

An evaluation of *Health Workers for Change* in seven settings: a useful management and health system development tool

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This paper presents the findings of a multi-centre study assessing the impact of *Health Workers for Change* (HWFC) workshops in seven different primary care sites, based on the common core protocol described in this paper. The paper discusses a common methodology used by the studies, consisting of a triangulation of qualitative and quantitative methods. Such methodologies are inherently complex as they require comparisons across systems, sites and procedures. The studies were conducted in six sites in Africa and one site in Argentina. Generally, the intervention resulted either in positive change or in no change, except in the area of staff relationships where conflicts were more frequent after the intervention than before. This may reflect a willingness to confront problems or contentious issues. Implementing the HWFC workshops improved provider–client relations, facility level functioning and aspects of staff interrelationships, and had some impact at the system level. All studies indicated that overall health system development is essential for improved service provision including quality of care. The findings also indicated that this intervention complemented and could assist health sector reform efforts and can play a role in sensitizing health workers to gender issues. The paper concludes with a discussion of the robustness of the methodology used in the studies.

Introduction

The general objective of the evaluation of the *Health Workers for Change* (HWFC) workshops was to determine how HWFC affected the provision of health services, whether the workshops encouraged health workers to seek solutions to their problems at work and the degree to which they were motivated to seek assistance from the health system with problems that they were unable to address on their own. The impact of HWFC was therefore assessed at the facility level, at the local health system level in which the facility operated, and at the client level in terms of how the quality of services were perceived by women clients.

This paper compares the findings of seven studies in different sites on the impact of the HWFC workshops, based on a common core protocol described below. This multi-centre study was conducted in six sites in Africa: two in Nigeria, two in Tanzania, one in Ghana and one in Kenya. In addition, with the assistance of the Pan American Health Organization, HWFC was translated into Spanish and adapted to the Latin American context, and its impact was studied in one site in Argentina.

The research protocol was developed at a meeting in Morogoro, Tanzania, in November 1995. In keeping with the philosophy of the Gender and Tropical Diseases Task Force of the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) which funded this research, the activity was advertised widely and research teams selected. A criterion for acceptance was that the teams be multi-disciplinary, composed of a combination of health and social scientists. The participating teams in the Morogoro meeting included several disciplines: social sciences, medicine, epidemiology, education and communications. A number of research tools were developed to study different aspects of HWFC from the perspectives of clients, the facility itself and the larger health system. After the workshops the research teams pre-tested the protocol tools and met in two separate groups (one in East Africa and one in West Africa) to compare the results of the pre-tests. These results were then sent to TDR where the recommendations were incorporated into a revised common research protocol.¹

The protocol was applied in seven different research sites, six in Africa and one in Latin America. Two data analysis workshops were held during the research process – one soon after

the application of HWFC and the other before final data analysis. The workshops allowed participants to present their data according to a commonly agreed upon format and to discuss plans for further analysis and writing up of the results. They provided a forum for the participants to learn from each other's experiences and to capitalize on the insights gained from the multi-disciplinary nature of the studies and the teams. They also allowed participants to further consolidate their analytical and presentation skills. The studies began in mid-1996 and the reports were completed in mid-1998.

Study design

Because the objective of the study was to investigate changes brought about by the intervention, a longitudinal (before and after) methodology was chosen. The intervention was planned for a selected health facility and the impact was measured at three levels: the community (focusing on female clients), the facility itself and the district health system level.

Criteria for the selection of the study sites were that the health care facilities chosen should have a range of providers and be relatively well utilized. In all cases (with the exception of Ghana) the researchers approached the relevant authority to discuss the research plan and sites were selected to meet the criteria in conjunction with the health care authorities. This interaction also provided the entry point to the system level. In Ghana the interaction with the health system level was more informal. While there were differences between the various health care systems in all the countries, there were also similarities. All countries provided primary health care (PHC) to the population through a local level of authority, which in turn was supervised by a higher provincial/regional level and ultimately, the national level. In most countries some form of decentralization had taken place. In Argentina and Nigeria the day-to-day management of health care delivery was more heavily influenced by the decisions and actions of locally elected officials than in the other sites, which responded mainly to national health policies.

