery system. By participating in COPE, supervisors understood much better the issues that staff were confronting in the workplace. In Guinea, groups linked improved service delivery to improved supervision. When they discussed the aspect of improved teamwork due to COPE, Guinean participants even included district supervisors in their “team,” saying that through teamwork they had worked with local authorities to solve problems via supervision and other means.

Staff at both intervention and control sites were also asked individually their opinions about supervision by off-site or district supervisors. Although there was no significant difference in recent supervisory visits (at least one visit in the last six months) between intervention and control sites (87% vs. 75%), the responses to statements about what supervisors did during their visits (working with providers, helping with problem solving, helping to conduct COPE, helping with training, and helping with supplies) were significantly (p<0.01) different between the two types of sites (Figure 5).

**Self-confidence**

One measure of staff confidence in providing services is their own assessment of their knowledge. We asked staff at intervention and control sites to use a Likert scale to assess their own knowledge in certain areas. For the response “very knowledgeable,” there were differences between the intervention and control sites (Figure 6). In every area (most of which were not the subject of project-related training), the intervention-site staff appeared more confident than the control-site staff. The important, and statistically significant, differences in self-reported knowledge between the intervention and control sites were in the areas of immunization (p=0.03), diarrhea management (p=0.02), IMCI (p=0.04), and infection prevention (p<0.01). It

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9 One control site had also undergone a single COPE exercise (for reproductive health, not child health), managed by another donor agency.
should be noted that knowledge of IMCI is still low, as neither country has yet made great inroads in provider training—and even where it has, in Kenya, such training has focused on physicians and clinical officers rather than on nurses.\textsuperscript{10}

\textbf{Training issues}

When staff were asked about future training needs, there was more demand reported at the control sites than at the intervention sites (179 requests vs. 128 requests) in a multitude of different subject areas. But when asked whether they thought that their training needs might be met soon, only 3.8% of control-site staff answered yes, compared with 22.4% of staff at the

\textsuperscript{10}When this report was being written, IMCI training had not yet begun in Guinea, but such training did eventually occur in mid-2002 at four health centers, including two that participated in this study.
intervention sites (p<0.01), showing far greater levels of confidence and optimism at the intervention sites.

At this point, an important difference between Guinea and Kenya should be noted. We asked what other support the sites had received during the previous 12 months from any other source unrelated to the COPE project. At Guinean sites, staff reported hardly any staff training, equipment donations, renovations, or technical support from any other agency. In fact, only one site mentioned some training in sexually transmitted infections (STIs), and no other site had any training events. On the other hand, in Kenya, at both the intervention and control sites, there had been a multitude of training events not associated with the COPE project—for example, in malaria, safe motherhood, HIV/AIDS, STIs, cervical cancer, tuberculosis, leprosy, revenue collection, eye care, family planning, training of trainers (undefined), minilaparotomy, community pharmacies, community-based distribution, income generation, vitamin A, immunization, personal hygiene, school sanitation, emergency obstetric care, micronutrients, reproductive health update, youth-friendly services, and syndromic management of STIs—sponsored by a variety of donors. One control site even had a (one-time) COPE (for reproductive health) exercise conducted by another agency. It is important to reflect on the considerable demands on the time of Kenyan staff by donor agencies—in one year, a total of 23 training events for the very small staff contingents of eight rural health centers.

What really changed for providers?

Some of the discussion above highlights that staff felt a new awakening to issues of quality and to the needs and expectations of their clients and community. They also seem, after experiencing some initial doubts, to have welcomed increased participation and teamwork and as a result to have forged new partnerships and alliances, both work-related and personally. They also clearly seem to have noticed and appreciated changes in management and supervision, changes not remarked upon at the control sites. But what changes had they felt personally? Our focus groups were asked this question.

Many people agreed that going through a COPE process had changed them personally. For some, the experience was very emotional, leading them to say things like “I felt wanted,” “we felt we were all important and equal,” “we picked (found) the courage to talk to other staff about what they should be doing,” and “I consider the problems of the health center as family’s problems.” For others, the changes were felt and expressed in terms of people having better interactions and developing friendships with co-workers at the facility: “Now we are united, we respect and trust each other,” “working as a team made me feel wanted and an equal member of the group, even a cleaner like me,” and “now we are good friends, working in harmony for the satisfaction of the clients.” Terms like comfortable, common goals, free, and happy were used widely during the discussion, and one person said she felt like a “crew member.”

In both countries, staff felt that it was now easier to discuss and expose problems in a group setting. They cited increased confidence, greater feelings of being part of a team, and increased morale, courage, and freedom to speak out. Focusing on problems and work processes instead of

11 The African Medical and Research Foundation, the Department for International Development, the International Centre of Insect Physiology and Ecology, the Japan International Cooperation Agency, JHPIEGO, Marie Stopes, and the Program for Applied Technology in Health, among others.
COPE® for Child Health in Kenya and Guinea: An Analysis of Service Quality

looking emotionally at them or personalizing them was also of great benefit: “We realized that COPE was looking at the process and not at individuals,” and “my colleagues (now) always listen to me and they value my opinion.” Similarly:

“We are happy and proud to express ourselves without complexes and to discuss and expose problems, even in large groups, because we know that we all listen to each other, so nothing is hidden. Before, we felt threatened and unhappy to talk about problems. ‘L’expression est libre.’”

(Guinean participant)

COPE served to energize some, making them feel like they were “in school again” and returning to values that had made them choose to work in the health services in the first place. Others felt (re)-energized by the challenges of problem solving and the quest to find solutions. Responses directly related to the COPE process included that the COPE guides helped raise awareness of issues upon which to base change, and that COPE helped give people the permission to raise issues and discuss them: “We were given freedom to undertake unusual initiatives.” Others talked about action-planning skills and the value of all being involved in helping to resolve problems (the “buy-in” factor). There were also several subthemes on action planning raised in discussions: that people had a trust and belief in the plan that they created themselves and were committed to adopting “radical” behavior changes. “COPE has raised our consciousness, and due to this we have become more responsible.”

Problem Identification and Problem Solving

A review of the COPE action plans shows a slightly different, and in many ways much broader, set of issues and problems being raised by staff themselves than were identified in our external baseline survey, and certainly very different and more innovative solutions to those than could have been proposed by an outsider. By and large, the extensive list of issues developed at the first COPE exercise at every site was reviewed several times during the succeeding 15 months, with one or two additions only. However, by the end of 15 months (the time of the fourth COPE exercises), some new problems were being added to the list, some because sites that had begun to conduct client-flow analysis recognized time-management issues.

The problems identified were remarkably similar at all sites and in each country, and the overwhelming majority were solved over the 15-month period. This report highlights some of the issues addressed, but more comprehensive reports can be found elsewhere (AVSC International, 2000; Igras, 2000). The issues can be divided into four different areas: infrastructure, equipment and supplies, human resources, and provider performance.

- **Infrastructure issues**
  (a) Inability to offer services because of physical constraints. These were by far the most difficult issues to deal with, as they generally required a large investment of funds for rebuilding or reorganizing space, yet some major changes in infrastructure were attributed to tackling the issue through the COPE process. In Guinea, maternity units were built in two centers.
and an emergency room in another; in Kenya, most intervention sites had undergone some construction and painting. In Kenya, client transport was an issue at some sites and was resolved, with community financial help, by repairing vehicles and hiring drivers.

(b) Poor environment and facility. These issues came up at every site and were addressed pretty well. Site staff were able to make signs to announce what services were available, resolve water shortage issues (by tapping into water mains for supply or by paying outstanding bills and getting reconnected), clean up compounds and plant flowers, deal with infestations (rats, bats), effect telephone reconnections, improve garbage disposal, clean the facility more frequently, and, in Guinea, paint the clinics. Several sites installed an incinerator, and one site got a new septic tank.

- **Equipment and supply issues**
  (a) Lack of guidelines. Many sites noted the absence of a library and written materials and guidelines. Project personnel provided guidelines associated with the training they undertook, but others, which needed to be obtained from ministries of health, were more difficult to obtain.
  (b) Lack of equipment. All sites reported shortages of basic equipment and drugs and made efforts to improve the situation, with considerable success. All sites showed great initiative in identifying and tapping a variety of sources for obtaining supplies. However, this was piecemeal, and a more systematic improvement in supplies remains the purview of district or national bodies.

- **Human resource issues**
  (a) Knowledge and skill needs. In-service training in a variety of areas was identified as a major need at all sites. The project staff helped out in providing some training (see below), but the sites also improvised, encouraged staff to train each other, and found hitherto untapped local resources. Multipurpose agents in Guinea, known as agents techniques de santé (ATSs), reported that they now felt more able to provide the large range of services expected of them. Whole-site training was mentioned as being beneficial in and effective at improving the abilities of all staff at the sites. Moreover, as a result of training at all intervention sites, improvements in infection prevention procedures were noted by all intervention centers in Kenya and Guinea. Our external evaluators in both countries observed in 1999 that decontamination was only being

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12 Whole-site training (WST) is an approach aimed at meeting the learning needs of a site. WST links supervision and training, emphasizes teamwork and sustainability, and includes a range of training strategies. WST actively engages supervisors in identifying learning needs at a site, planning and implementing the required training either on-the-job, on-site, or off-site, and facilitating the implementation of newly acquired skills through coaching, mentoring, and teamwork. The types of training include orientations to new services or concepts, knowledge updates, and skills training (Bradley et al., 1998b).

