The rise and fall of supervision in a project designed to strengthen supervision of Integrated Management of Childhood Illness in Benin

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Objective In developing countries, supervision is a widely recognized strategy for improving health worker performance; and anecdotally, maintaining regular, high-quality supervision is difficult. However, remarkably little research has explored in depth why supervision is so challenging.

Methods In the context of a trial to improve health worker adherence to Integrated Management of Childhood Illness (IMCI) guidelines and strengthen supervision in southeastern Benin, we used record reviews, focus group discussions, key informant interviews, and cross-sectional surveys to examine the supervision process.

Findings Initially, little IMCI supervision occurred. The frequency increased substantially after implementing a series of workshops, but then deteriorated. Quantitative and qualitative data revealed obstacles to supervision at multiple levels of the health system. Based on supervisors’ opinions, the main problems were: poor coordination; inadequate management skills and ineffective management teams; a lack of motivation; problems related to decentralization; health workers sometimes resisting IMCI implementation; and less priority given to IMCI supervision because of incentives for non-supervision activities, a lack of leadership, and an expectation of integrated supervision. To this list, based on our observations, we add: the increasing supervision workload, time required for non-supervision activities, project interventions not always being implemented as planned, and the loss of particularly effective supervisors. In terms of correctly completing steps of the supervision process, the quality of supervision was generally good.

Conclusions Managers should monitor supervision, understand the evolving influences on supervision, and use their resources and authority to both promote supervision and remove impediments to supervision. Support from leaders can be crucial, thus donors and politicians should help make supervision a true priority. As with front-line clinicians, supervisors are health workers who need support. We emphasize the importance of research to identify effective and affordable strategies for improving supervision frequency and quality. (ClinicalTrials.gov number NCT00510679.)

Keywords Benin, child health, developing country, health services research, supervision

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KEY MESSAGES

- In the context of a project to strengthen supervision in Benin, after some initial success, we encountered obstacles at multiple levels of the health system that led to a breakdown in supervision.

- Key obstacles were: poor coordination, inadequate management skills and ineffective management teams, a lack of motivation, decentralization, health worker resistance, less priority given to programme-specific supervision, supervision workload, non-supervision activities, incomplete implementation of project interventions, and loss of leadership and effective supervisors.

- Managers should monitor supervision, understand the evolving influences on supervision, and use their resources and authority to both promote supervision and remove impediments to supervision. In other words: pay attention and act on what you find.

Introduction

Improving health worker performance is critical for strengthening health systems and reducing the enormous burden of preventable morbidity and mortality in developing countries. This issue has become a high priority, as a growing number of studies have documented inadequate health care quality for a variety of conditions (World Bank 2004; Rowe et al. 2005; WHO 2006).

Supervision is widely recognized as a key support for improving health worker performance (WHO 2006; Bosch-Capblanch and Garner 2008), and trials have found that supervision and specific supervision practices such as audit with feedback can increase health worker adherence to clinical guidelines (Zeitz et al. 1993; Loevinsohn et al. 1995; Trap et al. 2001; Rowe et al. 2005). When done well, it can define objectives and expectations; monitor performance; help interpret local data; provide motivation, job satisfaction, focused education, and a link between tiers of the health system; model correct practices; assist with planning and problem-solving; and enhance community participation (Marquez and Kean 2002; Rowe et al. 2005; Bosch-Capblanch and Garner 2008).

Although no global statistics exist on the frequency and quality of routine supervision, published and unpublished quantitative surveys have revealed substantial variation; and qualitative studies have described numerous important deficiencies (Supplementary Table A).

In our experience, we have repeatedly heard that supervision is important but difficult to maintain. However, while informal anecdotes abound that illustrate specific problems in one setting or another, remarkably little in-depth scientific research has examined why it is so challenging. We found only three such studies (summarized in Box 1). Other studies have mentioned a variety of reasons for inadequate supervision (Supplementary Table B), although these studies were not focused specifically on identifying causes.