Methodology

The study design consisted of the collection of baseline information at Time 1 (T1), estimated to last about 4–6 weeks, in order to obtain a descriptive overview of the conditions at the health facility prior to the introduction of the intervention. Thereafter, the HWFC workshop series was conducted in the facility by independent facilitators; the researchers were not present and were blind to the content and outcome of the intervention until after completion of data analysis at Time 3 (T3). At Time 2 (T2), about 4 weeks after the completion of the HWFC workshops, an abbreviated impact assessment was conducted at the facility and client levels. At T3, about 9 months after the completion of the HWFC workshops, the final data collection was done at the three levels in order to assess their longer-term impact (see Table 1).

As with health systems research (HSR) more broadly, the research methods reported here are numerous and, in some ways, represent a kind of intervention in themselves. When the researchers are closely involved in gathering data within

small communities, and especially when in-depth and longitudinal data is collected from the same people, the research process itself can affect the findings in one direction or another. For example, if the researchers and the nature of the interventions associated with them are essentially received by the community in a positive way, the process itself can influence the outcome of the study in a positive direction. It is important to recognize that HSR, and the methods reported on in this study, have this potential, and to recognize that such research should be considered as quasi-experimental.

Several research methods were used to triangulate information, including qualitative methods (key informant interviews, group interviews and focus group discussions) and quantitative instruments (structured observations, time flow studies, individual interviews and records reviews). At the facility level the following methods were applied at T1, and again at T3; at T2 only two of these (structured observation of provider–client interactions and staff questionnaire) were used.

- Key informant interviews with facility heads and selected staff concerning issues such as meetings, services, equipment, follow-up, quality of care, supervision, career development, and community participation at the facility.
- A staff questionnaire with all employees in the clinic on demographic and other background information, interpersonal relations, services rendered and job satisfaction.
- Observation checklist concerning drugs available, treatment protocols, equipment for essential services, and types of records kept.
- Observation of client–provider interactions: following clients from the reception area to the consultation room, including provider behaviour in terms of greeting, politeness, facial expressions, manner of questioning, tone of instruction, whether instructions were clear and helpful, whether clients were given the opportunity to ask questions and whether adequate responses were obtained.
- A short exit interview with the clients on whether they felt their problems had been solved.
- Time flow studies to determine the time taken by clients attending the clinic.
- Group interviews with women clients attending the clinic to obtain their perception of services.

At the community or client level two methods were used at T1, T2 and T3: focus group discussions and individual interviews. Focus group discussions with three age groups of women (12–20, 21–35 and 35+ years) explored women's perceptions of services offered, main reasons for visiting the clinic, privacy and confidentiality, and decision-making during consultation. Individual interviews were held with a small number of female clients in their homes, an environment where they could express their opinions freely about their individual experiences at the health facility. The same women were interviewed at all three time periods. This information supplemented focus group discussions by providing information on personal satisfaction with the health services. The respondents for both the focus group discussions and individual interviews were evenly distributed among the villages served by the facility.

Table 1. Summary of sample studied at each time (baseline – T1, shortly after intervention – T2 and about 9 months after intervention – T3) for each study site

	Nigeria – Kwara			Nigeria – Kaduna			Tanzania – Ilala			Tanzania – Kinondoni Kenya			Ghana			Argentina ^a					
	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3			
Client level																					
Interviews ^b	20	13	20	25	25	12	7 ^d	7	7	15 ^d	15	15	4	4	22	10	12	10	-	-	-
Focus groups	3	3	3	6	6	4	2	2	2	3 ^d	3	3	3	3	3	3	2	3	15	8	-
Time study	153	64	62	21	24	42	188	-	166	255	200	200	58	12	54	-	-	-	-	-	-
Facility level																					
Key informant int.	2	2	2	3	3	3	2	-	2	4	-	4	2	-	4	2	2	2	-	-	-
Observations ^c	225	86	90	31	24	42	201	283	180	225	200	200	62	78	121	383	274	260	-	-	-
Questionnaires	79	64	39	18	19	20	21	18	14	30	31	30	21	21	23	10	11	9	9	8	-
Staff group int.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	14	11
System level																					
Key informant int.	2	-	2	6	6	6	2	-	2	1	-	1	5	-	5	2	2	2	2	2	2

Checklists on availability of equipment and drugs were carried out at the facilities at T1 and T3 and the availability of various documents (budgets, planning documents, supervision timetables etc.) were documented at the system level at T1 and T3.

