

**MANAGING CHANGE IN BUREAUCRATIC HEALTH CARE
ORGANISATIONS.
A CASE STUDY OF A QUALITY IMPROVEMENT PROJECT IN ZIMBABWE**

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Abstract

Improving quality in health care means implementing change. Public health services in most African countries are hierarchical and rule-based organisations close to the machine type of bureaucracy according to Mintzberg's typology. How can a conformity-based culture of stability accommodate the innovative culture of change promoted by quality management?

We present a case study from a health district of Zimbabwe, which runs an action-research programme for quality improvement. Since 1992, the district management team implements problem solving cycles. In 2002, we conducted in-depth interviews with district health professionals. The objective was to investigate the process of management of change and its underlying dynamics.

Our analysis identifies the coping strategies developed by the management team to overcome organisational rigidity and to unfreeze the rules. It also reveals how stakeholders call upon different sub-culture paradigms to promote or oppose change. The tricky play with written and unwritten rules and with power relationships determines the level of tolerance of the bureaucracy to innovation. Reference to professionalism may be used either to forbid changes or to promote positive deviant behaviours.

Our study confirms that quality improvement cannot be reduced to the linear rationality of tools, methods and principles. Indeed quality management involves managing tensions within the complex web of organisational culture and quality management paradigms.

Introduction: how can a bureaucracy accommodate change?

Improving quality in health care basically means (i) agreeing that what is currently being done is not optimal and could be done better, and (ii) agreeing to implement change. Quality management whether labelled continuous quality improvement, total quality management, or quality assurance provides a framework for a systematic approach to implementing change with the purpose of improving the quality of care and services delivered.

In previous Toulon-Verona conferences we have highlighted the tension, which exists between the conformity to standards considered as an achievement in quality management and the creativity advocated for the implementation of dynamic changes (Blaise & Kegels 2001; Blaise & Kegels 2002). We have shown indeed that the tension between standardisation and creativity found 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.

On the one hand, the philosophy of most quality management initiatives promotes a participatory approach where the people in charge of activities are involved in evaluating, redesigning and implementing changes of processes. On the other hand, the main characteristics of a machine-bureaucracy type of organisation are conformity to written rule, depersonalisation of working relationships, hierarchical lines of command, and separation of procedure-design and procedure-implementation. In such an organisational context change only happens if it is driven from the top through the revision of written rules by the rules designers and their enforcement by the hierarchic line. What happens in such a bureaucratic organisational environment when a bottom-up participatory quality management involving frontline staff and requesting creative changes is promoted? This is the research question that this paper addresses.

In a first part, we present our methodology. In a second part we provide information on the general context of the health system in Zimbabwe and on the specific project, which form the basis of our case study. In a third part, we present our results, which first confirm the bureaucratic character of the district health system in our case study and, second, identify the coping mechanisms developed to circumvent the resistance of the system to implement change.

Method

We report a case study of an action-research project run in Zimbabwe from 1992 to 2002. Our study material consists of a series of interviews of actors of the project, the project documentation, general documentation about the health system and the health programmes in Zimbabwe, and the administrative documentation and records of the routine district management (meetings minutes, correspondence etc.). In line with the philosophy of an action-research project the authors of the paper have also been involved themselves in the project at some stage. One author indeed was medical officer, member of the District Health Executive (DHE) from 1992 to 1995 and as such was a local actor and researcher.

We conducted in-depth interviews with a set of actors of this research project. In December 2002, at the end of the project, 24 persons were interviewed representing about 30 hours of interview. They had all been involved in the DHSM project at some stage. Some were direct members of the management team at the heart of the project decision making process. Some were officials senior to the district staff in the ministry hierarchy, from province up to the top at national level. Some were district staff, at operating level but not directly involved in the project management. At the time of the interviews, some of the interviewees were still working in the district; some were still working for the ministry but left the district; some had left the ministry of health and were working for another institution; some had left the country and worked in another context.