13 Decontamination is defined as the first step in processing instruments and other items for reuse. Decontamination kills viruses and many other microorganisms, making items safer to handle by the staff who perform cleaning and further processing. Decontamination is performed by soaking instruments and other items in a 0.5% chlorine solution for 10 minutes immediately after use.
performed correctly at two of the 16 sites (one intervention and one control). In 2001, however, it was being done correctly at six of the eight intervention sites but at only three of the eight control sites. Similarly, high-level disinfection of instruments \(^{14}\) was correctly performed at five sites overall in 1999 (two intervention and three control sites); by 2001, seven of the eight intervention sites and three of the eight control sites were seen to be performing it correctly.

(b) Attitudinal changes. Through COPE, the staff themselves identified shortcomings in the way they treated clients and delivered services, and all sites reported improvements in these areas in their COPE action plans and spoke of them during the focus groups. In Kenya, the introduction of cost-sharing seems to have caused antagonism between health facilities, the health committees, and the communities they serve, and the need to improve these relationships was a key issue at almost all sites. Clearly, clients expected that now they were being asked to pay for services, they had a right to expect better service from the providers. This very difficult issue was addressed, and staff reported that “before, a type of war between the community and staff existed….We were offending them by such things as being late….The relationship changed after we appreciated their rights…now we have peace between the community and the staff.”

Staff also acknowledged giving clients a poor reception, making them wait too long, not offering services at appropriate times or in a timely manner, treating clients tersely, and not doing enough to ensure privacy and confidentiality. Staff reported that “the poor staff attitude to clients has changed….We now talk to them as human beings....We can laugh, inquire (whether) they are satisfied.”

- Provider performance

(a) Lack of information for clients. Lack of information was considered to be an important issue for staff to deal with at all sites. In Kenya, staff reported progress on giving more health talks in the facility, working with men in the community, addressing nutrition issues, and placing more emphasis on home care for the child. In Guinea, staff at most sites decided to provide the community with more information about certain prevalent diseases, such as malaria and diarrhea, and about immunization and family planning. All sites reported an increase in disease surveillance and community outreach and education, including the development of a radio program at one site.

(b) Poor services. Systemic problems, such as late opening times, long waiting times, poor record keeping, poor referral systems, poor infection prevention, failure to serve the indigent, and poor counseling were all issues reportedly addressed with quite a good degree of success. Issues that could be resolved by orienting staff (in infection prevention, record keeping, and privacy) or by minor tweaking of the system (looking at client flow, or ensuring growth monitoring) were tackled successfully according to the COPE action plans.

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\(^{14}\) High-level disinfection is defined as part of the third step in processing instruments and other items for reuse. It is used when sterilization (either by steam, dry heat, or chemicals) is not available, and it eliminates bacteria, viruses, fungi, and parasites (although not all bacterial endospores). High-level disinfection is conducted by boiling, chemicals, or by steaming.
Many changes were reported in the staff focus groups. In both countries, staff reported that COPE had raised their awareness about the need to do outreach work. In Kenya, one site introduced eight mobile clinics, which were nonexistent before due to lack of transport, and this had improved immunization coverage in the area. In Guinea, staff at one site were concerned about poor immunization rates for children on offshore islands, but after they discussed the problem with commercial ferry owners, this problem was resolved with an agreement to transport the children free of charge. However, issues requiring more senior or off-site administrative approval and direction, such as reducing service costs for the poor in Guinea, were not resolved, although not for lack of trying.

There were also efforts to integrate child health services more. At one Kenyan site, child health services were moved so they would be physically closer together instead of being scattered throughout the outpatient department. In Guinea, with the reorganization of the physical structure and staff responsibilities, units such as the family planning and nutrition units were now fully functioning.

Improved information on clients’ charts and record filing were mentioned in focus groups at all Kenyan and at several Guinean intervention sites. Staff noted that there was better follow-up of clients (such as for missed vaccinations) and improved confidentiality of client information, and one group remarked that with better-organized files, the center could serve clients faster. In Kenya, two groups noted examples of more coordination among departments: At one site, staff said that health information such as mortality and morbidity data was now being shared between the curative and preventive departments.

Both Kenyan and Guinean sites also discussed changes in service delivery that had resulted specifically from feedback by clients during client interviews—though a greater number of specific changes were described in the Kenya groups. Some changes made in the Kenyan health centers due to client feedback included instituting a suggestion box, providing one general space for women coming for child health care who also have antenatal appointments, eliminating the need for multiple queuing for different services, and starting an emergency service at night (all Guinean intervention sites).

At one site, upon learning from clients that there was a long waiting time at the laboratory “due to the slides taking too long to dry. ... We gave the laboratory an extra sterilizer to use to dry the slides faster.” In Guinea, client-elicited changes included the watchman changing his behavior at one health center—he no longer slept all day!

Also as a result of COPE, our evaluators noted that at the end-of-project evaluation, all intervention sites (compared with three of eight...
control sites) were providing visual and auditory privacy for counseling, six of eight intervention sites (compared with one of eight control sites) had clean toilets, clean, well-ventilated waiting areas, and clean linen, and seven intervention sites (compared with two control sites) had separate oral rehydration corners, where staff teach parents how to rehydrate their children.

(c) **Management issues.** Most sites identified several areas they would like to address: a lack of a discussion forum and staff meetings, a lack of review of statistics (especially mortality and morbidity reviews), and a lack of emphasis on quality. But at all sites where these came up as issues, the action plans noted that the sites had made significant progress—for example, by beginning to meet regularly to discuss quality-of-care issues.

### Observed Provider-Client Interactions

At each site, providers were observed interacting with 10 children (and their caregivers) who were sick and 10 who were being immunized (for a total of 320 observations). Observers were asked to note what questions were posed to the clients, what information was given, and what treatment was offered, and to comment on aspects of the interaction, such as privacy and respect. Management of sick children was gauged loosely according to IMCI guidelines, even though we knew that no staff had been trained in this prior to the project and that it was not part of the project’s intervention. At the same time, use of other existing clinical standards, such as examination of the chest with a stethoscope (which is not actually an IMCI requirement), were also noted by our observers. We hypothesized that even without specific clinical training, staff would have been encouraged through the COPE intervention to examine their practices with respect to both sick and well children, and that practices would improve. It should be noted that since the interventions were to a large extent site-specific, and not determined *a priori*, we could only guess at what might change.

### General quality of client-provider interactions

Table 3 (page 22) summarizes the key differences between the intervention and control sites in representative areas of provider performance: client-provider discussions of family planning and child health, privacy and confidentiality, diagnostic approaches used in the care of sick children, and information for caregivers about how to care for children at home.

### Observations of care

Our first objective in observing client-provider interactions was to observe what opportunities were found to discuss wider health concerns with the adults accompanying children to the health facilities: family planning, the child’s growth and nutrition, immunization schedule (of sick children), and general health (of well children), even where the caregiver had not come to discuss these issues (Figure 7, page 23).

We found differences between intervention and control sites in the percentage of providers who discussed family planning (17.1% vs. 2.5%, *p*<0.01), who discussed the child’s growth (26.3% vs. 16.3%, *p*=0.02), who discussed the child’s immunization schedule (40.0% vs. 26.3%, *p*=ns), who discussed general health (26.3% vs. 8.8%, *p*<0.01), and who discussed nutrition (35.6% vs. 15.6%, *p*<0.01). As with other quality indicators, the differences between intervention and control sites were much more marked in Guinea than in Kenya.
Table 3. Provider performance: Observations of interactions

<table>
<thead>
<tr>
<th>Provider performance</th>
<th>Indicator</th>
<th>Intervention vs. control-site observations of interactions</th>
<th>Significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client-provider discussions</td>
<td>Discussed family planning</td>
<td>17.1% vs. 2.5%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Discussed child’s growth</td>
<td>26.3% vs. 16.3%</td>
<td>p=0.02</td>
</tr>
<tr>
<td></td>
<td>Discussed general health</td>
<td>26.3% vs. 8.8%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Discussed nutrition</td>
<td>35.6% vs. 15.6%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Privacy and confidentiality</td>
<td>Auditory privacy</td>
<td>60.5% vs. 40.9%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Visual privacy</td>
<td>58.8% vs. 40.3%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Uninterrupted sessions</td>
<td>81.3% vs. 57.9%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Maintenance of privacy of client records</td>
<td>100.0% vs. 94.3%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Diagnostics in care of sick children</td>
<td>Asked about appetite</td>
<td>37.5% vs. 17.5%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Asked about drinking</td>
<td>10.0% vs. 0.0%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Asked about fever</td>
<td>42.5% vs. 25.0%</td>
<td>p=0.02</td>
</tr>
<tr>
<td></td>
<td>Asked about convulsions</td>
<td>13.8% vs. 5.0%</td>
<td>p=0.05</td>
</tr>
<tr>
<td></td>
<td>Examined neck for stiffness</td>
<td>45.0% vs. 18.8%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Examined abdomen</td>
<td>72.5% vs. 57.5%</td>
<td>p=0.04</td>
</tr>
<tr>
<td></td>
<td>Checked hands for pallor</td>
<td>26.3% vs. 3.8%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Took child’s temperature</td>
<td>63.8% vs. 38.3%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Information given by provider to caregivers of sick children</td>
<td>Continue to feed the child</td>
<td>25.0% vs. 7.5%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Give more fluids to child</td>
<td>23.8% vs. 5.0%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Bring child back if there is no improvement</td>
<td>48.8% vs. 12.5%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Bring child back if fever continues</td>
<td>35.0% vs. 3.8%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Bring child back if loss of appetite continues</td>
<td>23.8% vs. 1.3%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Bring child back if vomiting continues</td>
<td>22.5% vs. 7.5%</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>Bring child back if difficulty in breathing occurs</td>
<td>22.5% vs. 5.0%</td>
<td>p&lt;0.01</td>
</tr>
</tbody>
</table>

Note: For intervention sites, N=160; for control sites, N=160.
Privacy and confidentiality issues had been included in many sites’ action plans over the previous 18 months, and examination of these topics by our outside evaluators showed marked differences between intervention and control sites. There were differences in observed auditory privacy (60.5% vs. 40.9%, p<0.01), in visual privacy (58.8% vs. 40.3%, p<0.01), in uninterrupted sessions (81.3% vs. 57.9%, p<0.01), and in maintenance of privacy of client records (100.0% vs. 94.3%, p<0.01) (Table 3). Again, when we looked at Guinea and Kenya separately, differences between intervention and control sites were much more significant in Guinea, and privacy standards were generally low at all Kenyan sites, both intervention and control. However, much of this was accounted for by the continued operation of mass child immunization clinics. When we looked only at sick-child consultations, the Kenyan intervention sites scored much better than control sites in these areas; for example, 70% of sick child consultations at intervention sites continued without interruption, compared with only 45% at control sites (p=0.02).

