

**QUALITY MANAGEMENT IN HEALTH CARE SYSTEMS IN AFRICA: ONE
CONCEPT, MANY FACES, CONTRASTED RESULTS.
AN ANALYSIS OF THREE CASE STUDIES FROM AFRICA**

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Abstract

Quality and quality management in health services are high on the agenda in Africa. On the basis of three case studies conducted in Niger, Zimbabwe and Guinea, we review past experience with quality management in African health systems.

We have identified four main issues. First, the vertical implementation of these quality management approaches, taking the shape of projects or programmes, does not foster their integration in routine management. Second, in the absence of a reference model, the impact of interventions remains uncertain given the complexity and dynamics of health systems. Third, the legitimate importance given to the diffusion of quality management tools oversimplifies complex issues. Fourth, the generalisation of practices resulting from pilot intervention appear a hazardous undertaking leading to perverse effects. Fifth, the tension between standardisation and creativity within quality management approaches mirrors the tension between the command and control culture of bureaucratic health systems and the culture of professional independence that prevails in health care.

In our conclusion, we propose perspectives for action : health systems should promote creative initiatives supported by scientific guidance. Two areas for research are identified : (i) the articulation of rationalisation with responsiveness to public and staff expectations; (ii) a better understanding of the tensions within quality management approaches and between quality management and organisational culture.

Introduction

Today quality assurance (QA) is high on the agenda of reforming health systems and with the increasing pressure for accountability, the formal promotion of quality is a necessity today. This is also increasingly the case in Africa and QA projects were set up in many African countries over the past decade.

Still, even if the label “quality assurance” has only recently been introduced for health development projects in Africa, the concepts it covers are not new. Tools from quality management have been at the heart of health systems development for more than 20 years. For decades indeed, the development of health systems in Africa referred to approaches which belong to the field of quality management. The standardisation of clinical practice through guidelines, the design of tools for adequate management of essential drugs, the monitoring of results to set targets and plan interventions or even the promotion of action research or operational research such as the “health system research” programme promoted by WHO, only to name a few, are familiar to health service managers in Africa. They all resort to systematic situation analysis and evidence-based interventions which are characteristic features of quality management. The implementation of these projects met great enthusiasm indeed. Still despite rising

expectations, all these approaches have equally shown important limitations in terms of sustainability and of effectiveness, and already disappointment becomes visible. At a time where there is huge pressure to scale up seemingly successful interventions, it is crucial to reach a better understanding of the constraints so as to orient interventions. It is equally important to identify what remains unclear and so identify areas for research.

Why do some quality management systems lead to prompt and sustainable results and what are these results? Why do well designed and properly implemented systems eventually get perverted? Why do some health systems -and which ones- adopt or reject specific interventions? Why do some interventions -even when initially rejected- end up as frozen bureaucratic rituals while others initially well accepted and deemed effective eventually vanish? What is the dynamic underlying these quality improvement interventions, projects and programmes? What is their potential, and what are their constraints? Which lessons can we draw from this rich field of experience? A better understanding to act more efficiently is the objective of the research presented in this paper.

To address these questions, we present in this paper three case-studies conducted in three African countries: Niger, Guinea and Zimbabwe. We first describe the quality management intervention(s) or programmes implemented, their strengths, their successes and their limitations. We then discuss five issues which contribute to their limited impact, either on the quality of the services delivered or on the capacity to transform the system itself towards a more quality oriented management. Finally, we propose perspectives for action and areas for research.

Material and methods

Quality interventions in health systems are context specific. Indeed a strategy which proves relevant and effective to resolve a given problem in a given context is not necessarily relevant and effective in another context and for all problems. This is largely exemplified by the difficulties usually encountered to scale up approaches initiated in the particular context of a project. Furthermore, health systems are complex and dynamic. Their components interact. Problems that arise in a sub-system such as a hospital can have their origin in another part of the system, another sub-system such as the primary care clinics and vice-versa. Conversely, changes introduced at a system level will have consequences, expected or unexpected, on other levels of the system.