The broad aim of the interviews was to have a description of the whole process of action research as perceived by the actors. The interviewees were prompted to describe the rationale of the project; to identify the project's actions and interventions; to describe the processes in which they were involved themselves or which they witnessed; to analyse the level of achievements or failure; and to provide their interpretations of what happened. Right from the first interview, the issue of resistance to change from the system was raised. It was then systematically addressed in all subsequent interviews to

circumscribe the strategy or coping mechanisms used to overcome system resistance. In this paper, we present the results pertaining to this issue of change management, as one of the various themes that emerged from the interviews.

Context

The district health system in Zimbabwe

The case study we present is situated in the health system in rural Zimbabwe. The cornerstone of the health system in Zimbabwe is the district health system as it was advocated in the Harare declaration on strengthening district health systems based on primary health care (W.H.O. 1987). In Zimbabwe, a health district usually comprises a district hospital and a set of rural health centres. It covers a population of around 150 000 people. 'Rural hospitals', often run by missions, which existed before independence, were either upgraded to district hospitals or kept unchanged as intermediary facilities between health centres and district hospital. Rural health centres fall under the administrative responsibility of either the Ministry of Health, or the District Council, corresponding to the local government. All health facilities whether mission, district council or ministry of health are technically under the responsibility of the DHE. Initially, the system was run with distinct accountability lines for environmental health, nursing, administration and medical services. Since 1992, under the 'corporate plan', all cadres of the district are accountable to the District Medical Officer. The DHE comprises medical doctors in charge of the hospital, cadres from the nursing profession, from pharmacy, from environmental health and from the administration. The DHE runs the health district, its hospital and health centres. It establishes annual plans and co-ordinates and supervises disease control programmes and other health programmes. Led by the District Medical Officer, the DHE is answerable to its equivalent at provincial level, the Provincial Health Executive (PHE), itself answerable at national level to the Principal Medical Director and the Permanent Secretary.

To the contrary of many health systems in Africa, during the time of the project, the system was not plagued with generalised corruption, absenteeism, or other deviant behaviours. The system was also still adequately funded to perform, even if not to the standards it claimed. Therefore rules and regulations were generally perceived as applicable and were applied to a large extent.

The District Health System Management (DHSM) project: managing change to improve quality.

Our case study is situated in the context of a quality improvement project running for ten years in a Zimbabwean health district. The District Health Systems Management (DHSM) project (1) is an 'action research' project running since 1992 in the district of Tsholotsho of the Matabeleland province of Zimbabwe. The project focuses on problem solving and capacity building of the management team – the DHE – in decision making, to improve the quality of the district health system performance (Criel 1999). We therefore claim that this project belongs to the domain of quality management even if it has not been formally labelled as such.

The project methodology 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. Such 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 (Figure 1) (Nitayarumphong & Mercenier 1992) (Grodos & Mercenier 2000). 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 of the Institute of Tropical Medicine (ITM) of Antwerp and the Blair Research Institute (BRI) of Harare.

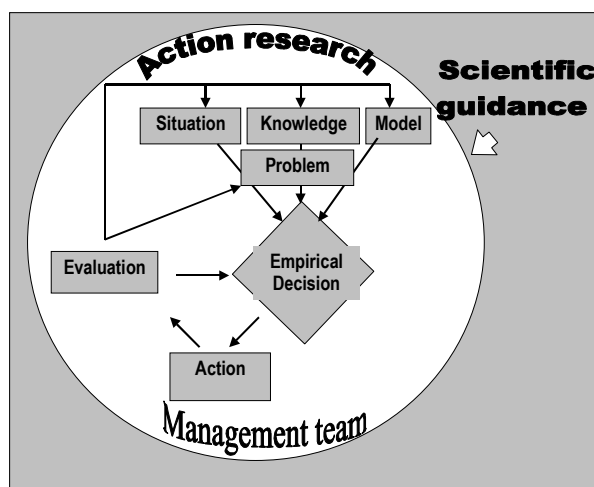


Figure 1 The District Health System Management Project in Zimbabwe

In the DHSM project in Zimbabwe 15 action-research cycles have so far been carried out over a period of 10 years. Issues were not reduced to mere problem analysis to be solved through process reengineering. Problems were brought in a system perspective (DHSM team 1999). A series of interlocked decisions were taken indeed, which had a bearing on the system as a whole (Figure 2). 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. New first line services have been set up and the referral system streamlined. Changes have been introduced also in disease management and epidemic control. These changes eventually contributed to the revision of the national policy for malaria. 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 strength gained by the district management team generates ambivalent feelings from the provincial team. Members of the provincial executive refer to the district as a demonstration and experimental area but recognise the field of tension created by a self-confident district 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.

