# DOES CLINICAL AUDIT PROMOTE PROFESSIONAL REFLEXIVITY? THE EXPERIENCE OF CASABLANCA PUBLIC HOSPITALS IN MOROCCO WITH QUALITY OF CARE IMPROVEMENT

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## ABSTRACT

Clinical audit was introduced in 2005 in 4 public hospitals of Casablanca to improve the quality of clinical care. We report on a qualitative analysis of subsequent in-depth group interviews that aimed at documenting longitudinally the process pertaining to professionals and organisational change dynamics.

The level of appropriation remains limited with wide variability. The implementation faces a web of technical constraints related to the poor quality of clinical records and the limited capacity to analyse data. Improvements remain limited by the capacity to implement changes revealing the high interdependency of medical activities across and beyond hospital departments, calling for the integration of audit in a global quality improvement strategy.

Professionals attribute the gap between actual practice and standards to resources shortage, to patients' behaviour and to other departments' dysfunction. However, they only marginally question possible competence or professional deficiencies, justifying them by the need to cope with practising under resource poor conditions.

The instrumental use of audit as a lever to get more resources as well as the limited willingness, variable across professional groups, to exert reflectivity questions the leading assumption of clinical audit that exposure to the auto evaluation of their practice against self set standards will trigger behaviour change towards professional excellence.

## 1. INTRODUCTION

We report the results of a multidisciplinary action research on the routine implementation of criterion based clinical audit (CBCA) in public hospitals of Casablanca, Morocco, as a first step before scaling up to all public hospitals. Internal clinical audit, as a self-evaluation process, was considered by the Ministry of Health (MOH) of Morocco particularly appropriate as a tool for hospital quality improvement. The Moroccan MOH has indeed a relatively long experience of clinical audits pilot projects (mainly case reviews) dating from the beginning of the 1990s. The relevance and feasibility of clinical audit in Morocco has been confirmed in several projects. However, the routine implementation and its subsequent effect on the Moroccan health system are still to be documented. In 2005, the MOH decided to extent the clinical audit practice to all public hospital departments. The plan to scaling up clinical audits considered a progressive extension beginning the process the first two years in two regions, Casablanca (9 public hospitals) and Fes (3 public hospitals). Our research objective is to inform the process of audit implementation under routine circumstances for both promoters and implementers. It explores two research questions: What are the constraints and the potential for the routine implementation of clinical audit? How do the system and its actors react to the routine implementation of clinical audit?

The National Institute for Health and Clinical Excellence (NICE) in the paper *Principles for Best Practice in Clinical Audit*, defines clinical audit as "*a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. […] Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery*." (NICE 2002). There are different types of clinical audit. Two have been used in Morocco. First, in a case review clinical audit, a specific case, usually a critical incident, preferably a 'near-miss' case than a death, is systematically peer reviewed in order to identify analyse and solve clinical management and organisational problems (Ronsmans & Filippi 2004). Second, in a criterion based clinical audit, a series of patients files with a specific condition is retrospectively scrutinised against preset criteria in order to identify gaps and develop solutions to fill the gap (Bullough & Graham 2004). The two types of audit were presented to the hospital teams involved. They opted for the Criterion based clinical audits (CBCA) because it looked less threatening for clinician teams and more easily manageable from the central

level. Indeed, case reviews require regular meetings attended by all the clinicians of a department who have to take on their errors in front of their peers. The routine implementation of CBCA is viewed by the ministry as one of the strategies for quality improvement in the public hospitals. They were considered both as an objective in itself and as one of the criteria for future accreditation. The internal clinical audit process is however clearly differentiated from the external audit process applied for the accreditation.