The objective of our research is to get a good understanding of the reasons for success or failure rather than identifying successful interventions to be replicated or scaled up. In order to understand the dynamics of complex and changing systems, and to analyse the interactions between interventions and host systems and sub-systems, a "case-study" is an appropriate methodology, despite its limitations in terms of external validity. It is thus the method we have chosen and our research draws on three case studies: The Quality assurance project (PAQ) in Niger, the District Health System Management (DHSM) project in Zimbabwe, and some key interventions of the Immunisation and Primary Health Care (PEV-SSP) programme in Guinea.

Results: cases studies

Quality assurance project (PAQ) in Niger: Toolbox for all, quality circles everywhere.

Niger embarked on quality management in 1993 with the Quality Assurance Project (PAQ), which ran from 1992 to 1998 in the Tahoua region. This project builds on two key concepts in quality management: 1) quality is everybody's business and 2) improving quality is about problem solving directly at providers and clients' level.

The project followed the classical quality assurance cycle with the monitoring of deviation from standards to identify problems and the setting up of quality improvement interventions to address them. At the heart of the project were 68 quality circles, that have been initiated in the services themselves, and which led to 120 problem solving cycles. To ensure the involvement of the various actors, the strategy put strong emphasis on the diffusion of tools, toolboxes and capacity to use them through intensive training. More than 500 health workers have been trained in quality management techniques. To ensure the implementation of these techniques, an intensive support was provided in the form of coaching (more specific to each intervention) and regular supervision (more generic and based on an exhaustive check list). (Figure 1)

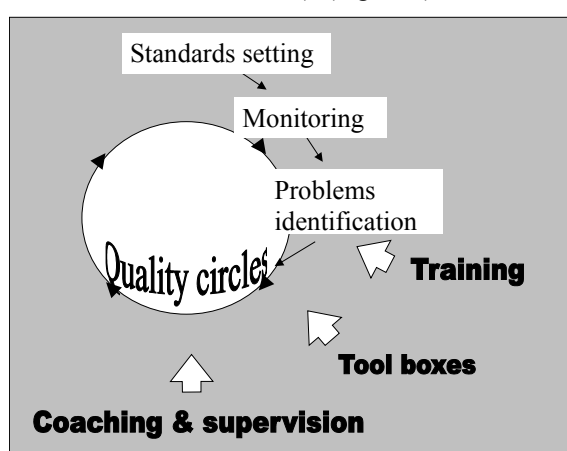


Figure 1 The quality assurance project in Niger.

The coverage of preventive activities increased markedly and positive changes in health workers practice were introduced in many health centres. The most striking aspect is how the dynamic of change and the sense of control over the working environment marked people's minds and created a real myth (Dugas 2000). But today, as anticipated by the evaluation team (Legros et al. 2000), even if the venture is in everyone's memory, in the absence of renewed inputs to give resources and content to the supervision, toolboxes are no longer used and the usual crisis management has taken over as was the case in the past (Dugas & De Brouwere 2001).

District Health System Management (DHSM) – Zimbabwe: “Systemic approach and action research”

The District Health Systems Management project in Zimbabwe supported by Medicus Mundi Belgium and the Blair research institute of Zimbabwe is an “action research” project running since 1992. The project focuses on problem solving and capacity building of the management team – the District health Executive (DHE) – in decision making to improve the quality of the district health system (Criel 1999).