A ‘-’ denotes that this tool was not used either because it was not called for in the protocol or that site did not intend to collect that data.

^a The Argentinean study design was somewhat different and also included various control groups where the intervention did not take place.

^b Clients were identified at random at the facility and appointments were made to do interviews in their homes.

^c For all sites with exception of Tanzania-Ilala, Nigeria-Kwara, Ghana and Kenya, this number refers to the number of patients observed. For the other four sites it denotes the number of points within the facility where provider-client interactions were observed – thus one patient may have been observed at more than point in the facility.

^d For these tools in these sites the same people were interviewed at T1, T2 and T3.

^e In the client interviews in Kenya at T2, four of the six women from T1 were re-interviewed and at T3, three of the 22 women interviewed were also interviewed at T1.

At the health system level, key informant interviews were held with members of the district health management team focusing on issues such as budget allocation, supervision, planning, career development and management of information. The interviews were conducted at T1 (baseline) and T3 (evaluation). At T3 interviews were also held with other district level staff (such as the District Health Medical Team) to obtain their views on the findings and their intention to use them for planning purposes. A review of records including budget, supervision schedules, district plan, training and data forms was also done at the health system level at T1 to provide baseline information and at T3 to monitor any changes after the workshop series.

During the research it became clear that some of the data could be interpreted in different ways. Thus, after completion of data collection at T3, the researchers returned to the health facilities to ascertain how health care providers themselves had understood the impact of the intervention. This was done either by focus group discussions or in-depth interviews. These data were included in the final conclusions from the various sites and allowed the researchers to be more confident about their conclusions. This confirmatory process was useful not only for validating the information gained through the research but also for sharing results with the communities and health personnel involved.

Description of sample

A summary of the sample studied at each time (T1 – baseline; T2 – shortly after intervention; T3 – about 9 months after intervention) for each study site is given in Table 1. In Nigeria one study took place in the Offa Local Government Area (LGA) of Kwara State. Two facilities were selected, a PHC facility offering predominantly preventive and some curative services with 20 staff members (managed by the LGA) and a secondary level General Hospital and referral facility, offering curative services for the PHC, with 122 staff members (managed by the State Ministry of Health). Both facilities served a peri-urban community. Data indicated that these services saw on average 30 (PHC) and 19 (General Hospital) patients per day. The second study in Nigeria took place in two PHC facilities in the Chikun LGA of Kaduna State with 12 and 14 staff members respectively, providing curative and preventive care to rural communities.

In Tanzania two sites in Dar es Salaam were selected by separate research teams. One was a dispensary in Ilala district which provided ambulatory curative care and maternal and child health (MCH) services. It had a staff of 28 and served an average of 160 patients a day. The second Tanzanian site was an MCH clinic, which provided care to pregnant women, family planning and child health services. It was located in the Kinondoni district hospital, which had a staff of 30 and served an average of 100 patients a day.

In Kenya the study was conducted in a rural health centre in Kisumu district, a referral centre for the various dispensaries in the area, providing curative and preventive care including MCH. It had a staff of 34 and an average daily patient load of 100.

The study in Ghana took place in Sage sub-district of Dangme East district of the Greater Accra region. Despite being within the most well-resourced region of the country, the surrounding sub-districts are similar to other rural areas of Ghana where infrastructure and services are poorly developed. The selected facility provided preventive and curative care to an average of 15 patients per day.

In Argentina the study was conducted in one of the public health facilities of Avellaneda district in the Province of Buenos Aires. The clinic operated two shifts with 10 professionals per shift and four other staff members, a director, receptionist, nurse and janitor. The clinic provided a range of services and each doctor saw about 30 patients per shift. The study design was adapted in the Argentina site to suit the local circumstances and to fit in with a pre-existing study (Pittman et al. 2001, this issue). Though a slightly different study design was adopted, this intervention did evaluate the impact of HWFC and hence is included here.

Results

In the following sections changes noted after the intervention are described at the three levels of analysis: client, facility and health system.