As billions of dollars are being dedicated to combat diseases such as AIDS and malaria, which require health workers to use new expensive medicines and laboratory diagnostics,
it is now especially relevant to understand how to make health-worker support strategies, such as supervision, successful. Without such research, it is difficult to identify pitfalls to avoid and effective strategies to replicate, and managers must rely on experience and intuition.

From 1999 to 2004, we conducted a trial in Benin to evaluate a multi-faceted strategy to improve health worker adherence to WHO’s Integrated Management of Childhood Illness (IMCI) guidelines (Gove et al. 1997). The trial showed that our package of supports (job aids, non-financial incentives, and strengthening supervision) was significantly associated with better adherence (Rowe et al. 2009). We anticipated that supervision in the project area, although described as a priority, was weak and that improving it might be difficult. As we wanted to understand how well different aspects of our strategy worked, we gathered detailed information on the supervision process. The objectives of this study were to describe the frequency and quality of supervision in the trial’s intervention area and explore reasons why supervision often was not done—despite efforts specifically designed to strengthen it. This type of study is increasingly recommended to complement trials to strengthen health systems to show how and why interventions work, and to describe the study context in greater detail (Victora et al. 2004; Sanders and Haines 2006; Walshe 2007).

Methods

Study design and setting

We prospectively collected qualitative and quantitative data on supervision during a randomized controlled trial of a strategy to improve health worker performance. We present the supervision results as a case study.

The trial was conducted in all public and licensed private outpatient health facilities in Ouémé and Plateau Departments in southeastern Benin [combined size 4545 km² and a largely rural population of about 1.2 million (République du Bénin 2005)]. Although nominally two departments, they operated as a single unit, with one health management team led by a Departmental Health Director. Administratively, Ouémé/Plateau comprises 16 communes (i.e. districts). During the trial, the national decentralization plan grouped the 16 communes into five health zones and created health zone management teams. In practice, decentralization proceeded slowly, and few health zones were functional. Throughout the trial, each commune had one principal supervisor for case-management activities (a physician), although sometimes senior nurses conducted supervision. These supervisors were the same individuals responsible for supervision before the trial. The policy pre-dating the trial was that health facilities should be supervised monthly.

The trial design involved dividing Ouémé/Plateau into two similar geographic areas, each with eight communes. One area was randomized to be the intervention area, where health workers received IMCI training plus study supports (details below). In the other (control) area, health workers received IMCI training plus ‘usual’ supports (i.e. whatever the government and other partners provided). From 1999 to 2004, the number of health facilities in the intervention area increased substantially from 48 to 72, and the average number of facilities per commune increased from six to nine. The number of facilities increased because some new clinics were built and some pre-existing disused facilities were assigned new staff and re-opened.

The population for this case study was IMCI-trained health workers in the intervention area, their supervisors, and departmental managers involved with IMCI implementation.

Interventions

In the trial intervention area, we implemented a multi-faceted strategy to support health workers after IMCI training. The strategy included: (1) a workshop in July 2001 to train supervisors on ‘alternating supervision’ (visits alternating between the health worker’s clinic and the supervisor’s hospital) and establish a supervisor of supervisors (SOS), (2) job aids, (3) health worker training on the job aids, and (4) non-financial incentives (Box 2). All components were

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**Box 2 Details of Integrated Management of Childhood Illness (IMCI) supports, Ouémé/Plateau Departments, Benin**

1. In July 2001, a 5-day workshop was conducted with three facilitators (investigators AKR, FO and ML), the eight commune supervisors, one additional senior nurse supervisor, and five departmental health officials, to develop, practice, and encourage use of a protocol for supportive supervision related to IMCI (Supplementary Box A). The protocol called for ‘alternating supervision’ (i.e. each quarter, one visit at the health worker’s clinic and one visit at the supervisor’s hospital). All supervisors received IMCI training. To support supervisors, a supervisor of supervisors was established. The supervisor of supervisors was a senior paediatrician with extensive experience in training clinicians and with IMCI guidelines. He was trained to observe supervision visits and provide constructive feedback to supervisors on their performance.

2. Job aids were distributed to IMCI-trained health workers: patient registers with reminders of IMCI clinical tasks, and a counselling guide.