We asked our external assessors to rate client-provider interactions in terms of the interpersonal skills of providers. They assessed the quality of greeting, eye contact, smiling, respectfulness, gentleness, judgmental behavior, listening skills, efforts at explanation, and efforts to ensure the client understood everything he or she had been told. On every measure, and in both countries, there was a significant difference between the intervention and control sites (Figure 8, page 24). Staff at intervention sites were also much more likely than those at control sites to offer a client a seat, to give information about other services, and to tell the client if and when to return.

Although the Guinean sites (both intervention and control) performed better than the Kenyan sites on virtually every other quality indicator we examined, the interpersonal skills indicators revealed a different pattern. For these indicators, we observed similarities in both countries, with staff at the intervention sites showing high levels of interpersonal skills and staff at the control sites faring poorly (Figures 9 and 10, page 25). On every indicator and in both countries, the differences were statistically significant (p<0.01).
Care of sick children: Diagnostics

Our researchers observed 10 sick-child consultations at each site (160 in total). In Kenya, one health care practitioner at each site mostly performed the observed consultations, whereas in Guinea approximately three different practitioners per site were observed. The main reason for this difference is that in Kenya sick children are seen by clinical officers, and each site has only one or two clinical officers, who tend to see either children or adults all of the time. In Guinea, on the other hand, sick children are seen by the multipurpose ATS agents, who regularly move around and work in different stations at the facility.

Illness symptoms in both countries were remarkably similar. Also, as expected, in neither country was there a significant difference between the intervention and control sites in the presenting complaints of sick children. The most common complaints were fever (85.0% vs. 86.3% of children), followed by cough (56.3% vs. 56.3%), diarrhea (25.0% vs. 22.5%), and vomiting (18.7% vs. 15.0%). Many of these children had both cough and fever (51.2% vs. 53.7%), and some had cough, fever, and diarrhea (12.5% vs. 7.5%). A small percentage of children (8% at both types of sites) had none of these complaints and had either burns, skin rashes, constipation, or other minor ailments.

We observed and noted what questions the provider asked a child’s caregiver (Figure 11, page 26), and found that even though clinical and diagnostic training had not been part of the intervention in either country (in fact, no training was associated with management of sick children), staff at the intervention sites questioned the caregivers much more than the staff at the control sites. There was a statistically significant difference in whether providers asked about appetite (37.5% vs. 17.5%, p<0.01), drinking (10.0% vs. 0.0%, p<0.01), fever (42.5% vs. 25.0%, p=0.02), and convulsions (13.8% vs. 5.0%, p=0.05). More differences were observed between the intervention and control sites in Guinea than in Kenya.

Further, we noted what examinations were performed by providers, and again found more thorough assessments made by the staff at the intervention sites (Figure 12, page 26), with statistically
significant differences in the proportions checking the neck for stiffness (45.0% vs. 18.8%, p<0.01), checking the abdomen (72.5% vs. 57.5%, p= 0.04), checking hands for pallor (26.3% vs. 3.8%, p<0.01), and taking the child’s temperature (63.8% vs. 38.3%, p<0.01). Again, staff in Guinea, both at intervention and at control sites, conducted much more thorough examinations of the sick children: In fact, more examinations were performed at the Guinean control sites than at the Kenyan intervention sites. For example, examination of the child’s neck was done among 77.5% of children at Guinean intervention sites and among 30% of children at Guinean control sites, while at Kenyan sites such an examination was done on 12.5% and 7.5% of sick children,
respectively. On two indices, examining the chest and the eyes, staff at the control sites in both countries were more thorough than staff at the intervention sites. The reasons for this are not clear, although it may be that some staff at intervention sites are somewhat aware that examining the chest with a stethoscope (the way we recorded this item) and conducting a detailed examination of the eyes are not necessary diagnostic steps in the IMCI protocol.

**Care of sick children: Prescribing**

There was no difference between intervention and control sites in the proportion of children receiving antimalarial medication. Almost all children presenting with fever were treated for malaria, although this analysis cannot determine how febrile the child was or whether the child was more likely to be suffering from cold or flu. As observed at baseline in 1999, the drug of choice differed by country. Apart from a few cases where quinine was used, chloroquine...
represented 96% of antimalarials used in Guinea (where it is still the recommended antimalarial drug), while Fansidar represented 93% of use in Kenya, following government directives reflecting drug resistance concerns.\textsuperscript{15}

Although the prevalence of coughs was similar at the intervention and control sites, staff at the former were much less likely to prescribe antibiotics than were providers at the latter (51.3% vs. 76.3%, \( p < 0.01 \)), and this held true for both Guinea (35.0% vs. 65.0%, \( p < 0.01 \)) and Kenya (67.5% vs. 87.5%, \( p = 0.03 \)). Even where the child was complaining of fever and cough together, providers often did not prescribe an antibiotic. The antibiotics used varied by country, but not by type of site. In Guinea, 98% of providers overall prescribed cotrimoxazole (probably coincidentally, the drug recommended by IMCI); in Kenya, cotrimoxazole was used 48% of the time, but amoxicillin (34%), erythromycin (16%), and amoxicillin/clavulanate potassium (2%) were also used.

Antipyretics were widely used in both countries and at both types of sites (90.0% vs. 92.5%, \( \text{ns} \)). In 1999, aspirin (a drug that is contraindicated for children) was always the antipyretic prescribed in Guinea, even though acetaminophen was in stock at all sites\textsuperscript{16}. In 2001, aspirin use had fallen to 75% of cases overall, with the rest being prescribed acetaminophen. Intervention sites in Guinea were more likely to have adopted use of acetaminophen than were control sites (37.5% vs. 10.8%, \( p = 0.02 \)). In Kenya, acetaminophen was used almost exclusively.

Oral rehydration salts (ORS) were rarely used at either intervention or control sites (5.0% each), even though almost one-quarter of all sick children complained of diarrhea. Other medications prescribed for various complaints included mebendazole (including to children under 2 years of age, for whom it is contraindicated), Nystatin, Piriton, Flagyl, and various topical skin medications. The IMCI guidelines for Kenya (Government of Kenya, 1998) recommend prescribing vitamin A for children with fever (where malaria is suspected), suspected pneumonia, or diarrhea, yet no such use of vitamin A was observed in any case.

We used the IMCI guidelines on the various regimens somewhat loosely to consider whether the instructions given to the child caregivers were incorrect.\textsuperscript{17} During the end-of-project evaluation, as in 1999, we found that in Guinea, the provider explained the use of medication to child caregivers in almost every case. However, also as in 1999, none of the Kenyan providers did this; instead, they relied on the pharmacist to do so. In regard to written prescriptions given by the Kenyan providers, dosages were generally incorrect: Staff at both intervention and control sites not only frequently prescribed too small a dose for a child of a certain age, but also were inconsistent in the dosages they prescribed for children of the same age, a phenomenon that requires further exploration. At both types of sites in Guinea, frequency of doses and duration of treatment for antimalarials, antibiotics, and antipyretics were usually correctly explained to child caregivers, whereas they were prescribed correctly but not explained in Kenya; however, in no case of prescribing ORS was the client told anything other than “use as required.” Not one of the caregivers receiving ORS was given a mixing demonstration.\textsuperscript{18} Our

\textsuperscript{15} Chloroquine is now banned from use in Kenya because of severe drug resistance problems. In the 1999 baseline survey, chloroquine had been prescribed in 23% of cases in Kenya.

\textsuperscript{16} Aspirin is still listed on the Guinea essential drugs list as an acceptable antipyretic for children.

\textsuperscript{17} For example, dosages that were slightly too high or durations that were slightly too long were accepted as correct.

\textsuperscript{18} Our researcher noted that some of the intervention sites had recently set up ORS demonstration areas, but usually used them only for very sick or dehydrated children.
A researcher in Kenya also noted that pharmacists in Kenya frequently used some discretion in changing prescriptions they thought were wrong: Sometimes they corrected an error made by the clinician, but just as frequently they created an error.

Although there had been no training whatsoever as part of the COPE intervention, intervention-site staff in both countries more often correctly described the use of antimalarials than control-site staff (61.9% vs. 50.7%), with the greatest difference between the intervention and control sites in Guinea (46.9% vs. 29.7%). However, neither of these differences was statistically significant. There was little difference between the intervention and control sites in Kenya, with both performing well, probably because of the use of the easy-to-understand (and to explain) regimen of Fansidar. In both countries, not only were antibiotics less used at intervention sites (see above), but their use was also more likely to be properly prescribed at the intervention sites than at the control sites (78.8% vs. 45.9%, p<0.01). This difference was observed (and was statistically significant at p<0.05) in both countries. The IMCI guidelines recommend that the first dose of any medication be given at the health facility, but as in 1999, this rarely happened anywhere (only two cases of all those observed).