Client level

Using the triangulation method we can compare three types of data at the client level – observations of the amount of time spent in the facility including waiting time, provider–client interactions, interviews with the clients and client focus groups.

Time spent by patients in the facility was observed and recorded in all study areas with the exception of Ghana and Argentina. In all sites a decline in the total time spent by patients following the intervention was recorded. In Kinondoni, Tanzania, a decline was noted from T1 (51 minutes) to T2 (31 minutes) and this was sustained at T3 (31 minutes). In Ilala, Tanzania, total time in the facility declined from an average of 55 minutes at T1 to 26 minutes at T3 (these data were not collected for T2). In Kenya total time at the facility declined from T1 (2 hours) to T2 (87 minutes) to T3 (79 minutes). In Kwara, Nigeria, time data for the hospital were difficult to measure, as people had to queue at many points to reach the service for which they were attending. At the PHC facility total time spent in the clinic was reduced between T1 and T2, and clients also reported noticing this reduction. In Kaduna total time was similar at T1 (21 minutes) and T3 (22 minutes) but declined slightly at T2 (18 minutes). However, waiting time declined steadily from T1 (34 minutes) to T2 (26 minutes) to T3 (16 minutes) in the antenatal care unit and similar reductions were observed in the postnatal care unit. Clients reported that they had a sense that time in the health services was better spent.

Interactions between providers and clients were based on both observational and interview data. Overall, positive changes were noted between T1 and T3 in four sites (both Tanzania sites, Nigeria-Kwara and Kenya). In the two Tanzanian sites

and in Kwara steady positive changes from T1 to T2 to T3 were observed in interactions between providers and clients. In Kenya as well, these interactions improved notably between T2 and T3.

Examples of positive changes noted by the clients included a more polite and respectful attitude on the part of providers in both Tanzanian sites. Both studies remarked on the fact that before the intervention young health workers were often impolite to older female clients whereas after the intervention they were more respectful. In a culture where respect for age is the norm the impolite behaviour of health workers is particularly objectionable, a 40-year-old woman in Kinondoni site commented, “a young provider can just shout at you”. Another said, “If it happens you get at the clinic late when sessions have started, you need to hide yourself. Otherwise you will be welcomed with unbecoming language.” In an African setting, a young person is not expected to shout at an older person; such behaviour when practised by a health worker impedes clients from seeking care from that facility.

In Ilala site, Tanzania, a female respondent interviewed before the intervention commented, “A young health provider may shout at you in front of all clients.” After the intervention most (six out of seven) interviewees perceived that overall the services have improved at the facility: “It seems like the nurses are more kind and caring now than before.”

An example of positive change in Kwara, Nigeria was that the quality of explanations improved after the intervention concerning medications and where to go next in the clinic: “These would build the confidence of the clients in the providers and improve compliance and follow-up.” In Kenya the researchers reported that, “before the intervention clients had the opinion that health providers were biased, rude and did not give them enough time to explain their problems. The situation was different after the intervention, for clients saw health providers as giving them advice instead of rebuking them.” One client reported “a remarkable change in attitude” whereby nurses were friendly when she came to the clinic with her baby, which was born at home and delivered by a traditional birth attendant. Formerly nurses were not willing to attend to babies who had been delivered at home.

In Kaduna interactions were already good at T1 and some additional positive changes were observed in provider–client interactions: clients noted that staff were more likely to greet them and that they felt more confident to ask questions. In Ghana client perceptions of the quality of care did not change between T1, T2 and T3, and observational data were inconclusive. In Argentina minor positive changes were noted between T1 and T2 in that fewer people complained about problems mentioned at T1. Clients were not re-interviewed at T3.

Other aspects of the health services were also reported by clients to have improved. In Kaduna changes were reported in promptness in being attended to, in availability of drugs and in the services and attitudes of health providers. This was

demonstrated by comments in the interviews with clients: “Patients are attended to promptly. This clinic is really improving.” “Four months ago when I used to go for antenatal, there were no drugs, but now this is a thing of the past. We now have enough drugs there.” “They are now more helpful and they give me better attention than before.” In Kenya changes were noted in the greater “availability of drugs, fast moving queues, presence of additional staff, good attention to, and communication with, patients, and cleanliness.” These changes were mentioned by clients both in interviews and in focus group discussions.