3. Just after IMCI courses, half-day training sessions were organized for health workers on the use of the job aids and on the supervision checklist, so they would know what to expect during supervision.

4. Non-financial incentives were implemented: framed ‘certificates of merit’ given to health workers at a ceremony every 1–2 years.
implemented together, and all were designed with extensive input from the Departmental Health Director. No financial support was provided for supervision, as a mix of government and community-based funding was supposed to cover supervision field costs. Except for several vehicles (one per health zone) provided by a donor at the end of 2002 and beginning of 2003, no other project was directly supporting supervision in the trial intervention area.

Data collection

To determine the number of IMCI-trained health workers needing IMCI-specific supervision and the frequency of IMCI supervision, training and supervision records and IMCI supervision checklists were reviewed. We also conducted four cross-sectional health facility surveys to assess supervision (all types combined, whether or not related to IMCI) and other health system characteristics. Methods are described elsewhere (Rowe et al. 2001; Rowe et al. 2009).

To obtain opinions on why supervision did not occur, we conducted semi-structured key informant interviews with three senior staff involved with strengthening supervision in March and July 2004. Similarly, we conducted focus group discussions (FGDs) with supervisors in the trial intervention area before (2001), during (2003) and after (2005) implementing our IMCI supports. FGDs comprised a facilitator, 1–2 assistant facilitators, community supervisors, and sometimes other staff (see footnotes of Box 3, Figure 2, and Supplementary Figure B). Participants knew each other, and most knew the facilitators worked on the IMCI project. FGD participants were not a sample of a larger population, but were generally the entire population of interest; thus, we only conducted one FGD per time period.

All key informant interviews and FGDs were conducted in French and lasted 1–2 hours. A facilitator (investigator AKR) asked participants why supervision did not occur in the project area, according to personal experiences. After initial responses (e.g. ‘supervisors lack motivation’), the facilitator asked for causes of the given responses (e.g. ‘Why do supervisors lack motivation?’). In all interviews and FGDs, discussions appeared free and relaxed; participants readily responded to each other; and critical comments were often given, which suggested openness. Discussions continued until saturation was reached (i.e. participants indicated they had no additional opinions to express), and no obvious signs of fatigue were observed.

For the 2001 FGD, a causal diagram was constructed (details below) and then shown to participants to verify that it accurately represented their opinions and the causal links among them. Supervisors’ feedback was used to modify the diagram, although little modification was required. Additionally, supervisors were asked to classify the relative importance of each ‘cause’ with a 3-level scale (very important, somewhat important, or not important). In 2003 and 2005, FGD participant responses were listed on a flip chart and feedback on causal relationships was elicited during the discussion.

Analysis

First, a timeline of key events and narrative summary of the supervision process were produced. Second, quantitative results on supervision over time from the health facility surveys, training records and supervision checklists were summarized with tables and graphs. Third, qualitative results from FGDs in 2001 and 2003 and key informant interviews in 2004 were summarized with causal diagrams. Causal diagrams were created when FGDs revealed multi-step chains (i.e. root causes leading to intermediate causes leading to the final outcome of supervision not being done). In 2005, when the FGD yielded a simple list of reasons, results were presented in a text box.

To make causal diagrams, nearly identical responses were combined, causal relationships were identified (usually relationships were obvious, as participants were directly asked what caused what), and causal chains were developed (Franco et al. 1997). ‘Root causes’ were causes at the end of a chain furthest from the problem being studied (i.e. causes with no identifiable cause, according to participant responses) and ‘intermediate causes’ were causes in the chain between root causes and the problem.

For the 2001 FGD causal diagram, supervisors classified causes into three levels and each was assigned a point value: very important (1 point), somewhat important (0.5 points), and not important (0 points). The mean value for each cause was used to shade the diagram: very important causes (mean value 0.67–1.00 points), somewhat important (mean 0.33–0.66), and least important (mean 0–0.32). For all other FGDs and interviews that yielded results that were much simpler than the 2001 FGD, no attempt was made to categorize the relative importance of the causes.