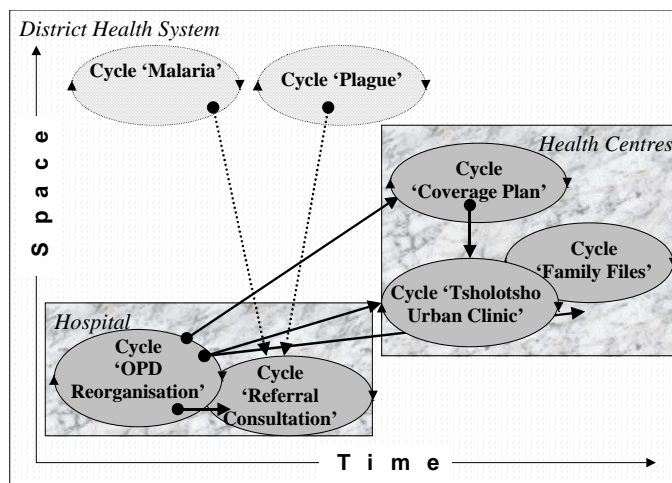


Figure 2: An interlocking network of empirical decisions: the case of OPD overcrowding problem solving in Tsholotsho district hospital in Zimbabwe.

Results

Our analytical framework: bureaucratic and professional organisational models.

In the domain of organisational theory, Taylor is the first and famous author to apply scientific principle to the organisation of the work in industry. Moving from industry to administration, Weber describes the bureaucracy as an 'ideal type' of organisation to be able to organise the work efficiently and rationally. Initially, the word bureaucracy did not carry a negative meaning. For Weber a modern bureaucracy should conform to the following traits: 1) continuity; 2) delineation of power through impersonal rules; 3) hierarchy and controls; 4) clear separation between private sphere and work; 5) no interference of heredity; 6) importance of written rule. Crozier considers three elements as essentials in Weber's ideal type: impersonality of rules, procedures and roles; specialisation of workers within a specific expertise; a strenuous hierarchical system, which implies subordination and control (Crozier 1963). Crozier and Friedberg, studying bureaucracies, consider that the perversions of bureaucracies, the 'bureaucratic phenomenon', results from power struggles within the organisation (Crozier & Friedberg 1977). They show how opportunistic individual and collective strategies shape the way an organisation functions (and dys-functions) however rationally it is organised.

According to Mintzberg, another author in the domain of organisational management, "every organised human activity...gives rise to two fundamental and opposing requirements: the division of labour into various tasks to be performed and the co-ordination of these tasks to accomplish the activity". Therefore, "the structure of an organisation can be defined simply as the sum total of the ways in which it divides labour into distinct tasks and then achieves co-ordination among them". Building on this statement, Mintzberg proposes a model to describe an organisation. He identifies 5 basic parts (Figure 3). The operating core represents the operative staff actually performing the tasks. The strategic apex defines mission and strategy. The middle line of managers form the command and control hierarchic line. The technostructure design processes. The support staff brings in specific expertise or accomplishes complementary tasks not directly related to the operating core's productive tasks.