Improved privacy for patients was also mentioned in two sites (Kenya and Tanzania-Kinondoni). In the Kenyan site clients reported that this was a change from previous behaviour: whereas at T1 patients were discouraged from bringing their own covering to be used during antenatal examinations, at T3 they were encouraged to bring a kanga (traditional cloth) to cover themselves. In Tanzania-Ilala clients noted that “we are no longer being examined in public as it used to be”. Clients in one site (Tanzania-Kinondoni) reported that “you do not have to bribe any more”, that “bribes are rarely demanded these days” and further, that people were treated on a first come, first served basis.

Clients did not report improvements across the board; they still complained about things that had not changed. For example, in Kenya structural problems such as the lack of electricity and water, charging for services and negligence of the night watchman were still problematic. In Nigeria-Kwara patients still complained of the lack of doctors at their facility.

Facility level

Data at the facility level consisted of questionnaire interviews with all health staff, key informant interviews with heads of units and reviews of records and documents. In the same five sites where improvements were noted by clients, positive changes were also recognized by facility level staff. In the two other sites, Ghana and Argentina, changes at the facility level were minimal or inconclusive.

Exploration of conflicts in working relationships was evident between T1 and T2 in all study sites, except in Kenya where no change was found. Whereas at T1 there was a tendency to deny or minimize problems, at T2 staff began to express them more openly. This resulted in considerable dissension at T2 compared to T1. At T3 working relationships in all sites, with the exception of Ghana and Argentina, had improved as a result of improved communication among staff members and greater openness to discuss and resolve problems themselves. In Argentina, despite claims that working relationships were excellent at T1, the existence of conflicts was admitted at T2 and exploration of conflicts continued at T3.

At T3 staff in most countries described a sense of being members of a team and working in a more mutually supportive manner than at T1. In Kenya a difference in team work was found between those staff who participated in the HWFC workshops and those who did not: those who did were more

positive about their work and were even willing to take on some roles not in their job description. This willingness to share the work of others was not observed among staff who did not participate in the workshops.

Desired changes in health services were investigated at T1 by asking facility staff about whether they would like to see any changes and in what areas. At T2 and T3 several of the changes identified at T1 had been made, especially in areas that were within the power of health workers themselves to control, as opposed to those that required a response from higher levels. In Tanzania-Kinondoni the clinic removed the general registration desk where clients had to register before going to the unit where they were seeking attendance. This reduced the time clients had to spend at the clinic, and at T2 and T3 clients also noted that time spent at the facility had been reduced. Health workers also expanded the range of services to meet clients' needs by including geriatric services. Also, meetings were held twice a month at T1 and decisions were made by the head of the clinic. At T3 meetings were held two or three times a month and facility staff said that they were "more professional than administrative", and that they focused more on the health workers' responsibilities compared to the pre-T1 meetings. At T3 it was also reported that the meetings were "more democratic in terms of decision-making compared to T1".

Problem solving was another area in which important changes were observed at the facility level after the intervention. Health workers demonstrated more initiative in solving problems. Requests for changes were made from higher levels, especially in relation to the supply of drugs and equipment; in some cases health workers requested the community to help them to meet facility needs. For example, in Kwara, Nigeria the PHC staff requested and received supplies and equipment from the community, including a delivery couch, urinalysis facility and blood pressure apparatus. At the General Hospital requests for equipment were intensified resulting in the repair of some equipment, though no new equipment was supplied. In Kenya the majority of health workers at T1 mentioned lack of water and electricity as a problem. By T3 the facility had consulted with the system level on this matter and a decision was made to use the facility-held proportion of user fees to fence the facility and install electricity.

Triangulation of data, including observational data on facility records, questionnaire interviews and key informant interviews confirmed the above-mentioned positive changes. In Kenya, for example, at T3 (but not at T1) patient clinic cards and laboratory request forms, and time schedules for monitoring routine drug supplies were available. Also, at T3 records were kept in appropriate places such as filing cabinets, drawers and lockers, compared to T1 when records were kept in the kitchen. In Nigeria-Kwara, treatment protocols were available at T3 at both facilities (but not at T1), and more drugs were available at the General Hospital. Also at T1 records were not adequately kept, but at T3 they were adequately stored, maintained and used. Staff in Kenya report that they now arrive on time for work, in contrast to before the intervention when they tended to arrive late.