For all FGDs and interviews, the unit of analysis was the group, and the analytic approach was inductive. That is, understanding was based on participant responses—no preconceived hypothesis or theory was being tested (Krueger and Casey 2000). Analyses were based on field notes, and the highly focused nature of the discussions made it unlikely that key points were lost. Causal diagrams and the text box generally contained actual or paraphrased statements of participants. For improved visual clarity, quotation marks were often omitted.

Results

Narrative summary of IMCI implementation and supervision

Training on IMCI guidelines followed WHO recommendations, which include an 11-day in-service course for health workers and a follow-up visit to health workers’ facilities. Although we intended training to take about one year (in 2001), due to funding and logistical problems, it took four.

In June–July 2001, IMCI implementation began with the first training and the 5-day supervision workshop (Box 2). The solid line in Figure 1, which shows the number of IMCI-trained health workers needing IMCI supervision, indicates the increasing supervision workload (increases in the solid line indicate when IMCI courses occurred). The training and workshop were thought to promote supervision.

However, almost no supervision occurred at first (October–December 2001; Figure 1, first vertical bar). This was surprising because only 13 health workers needed supervision; and in the July workshop, supervisors had actively participated in
developing the supervision protocol, demonstrated competence in following the protocol, and expressed a strong desire to do so. Likely influences on supervision included the need for some supervisors to teach IMCI courses and do IMCI follow-up visits. Also, we conducted a health facility survey from December 2001 to January 2002. As it might have drawn attention to health worker performance and supervision, the survey might have motivated supervisors to make visits. However, for the few supervisors who were data collectors, the survey was probably an obstacle to supervision. Notably, most supervision in late 2001 was done by one supervisor (‘supervisor A’) who was particularly effective and a data collector in the survey.

In response to the low number of supervision visits, we consulted with the Departmental Health Director, who was keen to strengthen IMCI supervision. At his suggestion, we added a component to our IMCI-support strategy: 1–3 day workshops each quarter in which supervisors presented their supervision results (and if not all visits were completed, explained why), engaged in problem-solving, planned the next round of supervision, and sometimes had clinical practice at a hospital. Although the workshops were designed to encourage supervision, requiring supervisors to explain failures in front of their peers might have been demotivating. In practice, however, the tone of workshop discussions was supportive, not punitive.

At the first newly added workshop (December 2001), supervision was planned for February 2002. However, just before the first visits, we sensed trouble. Few supervision checklists had been picked up, and several supervisors complained about broken vehicles and fuel needs. As we had already decided not to use study funds for supervision field costs (due to sustainability concerns, and as supervisors had previously insisted that adequate funding existed), we offered no financial assistance. In retrospect, the complaints appeared to have been attempts to obtain additional resources for fuel and vehicle repairs because, just as supervision was to begin, all supervisors picked up their checklists and began making visits. During that round of supervision, of 64 needed visits (two visits for each of 32 IMCI-trained health workers), 45 (70%) were completed—a nearly 5-fold increase from the previous quarter. As planned, a supervision workshop was held in February 2002.

Over the next 6 months (April–September 2002), the supervision workload did not change; but supervision decreased somewhat, with only 50–64% of needed visits done. During this period, several potentially influential events occurred. First, we held supervision workshops in June and September, which we think positively influenced the frequency of supervision. Second, in June and July, two particularly effective staff left the project area: our Project Advisor, who was not replaced for a year, and the Departmental Health Director, who was replaced with a temporary assignee. These departures almost certainly meant the loss of two motivating forces supporting supervision. Notably, the Director left for a job with a donor agency that was actively trying to strengthen supervision. Third, in September, we had a ceremony to award non-financial incentives to health workers, which might have drawn attention to health worker performance and the need for supervision. Fourth, we began a health facility survey, which lasted from September to October.

From October 2002 to March 2003, supervision declined sharply. Key events included completing the health facility survey that began in September; the donation of several vehicles for supervision (one per health zone); some IMCI training and follow-up visits; the loss of a particularly effective ‘supervisor A’ left the project area, and a national decentralization process began that shifted responsibility for supervision planning to the health zone level at a time when few health zone management teams were functional (decentralized planning involved all supervision, not just for IMCI). In August, we held a supervision workshop and a ceremony to give non-financial incentives to health workers; and some IMCI training and follow-up visits occurred. In January, another effective supervisor left.