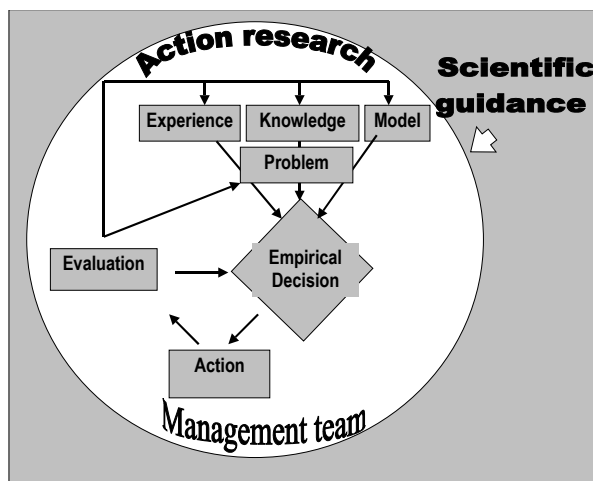


Figure 2 The District Health System Management Project in Zimbabwe

It acknowledges that improving quality of care, services and management is about introducing changes. In the context of the project, changes are considered to be the result of the implementation of empirical decisions. But decisions are not taken at random. First they respond to problems emerging from routine management practice. Then they bring about a systemic perspective and consider the effects of the problems and of their potential solutions on the system as a whole. On the one hand, the management team refers to the accumulated experience of the team, its knowledge of the field and the available scientific evidence. On the other hand, it relies upon a conceptual model which permits to put problems in a systemic perspective, to tackle them in their complexity and to guide action. Finally, such empirical decisions are considered as hypotheses to be tested and are thus subjected to an evaluation which leads to review or confirm the decision, to enrich the experience, and eventually to contribute to the refinement of the reference model (Grodos & Mercenier 2000), (Nitayarumphong & Mercenier 1992). Such a ‘decision making – implementation – evaluation’ cycle is very similar to the ‘plan – do – check - act’ cycle specific of quality management. Yet, this kind of scientific management approach needs fine tuning capacity. The management team is thus supported by external scientific guidance provided by academic professionals (Figure 2).

15 action-research cycles have so far been carried out over a period of 10 years. Changes have been introduced in disease management and epidemic control. These changes eventually contributed to the revision of the national policy. New first line services have been set up and the referral system streamlined. Moreover, the strength gained by the

district management team generates ambivalent feelings from the provincial team which refers to the district as a demonstration and experimental area but where at the same time a field of tension is created by a self confident management team claiming and demonstrating independent decision making (Chimbadzwa & Daveloose 2000). The process has been somehow validated when the district won the best district competition award in 1995 attributed by an independent jury supported by WHO.

PEV-SSP programme in Guinea: Extreme Standardisation to keep the system under control.

In 1987, with the support of WHO and UNICEF, Guinea launched a vast countrywide rehabilitation programme for primary care services: the PEV-SSP-ME Programme(1). This programme involved nearly all health centres of the country within a few years, and later also district hospitals. Given the countrywide scale of the project, the challenge was to avoid losing control over the rapid development of health services coverage.

Two components of the programme refer to typical quality management tools. One is the standardisation of clinical management through algorithms called 'ordinogrammes' in Guinea. The other is a systematic monitoring of coverage coupled with a micro-planning of local improvement strategies. This activity is a participatory process and is carried out every six months in all health centres and hospitals of the country (Knippenberg et al. 1997). The 'ordinogrammes' helped to keep the consumption of essential drugs under control and to guarantee the quality of prescriptions by a personnel with often limited qualification. But the dichotomised and standardised diagnostic and therapeutic process, streamlined by the algorithms, does not foster consideration for the expectations of the patients and leaves little room for interaction and negotiation between providers and patients (Jaffré & Olivier de Sardan 2002). The monitoring and micro-planning of corrective strategies contributed to a spectacular increase in coverage (Levy-Bruhl et al. 1997). But after a few years, there was a diminishing return effect and coverage reached a plateau. Initially creative, the approach eventually ended up as a bureaucratic ritual leading to wishful thinking rather than effective decision implementation. The very limited room for manoeuvre left to health centre committees inhibits innovative solutions to emerge.

Discussion: The reasons for a limited success

Our case studies raise five problem areas which contributed to their limited success, in term of impact or sustainability.

The programmatic introduction of quality management does not foster its integration in routine management practice.

In Niger quality assurance was introduced as a 'programme' and through a project with its own resources. Although the personnel and management structures of the public health system have been involved, the existing administrative structures and the management of vertical programmes have not been fundamentally questioned even if many improvements in the practices took place at ground level. At the end of the project, the management structures were unable to sustain the pace of changes when the specific

resources brought by the project to support supervision and decision making implementation came to an end. The expected mutation of the health system towards a quality oriented organisation did not occur.

In Guinea, the programme was introduced as a large-scale vertical programme. Yet, this programme was totally integrated within the health service management structures. Indeed the programme is 'the' national health policy since its introduction. Still, the design and the implementation of the programme was a top down process. This was probably a reasonable strategic choice given its scale and its speed. But fifteen years later, there is still no flexibility. The programme was integrated indeed but it was not a decentralised decision making capacity that was integrated in peripheral service management but rather the end decisions themselves which were internalised and eventually fossilised.