**Care of sick children: Home care**

An important aspect of care of the sick child is that providers give information to child caregivers about how to manage the child’s illness at home and if and when to return to the health center. Here we observed significant differences between intervention and control sites (Figure 13). There were statistically significant differences with respect to the extent that providers gave information about feeding the child (25.0% vs. 7.5%, p<0.01), about increasing...
fluid intake (23.8% vs. 5.0%, p<0.01), and about bringing the child back if he or she does not improve (48.8% vs. 12.5%, p<0.01). The proportion of caregivers who were informed about at least two aspects of home care totaled 46.3% at intervention sites and only 13.8% at control sites (p<0.01). Information on danger signs to look for included fever (35.0% vs. 3.8%, p<0.01), loss of appetite (23.8% vs. 1.3%, p<0.01), chest in-drawing (22.5% vs. 5.0%, p<0.01), vomiting (22.5% vs. 7.5%, p<0.01), and convulsions (26.3% vs. 5.0%, p<0.01). Overall, 37.5% of caregivers at intervention sites were given information about danger signs and returning to the clinic, compared with 8.8% at the control sites (p<0.01).

The significant differences between intervention and control sites, noted above for both countries together, mask even greater differences between the two countries when they are examined separately. In Guinea, the difference between intervention and control sites is more marked than in Kenya, where in 2001, as in 1999, the clients in neither type of site received much in the way of home care instructions from providers. In Guinea, the proportions observed getting at least two instructions on home care were 80.0% at the intervention sites and 27.5% at the control sites (p<0.01); in Kenya, the corresponding figures were 12.5% and 0.0% (p=0.02). In Guinea, the proportions receiving at least two pieces of information about warning signs were 70.0% at intervention sites and 17.5% at control sites (p< 0.01), while in Kenya the corresponding figures were 5.0% and 0.0% (ns), a huge difference between the countries.

**Children being immunized**

As well as observing sick-child consultations, we also watched providers immunizing 160 children up to five years in age. At the intervention sites, 87.5% of providers discussed the immunization schedule with the child’s caregivers, compared with 72.5% at the control sites (p=0.02); this happened more often in Guinea (100.0% vs. 87.5%, p=0.02) than in Kenya (75.0% vs. 57.5%, ns). We observed what information with respect to side effects was given to clients after immunization (Figure 14). There were statistically significant differences between all intervention and control sites on all side effects mentioned (p<0.01); overall, 63.3% of intervention-site providers mentioned at least two side effects, compared with only 25.3% of providers at the control sites (p<0.01). Again, the differences between intervention and control sites in Guinea were more marked than were differences in Kenya. In both countries, there was a
statistically significant difference (p<0.01) between intervention and control sites in the number of providers mentioning at least two side effects. In Kenya, such side effects were mentioned at 37.5% and 12.5% of intervention and control sites, respectively, while in Guinea they were discussed at 89.7% and 38.5%, respectively.

Similarly, what the caregivers should do about these side effects was included more in discussions at intervention sites (69.9%) than at control sites (36.5%) (p<0.01), and again were discussed much more in Guinea than in Kenya.

Clients’ Knowledge of and Perspectives on Services

Clients’ knowledge and perceptions of services are key indicators of the quality of service being provided, and exit interviews offer data that can be compared with those obtained during consultation observations by independent researchers. Information on issues such as knowledge of immunizable diseases and immunization side effects, knowledge about home care for sick children, knowledge of drug regimens, and attitudes toward providers at the clinics were all measured in 20 client exit interviews from each site (10 involving caregivers of well children and 10 caregivers of sick children)—a total of 320 observations. Exit interviews were conducted with a different set of clients from those who had been observed during consultations with providers, to confirm if practices were the same whether providers were being observed or not. In brief, the information on prescribing practices reported by caregivers was consistent with that observed by our researchers, indicating no evidence that reports on prescribing practices differed depending on whether providers were being observed and confirming no difference in prescribing practices between the intervention and control sites. Clients were able to recall very accurately how to use drugs, whether this information was given by the primary provider (Guinea) or by the pharmacist (Kenya), and any mistakes on the correct drug dosage were related to inaccuracies in the prescription rather than to clients’ own inability to recall the regimen given.

Caregivers’ knowledge of home care for the sick child

One of the important aspects of caring for sick children is the information that providers give caregivers about how to help the child recover. Without prompting them, we asked caregivers what they had been told to do (Figure 15), and the results again confirmed what we had observed. There were statistically significant differences between the intervention and control sites in what caregivers said they had been told: continue to feed the child (22.8% vs. 6.3%, p<0.01), give more fluids to the child (22.8% vs. 5.1%, p<0.01), complete the medication (69.6% vs. 67.1%, ns), and bring the child back if there is no improvement (40.5% vs. 22.8%, p<0.01).
Similarly, when they were asked how to know if the child’s condition is deteriorating while at home, the caregivers at the intervention sites were much more knowledgeable than were those at the control sites (Figure 15). In particular, caregivers knew to look for fever (69.6% vs. 45.6%, p<0.01), diarrhea (46.8% vs. 19.0%, p<0.01), vomiting (35.4% vs. 21.5%, p=0.05), difficulty in breathing (13.9% vs. 5.1%, p=0.05), and other warning signs, such as coughing, crying, and loss of appetite (20.3% vs. 8.9%, p=0.04).

As noted above when observing clients and providers in consultations, the differences between intervention and control sites in Guinea were much greater than those in Kenya. For example, in Guinea, the proportion of caregivers saying they had been given at least two or more home care instructions was 65.0% at intervention sites and 42.5% at control sites (p=0.04), compared with 12.8% and 10.3%, respectively, in Kenya (ns). Similarly, when looking at information gained about danger signs warranting a return to the clinic, 87.5% of caregivers reported having been told at least two signs at intervention sites in Guinea, compared with 65.0% at control sites (p<0.01). Although the difference between intervention and control sites was also statistically significant in Kenya, the actual proportions were much lower at both types of sites (35.9% vs. 2.6%, p<0.01).

**Caregivers’ immunization knowledge and practices**

Our next set of questions asked caregivers what immunizable diseases they could name. Caregivers at the intervention sites were clearly more informed than their counterparts at the control sites, with significant differences in the ability to recall information about measles (55.0% vs. 40.6%, p<0.01) and polio (69.4% vs. 54.5%, p<0.01). When asked about side effects of immunization (Figure 16, page 32), respondents at intervention sites were again much more knowledgeable than clients at control sites about fever (82.5% vs. 70.0%, p<0.01), irritability (51.9% vs. 40.0%, p=0.03), and pain at the injection site (34.4% vs. 17.5%, p<0.01). Overall,
Figure 16. Child caregiver’s knowledge of immunization side effects: Percentage of caregivers recalling side effects

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Intervention sites</th>
<th>Control sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Pain at site</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>Irritability</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Swelling</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>Know at least two side effects</td>
<td>61.9%</td>
<td>44.4%</td>
</tr>
</tbody>
</table>

there were clear differences between the two types of sites with respect to whether caregivers knew at least two possible side effects of immunization (61.9% vs. 44.4%, p<0.01). However, when we looked at the two countries separately, not only were Guinean caregivers more knowledgeable overall than Kenyan caregivers, but the differences between intervention and control sites were much more marked.

About three-quarters of all caregivers had brought the immunization cards of their children (most of whom were under 1) with them or could recall what immunizations they had been given. Of these, the children of intervention-site clients were more likely than the children of control-site clients to have received their birth polio vaccine (80.0% vs. 56.2%, p<0.01) and their BCG vaccination (84.3% vs. 78.1%, ns). There were also significant differences between the two countries. In Guinea, there was almost universal coverage: At both types of sites, 91.8% of children had received their first polio vaccination and 91.8% a BCG vaccination. However, in Kenya, 71.2% of children of intervention-site clients had received a first polio vaccination, compared with 17.5% of children of control-site clients (p<0.01), while 80.2% and 61.2%, respectively, had received a BCG vaccination (p<0.01).

**Clients’ perceptions of the quality of services**

Clients’ perceptions of services are important indicators of service quality, and although one expects courtesy bias overall, we sought to observe any differences between clients at intervention and control sites. First, although we did not record actual waiting times,19 we asked the respondents whether they thought waiting times were not long at all, somewhat long, or very long. Interestingly, there was a much greater tolerance of the wait at the intervention sites, with 72% saying it was not long and 14% saying it was very long, compared with 59% and 26%, respectively, in the control group (p=0.03). As we had noted at baseline, Kenyans were much more tolerant of waiting than were their Guinean counterparts, with 75% of Kenyans saying the wait was not long (with no significant difference between intervention and control sites), compared with 55% of Guinean clients (also with no significant difference between intervention and control sites).

Staff at the intervention sites had reported that they were now doing much more in the way of health education. We sought to confirm this by asking a child’s caregiver whether he or she had

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19 We attempted to do this, but the resulting data were unreliable.
ever heard health talks in the facility. There was a statistically significant difference between clients at intervention sites and at control sites answering yes to this question, both when the data were aggregated (48.8% vs. 14.4%, p< 0.01) and in each country separately. The range of health talks was also quite wide at intervention sites (all differences statistically significant): infant and child nutrition, diarrhea, management of illness, antenatal care, immunization, family planning, AIDS, and malaria (Figure 17).