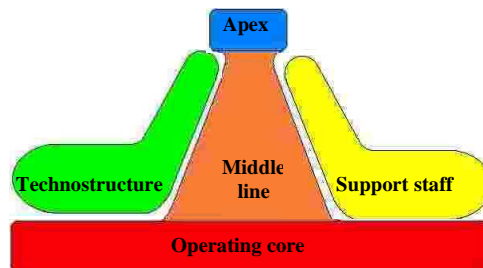


Figure 3 : The five basic parts of organisations (from Mintzberg, 1979. *The structuring of organisations* p 20)

He goes on to describe 6 different co-ordinating mechanisms corresponding to 6 types of organisational structure (Mintzberg 1979). The *entrepreneurial organisation* co-ordinates activity through direct supervision, the strategic apex is its key part. The *machine organisation* co-ordinates its activities through standardisation of work processes; the "technostructure" which designs procedures is its key part. The *Professional organisation* co-ordinates activity through standardisation of skills and qualifications; the Operating core consisting of independent professionals is its key part. The *Diversified (or divisionalised) organisation* co-ordinates activity through standardisation of outputs; the middle line which takes overall responsibility for a set of activities and results is its key part. The *Innovative organisation (adhocracy)* co-ordinates its activities through mutual adjustment; the support staff and the input and opportunities for connections it provides is its key part. The *Missionary organisation* co-ordinates its activities through standardisation of norms and behaviours, its key part cannot be associated with a specific group of people as "each member is trusted to decide and act for the overall good of the organisation"(Mintzberg 1989). Two types of organisational structure are particularly relevant to health care organisation. These are the professional and the machine bureaucracy type (Figure 4).

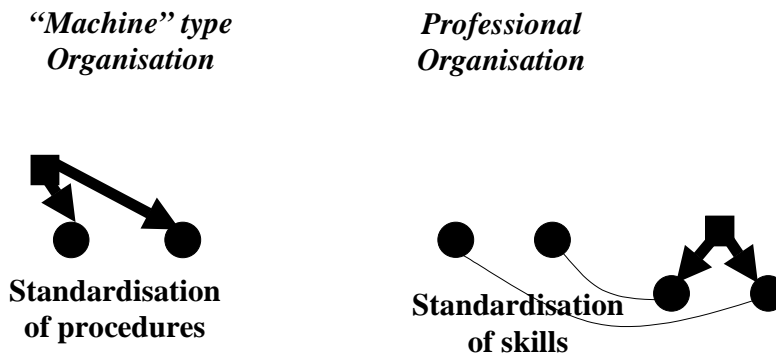


Figure 4: Professional organisation and Machine type bureaucracy, and their respective co-ordination mechanisms, by Mintzberg.

The sociology of professions deals with the concept of professionalism. Professionals claim autonomy in decision making based on their specific expertise, gained over a long training and socialisation process. They consider that they alone can decide what is a good decision and refuse bureaucratic control, resorting to peer-review for regulation. However this requires from them the special responsibility to place the interest of their client above their own. This special responsibility and specific expertise is put forward as a justification for the privileges that professions enjoy in the society. Theories in sociology of professions (Parson in 1950, Freidson in 1960, Schön in 1970) debate to what extent these characteristics are the result of the capacity of the professions to conquest their autonomy through power strategies or are genuinely related to the specificity of the tasks they perform and of the type of knowledge and practice the tasks require.

From these three perspectives - the description of the bureaucracy by Weber and the analysis of its perversion by Friedberg and Crozier, the Mintzberg framework, which compares the professional organisation and the machine type of bureaucracy, and the paradigm of professions studied in the sociology of professions - we can try to qualify the Zimbabwean district health care system.

Hierarchical, written rule-based and operating along externally produced guidelines, the district health system in Zimbabwe corresponds to a bureaucratic type of organisation.

In the Zimbabwean health system, there is a very strictly organised hierarchical system. Discussing decision making process and management, the staff discourse continuously refers to subordinates, supervisors and accountability lines. For each category of staff in the health system, there is an explicit hierarchy. Nurses belong to different categories depending on their training and follow a clearly demarcated career ladder from ordinary nurse, through nurse in charge, to nursing officer. The same applies also to the environmental or the administrative department.