System level

At the system level, some impact of the intervention was evident in four sites (Kenya, Tanzania-Ilala, Nigeria-Kwara and Argentina). In Kenya supervisory visits increased because of the nutritionist's interest in the garden started by facility level staff. Also, for the first time the facility prepared a budget for how it would like to spend the 75% of the cost-sharing revenue due to it. In addition, because of the competence demonstrated by facility level staff in managing their drug ordering system, they were exempted from having to follow a newly introduced bureaucratic procedure aimed at dealing with inefficiencies at the facility level in drug ordering. In Tanzania-Ilala the medical assistant in charge was involved in budgeting at the system level at T3, giving him more opportunity to influence budget allocations to his facility, receive feedback to complaints and requests for information than before the intervention. In Nigeria-Kwara a change was noted in the amount of time spent in supervision at different facilities at T3, as opposed to T1 when the same amount of time was allocated to all facilities according to the supervisor's pre-arranged schedule. There was also a marked increase (from 13–67%) across the different sites in the number of supervisors using checklists between T1 and T3.

Despite these individual changes at the system level, there was little evidence of greater overall responsiveness of system level managers to the facility level. Rather, the system tended to follow up on initiatives taken at the facility level rather than actively initiating change.

In Argentina the system response was more complex. The manager's expectation of the intervention's outcome was different from the goals of the intervention: he expected the intervention to facilitate the movement from curative to preventive care in spite of the researchers' explanation that this was not its aim. Following the intervention, three main areas of impact were identified at the system level as at least partially attributable to the workshops: an increase in the number of supervisors in the city from one to three, a system of drug allocation that responded to the demands of the health facility and the recognition that HWFC was a useful tool for in-service training. Interestingly the manager used the enthusiasm generated by the intervention to target the facility to introduce other changes. However, he ignored many of the issues that were identified as problems by providers and by not responding to these, jeopardized the chance of making other changes – an example of an opportunity lost.

Evidence of impact of HWFC

In order to assess the impact of HWFC we need to answer the question of the degree to which the results from the various sites can be compared and aggregated. Several differences existed in the selection of sites across countries. With regard to the choice of the location of the study in each country, there are two issues to consider: the point of entry and the way in which the study was introduced. In all sites, with the exception of Ghana, the workshop intervention was officially discussed with the relevant authorities who were involved in choosing the site. This may have influenced the potential for

success and also made the system level more engaged in the process than would otherwise have been the case. In Ghana the intervention was introduced in the district adjacent to the one in which the principal researcher worked; the influence of this proximity on the study is unclear. In Argentina an urban site was selected and the study formed part of a larger investigation of quality of care. HWFC was introduced as an additional measure to ongoing interventions.

The second issue relates to the facility in which the study took place. Two characteristics were required – that a range of services be provided at the facility and that it be relatively well utilized. Many of the tools to test impact depend on a large enough sample size, a criterion that is difficult when the patient load is low. These criteria were met in the case of the studies in Tanzania, Kenya and in Nigeria-Kaduna. In Nigeria-Kwara, the daily patient load at both the General Hospital and the PHC facilities appeared to be low. It is unclear if this was characteristic of all public health services of the State or if these were special cases, but the low utilization rates need to be taken into account in interpreting the data. Similarly, in Ghana utilization appeared to be low. In Kwara the researchers tried to compensate for this by spending more time in the clinic collecting data. The same was not true for Ghana and thus these data are more difficult to interpret. The situation in Argentina diverged from the common protocol in terms of location and type of facility and hence, to some extent, needs to be considered separately.

Findings based on individual tools give some indication on their own of the impact of HWFC: where the findings from different tools reinforce each other, conclusions can be drawn with more confidence. Thus, for example, where objective evidence by observation coincided with providers' opinions from questionnaires or interviews, and with clients' perceptions in focus groups and/or interviews, the conclusions derived are more reliable. This point is further emphasized when the similarity of findings across study sites is noted. This latter point also emphasizes that HWFC is acceptable and applicable in a range of settings, a finding demonstrated previously (Fonn et al. 2001).