We also solicited clients’ perspectives on the way staff treated them, by reading several statements and asking clients to say on a Likert (picture) scale how much they agreed with the statements (Figure 18). For all statements, there was a statistically significant difference between intervention and control sites (p<0.01), both for the countries together and when they were
analyzed separately. Clearly, clients at the intervention sites found staff to be very knowledgeable, friendly, and respectful, believed that they explained things well, and reported that they gave clients privacy and plenty of time. Clients at intervention sites were also much more likely than those at control sites to report understanding everything they were told (97.5% vs. 88.1%, p<0.01), getting all the information they needed (95.0% vs. 87.4%, p=0.04), and being “very satisfied” overall with the visit (69.8% vs. 48.4%, p<0.01).

Other measures of general client confidence in services showed similar superiority of the intervention sites (Figure 19). Clients at the intervention sites were more likely than those at the control sites to report thinking the services are offered at convenient times, that waiting times are acceptable, that services are safe, that staff treat clients with privacy, confidentiality, and respect, and that staff help them access other services, both at that facility and elsewhere (all significant at p<0.01). Seventy percent of clients at intervention sites gave services overall a “very good” rating, compared with only 39% at the control sites (p<0.01). This pattern held true when we analyzed the countries separately.

We also wanted to know whether clients had observed any changes in service delivery over the past year. Resoundingly, 80.0% of clients at intervention sites said that services were better than before, compared with 26.9% of clients at control sites (p<0.01). This high level of satisfaction at the intervention sites and statistically significant difference between intervention and control sites also held true separately for each country. When clients were asked whether they would recommend the facility to friends, all but one at the intervention sites (99.4%) said they would, and while this figure was also high in the control group (94.3%), the difference was statistically significant (p=0.02). Looking at this issue in the countries separately, the responses at intervention and control sites were significantly different in Guinea (100.0% vs. 88.7%, p=0.01), but not in Kenya, where almost all control-group clients also felt they could recommend the site.

Service Utilization
Collection and analysis of service-utilization data, relying on what the facilities regularly collected and forwarded to the Ministries of Health, proved to be problematic. Initially, we
collected data on immunizations (measles, first combined diphtheria-pertussis-tetanus [DPT], and third DPT), antenatal care (first antenatal and all antenatal visits) and sick-child visits (first sick-child visits) for the years 1998 to 2001, to look for changes in utilization that might have resulted from the COPE interventions.

In Kenya, large monthly fluctuations and/or months with completely missing data, as well as conflicting trends, prompted return visits to check or recollect data and to discuss findings with staff at the sites. Recollection, however, did not yield very different results. It was observed that even though staff stated that they had improved record keeping, they were inconsistent in their recording of clients in day books, they often failed to keep records, and data clerks made errors in distinguishing between first sick visits and first sick episodes and between adult and child visits. We concluded that the data were not usable.

The data from Guinea were similarly difficult to interpret, with some intervention sites showing increases in clients and some showing decreases, thus making aggregation confusing. Overall, however, the data showed that in Guinea, the number of immunizations did not change much over time at intervention or control sites; the number of antenatal visits increased at intervention sites after the start of the project, while falling at control sites; and the number of sick-child visits fell at both intervention and control sites. But measurement was seriously confounded by external events: Political instability in neighboring Liberia and Sierra Leone caused intermittent closure of some facilities, the exodus of populations in some catchment areas, and an influx of refugees into others. At the same time, changes in administrative boundaries, construction of new facilities nearby, and other unknown externalities served to confound evidence of an intervention effect. A discussion on the limitations of using service-delivery data can be found in Appendix 3.

DISCUSSION

Improved Services

The results of this study show significant differences on almost every indicator of service provision between intervention and control sites only 15 months after these low-key interventions began. There was evidence in both countries of the more direct contributions made by EngenderHealth, UNICEF, and the respective ministries of health (such as some equipment, and improvements in infection prevention after training), but also evidence of another whole range of improvements generated by the sites themselves. Some were not directly observed by our researchers (for example, the greater community support sought and achieved, the wider service outreach, the better use of community funds, and the solving of previously intractable problems), but our evaluators documented many of these improvements through discussions, reports, and interviews. We did observe at the intervention sites a greater availability of services being provided in cleaner, more pleasant, more private settings. From staff, we heard about their new knowledge and awareness of quality improvement issues, of clients’ rights and expectations, and about their newfound awareness of their ability to effect change.

We also observed at intervention sites (and had confirmed by clients there) that staff had more respect and information for clients, afforded them more privacy, showed improved personal communication skills and improved diagnostic skills, gave better home care instructions, and showed some improvement in prescribing practices and immunization practices. Although this study did not look at the longer-term health impact of improving quality in health facilities,
intuitively we feel that more satisfied and informed clients will adopt healthier practices. We did measure some consequences of these improved services and found more informed clients (in many subjects), better immunization coverage for first polio and BCG, and more satisfied clients, with a greater tolerance of waiting times. Clients also acknowledged that change had occurred over the past year. On almost every quality indicator, whether it was reported by staff, observed by evaluators, or reported by clients, the intervention sites performed significantly better than the control sites.

What is interesting about many of these changes is that although the COPE self-assessment guides suggest what standards of care might be, there was no specific intervention or training associated with them. Nobody told staff that they needed to treat clients better, give out more information, or ensure that no one interrupted their consultations. For example, providers at intervention sites conducted better and more thorough clinical assessments of sick children than did providers at control sites, even though neither supervisors nor training made any special effort in this area. So what triggered these changes, and how did they know what to do?

Empowering Staff to Do What They Can Do

EngenderHealth’s experience with COPE, both here and in other settings (where the focus has been on family planning rather than child health), has shown us that providers already know what needs to be done, either because they were taught in medical or nursing schools or because they are clients themselves and know how it feels to receive a good or poor service. We have also learned that even where providers know what needs to be done, they sometimes forget, or they are unable to do a good job because they lack the tools or the technical expertise, or they lack the feedback on their performance; they may also be so demoralized that they have given up trying to understand and to interact personally with their clients.

Our hypothesis was that three aspects of COPE are important:

- Philosophy—setting a tone of participation, teamwork, and respect, sharing responsibility for actions, focusing on systems rather than on individuals, focusing on cost-consciousness and efficiency, focusing on clients’ rights to quality services, developing staff capacity, and engaging supervisors in the process
- Tools—introducing simple tools to help in problem identification (and solution) and to raise awareness of good standards of practice
- Minimal outside help—providing better supervision, with minimal equipment and training

Further, we hypothesized that an intervention with these three aspects would lead to personal and organizational change: that providers would feel empowered, feel free to act, assume ownership of the problems (and the solutions), have better morale and stronger commitment, be more reflective, and feel better supported. We hypothesized that these personal changes, coupled with minimal skills enhancement, would start to break down some of the inertia found in many health services and would provide fertile ground on which organizational change could occur, change that would lead to improved quality of services and enhanced client satisfaction.

COPE focuses on the processes by which change can take place, by stressing all-inclusiveness of staff, by encouraging management to provide leadership by letting other voices speak, by encouraging outside supervisors to participate and provide much needed support, and by letting
clients and community have a voice. The limited outside support for equipment and training (defined only by the sites, not from outside) responds to some of the most pressing needs, without bombarding sites with unnecessary or unsolicited initiatives. The evidence presented here from staff focus groups in both countries show common threads: that the very act of outsiders not identifying the problems, not suggesting the answers, and not providing the solutions, but instead creating an enabling environment for staff to do those things themselves, is what stimulated action and created change. The COPE tools provide a gentle reminder of what needs to be done in practical terms (by posing questions about how services are delivered, based on internationally accepted standards, guidelines, or best practices) and in philosophical terms (by framing those questions within a “rights” and “needs” framework). Again, staff confirmed that these were easy to use, gave them ideas, and yet left them choices about what to do. This very ownership of problems and their solutions, although daunting at first, seems to have had a strong impact on staff attitudes towards change in their work environment and their own behaviors and interpersonal interactions.

How Much Training Is Needed?
In the baseline survey in 1999, staff told us of their lack of confidence in being able to provide certain services and of their many training needs. This was not unexpected: In the many development projects around the world, training is a key intervention, as we all too often assume that people do not perform well due to lack of training. This training culture has inculcated in many minds that not having a certificate of training attendance means that they cannot do the job. The COPE process encouraged staff and management to make a training plan for their sites during the first COPE exercise. Given limited resources, what would they identify as training needs? Almost identically in both countries, they identified infection prevention as a priority. In addition, in Guinea they chose counseling, and in Kenya they chose child health training for community health workers—i.e., chose training for others over themselves. The means of acquiring the requisite knowledge were worked out by staff themselves within the site—through one-on-one coaching or through short in-service sessions for each other.

Fifteen months later, staff were asked the same questions about training needs. The list was shorter at the intervention sites, and staff there reported feeling more confident about being able to do their jobs. There had been no training in how to give information to clients, how to assure privacy in consultations, how to ensure that clients understood what they were being told, how to diagnose illness, or what to tell clients about home care. Yet in all of these areas, there was a significant difference between the intervention and control sites. The reason for this was not training, but something less tangible, perhaps an increased confidence, a feeling of empowerment, improved morale, or a feeling that management, supervisors, and clients appreciated them and were relying on them to make good decisions.