The Zimbabwean health care system is strongly disease control oriented. This stems from history: before independence the priority was more on controlling the health of the population rather than on providing care to individuals. Disease control programmes are usually very much organised along a strict hierarchic line focusing on the

implementation of a set of activities directed towards a well-defined target population. The definition of broad objectives, the set of activities and the procedures to follow are usually designed by experts and written in the form of guidelines for the staff at operational level to implement. After independence, there was a clear shift to develop a culture of individual care through the rapid development of a network of multipurpose primary care services. Nevertheless, at district level the focus on disease control remains very strong and is reflected in the annual plan priorities. The planning and the implementation of programmes are the responsibility of the DHE but despite the autonomy granted by the corporate plan, district executives have little flexibility to challenge the strategies designed in national programmes.

The importance given to written rule is also characteristic of the organisational culture of the Zimbabwean health system. There are numerous written policies and written guidelines and instructions for activity implementation. During management meetings the time given to the correction and revision of minutes is a sign of the importance given to writing down decisions. During the review of clinical activities or if a conflict arises concerning clinical management, the existence of a written report or instruction may be given more importance than the actual relevance or appropriateness of its content. Even more significantly if an initiative challenges or may contradict the actual regulation, then it can only be accepted if it is endorsed in a written form by a superior even if there is a large consensus on the relevance and appropriateness of the decision submitted. The impressive volume of archives concerning clinical documents and also all correspondence and meeting minutes filed more in a systematic fashion than in a functional way also illustrates the importance given to the written word.

The Zimbabwean health care organisational culture also pays much attention to the respect of the functions of each cadre. There is a clear delineation of each staff responsibility. This of course finds its full justification in the level of competence attached to each function. But it goes further. If mutual adjustment is always possible to solve a given problem, it must be endorsed eventually by the person given the official responsibility to take a decision.

The co-ordination of tasks in the district health systems relies on the standardisation of procedures in written guidelines. This is very obvious for all administrative procedures. We have also said how it applies to disease control programmes. Regarding clinical activities, one could expect that the autonomy of professionals, whose competencies are effectively standardised through training, would take over from the standardisation of procedures through guidelines. But generally speaking clinical guidelines designed externally to the staff applying them are used to a large extent. If they are not, there is a large consensus that this is not a right thing to do.

All these characteristics are typical of a bureaucratic type of organisation. It conforms to the model of machine bureaucracy designed by Mintzberg and to the description by Weber of a bureaucracy. Such a system is characterised by its rigidity. It seems obvious as stated by Crozier that such a system is unable to adapt and change through reflecting on its mistakes and dysfunction. Yet, as Crozier confirms, big bureaucratic organisations do operate changes. But these changes either are the result of strategic decisions taken and implemented following the rule and routine of the organisation, thus top down, or they are the result of a power struggle taking advantage of a crisis created by the incapacity of the organisation to adapt to a changing environment. How change

did actually happen in our project is thus a relevant question. Indeed, the aim of the DHSM project precisely was to test alternative ways of delivering care.

Coping mechanisms permit to overcome bureaucratic resistance to change.

Our interviews identify four coping mechanisms to implement changes in such a bureaucratic system. The first one consists in playing with the written rules and the hierarchy. The second one consists in implementing a change for which there is a strong rational basis and consensus but leaving the system the ability to pretend ignoring it took place. The third one consists in forcing the hierarchy to endorse a decision for change, hiding the contradiction with the prevailing rules. The fourth one consists in taking advantage of the tension between professional pride and bureaucratic tendency to conform to even inapplicable rules.