## 2. METHOD

### 2.1. The intervention

Criterion Based Clinical Audits (CBCA) were introduced to clinical teams and implemented in eight wards (paediatrics, maternity, surgery and oncology) of 3 public district hospitals and one university hospital of Casablanca. During the first phase, a half day initiation training was offered in April 2005 by the MOH for those staff who had never been exposed to CBCA. During this phase, department staffs who wanted to start the process were identified and themes for CBCA were selected together with the clinicians. Themes were common to the same services: early neonatal infections in the 2 paediatric wards of district hospitals; severe acute asthma in children in a paediatric ward of the university hospital; acute appendicitis in adults in the 2 surgery wards; postpartum haemorrhage in the 3 maternity wards; and breast cancer in the oncology service of the university hospital. The second phase consisted of a 1.5 workshop held in May 2005 during which clinical standards were elaborated for the theme selected along with organisational standards for the efficient management of patients. Assistance from university specialists was provided. Criteria to judge if the standards were applied were also defined as well as data extraction forms and this allowed moving to the third phase, the assessment of the current practice. The results of the audit in terms of compliance to standards and effectiveness of the improvement strategies developed is not the focus of this paper and will be reported elsewhere.

### 2.2. The action research

Our paper focuses on the action research dimension of this approach, assessing to what extent the practice of clinical audits produces what the theory predicts: reflexivity and responsiveness of professionals to improve the quality of services.

The action research has two complementary components: A first team, comprising a central ministry medical officer, a university professor and an international expert, supports technically and documents the implementation of CBCA throughout, as explained above. It follows a clinical and epidemiological approach. A second team comprising an anthropologist and three public health researchers conducts subsequent in-depth group interviews with the clinicians (medical doctors, nurses and midwives) and the hospital directors involved in the CBCA to document the process pertaining to actors and organisation change dynamics. It follows a sociological and anthropological approach.

The group interviews have two aims: first, to support the teams of clinicians and administrators by giving them a platform to unveil and discuss their perception about the implementation process while doing it; second, to collect longitudinally the actors' perception in order to document the process. The approach is to prompt a discussion about the experience, telling stories and expressing feelings. The questions do not directly address the research questions but rather prompt a discussion generating discursive material for qualitative analysis.

The interviews took place at four different stages of implementation : (i) when CBCA was introduced in May 2005; (ii) during patients' files auditing from June to November 2005; (iii) after completion of the first audit round in December and January 2005, (iv) finally when preliminary analysis of interviews were fed back to the participants in May 2006. The group interviews involved three categories of staff: the hospital directors, the medical doctors and the nursing staff working in the four hospitals in the departments of obstetrics, paediatrics, surgery, and oncology. Altogether, 41 group and individual in-depth discussions were held and analysed between May 2005 and May 2006.

### 2.3. A qualitative analysis to test the theory of audits

We reviewed the data generated by the CBCA and we performed a qualitative content analysis on the field notes and transcripts of the in-depth group interviews, coding the discourse for pre-identified (framework method) and emerging themes.

We further discussed our results along the lines proposed by theory driven evaluation and specifically the realist evaluation approach (Blaise et al. 2005; Pawson 2002a; Pawson 2002b; Pawson & Tilley 1997). The realist paradigm shifts the focus of intervention evaluation from testing a cause-effect relation (positivist epidemiological paradigm) towards testing the theory of the intervention and the mechanism by which it is

expected to produce its result. Unlike positivist evaluation, which focuses on the question “does it work?”, the realistic evaluation attempts to answer to the question “does it work, for whom and in what circumstances?” Our qualitative analysis of the participants’ discourse, ‘tests’ indeed the theory underlying the practice of clinical audits, which we summarise as follows: “the practice of self-evaluation against preset criteria triggers practitioners’ reflexivity and prompts quality improvement initiatives”.

## 3. RESULTS

### 3.1. The clinical audit of patients files in brief

In Casablanca, where the staff perception of audits was analysed, 9 hospital department teams in 4 hospitals have been coached to implementing CBCA. In all, 83 health professional (professors, specialists MD, nurses, midwives) attended the sessions. The measurement of current practice showed that at the general hospitals as well as in the University Hospital, criteria were not found to be documented in the files or only in a small proportion of patients’ files. To a large extent, this is explained by the absence of notification (recording) of medical acts or time of act during the patients’ medical supervision. This also explains why the hospital teams considered it possible to reach 100% of most of the criteria for the next 6 months by simply improving the recording. When information was recorded, the lack of compliance with the standards was attributed mainly to the lack of resources, even if everybody acknowledged the necessity to make an effort to fill patients’ records. We do not go further in reporting the patients’ files audit results as it is not the focus of our paper.