**Health facility surveys**

Surveys in the trial intervention area (Table 1) revealed trends that differed somewhat from the results of the checklist count presented in Figure 1. Among IMCI-trained health workers, both data sources showed that little supervision occurred from December 2001 to January 2002. However, in 2002 and 2004, surveys showed moderately high levels of supervision (78–88% of workers received at least one visit in the preceding 6 months), while checklist counts showed much lower levels. It is important to note that these two data sources were not completely comparable, as surveys asked for supervision of any type in the past 6 months and the content of supervision was not assessed in detail (e.g. clinical supervision might have been for adult patients). In contrast, in Figure 1, during a 6-month period, four IMCI supervision visits were expected.
Proportion of health workers who received at least IMCI-trained health workers

<table>
<thead>
<tr>
<th>Health worker group and indicator of supervision frequency</th>
<th>July to October 1999 (pre-IMCI baseline)</th>
<th>December 2001 to January 2002 (follow-up 1)</th>
<th>September to October 2002 (follow-up 2)</th>
<th>July to October 2004 (follow-up 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMCI-trained health workers</td>
<td>n.a.</td>
<td>7/23 (30.4)</td>
<td>14/18 (77.8)</td>
<td>37/42 (88.1)</td>
</tr>
<tr>
<td>Proportion of health workers who received at least 1 supervision visit (any type of supervision) in the past 6 months, n (%)</td>
<td>n.a.</td>
<td>0/22 (0)</td>
<td>13/18 (72.2)</td>
<td>27/42 (64.3)</td>
</tr>
<tr>
<td>Non-IMCI-trained health workers</td>
<td>31/52 (59.6)</td>
<td>7/29 (24.1)</td>
<td>4/23 (17.4)</td>
<td>11/23 (47.8)</td>
</tr>
<tr>
<td>Proportion of health workers who received at least 1 supervision visit (any type of supervision) in the past 6 months, n (%)</td>
<td>17/52 (32.7)</td>
<td>4/29 (13.8)</td>
<td>0/25 (0)</td>
<td>1/23 (4.4)</td>
</tr>
</tbody>
</table>

In 1999, 2001, 2002 and 2004, the number of health facilities surveyed was 48, 55, 22 and 54, respectively. 
Not applicable because no health workers had received IMCI training in 1999. 
One missing value.

Notably, after IMCI implementation began, non-IMCI-trained health workers received almost no clinical supervision (Table 1, last row).

FGDs and key informant interviews

In July 2001, before IMCI supervision began, the FGD indicated 26 unique root causes that led to 18 intermediate causes of why supervision rarely occurred (selected results in Figure 2, all results in Supplementary Figure A). While numerous reasons were described at multiple health system levels, the causes classified as most important (shaded boxes in Figure 2) fell into five interrelated themes: supervisors were expected to do too much in each visit, poor coordination and time management, insufficient training, transportation problems, and inadequate management skills and dysfunctional management teams. Interestingly, we found what appeared to be a self-perpetuating cycle in which the perceived uselessness of local planning (because of frequent conflicts with requests from higher administrative levels) led to poor communication and coordination, which reinforced the perceived uselessness of planning (centre of Figure 2).

Two years later, a FGD on IMCI supervision yielded nine root causes and six intermediate causes (Supplementary Figure B). Key themes included inadequate planning and coordination, lack of motivation, and supervision not being a real priority. Additionally, participants mentioned that planned supervision workshops did not always occur. As we were concerned about problems with project-supported activities, we interviewed senior staff informally. We learned that some workshops were skipped because: (1) health workers, supervisors, and our MOH counterparts who organized the workshops were busy with other activities; (2) there were bureaucratic delays in accessing project funds; and (3) Health Zone Coordinators were sometimes already holding zone-level supervision meetings, so some (but not all) managers thought that department-level meetings were less of a priority.

The last FGD was conducted in 2005, after the trial, when over 80 health workers needed IMCI supervision (Box 3). Key themes included poor coordination, dysfunctional management teams, and an insufficient number of IMCI-trained supervisors.