In the district the capacity to conduct deliveries is strictly defined. Only nurses who have followed a specific training are allowed to perform deliveries except in case of unexpected unavoidable fast delivery. During a field visit in a very remote health centre where the nurse was not qualified to perform deliveries, the issue of improving deliveries outcome and speeding up potential referrals, was brought up. Given the shortage of staff, it was not possible to deploy new qualified staff. The supervising team considered as a potential strategy to advise mothers to deliver in a better equipped environment such as the health centre with the help of an experienced traditional birth attendant, helping the health centre nurse. The rationale was that it would be better than delivering at home with the same traditional birth attendant, with a risk of delaying a referral in case of problem. However, the community nurse, who supervises the health centre nurse, could not endorse this suggestion. The rationale to resist was that it would be against the rule, which does not allow an untrained nurse to perform institutional deliveries. Thus it would be wrong for a nurse supervisor to go against written rules even if they are not adapted in a staff shortage situation. Still there would be no problem for the traditional attendant to deliver the mother at home or for the nurse to systematically refer all women presenting in labour at the health centre. The only way out for the suggestion to be acceptable to the nurse in charge was to advise the birth attendant to make sure that the labour was well advanced to bring the patient to the health centre, and to advise the nurse to consider and write down that the labour was so advanced that the delivery was imminent. Here the apparent conformity to the written rules had to be preserved for the suggestion for improvement to be acceptable. Another example illustrates the same mechanism. Nurses are not allowed to give intravenous injections, only doctors are. Yet it is part of nurses' training and they do it routinely in hospital where doctors are few. The issue was brought up in a meeting at provincial level. Two types of arguments were opposed. First the legal implication in case of a problem. Second the issue of professionalism. Delegating tasks to nurses that they are not supposed to perform moves them away from being professionals, autonomous within their domain of expertise, and drives them towards task oriented functions. Such a shift was perceived as a form of de-professionalisation. As a senior nursing officer puts it, executing tasks he or she does not master, away from his/her domain of expertise, a nurse can no longer take up challenges, and this is a loss of professionalism. Even if there was a general agreement that it was not possible, given the medical doctor shortage, to have all injections performed by doctors and that nurses had the technical knowledge to do it, the proposal was challenged by all the nurses. Eventually only a written agreement by which the decision

was endorsed by the most senior officer, covering for legal implications, could resolve the issue after a very long debate.

On several occasions, the DHE attempted to implement changes at district level, which were contradicting existing rules. District officers were seeking approval from the provincial office, which regularly opposed the change, referring to regulations. This frustration went on until, 'of the records' and strictly orally the advice was given to implement the change but without explicit reporting. It was considered acceptable by the hierarchy as long as the decision was relevant, there was a consensus among the implementers that it was a relevant decision, and the hierarchy is not bounded by any sort of written agreement. This, it was explained, would allow the hierarchy to pretend it did not know what was taking place in case the decision would be officially questioned. Once the experiment is done, and positively evaluated, the change can be proposed officially and imposed from the top with all the conditions imposed by the bureaucratic rules. Of course implementers must take all precaution to ensure their decision is correct and properly implemented with little uncertainty regarding the result, as they would bear responsibility if ever things would go wrong.

A dramatic malaria epidemic in 1993, resulted in a complete disorganisation of the district. Nurses had to refer all patients with severe malaria, as they were not allowed to inject quinine, which was not supposed to be available at health centres, according to the essential drug guidelines. As a result the system was totally burdened out and the subsequent delays in referral were held responsible for deaths. The DHE took the decision to decentralise the initiation of quinine treatment at health centre level. But this was against several rules concerning nurses' regulation and essential drug policy. If the consensus around the relevance of the decision was not a problem, the concern was about the contradiction with existing rules. To circumvent the problem, the implementation process conformed to the requirements of a machine bureaucracy. All the operational details were written down, strict guidelines were set up including instructions pertaining to the command and control chain. The supervisors, through written instructions covered subordinates. The felt need at district level to prevent further crisis during future epidemics contributed to accept the need to change. But this was not the case at upper level of the hierarchy. To prevent resistance from the top, the strategy followed by the DHE was to build alliances at provincial level with officials supporting the change and get the new policy, designed at district level, endorsed by the hierarchy. The proposed change was submitted in a national policy making meeting as a research experiment. The timing of the submission at that meeting was carefully chosen to prevent any discussion. Two elements were crucial to explain why firm opposition did not erupt. First the proposal was perfectly in line with the WHO policy for malaria. In other words, there was a blessing from a level perceived as technically above the local policy. Second, the district implementing the change enjoyed a special status of 'research district' supervised by academic institutions and thus flexibility could be advocated for the sake of the research. The success of the intervention and the official report of its evaluation in international meeting led, a couple of years later, to the adoption of the tested change as a national policy... and from then on, to its 'bureaucratic' top down implementation.