### 3.2. The themes emerging from the qualitative analysis of participants discourse

Ten themes emerged from the qualitative analysis: first, the fear generated by audits; second, the improvements generated by the audits; third, the issue of the relevance of standards; fourth, the web of constraints faced in the implementation; fifth, the difficulties faced by clinicians when documenting their practice; sixth, the interdependency of services and people; seventh, the tense relations with patients and services outside the hospital; eighth, the instrumental use of audits to claim resources; ninth, the issue of sustainability; and tenth, a wide variability of results across the participants.

### 3.3. Reluctance to self-evaluation and fear generated by the audits: a common issue with audits

The discussions reflect the commonly known reluctance and fear generated by audits. The word “audit” carries a negative connotation. By analogy with financial audit, it is related to control. The potential use of audit for sanctions in case of medical error is feared by the professionals. In that respect, the issue of confidentiality is systematically raised. Although, it was made clear that what is discussed in the clinical audit remains confidential and its diffusion restricted to the professionals involved, the level of trust remains low. Reference is made to previous critical incidents, where confidentiality was breached. Professionals request the administration to be seriously involved in the process in order to share the responsibility and the risk of blame.

Although the hospital departments involved were consulted and had agreed to participate in the process, the perception of the professionals was that it was a top down decision with little room to oppose the decision. However, that was not perceived as a problem. The perception was that the departments had not been chosen at random but were believed to function sufficiently well so as to be able to implement the project. Moreover, being eligible to participate in this new development was perceived both by the hospital administration and by the personnel as an opportunity to show good performance, to obtain extra inputs to improve performance, or at least to show evidence of the constraints faced by the clinicians and the administration to achieve good performance.

Initially, there was a shared perception that the clinical audit would demonstrate the relevance of the current clinical practices. On the one hand, it was felt that it would confirm that practices were in conformity with standards, strengthening the legitimacy of actual practices. On the other hand, it was taught that it would reveal that best practices are often jeopardised by shortage of resources.

### 3.4. The clinical audits triggered improvements appreciated by the professionals

The process of clinical audit was understood as an opportunity to be aware of the actual practices and to improve them. Professionals had rightly anticipated problems in medical records; however, they were amazed by the numerous patients’ files lacking records. Moreover, they were not aware about the disparities of practices among themselves. The clinical audit was an opportunity to identify gaps between what they think should be done, what they thought they were doing and what were their actual practices. This was perceived as positive and as an opportunity to be more consistent and align their practices. This was also an opportunity for discussion among different groups of professionals across disciplines and across professional groups (nurses and doctors)

and with the administration of the hospital. This discussion was facilitated by the availability of data to show evidence of deficiencies or inconsistencies. In addition, this was also an opportunity to reveal the lack of capacity of some health workers to face tasks that were delegated to them without the necessary competence transfer, resulting in a feeling of insecurity.

Professionals consider that this raised awareness, the availability of evidence and the increased dialogue contributed to positive change. Changes occurred relate to the relation with the hospital direction, change in the availability of some resources, particularly drugs and improvement of the patients reception.

Professionals recognise that the development of explicit standards easily convertible in guidelines through the clinical audit process makes it easier to delegate tasks and to ensure continuity in the quality of practices despite the turn over of personnel. Professionals are convinced it also improved the compliance to best practices: shortening of delays, more relevant protocols better follow up of prescriptions. Some nurses expressed gain in self efficacy especially when they have to deal with difficult emergencies with newborns, a task for which they felt ill-prepared. New tools for patient management have been developed as a result of clinical audits: additional forms for patient care management or additional monitoring forms were specially designed.

### 3.5. The difficult trade-offs to set standards

Although the development of standards was a participatory exercise, professionals express doubts about their relevance. They perceived the process as gently imposed on them from the ministry in a top down fashion, without possibility to refuse to participate. They also question the urge to take final decisions on standards during a short workshop. There was indeed no provision for a lengthy and thorough participatory literature review and consensus making. They also question the level of expertise available as they did not consider the two experts involved in the process as ‘recognised specialists’ in their discipline despite their competence in conducting audits even in their discipline. They question the applicability of internationally validated standards to their particular context. Although they initially considered the benchmarking of their practices against international standards as a positive challenge, when confronted with results they felt it was not fair.