Key informant interviews in 2004 provided similar results to those from FGDs (Supplementary Figure C). Key themes were: (1) decentralization and Health Zone Coordinators’ difficulty accessing funds; (2) lower priority given to IMCI supervision because of poor planning (supervision and non-supervision activities planned for the same time), incentives for non-supervision activities, lack of leadership, and a culture promoting integrated supervision [i.e. supervision conducted by a multi-disciplinary team covering all aspects of service delivery (Egger and Ollier 2007)]; (3) lack of confidence; and (4) health workers sometimes ‘resisting’ IMCI implementation.

Quality of IMCI supervision

Of 348 supervision visits, 317 (91.1%) supervision checklists were available for analysis. Of these 317 forms, two-thirds (212/317, or 66.9%) had all sections completed; and almost all (308/317, or 97.2%) had the most important section completed (observing a consultation and providing feedback to the health worker). Among 105 checklists with at least one error, nearly half were from one supervisor who repeatedly skipped the same section at the end of the last page.

Twenty-two SOS checklists were available for analysis (regrettably, we did not collect these forms systematically). For each of 18 key tasks of the supervision protocol (Supplementary Box A), we calculated the percentage of supervision visits in which the SOS indicated that the task was performed correctly. The 18 task-specific percentages
ranged from 57 to 100% (median = 90%). Only three tasks were
frequently missed (performed in <85% of visits): interview the
caretaker to assess satisfaction (performed in 71% of visits),
set date for next visit (69% of visits), and give feedback
to the health worker on the caretaker's satisfaction (57% of
visits).

**Discussion**

In developing countries, although numerous scientific studies
have examined causes of inadequate health worker perfor-
mance (for instance, Brugha and Zwi 1998; Rowe et al. 2001;
Muula and Maseko 2006) and some studies have explored
the challenges of health management more broadly

![Diagram showing root causes, intermediate causes, and resulting problems of supervision rarely occurring.](https://example.com/diagram.png)

**Figure 2** Selected results of a focus group discussion: reasons why supervision rarely occurs and the importance of each reason, according to supervisors' opinions, in the intervention area of a trial of IMCI supports, Ouémé/Plateau Departments, Benin, July 2001 (just before IMCI supports were implemented).

Dept. = Departmental; IMCI = Integrated Management of Childhood Illness; MOH = Ministry of Health.

- The focus group discussion comprised 1 facilitator, 2 assistant facilitators, and 14 participants (9 commune supervisors and 5 senior departmental staff, including 13 physicians and 1 senior nurse, 12 of whom were men and 2 were women). This figure only shows causal chains that contain at least one cause that supervisors considered most important (all results shown in Supplementary Figure A).

- Most important reasons in shaded boxes, somewhat important reasons in white boxes with dark outline, least important reasons in white boxes with dashed outline (see Methods).

- Other responsibilities include: patient consultations, meetings and administrative work.
Box 3 Results of a focus group discussion:

In the intervention area of a trial of Integrated Management of Childhood Illness (IMCI) supports, Oue´me´/Plateau Departments, Benin, February 2005 (4 years after beginning the implementation of IMCI supports)

- Health worker strikes made supervision difficult (e.g. from October–December 2004).
- Health zone teams are not all operational. It is as if people do not recognize that they need to work as a team or that they are not convinced of this.
- There is interference by other activities at health facility, departmental and national levels (especially from the national level), and a lack of coordination. So micro-planning does not work well. Planning was not the problem, the problem was interference. Examples:
  - Trainings in sexually transmitted diseases and HIV (3 days), nutrition (6 days), tuberculosis (3 days), Buruli ulcer (3 days)
  - Self-evaluation ordered by the Ministry of Health (3–4 days)
  - Workshop on developing health zones (2–3 days)
  - Vaccination outreach in communities (2 days)
  - Routine monitoring via document review every 6 months (e.g. for vaccinations, prenatal care, and community financing)
- The biggest problem was that there were not enough IMCI-trained supervisors to do all the visits, or IMCI-trained supervisors are busy with other tasks.
- You would go to a health facility and the health worker was not there, or the health worker was busy with an urgent case and could not participate in supervision.