District hospitals in Zimbabwe face a chronic shortage of staff given the gap between the theoretical establishment stated by regulations and the real availability of personnel. Strict application of the rules for allocating staff to cover hospital wards together with

the entitlement of nurses to compensation for the permanence of the service is not possible. Crises occur regularly in periods of extreme shortage. A first attempt to address the issue was the implementation of a district policy reducing both entitlements for leave and the norms for adequate coverage of the wards. The rationale was to adapt the rules to the resource availability. Designed and implemented in a bureaucratic way (written rules, respect of hierarchy, official endorsement) it was eventually adopted at district level. However, the policy was reducing the opportunity for the staff to accumulate leave and go for long periods to do business and increase their revenue. The strategy of the nursing staff to challenge the DHE decision was not to negotiate arrangements over the lost advantages but to request the strict application of the public service regulations. Eventually an administrative official from the province re-established nurses in their 'rights' and the change was reverted. In other words, as the change was bureaucratically installed, so was it bureaucratically uninstalled! The same issue of staff shortage was addressed again a few years later in a completely different way. The opportunity taken was a strike of nurses, which created a sudden and severe shortage. The DHE's response was a complete reorganisation of hospital wards to concentrate severely ill patients and senior nurses in a critical ward leaving other wards even more 'understaffed' than usual, against regulation. What made the change acceptable was the appeal to professional pride. The convincing argument was, first, the support given to the nursing profession in its struggle by finding a solution compatible with the strike and, second, to sustain the professional requirement from the nursing profession to place patients interest before its own by ensuring life saving care services despite the strike. In this case the professionalism was stronger than the bureaucracy. Though the decision was considered as temporary and was reverted after the crisis, it was later easily re-implemented on several crisis occasions, which shows a high degree of acceptance.

Conclusion

Our analysis identifies the coping strategies developed by the management team to overcome organisational rigidity and to unfreeze the rules in a highly hierarchical organisation. It also reveals how stakeholders call upon different sub-culture paradigms to promote or oppose change. The subtle play with written and unwritten rules and with power relationships determines the level of tolerance of the bureaucracy to innovation. Reference to professionalism may also be used either to oppose changes or to promote positive deviant behaviours.

Our study confirms that quality improvement cannot be reduced to the linear rationality of fixed tools, methods and principles. Indeed quality management involves managing tensions within the complex web of organisational culture and quality management paradigms.

Still the importance of the context in which this took place should not be underestimated. The context of a research project on improving management is indeed different from the standard situation of most health districts. The DHSM explicitly created a culture that valued the implementation of dynamic change. This was further reinforced by the involvement of supportive research institutions also with a cultural background of promoting changes. Interviews with cadres working in more 'classical' districts highlighted the frustration they face when they attempt to confront bureaucratic rules. They are indeed expected to improve their services by reinforcing the strict application of instructions and guidelines, not by challenging them. The way health bureaucracies in

Africa usually progress and introduce positive change is through the testing of new strategies in pilot sites. If they appear successful, they are scaled up and relevant changes are introduced in the rules, instructions and guidelines. This also applies to initiatives promoting participatory bottom up quality improvement in otherwise rigid bureaucratic system. But if the promotion of flexibility and of a culture of change seems successful in a pilot context, the generalisation of such an approach to a bureaucratic organisation is questionable given our observations. One can indeed formulate the hypothesis that within a bureaucratic organisation, a pilot or research project may allow a specific culture valuing change to operate. However, in that case, it remains nested in, and protected from, the bureaucratic culture valuing the conformity to the established rules, which prevails in the wider environment. To be successful, the generalisation of participatory improvement practices would require either a transformation of the bureaucratic culture towards more flexibility, or the design of coping strategies to prevent the rejection of a culture of change, otherwise perceived as a 'foreign body' by a bureaucratic system.

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Notes

(1) The DHSM project is a joint project of the NGO Medicus Mundi Belgium and the Zimbabwe Ministry of health and Child Welfare. It is financed by a European Union grant. The project is run by the district executive team under joint scientific guidance of the Blair Research Institute of Zimbabwe and the Institute of Tropical Medicine of Antwerp.