Some of the standards had criteria set at a level that was clearly recognised from the beginning as impossible to meet. This probably reflects the initial perception of audits by the hospital staff as a mean to exert pressure on the system to claim for more resources. This reflects the uncertainty about the rationale of the audits: evaluation against universal criteria as a golden standard or an incremental improvement process with achievable and continuously rising criteria? This also questions the level at which a threshold should be set for a clinical process to be recognised as “good” and whether this threshold is only to be reached once for all or should be continuously revised to a higher level.

Clinicians highlighted the tension between what the standard says for a generic clinical situation and what common clinical sense says for a specific patient in a specific context. It is sometimes medically justified indeed to move away from the standard. What if the conformity to standard may be used as a reference point for sanction against a practitioner?

The discussions also acknowledge the tension between local norms and international standards. The gap between actual practices and the standards set during the process may reflect that some of the actual practices correspond to standards locally defined by the teaching hospital or by alignment of professionals in the area. It leads to a tension between the local norms reflecting the habits - what is commonly done around - and the standard - the standard explicitly set by a subgroup of professionals within the context of the audit. It eventually leads to questioning the precedence given to the new standard instead of the prevailing one.

### 3.6. Technical constraints and risks in the implementation of audits

The discussions highlighted the practical constraints to implement clinical audits. Practising clinical audit entails a cumbersome time consuming sorting of files, extracting, encoding and analysing the data. In some hospitals, there were no sufficiently qualified people to deal with the process of data entering not to speak about the data extraction for analysis. In others, students were available to do the work. In the best resourced hospital statisticians managing the routine health information system were made available. However, it was generally felt difficult to imagine doing this data management as a continuing process without engaging additional personnel. It also revealed the unexpectedly low level of computer literacy among health professionals including doctors.

Another constraint was the difficulty to have all members of a given department being informed, trained and involved. As for other quality management activities which require team involvement, it is often difficult to mobilise everybody at once. Offering a permanence of service means indeed working in shifts, inevitably leaving out of the meeting those who are off-duty or resting after their shift as well as those on duty or attending emergencies during the meeting.

A risk was also evoked of manipulation of data during the process. The clinical audit was indeed an internal audit conducted as a self-evaluation. The danger is great that data would be manipulated due to fear of the consequences of poor results. The level of trust within the organisation and between internal auditors and external supporters / promoters must be very high indeed.

### 3.7. Putting practice in writing: the difficult relation of medical professionals with papers

"We do, but we don't note it down". The audit revealed the poor quality of medical records. When files were scrutinised, it appeared that the doctors write very little and information is poor if they write anything at all. In some hospitals, many patient files were empty. Only administrative information and information relevant for billing were recorded. Professionals felt it was unfair to get bad scores because they are confident that they are doing the right things. The extent of the poor recording had been anticipated but grossly underestimated by the practitioners, who recognise that it could jeopardise the quality of care and continuity of treatment. However, there was wide variation across the departments involved in the study.

Professionals raised several explanations. First, care is given priority to administrative tasks in case of emergency or of extreme affluence. Second, when the emergency is over and good care has been given, then there is no felt need to write down what happened unless further complication is anticipated. Third, when a practitioner has done what he feels is the right thing to do, writing down is perceived as a pure bureaucratic task, irrelevant to patient care and thus requiring little attention. Fourth, it is thought that many documents get lost from the files because of poor record keeping. Fifth, writing down all the medical procedures and recording longitudinally the condition of the patients is perceived as potentially risky despite its usefulness for patients' management. Properly filled medical records provide support for legal action indeed. Although properly held records might prove useful for practitioners to justify medical decisions it may as well as provide evidence to sue them. If something goes wrong, professionals feel in a better position to defend themselves when records are poor, only having to account for poor recording and keeping control over the case report. The current shift of power from the professionals towards the patients and the rising concern for people's rights in the Moroccan society is reflected in the dilemma faced by the health workers regarding medical records.