Specific Training Needs
Although we found that COPE could effect change in many areas, there was little or no observable difference between intervention and control sites on a few indicators. For example, prescribing practices were generally poor at both the intervention and control sites and in both countries. COPE can raise issues such as these, and staff can undergo the intangible changes noted above that improve the workplace receptivity to change, but some problem areas are associated with specific technical skills and knowledge that can be beyond the subject of COPE.
discussions. These problem areas are probably best addressed through specific training, supported by external monitoring and supervision: perhaps IMCI training and supervision support, with its defined medical regimens and protocols, can play a role here. Once a specific training need is addressed, then the systems support inherent in the COPE or other QI processes will effectively ensure that new knowledge and skills can be applied and new practices institutionalized in the workplace. Certainly, to improve diagnostic and prescribing practices and to have such change supported by a smoothly functioning facility, one can envisage a successful marriage of COPE and IMCI training.

The Critical Role of External Support for Facilitating and Sustaining QI Efforts

There are clearly other areas where staff are constrained in their ability to take action, through no fault of COPE (or problem identification) but through a lack of external support for problem solution. Except where the project specifically supplied drugs and equipment, there was little observable difference between the intervention and control sites in terms of the availability of drugs and equipment, even though many intervention sites had taken steps to work with local health committees to make funds available from the community coffers for purchases of prescription drugs and equipment. The important role of the district management committees, supervisors, and community health councils in ensuring the availability of both consumable and nonconsumable items (such as infection prevention supplies, emergency drugs, IEC materials, needles, and syringes) is evident.

At the end of the day, COPE needs a good leader, and it is very important that senior staff at the sites are encouraged and trained to take on a role of sustaining QI efforts in a more facilitative way. Furthermore, district-level support for this person is crucial to continued success. Not only because many of these sites may have rapid turnover of management and senior staff, but also because providers need to be reminded that they are doing a good job, it is very important that COPE becomes institutionalized in a larger context. Our respondents felt very keenly that the new way of supervision introduced with this project was of great benefit to them: At most sites, they began to regard the external supervisors as part of their team and saw the benefit of their involvement.

A Quality Culture?

In 2001, we observed that the quality of services in 2001 was much higher in Guinea than in Kenya, not only at intervention sites but also at control sites. This raises an interesting question about Ministry of Health service-delivery structures, support mechanisms, and inherent systems-support of QI efforts.

Why did we observe a difference in service quality between the two countries? The level of project effort in each country was fairly well controlled—the same number of COPE exercises, similar training assistance, and similar supervisor training. We can only postulate what factors might have been operating. We could not control for the quality of COPE facilitation or for the quality of supervisor support. We know, for example, that the Kenyan staff adopted a more hands-off approach to facilitation during COPE exercises, trying not to steer the COPE discussions too much, whereas the facilitator in Guinea may have been more directive and insistent on issue clarification.
Other factors may also have been at work. First, child health services in health centers are organized and managed very differently in the two countries: In Kenya, nurses manage preventive care, and one or two clinical officers manage curative care; in Guinea, in contrast, the omnipresent ATS staff take on multiple tasks and manage everything. It may be that COPE is easier to introduce in a setting where staff are used to being involved in everything. In addition, the distribution of health facilities in each country differs: The Kenyan facilities serve much larger populations and consequently are extremely busy and understaffed, meaning less time for reflection and (in practical terms) making it difficult for clinical officers to stay engaged in a QI process. The Guinea sites serve much more localized populations and have much smaller staffs. At the facility level, too, local health management committees, comprised of service providers and community representatives, oversee certain quality domains and resources allocated to improving quality. This structure allows Guinean health centers to function in a more decentralized, locally controlled environment than does the Kenyan health center structure.

However, a critical factor that may explain in large part the difference in quality of services between the two countries is the organizational commitment to QI efforts within the ministries of health. In Guinea, we sensed great overall enthusiasm for quality issues within the Ministry of Health; in fact, at times we had to hold them back from instituting all kinds of additional initiatives.

This latter consideration points once again to issues of the sustainability of QI efforts: The more senior-level staff who have been trained and the more that the Ministry of Health incorporates COPE into its standards of practice, the more likely it is that COPE can be sustained at sites. End-of-project discussions highlighted the issue: Some respondents told us that COPE was time-consuming. This comment related to the time needed to complete the COPE exercises, but more importantly, the comment reflected the time and efforts that staff made to solve identified problems and to improve and sustain service quality, which was viewed as an effort beyond what was normally required of them. We believe that only when a quality culture is fully legitimized and supported at national, district, and local levels will staff know that it is an essential part of their job, rather than see it as an extra burden.

**Scaling-Up Recommendations**

COPE is a very low-tech, easy-to-do task, and our study confirms that it can have a dramatic effect on the way people work and on the services they provide. Staff feel better about their work, and clients feel better about the services. Scaling up in any country would not be a costly or difficult exercise. This project achieved significant results after one person visited each site four times, encouraged supervisors to participate, and provided a very small amount of money for (mostly on-site) training in site-determined subjects. After study findings were presented at dissemination meetings in Kenya and Guinea, participants from the relevant government departments, field staff, and donors suggested that to scale this process up to the regional or national level and to ensure its sustainability, funds would be required for the following tasks:

- Developing a department within the Ministry of Health responsible for improving quality of care in services and for supporting local COPE facilitators
- Training senior-level national and local (district/préfecture) supervisors in quality improvement, facilitative supervision, and COPE techniques, both preservice and in-service.

Essential to this training is the notion that district supervisors must be aware of their own role...
in helping to support site staff to access resources (such as equipment or training) that they cannot access themselves.

- Ensuring that salaries are available for a larger supervisory staff (or that government shift supervisors’ mix of responsibilities) so that supervisors can devote enough of their time to facilitating or participating in COPE exercises. (Attention could be focused on management of COPE at the district level, with oversight from a provincial-level COPE coordinator.)
- Traveling to all supervised sites at least three to four times per year for COPE exercises, especially during the first years of COPE, and more frequently if staff are involved in on-site training. (Note that the frequency of COPE exercise may be reduced over time. Experience has shown that the rate of COPE exercises is sometimes reduced after the first 12 to 24 months, once most of the initial—and often large—list of problems is addressed.)
- Studying how to coordinate COPE and IMCI activities, with the possibility that COPE follows IMCI training.
- Developing COPE for improvement of all services, not just child health.
REFERENCES


APPENDIX 1
ENGENDERHEALTH’S QUALITY IMPROVEMENT PACKAGE

Improving Service Quality: An Integrated Package of Approaches and Tools

EngenderHealth’s quality improvement (QI) package has been developed and refined in collaboration with developing country institutions over the past 15 years. The goal of this integrated package is to help service systems and providers improve the quality of services for family planning and other reproductive health services, by determining what needs improvement and considering how to move from actual practice to better practice. The continuous process through which these approaches and tools are applied has four steps, as shown below:

- Information gathering and analysis
- Action plan development and prioritization
- Implementation
- Follow-up and evaluation

The approaches and tools in this package share the same underlying framework of addressing clients’ rights and providers’ needs (see Box 1, page 44). They all reflect international standards and best practices. They are most successful when used together, continuously reinforcing the underlying value of addressing rights and needs to improve quality.
Box 1. Framework of clients’ rights and providers’ needs

<table>
<thead>
<tr>
<th>Clients have the right to:</th>
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<tbody>
<tr>
<td>Information</td>
</tr>
<tr>
<td>Access to services</td>
</tr>
<tr>
<td>Informed choice</td>
</tr>
<tr>
<td>Safe services</td>
</tr>
<tr>
<td>Privacy and confidentiality</td>
</tr>
<tr>
<td>Dignity, comfort, and expression of opinion</td>
</tr>
<tr>
<td>Continuity of care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health care staff need:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitative supervision and management</td>
</tr>
<tr>
<td>Information, training, and development</td>
</tr>
<tr>
<td>Supplies, equipment, and infrastructure</td>
</tr>
</tbody>
</table>


These approaches and tools can be applied at the site level, at the district, regional, or provincial level, and at the institutional level. They are particularly useful for district health management teams, or other supervisory units, of health systems undergoing reform. They provide such teams and supervisors with approaches to improve the quality of supervision, clinical quality assurance, and training systems, and enable site administrators to engage the community in defining and supporting the quality of services they want at the facilities that serve them.

EngenderHealth’s QI approaches and tools were originally developed for family planning programs, but over time have been adapted and/or used for other reproductive health services, for maternal care, for child health services (including places where Integrated Management of Childhood Illnesses [IMCI] is practiced), for adolescent services, and even for psychiatric services. They have been used in public-sector and private-sector sites and in large hospitals and very small clinics.

**Approaches**

EngenderHealth’s approaches for continuously improving the quality of services include:

- **Facilitative supervision.** This approach to supervision emphasizes the supervisor’s role in facilitating QI among a team of staff. It emphasizes mentoring, joint problem-solving, and two-way communication between a supervisor and those being supervised. To facilitate change and improvement and to encourage staff to solve problems, supervisors must have the solid technical knowledge and skills needed to perform tasks, must know how to access additional support as needed, and must have time to meet with the staff they supervise.

- **Medical monitoring.** This is an approach to continuously monitoring health care services aimed at identifying and rectifying gaps between actual practice and established standards, and is a key element of facilitative supervision. Supervisors use a facilitative approach throughout site assessment, morbidity and mortality case review, on-site coaching and updates, and the modeling of client-provider interaction. Through medical monitoring,
supervisors encourage staff to solve problems and communicate better through self-assessment and to incorporate solutions into an ongoing action plan at the site.

- **Whole-site training (WST).** This approach is aimed at meeting the learning needs of a site. WST links supervision and training, emphasizes teamwork and sustainability, and includes a range of training strategies. WST actively engages supervisors in identifying learning needs at a site, planning and implementing the required training (either on-the-job, on-site, or off-site), and facilitating the implementation of newly-acquired skills through coaching, mentoring, and teamwork. The types of training include orientations to new services or concepts, knowledge updates, and skills training. WST includes inreach (staff orientations, referrals, linkages between departments, and adequate signs) to ensure that when clients come to the site, they do not miss opportunities to access information and services for all their reproductive health needs.