Overall, the aggregated findings from the different tools indicate that HWFC has a positive impact on the relationship between providers and clients, creating teamwork within a facility, creating a supportive environment for facility staff to take more initiative and to some extent, to demand more responsiveness from the system level. Numerous changes between T1 and T3 support this conclusion.

Some of these changes can be directly attributed to the intervention itself. This is specifically the case where post-intervention activities at various sites were formulated in the action plans resulting from the HWFC workshops. In Nigeria-Kaduna, for example, the action plan developed at the end of the workshop series listed six areas in which staff felt that they themselves could take action: staining of uniforms by their clients, pursuing personal economic gains during working hours, poor interpersonal relationships with colleagues and clients, delay in providing services due to health workers' unavailability, including lateness and abscondment, and

discriminatory services to clients. Significant improvements were seen to occur in these areas, and they were monitored by the staff themselves through regular meetings. Other areas not specifically listed in the action plan also improved, such as the supply of drugs and increased demands upon the system level for responses. In Nigeria-Kwara the health workers also developed an action plan which resulted in "problem definition, better perception of mode of solving problems and better approach to problem-solving as confirmed through key informant interviews at the facility, the staff questionnaire, follow-up discussions with staff and follow-up interviews at the system level."

In some cases there was an overlap between the intervention and other activities designed to make changes in the health sector. For example, an issue identified during the HWFC workshops in Kenya was the need for more staff. Additional staff were in fact allocated to the facility but this decision may have been taken independently from the intervention. Nonetheless, staff in the facility may have interpreted it as based on their request and thus they would have felt that the system was responsive to them. Secondly, the person allocated to the facility was strict and wanted to increase efficiency by insisting that staff arrive on time, something they had not always done previously. This issue was identified by the staff themselves during the HWFC workshops as something they wished to change. The concurrence between these two events – the enforcement of promptness by the new supervisor and a willingness to be on time from staff – seems to have been fortuitous. Health sector reform initiatives in several of these countries which aimed to improve, for example, drug supply systems, could be understood in the same way. Clearly some changes occurring between T1 and T3 may not have been due to the workshops.

There were cases where the impact of HWFC eclipsed proposed health sector reform activities. The exclusion of the Kenya facility from the more bureaucratic drug supply system (because it was more efficient than the health sector reform initiative) illustrates this point. HWFC, as demonstrated in this study and in the acceptability study (Fonn et al. 2001), reinvigorated facility level staff and stimulated them to initiate activities themselves. This feature of HWFC supports trends towards decentralization. However, staff at facility level still require additional skills training in management, including personnel management such as conflict resolution. Further, the system, of which the facility is a part, needs to be more in touch with and responsive to the conditions, requests and needs of staff and the infrastructural problems in these facilities.

In all the studies the researchers concluded that responsiveness from the system level to the facility was hard to document, although there were instances where facilities did impact on the system level. An example was the change in supervisor schedules in Nigeria-Kwara after the intervention that were more in accordance with need rather than with a rigid schedule, as was the case before. Perhaps these findings can be interpreted as a strength of HWFC, as people managed to achieve positive results despite relative disinterest of the system level staff. However, almost all the studies

concluded that the momentum and openness generated by the intervention could have been capitalized on by the system level had managers embraced it and supported it more fully. Further, they concluded that a similar intervention (even an adaptation of HWFC) would be beneficial to motivate health system level staff to critically evaluate their own activities in relation to their clients – health service providers. Implementing this intervention firstly at system level, and then by the system at other levels, may result in greater gains, especially in instances where the system is committed and able to respond to the issues identified at facility level.

During the HWFC workshops the links between gender and health, such as the importance of privacy and confidentiality, were made overt. Exploration for late attendance, or not following health workers advice, were recognized to be often mediated by gender issues such as women's lack of access to resources or decision-making power about how resources are spent. Sensitivity to this, as illustrated in being more welcoming towards women who had given birth at home, or promoting increased privacy, illustrate that this intervention was successful in sensitizing health workers to gender issues, and that an awareness of the impact of gender relations on health and health-seeking behaviour can play a role in improving quality of care.