In Zimbabwe the strategy of the DHSM project was to strengthen the routine management structures. In that sense, the project was thus inherently integrated. The selection of problems to be dealt with was made during the normal decision making process (2). This led clearly to the transformation of problem solving approaches and decision making processes. The very strong focus on the management team made such a transformation of managerial practices possible. But this new capacity appears locked into the ivory tower represented by the district management team whose meetings and decision making processes may appear hidden in a black box issuing potentially sound decisions but with little involvement from other cadres of the district who express in turn their frustration (Chimbadzwa & Daveloose 2000). The sustainability of the approach is fragile and the gains in terms of decision making and problem solving capacity may vanish soon, would all the members of the team change abruptly, or the decision making power be moved to another structure or institution.

In the three cases, but for very different reasons related to different contexts, the integration of quality management within the routine management was not achieved. Yet, such integration is a key to profound and permanent improvement in management.

In the absence of a systemic vision, the complex and dynamic nature of health systems is ignored.

In the case of the PAQ project in Niger, there was no overall system perspective: the problems were isolated and addressed within the subsystem or within the programme where the symptoms appeared. Though a causal approach was sometimes conducted with the Ishikawa cause-effect model, such a tool is insufficient to grasp comprehensively the multiple interactions in complex health systems. As a result, the problem analysis was eventually reduced to an analytical 'process analysis' reflecting a static and linear vision. Yet, as we have already stated, health systems are complex and dynamic.

The obstetrical risk management reported in an evaluation of an NGO intervention in the prefecture of Gaoual in Guinea represents a striking illustration of the consequences of the lack of systemic perspective (Blaise 1997). At one end, the monitoring of the maternal health programme in the health centres reports a 48% effective coverage, which shows that the activities conform to the coverage standards and process indicators. At the other end, obstetric hospital care also conforms to the expected standards in term of appropriateness of clinical management and of safety measures. But the women treated

at the hospital are not the ones referred by the health centres and those identified at risk by the health centres do not reach the hospital. A rapid assessment of the unmet obstetrical need with the approach proposed by De Brouwere and van Lerberghe (estimated a >50% deficit in life saving 'major obstetrical interventions' which means that more than 50% of pregnant woman with a vulnerable life threatening complication probably have died. Despite adequate management in each of the separate segments of the district health system, the end result is grossly inadequate, but is not detected by the monitoring. A problem analysis without a systemic perspective obfuscates major dysfunction of the system while services and programmes taken in isolation appear adequate.

In the DHSM project in Zimbabwe, on the contrary, the problem of overcrowding at the Out-Patient Department (OPD) was addressed following a comprehensive systemic approach (DHSM team 1999). The issue was not merely reduced to the problem of waiting time to be analysed through a flow process diagram and solved through a triage system. The problem was brought in a system perspective, which enlightened the importance of providing the right care (primary curative care, preventive care, referral care, emergency care, specialised care ...), at the right level of the system for each given health problem.

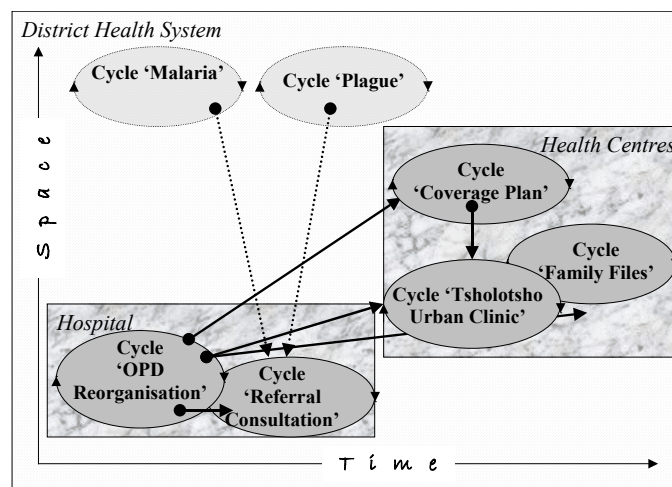


Figure 3: An interlocking network of empirical decisions: the case of OPD overcrowding problem solving in Tsholotsho district hospital in Zimbabwe.