### 3.8. The high interdependency of medical activities, professionals and services in a hospital

The audit confirms the high level of interdependency of the departments in a hospital. When confronted with the results, the professionals often attributed the cause of many problems to dysfunctions in another department. The surgical ward tends to blame the emergency department for not having followed the right procedure. The paediatric ward tends to blame the maternity for not having addressed properly neonatal conditions before the baby was transferred. The laboratory is blamed for delaying the issuing of results or for not performing the investigation specified in the protocol. In the latter case, treatment delays were explained by investigations done in private laboratories that not all patients can afford.

The dependency to the drug supply chain was also raised as a major problem. The capacity to solve the problem of drug shortages varied across the departments and is related to the level of financial autonomy of the hospital. The audit process was an opportunity appreciated by the practitioners to enlarge the range of drugs available. The audit was an opportunity to make new drugs available such as amoxicillin / clavulanate potassium for neonatal infections. This was highly dependant of the decision making capacity of the director of the hospital.

When it comes to medical equipment and technology, the capacity to improve the situation remained limited. This was particularly the case for the department of oncology, whose equipment is old and represents a major constraint for quality improvement especially regarding treatment delays. In this department, more than in the others, the audit process was considered as an opportunity to exert pressure on the ministry to address the issue, to the extent that the continuing participation to the audit was implicitly accepted under the condition that the ministry would take action to improve the working conditions. This extreme position was later adjusted when the team realised that other area for improvement had been identified through the audit which could be addressed at department level. This evolution in the perception was probably also explained by new developments in the cancer national programmes with more promising perspectives regarding equipment and building.

The capacity to address the issue of human resources availability was considered poorly vulnerable at hospital level. In the public service, decisions regarding personnel recruitment as well as dismissal are taken at national level and there is no space for decision making at hospital level. The shared perception is that there is a generalised lack of personnel. However, there is a great disparity across the hospitals in this study. There is also a wide variety in the efficient use of available human resources. Some hospitals seem to take advantage of not having a fully fledged surgical team to reduce their workload by referring to other hospitals that use their resources more efficiently and feel so penalised.

### 3.9. Partners or problems? Interference or participation? : Tense relations in hospitals.

The discussions highlighted factors outside the hospital that were considered as interfering with the clinical management. Among those factors identified by the professionals as external, the patients themselves are perceived as 'interfering' often negatively with the medical process. The discussions portray the general population as poorly educated, or at least not informed enough about the functioning of hospitals. As a result, patients do not conform to the prescriptions, they do not follow instructions related to investigations, referral or medications or they delay action. In short, health workers complain that patients and their families do not conform to the rules set by the system for them. Their health seeking behaviour is described as harassment and is held responsible for the disorganisation that seems to reign in most hospitals as far as patients –professionals relations is concerned. Words as strong as war are used to describe patients – staff relations. Health workers feel under pressure from patients usually assisted by several relatives, preferably of high influence and trying to obtain preferred access to practitioners and care. The attempts from practitioners to 'regulate' or get away from this pressure contributes to adding more barriers to care. In addition, poverty is mentioned as a major obstacle to proper clinical management as many investigations or treatment prescribed must be acquired outside the hospital either because they are not supposed to be available at the hospital or because of hospital shortages.

Problem with continuity of care between first line services and hospitals were systematically mentioned for obstetric care. The blame is sometimes put on the antenatal care facilities that do not refer properly. However the main complaint goes to the pregnant women coming to the hospital without their file or having dropped out of the antenatal care programme. Practitioners complain of the poor coordination with first line services. They express frustration for not having control over what happens at lower levels of the system, especially for obstetric care, a health issue particularly sensitive to system's coordination. This perception of powerlessness is even amplified when it comes to patients referred from the private sector.

### 3.10. The instrumental use of audits to claim resources

The discourse continuously refers to the lack of means, which is perceived as the main constraint to high quality care. Before engaging in the audit process, professionals were convinced that the audit would confirm that the clinical management was generally appropriate and that only lack of resources hampered conformity to standards. The audit was thus welcome to bring about evidence and help identify more precisely what was lacking. In some departments, the instrumental use of audit to claim for resources was explicitly expressed. Although professionals considered that the self-evaluation of their practice was potentially useful to adjust their practice to international standards, they did not anticipate major failure. When they were later confronted with the results, the departments more convinced of their good performance were also the more prone to implement change and adapt their practice. Others were more inclined to push the blame to other department or to even question the relevance of having written records of clinical findings.