(Health Systems Trust 2001; Egger and Ollier 2007), few have focused on supervision in detail.

In our setting, despite a seemingly robust strategy, relatively small project area, apparent local acceptance and fairly strong initial enthusiasm, it was sobering to find that from 2001 to 2004, only 29% (348/1186) of needed IMCI supervision visits actually occurred. This result was especially striking because we discovered problems at the outset and promptly responded with a reasonable, and initially successful, solution. Through prospective data collection, we accumulated a detailed database to gain an in-depth understanding of the difficulties encountered.

In the context of the Benin trial, what went wrong? Based on the opinions of supervisors and other staff, the main causes were: (1) poor coordination; (2) inadequate management skills and ineffective management teams; (3) a lack of motivation; (4) problems related to decentralization; (5) health workers sometimes resisting IMCI implementation; and (6) less priority given to IMCI supervision because of incentives for non-supervision activities, a lack of leadership, and an expectation of integrated supervision. To this list, based on our own observations, we add: (1) the increasing supervision workload over time (more IMCI-trained health workers in more health facilities); (2) time required for non-supervision activities; (3) project interventions (supervision workshops) not always being implemented as planned; and (4) perhaps most importantly, the loss of the initial Departmental Health Director’s leadership and the loss of particularly effective supervisors (including the first SOS).

These obstacles illustrate well the conceptual framework of health worker performance that describes health workers (in this case, supervisors) as working in and being influenced by a series of dynamic environments at various health system levels (Brugha and Zvi 1998; Marquez 2001; Franco et al. 2002; Dolea and Adams 2005; Rowe et al. 2005). Of course, these environments contain positive influences too, such as the workshops, the Departmental Health Director’s leadership, SOS visits, and supervisors’ self-motivation. The implication of this framework is that programme managers must understand the existing and often evolving influences, and use their resources and authority to alter environments to both promote supervision (e.g. help Health Zone Coordinators access funds, strongly express the importance of supervision, and award bonuses to supervisors who do well) and remove impediments (e.g. prevent non-supervision activities that offer per diem during supervision periods). In addition, tracking simple indicators (e.g. the proportion of needed visits that are completed) can be invaluable for monitoring progress. As we experienced, initially successful solutions can fail over time.

The obstacles from our setting were also remarkable because of expected issues that were absent. In particular, low salaries were not described as a cause, although participants might have been reluctant to discuss this in FGDs. Also, poor transportation infrastructure was not mentioned, despite the fact that some roads in rural areas are impassable during the rainy season and some villages (with health facilities) are built on stilts in a lagoon and are only accessible by boat. Thus, strengthening supervision does not necessarily require large capital investment; although, clearly, some basic infrastructure is needed.

We found that poor coordination was a recurrent theme. This point underscores the reality that time is a resource, supervision is ‘expensive’ from this perspective, and therefore time must be carefully budgeted. While it is tempting to think that there is always more time tomorrow, the recurrent nature of supervision (e.g. visits every quarter) means that time can

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The focus group discussion comprised one facilitator, two assistant facilitators, and five participants (five commune supervisors, all male physicians).
actually run out. Improving coordination will require better communication and prioritization, but also respect for locally planned activities. As in many settings, supervisors in our study felt substantial pressure to follow orders from their superiors. Thus high-level managers, who probably feel their agendas have greater importance, might need to change their mindset to accept local planning. A simple solution to improve coordination is to set aside a period routinely for supervision (e.g. the first 2 weeks of each quarter) and enforce a rule that other activities cannot be planned for this time.

Another important reported obstacle was the lack of supervisory skills and dysfunctional management teams. This finding fits into the broader priority of strengthening health management, which includes supervision (Egger et al. 2005; Janovsky and Peters 2006). Strengthening health management could involve in-service training and mentorship of individuals and health facility teams, pre-service training, management systems (e.g. to manage money, staff, information and supplies), supervision, clarifying responsibilities, recruiting the right kind of person (not all competent clinicians make good managers), as well as financial and non-financial incentives. However, evidence of the effectiveness and cost of these strategies in developing country settings is scarce.