**Tools**

EngenderHealth has developed the following simple and practical tools to help implement these approaches and to help supervisors and staff improve the quality of services:

- **COPE®.** This is a process and set of tools for health care staff to continuously assess and improve the quality of their services. COPE, which stands for “client-oriented, provider-efficient services,” is built on a framework of clients’ rights and staff’s needs. COPE consists of four tools: self-assessment guides (one for each of the clients’ rights and staff’s needs), a client interview guide, a client-flow analysis, and an action plan. The self-assessment guides encourage staff to review the way in which they perform their daily tasks and serve as a catalyst for analyzing the problems they identify. The guides contain key questions based on international clinical and service standards, and the guide on safety includes a medical record review. The tools also highlight client-provider interactions and other areas of concern to clients.

- **Quality Measuring Tool (QMT).** This tool is used annually to measure QI over time. Based on the self-assessment tool used in COPE, site staff and supervisors use the QMT together to determine whether clients’ rights are being upheld and providers’ needs are being met. Any new problems identified are then incorporated into the site’s ongoing action plan.

- **Cost-Analysis Tool.** Health care staff use this tool to measure the direct costs of providing specific health services. The tool measures the cost of staff time spent directly providing a service or clinical procedure, and the costs of the commodities, expendable supplies, and medications used to provide that particular service or procedure. The information can be used to improve the efficiency of staffing and use of staff time and supplies at a site, as well as to set user fees for different services that reflect the actual direct costs.

- **Community COPE®.** This participatory process and set of tools, an extension of COPE, is for health care staff to build partnerships with community members in order to improve local health services, making them more responsive to local needs. It can also have the result of increasing community “ownership” of health facilities and services and advocacy for resources for health. It is particularly useful to site administrators in areas undergoing health reform, as a means of engaging the community in defining and supporting the quality of services they want. The range of activities for learning about local needs and suggestions for improvement include individual interviews, group discussions, community meetings, site walk-throughs, and participatory mapping. Like COPE, the process includes identifying and analyzing problems, developing an action plan, and prioritizing solutions. Community
members select representatives to join the health facility’s QI committee and facilitate ongoing communication between the community and the facility staff.

**Other Tools**

To accomplish medical monitoring, a variety of observation, record-review, case-review, and facility audits are available and need to be adapted to the local situation, as well as for use either by internal or external supervisors.

In addition, implementing WST requires training supervisors in adult learning styles and training techniques, as well as making structured on-the-job training guides available.
APPENDIX 2
PREINTERVENTION QUALITY OF SERVICES

The baseline survey conducted in 1999 revealed considerable homogeneity of sites within each country (i.e., little difference between intervention and control sites), but some differences between countries. First, the Kenyan sites served much larger catchment populations (mean size, 55,922) than the Guinean sites (mean size, 27,778). Second, the Kenyan sites were staffed with more people than those in Guinea: In Kenya, the mean number of staff at all sites was 30, compared with 11 in Guinea. The Kenyan health centers usually were staffed by one or two clinical officers who dealt almost exclusively with curative services and by approximately 12 nurses, plus public health officers and support staff (technicians, receptionists, lab staff, and cleaners). In Guinea, the health centers were usually staffed by two or three aides sanités (health assistant/aides) and a doctor, plus approximately eight agents techniques de santé (technical health agents, or ATSs), who are multipurpose staff responsible for a wide range of nursing, technical, and support functions (in both curative and preventive services), and one or two community members.

The Guinean sites in 1999 offered antenatal, immunization, family planning, and curative services. Three of the intervention sites and two of the control sites also had laboratories, and two sites had labor and delivery services. In Kenya, besides antenatal, immunization, family planning, and curative services, three of the intervention sites and two of the control sites had laboratories; also, all four intervention sites offered labor and delivery services, three offered inpatient services, and one had a dental service. The number of clients seen in Kenya and Guinea reflected the different constellation of services offered, the size of the catchment populations, and the staffing levels; at the Guinean sites, approximately 420 preventive and 260 curative clients were registered per month, compared with 1,070 and 1,200, respectively, at the Kenyan facilities. Of particular note was the small number of family planning clients attending the Guinean facilities (fewer than 21 per month), while in Kenya sites served an average of 125 family planning clients per month, and one facility served as many as 250 per month.

In 1999, we observed that the two countries also had different community-outreach workers and activities. In Guinea, there were fewer than 10 traditional birth attendants per site associated with the facilities, along with about the same number of community volunteers who helped support the work of the health centers. Under the Bamako Initiative, all health centers had health committees, with elected community representatives sitting on the committees. In Kenya, the level of community involvement and clinic outreach was high: Three of the four intervention sites were supported by village health committees; six sites had a large number of community health workers (between 25 and 140 per site) linked to the site; seven had community-based contraceptive distributors, ranging from 12 to 100 per site; and all sites had traditional birth attendants (from 20 to 135 per site). Kenyan sites also had such community outreach services as antenatal care, immunization, family planning, and growth monitoring at four of the sites, whereas only two Guinean sites in 1999 had outreach immunization programs.

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Being in rural areas, the Kenyan study sites were located far away from district hospital referral centers—20 km, on average. The Guinean sites, on the other hand, were located in periurban areas that also have larger referral hospitals only 1 to 2 km away. Location did not seem to influence whether the sites were served by mainline water and electricity. In both Guinea and Kenya, in 1999, four of the sites had electricity and four had none. Only three of the Guinean sites had piped mains water, while one had a well and four had no source of water in the facility compound. In Kenya, by contrast, four had their own borehole, one had a well and three had a piped (though not always reliable) community water supply. By and large, the Kenyan sites were much better equipped than the Guinean sites in 1999, but sites in both countries lacked much of the basic equipment needed to provide good-quality child health services and were observed to have poor infection prevention.

Services for children were organized differently in Kenya and Guinea. In Kenya, sick children were basically seen by one or two providers at each site. The large numbers of sick children and the small number of qualified providers made this system extremely onerous and resulted in long waiting times and short contact times. In Guinea, the system of having multipurpose workers (ATSs) meant that there were always staff available to treat sick children and that staff could be restationed if the need arose. Our baseline survey revealed that overwhelmingly, sick children in both countries presented with fever. As study sites in both countries are in endemic malaria areas, treatment was routinely with antimalarials and antipyretics, with or without antibiotics. This was so routine that providers rarely looked for other symptoms or fully examined the children, basic tenets of IMCI management.

The preintervention survey revealed some differences in prescribing practices between the two countries, with drugs more available at health center pharmacies in Guinea than in Kenya and instructions for their use given by first-line providers in Guinea but by pharmacists in Kenya. We did not try to ascertain whether the providers correctly diagnosed the children’s illnesses, but we looked at whether instructions were given correctly for whatever drugs were prescribed. In both countries, most prescribed regimens were inappropriate according to IMCI treatment guidelines. Usually, either the provider prescribed too low a dose (in the case of antimalarials and antibiotics), too short a time (antibiotics), or an inappropriate drug for children (aspirin, in Guinea), or the instructions were too nonspecific (oral rehydration salts).

Similarly, other information given to caregivers of sick children and of children being immunized was scant. Despite this, clients had more knowledge than would have been expected from observing their contact with providers. However, many clients did not know how to manage the sick child at home, nor did they know how to tell when a sick child was getting worse. Also, knowledge of immunization was poor. By and large, the Kenyan clients appeared more educated about child health and preventive services than were their Guinean counterparts.

Clearly, cultural and experiential differences affected clients’ expectations in Guinea and Kenya. Despite the poor services reported by our observer in 1999 and the noted lack of time and lack of information given to clients, the Kenyan clients were much more accepting and grateful for what they received than were Guinean clients. Some of the issues identified during our externally assessed baseline survey (not shared with site staff and not necessarily those issues raised by staff during COPE) are shown in Table A2.1.
| Table A2.1. Problem areas identified by external assessors during baseline survey, 1999 |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| **Guinea-specific**                           | **Kenya-specific**                            | **Common to both countries**                  |
| **Infrastructure issues**                    | **Equipment and supply issues**               | **Human resource issues**                     |
| • Facilities are in need of repair.           | • There are shortages of antibiotics, tetracycline, gentian violet, iron and vitamin A, scales, stethoscopes, oral rehydration supplies, otoscopes, needles, recording materials, Fansidar, and written materials for staff. |
| • Clients complain about facility repair.     | • There are shortages of cotrimoxazole and quinine, otoscopes, needles, syringes, oral rehydration supplies, and recording materials. |
| • Facilities are short of space.              | • Infection prevention practices are poor, primarily because of a lack of supplies. |
| • Minor facility renovations are required.    | • Sick-child diagnostics are poor.            |
| • Some sites have poor water supply.          | • Staff do not feel they can make suggestions about services, do not feel part of a team, and are not encouraged to solve problems. |
| **Human resource issues**                     | • Staff training is needed in HIV, IMCI, infection prevention, quality assurance, lactation management, and counseling skills. |
| • Staff feel they offer a poor service and are demoralized. |
| • Clients have poor knowledge of immunization and are not given information by staff. |
| • Clients complain about staff attitudes.     | • Sick-child diagnostics are poor.            |
| • Staff think clients are ignorant about quality. |
| • Staff give no drug instructions to clients during consultations. |
| **Provider performance issues**               | • Service-utilization data are not used by staff or management. |
| • Clients complain about waiting times.       | • Staff do not personally take responsibility for improving quality. |
| • All needles are reused, but boiling practices need attention. |
| • Sites are not open every weekday.           | • Infection prevention practices are poor. |
| • Aspirin is prescribed for children.         | • There are few quality-assurance teams, meetings, or mortality reviews. |
| • No seats are offered for caregivers of sick children. |
| • Growth monitoring and immunization are done en masse, with no chance of privacy. |
| • Waiting times are long, and contact times are short. |
| • Many children are not up-to-date with their immunizations. |
| • Infection prevention practices are poor.    |
| • There are few quality-assurance teams, meetings, or mortality reviews. |
| • Toilets are not clean.                      |
| • Staff miss opportunities to discuss family planning, immunization, growth monitoring, and general health and nutrition. |
| • There is little information, education, and communication, and there are few oral rehydration corners. |
| • Treatment regimens are inadequate, and first doses are rarely given on-site. |
| • Consultations are frequently interrupted.   |
| • Poor or no instructions are given on home management of sick children. |
APPENDIX 3
METHODOLOGICAL ISSUES