A series of interlocked decisions were taken which had a bearing on the system as a whole (Figure 3). These decisions targeted the hospital sub-system (e.g. reorganisation of the OPD and setting up of referral consultations), or the primary care network sub-system (e.g. creation of a new urban health centre, design of a coverage plan). They were also consistent with other decisions related to disease control, particularly for aspects pertaining to referral instructions. Eventually, the reorganisation of the system, addressed from different angles but with consistency, thanks to the reference to a conceptual systemic model, contributed to the success of the control strategies for plague and malaria epidemics control.

The importance given to dissemination of quality management tools oversimplify complex decision making and carries the illusion that quality management is easy.

Maximising the involvement of all actors in quality management justifies the wide diffusion of toolboxes. But simplified tools in a minimal toolbox, accessible and handy as they may be, do not permit to deal with complex issues and carries the risk of oversimplification. In Niger the toolbox widely popularised among the health workers provided two useful tools for problem identification and prioritisation. The brainstorming method and the decision matrix were almost systematically used by quality circles (Legros, Tawfik, Crespin, Djingarey, Goodrich, & Abdalah 2000). But it is something of a paradox for quality circles participants to use a specific tool to look for problems to solve while at the same time the very same local actors are daily confronted with multiple problems dealt with under crisis management. Moreover, problems selected through these methods often turned out to reflect the preoccupations of the national programme managers while the day to day emerging problems are often created by the conflicting pressure put by these very programmes on burnt out local actors. In Zimbabwe the strategy was quite different. The principle was to start from the problems as they arose along the day to day management. Eventually, the problems selected and addressed significantly relieved the managers themselves from the pressure of the former crisis management. Still remained the difficulty for the management team to decide which emerging problem would deserve a more specific attention and would have the most significant impact on the system as a whole, given the present constraints and opportunities. Rather than resorting to a simple tool such as a decision matrix and voting, it is the reference to a conceptual systemic model which was pivotal to select relevant problems. Only a conceptual model indeed permits some projection of the effect of a given problem or intervention on the whole system (Van Dormael 1998).

The generalisation of practices resulting from pilot experience is a hazardous undertaking.

The systematic application of guidelines represents an example of the perverse effect resulting from the generalisation in a given context of a simplifying tool designed and proved effective in another context and rationale. In Guinea, the rationalisation of the curative consultation through the ordinogrammes eventually sterilised the dialogue between patient and clinician. While it dichotomises –yes or no– the dialogue between patient and staff to streamline the clinical reasoning, it leaves little room for negotiation and reduces the responsiveness to patients' expectations especially regarding psychosocial aspects. And yet, at its initial conception, this approach intended to free health workers' minds from clinical difficulties in order to foster dialogue (Equipe du Projet Kasongo 1982). Two phenomenon explain such a perversion. First the tool was generalised without taking into account an environment where not much attention was given to patient-health worker interaction. Second, during the generalisation of the tool, there was an unnoticed change of objective from a behavioural promotional objective to a managerial control objective.

Quality management and organisational culture conflicts: changing the culture in order to change the practices or changing the culture by changing the practices ?

Our case studies shows how conflicting approaches of quality management interact with the various organisational cultures found across health systems. There is first of all a tension between the two major trends in quality management: the conformity to standards on the one hand, the promotion of change and creativity on the other hand. Compliance to standards was the main focus in Guinea and was predominant in Niger while change management was key in Zimbabwe. In reality, these two approaches are intertwined. As stated by Kolb: “the challenge of quality management is to articulate successive phases: eliciting actual processes; challenging them to change existing practices; consolidating new practices. It refers to the dialectic between rigor and creativity: Too much of the former, sterile rigidity dominates; too much of the later sterile chaos follows” (Kolb 2002).

Then there is the tension among diverging organisational cultures. In Africa, referring to Mintzberg’s typology of organisational configuration (Mintzberg 1989), public health systems mainly correspond to a machine bureaucracy: The co-ordination of tasks builds on a command and control system. Processes are designed by experts, sometimes in a participatory manner, and further implemented by operators. This organisational configuration contrasts sharply with the professional culture usually claimed in the health sector. In a professional organisation indeed, according to Mintzberg, the co-ordination of tasks among professionals enjoying considerable decision making freedom is achieved thanks to the standardisation of skills, resulting from a long lasting and intensive training and socialisation.