An especially critical finding was the importance of leadership. The initial Departmental Health Director clearly communicated the importance of IMCI supervision to his staff, including commune supervisors. In contrast, while the new Director expressed support for IMCI supervision in numerous meetings with senior project staff, his lack of engagement in supervision support activities handicapped efforts to reverse the downward trend in supervision frequency (such ambiguity has been documented elsewhere, see endnote 2 of Meuwissen 2002). The lesson is that support from leaders can be crucial. However, the challenge is what to do when leaders are not supportive and not easily influenced by the health system (e.g. political appointees). Perhaps donors and politicians could leverage their resources and authority to gain the attention of high-level decision-makers who could make supervision a true priority. Additionally, donors should consider the damaging effect on supervision when they hire the most effective public sector supervisors and leaders. Instead, donors should consider making long-term investments in education (even helping just a few students per year) to increase the pool of bright and motivated individuals who could take jobs in their organizations (Health Alliance International 2009). Although these suggestions might have been unrealistic even a few years ago, the new (sometimes enormous) resources in many countries provide opportunities for donors to influence and support health systems in new ways.

Although not strictly comparable, differences between health facility survey results and checklist counts in 2004 raised several possibilities. Supervisors could have abandoned the IMCI-specific protocol in favour of integrated supervision. Alternatively, increasing supervision might have been done by departmental or national-level staff who did not use our checklist. Divergent trends in clinical supervision between IMCI-trained and non-IMCI-trained health workers suggest attention to the former might have occurred at the expense of the latter. If so, the finding illustrates a potential pitfall that quality improvement efforts might not always be additive, but just shifting attention from one health issue to another. As with clinical medicine, perhaps quality improvement strategies need to adopt the primum non nocere principle (first, do no harm).

Many of our findings and recommendations might seem like common sense, but we think it is still useful to document them in a scientific study. Such reports can help disperse lessons and prevent mistakes elsewhere. As in industrial management, case studies such as ours can contribute to a practical evidence base for managers, those who teach managers, and researchers seeking to understand and design interventions to improve health worker performance and strengthen health systems (Berwick et al. 1990; Meuwissen 2002; Egger et al. 2005; Janovsky and Peters 2006). Programme managers and researchers working on supervision should be encouraged to publish other case studies to add more real-life examples to the literature. When possible, novel strategies to improve supervision should be evaluated with rigorous methods.

Conclusions

In the context of a project designed to strengthen supervision, after some initial success, we encountered obstacles at multiple health system levels that led to a breakdown in the frequency of IMCI supervision. In terms of correctly completing steps of the supervision process, however, the quality of supervision was generally good. As Benin and other countries consider how to strengthen supervision to support the scale-up of new clinical guidelines, results from this case study support several practical recommendations. First, programme managers and donors must cooperate to keep motivated and effective staff in their government jobs. Second, coordination should be improved with better communication and prioritization, more respect for locally planned activities, and the establishment of supervision non-interference periods at least every quarter. Third, simple indicators should be tracked to monitor progress and determine whether programmatic actions have unintended negative effects. Fourth, management should be strengthened more broadly to improve supervision competence, time management and other skills. Finally, programme managers need to understand the evolving influences on supervision and then use their resources and authority to both promote supervision and remove impediments to supervision. In other words: pay attention and act on what you find. As support from leaders can be crucial, donors and politicians should help make supervision a true priority.

Unlike building clinics or treating patients, supervision is generally an invisible business. Overall, there needs to be a greater recognition that supervisors are health workers too, and they might need as much support (including supervision) as front-line clinicians. Additional research, including intervention trials and other case studies, is critical to identify effective and affordable strategies for improving supervision frequency and quality. Widespread, sustained, high-quality supervision in rural outpatient settings in low-income countries remains an elusive goal. If new, large-scale disease control initiatives are to succeed, action is urgently needed.
Ethical clearance

The study protocol was approved by the Ethics Committee of the Benin Ministry of Public Health and CDC’s Human Subjects Review Board.

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Supplementary Data

Supplementary data are available at Health Policy and Planning Online.

References