Evaluating the effects of a quality-of-care intervention is complex, and several issues need to be considered. First, the definition of quality, both for determining interventions and subsequently for establishing and measuring endpoints, is a question of perspective. Identification of quality-of-care problems varies for different stakeholders: Certainly, what we as outsiders thought needed to be, or indeed could be, improved may not have been the same as what service providers or clients thought their needs to be or thought could be improved. Our baseline assessment of problem areas highlighted broad areas of concern (although these were not shared with staff at sites), but in no way could it determine the underlying causes of those problems or identify optimal solutions, as evidenced by the staff’s much deeper and more innovative identification of problems and solutions during the COPE exercises.

In terms of evaluating the effects of the COPE interventions on quality improvement, we were faced with the problem of what changes to measure, for again, what we thought needed to be done was not necessarily what service providers thought needed to be improved. The intervention deliberately did not focus on any particular aspect of quality: No facilitator from outside specifically told staff what their problems were or what their priorities should be. No training events (apart from facilitative supervision for site managers) were determined from the outset. The intervention merely provided a forum and a catalyst for staff themselves to look critically at their services and to design their own interventions accordingly.

Our evaluation strategy, therefore, was very broad, and included many indicators of child health services. More importantly, it was necessary to look at changes from a variety of perspectives, to determine whether what we could see (by observing services) could be validated by what providers thought had changed (through provider interviews and staff focus groups) and by what clients thought had changed (via client exit interviews). Implicit in this process was the necessity of looking simultaneously at process (documenting the inputs and examining staff responses), at immediate outputs (changes in service-provision mechanisms), at intermediate outputs (changes in observed services provided), and at wider-ranging effects (client knowledge and behavior changes).

More problematic was deciding what impact measures to use. Clearly, the desired result of improving the quality of child health services is that child health improves. Frequently, making the assumption that improved health stems from increased use of health services, we use increased service utilization as a proxy for this. However, this poses more problems. First, service-utilization data in developing countries are notoriously inaccurate. In Kenya, many vaccinations failed to be tallied or reported in monthly statistics, and tally sheets were not kept for any period of time. At one site, local records could account for only 57% of third DPT immunizations reported to the district office. Our field staff in Kenya reported data clerks who were unable to define and distinguish between first visits and subsequent visits; sometimes the

“first sick visit” meant the first visit of the year and sometimes it meant the first episode of a particular illness. In some weeks, data were not collected at all.

Another factor influencing immunization numbers was the increase in immunizations given in mobile clinics or during National Immunization Days (NIDs), which may decrease attendance at clinics. It was noted by staff in a few clinics in Kenya that the introduction of free immunizations at mobile clinics covered under the new Gates-funded GAVI project had prompted many clients to become more passive and to wait for the services to come to them, rather than to seek them out at the health centers. In other places, it has been reported that the free services offered by the GAVI and NID initiatives have led to suspicion in the community about sinister government motives.

Second, even where data are accurate, the utilization of services is confounded by many nonseasonal variables. Staff at both intervention and control sites in Kenya noted that utilization had been seriously affected by rising drug charges, with fewer (cheap) drugs provided by government and clients’ need to rely more on (more expensive) community and private pharmacies. User charges for all services have recently increased in Kenya and have been levied for services that had been exempt. In some facilities, staff reported charging 10 Kenyan shillings for a community development fund, 15 Kenyan shillings for an antenatal or child health card, 10 Kenyan shillings for needles and syringes, and 10 Kenyan shillings for mandatory antenatal laboratory workups. At some sites, staff reported the cost of a first antenatal visit to be as high as 100 Kenyan shillings (US$2) and of a first child immunization to be 55 Kenyan shillings. Often, the cost of these services at government facilities was higher than the cost in local private clinics. The system allows for exemptions, but staff report that because clients are uncomfortable with being questioned about their ability to pay, some opt to try to pay or to not attend at all rather than to face this embarrassment.

Other events outside the control of the health centers may also have affected utilization. In 2000, staff reported a general shortage of BCG, DPT, and measles vaccines, leading to a decision to offer immunizations only on Tuesdays and Fridays. They suspected that this had discouraged many people from attending or had given the community the impression that vaccines were not available at all. Staff suggested that their training of traditional birth attendants and community health workers would also have an effect on antenatal attendance, with a greater number of women preferring to be seen by them. Some staff explained that a new policy of mandatory antenatal laboratory screening (for hemoglobin, syphilis, and blood typing), while essential, had also negatively affected attendance because of additional costs that were passed on to the clients. Other new initiatives, such as promoting the simple Fansidar regimen for malaria treatment (especially its availability in shops), may have led to more self-treatment and to a subsequent reduction in the use of the formal health facilities.

These rising costs and the changing nature of health-seeking behaviors are clearly also affected by ability to pay within the community. Staff in Kenya reported problems in their communities such as increasing AIDS (and resulting family stresses), increasing transport costs, severe drought, and market fluctuations in 1999 and 2000 that caused a collapse of the cotton, tobacco, and livestock industries.

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*c In 1999 and 2000 in Kenya, NIDs included measles immunizations.
In Guinea, utilization has also been affected by local political instability, new administrative boundaries (which affected two sites), new competing facilities starting up in the areas, shortages of vaccines and drugs, general economic downturns, and clients’ inability to pay for services. In some areas, political problems in neighboring Liberia and Sierra Leone caused populations to be displaced: Some health centers saw a loss of population (and some had to close completely for a few weeks), while others saw an influx of refugees.

Even in the absence of these confounders, or where they are always known and controlled for, it may have been too soon for news of the improved services to percolate into the wider community and to affect attendance. In summary, we would conclude that using utilization data to confirm the success of an intervention is very suspect, particularly with a small number of sites, which does not allow for mitigation of external effects.

But a case can also be made that service utilization is not the best proxy measure for good child health, as good health does not necessarily stem from use of medical services but is a combination of good health care, informed populations, good nutrition, healthy living, preventive health care practices, and good home management of illness. A key objective of the health system is to improve the community’s ability to understand and make informed decisions about appropriate actions to protect their health. We feel, then, that showing this intervention to have an effect on educating people, on providing immunizations, on explaining home care, on developing more community outreach activities, and on making clients more satisfied with the services they receive are good proxies.

Process evaluation was an essential part of this study, because of our need to understand how providers felt about and worked with this less-conventional process for improving services. In most development situations, or within the hierarchies of administrative institutions like ministries of health, standards are developed, guidelines are issued, and supervisors visit sites and report on what staff need to do to change. In the COPE process, the COPE guides provide some guidance about what might be appropriate service-delivery goals, but by and large what happens next is in the hands of the providers and of site management. We hypothesized that by giving the power of change to providers rather than by imposing change from outside, by giving general guidelines about how they might work together rather than telling them what they might work on, and by giving them some simple tools that reflect quality concerns, staff would take on this challenge. As an intervention, COPE, with its general guides raising more than 200 service-delivery issues, is very broad. We can see what issues staff choose to address, and we can see what improvements take place at the site and in the eyes of the clients. But as important is the need to understand what happens to staff in the process of change: How do staff relate and work together, what stimulates action, how do they view their clients, and how do they seek change both within their facility and within the wider community?

Second, and associated with the above, our challenge was to try to measure indirect effects of the intervention. Clearly, some differences directly related to outside influences are easily observed: One would expect, for example, that where we provided equipment or client cards, these would be more in evidence in the benefiting sites than in the nonbenefiting sites; likewise, where we helped with training in infection prevention, the practices in the benefiting sites would surpass those in the nonbenefiting sites. What is more difficult, but clearly more important, is to measure the indirect effects of the intervention, to know what impact a low-cost, minimally intrusive, minimally supportive attempt to create an enabling environment for staff has on creating a
changed service-delivery environment and on improving client satisfaction. The inclusion of and comparisons with matched control sites helped to illustrate the intervention effect. At the same time, the study of these approaches in Kenya and Guinea provided some evidence of how COPE may or may not work in two very different cultural and administrative settings.

Third, measurement is always confounded by external events, particularly when resources only permit study of a limited number of service sites. In Guinea, political instability in neighboring Liberia and Sierra Leone caused some facilities to close intermittently, some catchment populations to leave the area, and refugees to flow into others. At the same time, changes in administrative boundaries, construction of new facilities nearby, and other unknown externalities served to confound evidence of intervention effects. Despite these limitations and potentially confounding events, there was considerable consistency in evidence both from all investigative sources as well as from two very different countries that some observed and reported aspects of quality at intervention sites were not evident at control sites.