Finally there is a tension between quality management approaches and organisational culture. A quality management approach which emphasises compliance to standards is likely to be rejected in an environment where a professional culture dominates. An approach promoting creativity will challenge the hierarchic relationships in a command and control machine type of organisation. Conversely, emphasis on standardisation of tasks and processes will reinforce bureaucracy (Blaise & Kegels 2001).

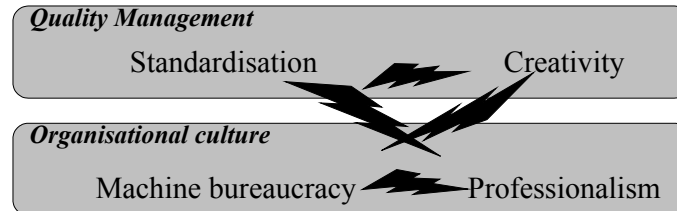


Figure 4: The tension among and between quality management approaches and organisational cultures

Should then the elimination of tensions by the application of a simple fit between organisational culture and quality management system be sought for ? Of course not ! It would mean giving up the potential of quality management as a tool for change. Still, what is important is to be aware of these tensions in order to better manage them. The question that remains to be answered is whether and under which conditions a mutation of organisational culture is a prerequisite for a successful introduction of quality

management or if a quality management system itself has the potential to fuel organisational culture changes.

Conclusion

Our case studies illustrate that given the complex nature of health systems, quality management can not be reduced to the implementation and wide diffusion of standard recipes. The challenge indeed is to combine the wide diffusion of quality management principles and techniques to ensure involvement and commitment with the professionalism - ie ability to take decision independently, and that are adapted to peculiar and changing contexts - required to permit necessary creativity and change. It is also for quality management approaches to be able to articulate on one hand rationalisation and its associated risk of bureaucracy and on the other hand creativity with its associated risk of dispersion. We can then suggest a way forward for action and fields for research.

Perspectives for action: innovative initiatives supported by scientific guidance

Whether it be in the context of research, projects, or NGOs, the field actors or institutions often express a willingness to introduce changes to improve quality. It should be taken as an opportunity to create room for innovation and creativity so as to prevent the frustration to have to wait for the health system itself to change. To avoid dispersion and its adverse side effects, it is necessary to accompany these initiatives not so much by a knowledge transfer (training, toolbox) but by long term support. We refer here to 'scientific guidance'. From the lessons learnt in our case studies, this scientific guidance should fulfil three functions. The first function is a resource-person function: providing the right tool to the right person in the field at the right time for the right reason and providing a conceptual model which permits a systemic reasoning. The second function is a facilitator function, to give regular support to the field teams and to allow field actors drowned in day to day issues to reflect. The third function is a synthesis function to build on the accumulated experience through networking so as to learn from one another, and through the systematic documentation so as to keep the memory of what is essentially a dynamic process and so move towards a 'learning organisation'.

Themes for research: "a better understanding for better management"

Our case studies put forward two challenges that merit further research. We identified a first tension area between standardisation and creativity; This is particularly relevant in the clinical field. We need to better understand how to articulate the standardisation of clinical practice along 'evidence based medicine' principles, with the responsiveness to individual expectations especially in the psychosocial field which requires flexibility and diversity. The answer probably lies in the experience of family medicine (Levenstein et al. 1986). Yet the conditions for the transfer of its principles in an African context are largely unknown. Experience is building up in this field but lacks systematic documentation. This constitutes a first theme for research (Blaise 2001; Blaise, Kegels, & Criel 2002).

Second, we have shown that health systems are complex and dynamic and that quality management is equally complex and shows drawbacks when oversimplified and

standardised. This in our view justifies abandoning the quest for a universal model of quality assurance warranting global diffusion and rather move along a 'contextual' approach building on models and which allows management within complexity. Yet, to be able to manage quality in complex and dynamic health systems we need a better understanding of the interaction and the tensions between quality management approaches and organisational cultures. This constitutes a second theme for research.

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Footnotes

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- 1 Programme Elargi de Vaccination - Soins de Santé Primaires - Médicaments Essentiels
 - 2 Moreover no extra resources were brought in and the changes were implemented within the recurrent budget of the district. When extra funds were needed they were sought by the district management with the usual procedures to bid for funds.