Discussion of methodological issues

The individual instruments used in this study, taken alone, provide only an indication of the change effected by the HWFC workshops. By contrast, the triangulation of methods and data from different levels (clients, providers, system) allow us to be fairly confident in the results obtained. Moreover, though samples in most sites were small, their additive value and similarities across the sites strengthen the confidence that may be accorded to the findings.

Generally, the combination of qualitative and quantitative instruments served the purpose of reinforcing the findings from different tools and data sets. Whereas a detailed analysis of these instruments is not of interest here, some of the problems encountered may be useful for those planning to implement cross-cultural studies of this kind. Firstly, although the instruments developed for this study were simple and easy to administer, it was important that they were properly used and interpreted. Hence, even for the application of simple tools, a level of sophistication on the part of the researchers was required. For example, it is important that researchers who conduct key informant interviews with health authorities understand the context of the health system sufficiently to ask informed questions and to follow up with appropriate probes so that the interview can elicit relevant and useful information. In this study, key informant interviews with system level personnel were meant to provide information on the functioning of the health system in terms of roles and responsibilities at different levels, how decisions are made and communicated, administration, management and supervision. Results were more complete and useful when interviewees were knowledgeable about these functions. Researchers less familiar with the health system sometimes neglected to ask questions that could have shed light on the

peculiarities of the selected health system and its particular strengths or weaknesses.

The area of interpersonal relationships in the questionnaire for health providers was found to be problematic in all sites. This was perhaps because the meaning of 'conflict', the terminology used to describe it and the ways of interpreting the information had not been discussed sufficiently prior to the studies. For example, in all the sites responses at T1 indicated that people were happy working together, that they worked well as a team and that they could express themselves freely. This was not always borne out by the findings in the HWFC workshops. Further, at T2 and T3 the tool indicated that interpersonal relationships were not as ideal as described earlier. At the same time health workers described improved teamwork when other tools such as key informant interviews were used.

This apparent contradiction was explored in focus group discussions with health care workers at most sites after the completion of data collection. In almost all sites health workers indicated that their reporting of increased conflict was because the workshops had heightened their understanding of problems, as well as what is required to resolve them and improve their services. In some cases this meant that they were now more now critical and demanding of one another, and hence that more conflicts or disagreements actually arose; in other cases, that they were more honest about the existence of conflict. Moreover, they recognized that they could no longer blame either the system level or the clients for all their problems and had to begin looking inwardly at themselves and their facility. A simplistic interpretation of this tool would have been that things had got worse rather than better. This illustrates the value of using a combination of qualitative and quantitative methods for providing a more composite picture of the situation in the health services.

Time flow data generated useful information when the sample size was large but less useful data when few clients were seen by a facility, demonstrating that this methodology is only robust when service utilization rates are high. Caution in interpreting the data is required, and differentiating waiting time as compared to consultation time is more useful than looking at total time in a facility. Nonetheless, total time can be useful in circumstances where researchers are familiar with a facility and can be confident, for example, that the vast majority of time that patients spend in the service is, in fact, waiting time.

It is also important for researchers to critically evaluate the appropriateness of questions and interpretations of behavioural data in different cultural settings. For example, greeting a client was not customary in the Kenyan setting and hence lack of greeting could not be considered as negative. In Tanzania, by contrast, greetings are socially sanctioned and both client and provider are expected to greet one another. This nuance can often be missed by researchers, as was the case during the pre-test of the observational tool in this study.

The study design described above was developed with the understanding that evaluations of local health systems need

to be realistic and cognizant of the capacity of these systems and sufficiently flexible to acknowledge that there are multiple influences on observed outcomes. Given this perspective, the protocol described here was found to be a useful tool for collecting data on the impact of HWFC, demonstrated by its use in a multi-centre context. The combination of qualitative and quantitative instruments was useful for generating the required information. Precisely because of the simplicity and ease of administration of these tools, the researchers suggested that they could be usefully applied within health systems for routine monitoring purposes.

Endnotes

¹The protocol was made available by TDR to other research teams interested in using HWFC and measuring its impact, but with the cautionary note that the methodology was intended for use in settings where there was a favourable climate for change. It was our sense that health workers could not be expected to change if the system did not support their efforts and that the workshop series would likely work best in an environment where change within the health system was possible.

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Biographies

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