Finally, it is also important to highlight the positive attitude of the hospital directors who view the audit as a useful diagnostic tool to ease the dialogue with clinicians by providing more hard evidence of what goes well or wrong. The responsiveness of the hospital administration during this first round of audit also confirms the potential of audits to trigger change. However, this is very much related to the margin of manoeuvre existing as far as resource mobilisation is concerned as well as to the existence of an overarching quality management culture and practice and its related techniques such as quality circles, problem solving cycles and alike.

### 3.11. Clinical audits: self sustainable?

The initial enthusiasm faced implementation constraints and doubts were raised regarding the sustainability of audits as a routine procedure.

The general feeling is that audit is not self sustainable. It needs a continuous external support. It needs also to demonstrate that it can make a difference as far as working conditions are concerned. In that respect the central services of the ministry are clearly identified as the place where responsiveness to the audit findings is expected in terms of resources. This relates to the shortage of human resources, the replacement of obsolete equipment or provision of basic missing equipment and the drug availability both qualitatively and quantitatively. To some participants, the initial acceptance to be involved was under the condition that clinical audit would act as a lever to raise resources indeed. Audits were thus expected to provide the evidence base for negotiation. This position was later tempered with practice as it became obvious that the lack of resources was not the sole explanation for the poor compliance to standards.

As mentioned earlier, the audits themselves were time and personnel consuming. This was particularly the case in the two university hospital departments. For the audit to be sustainable, hospital staff is on the opinion that ear marked dedicated means must be allocated to the audit activity itself.

For the practice of clinical audit- to be sustained, it must generate benefits for some. Those who benefit from it would then be in a position to push for its continuity. As one of the participant raised, "we do not know at this stage to whom the audits benefit the most: the central ministry, the hospitals and their staff, or the patients?" In the discussion following that statement it became clear that participants where expecting the audit output to focus on improving the working conditions of the medical staff as these are perceived to be the major stumbling block to quality improvement. This in turn is believed to fulfil the expectations of the central ministry and ultimately benefit to the patients as services processes and output would improve. In this perspective, patients as well as central ministry support services are expected to adapt themselves to the vision shared by the professionals as far as care management in concerned. An alternative approach emphasizing the responsiveness of practitioners to adapt their behaviour to patients' expectations was not proposed indeed.

### 3.12. A wide variability across hospitals, disciplines, professions and participants

Although our presentation intentionally (for anonymity reasons) does not breakdown results according to the various departments, the wide variation among the hospitals and the departments must be acknowledged. The appropriation was very diverse and evolved differently over time. Some initial believers became much more sceptical when results came out while other departments who were initially more reluctant, given the extra effort required, recognised later the usefulness of the exercise. Some professionals who were initially questioning the exercise, claiming they would have preferred continuous training from senior specialist ended up defending the relevance of audit when it was put into question during the restitution of results. This change of attitude was related to the discovery that some degree of standardisation gave an opportunity for improved clinical management such as reduced length of stay, more rational use of antibiotics and better coordination of care. To the contrary in other departments whose practitioners were initially more neutral, the conclusion at the end of the exercise was clearly spelled out as "never again", mainly because of the extra work it entailed for little perceived benefit.

There was also variation across hospitals mainly related to differences in their particular history, identity and culture. Some better organised and experienced hospitals were more capable to operate change based on the audit findings while hospitals with less experience felt it very frustrating to identify problem they could not address.

There was also variation according to the professional profile. The directors were the more positive as explained above. There were also differences between medical specialties. Medical specialties such as paediatrics or oncology were more positive while surgical and obstetrical specialties were more reluctant to accept the introspective approach of audit and to question their own practice.

## 4. DISCUSSION

### 4.1. Limitation of the study

Our study has obvious limitations. First, Casablanca public hospitals are not representative of the Moroccan hospital services. However, although it is not possible to generalise our findings, the lessons learnt may point to sensitive areas and guide the development of audits in other settings. Second, this analysis is done at a very early stage of audit development and perceptions will undoubtedly evolve further, but the purpose of an analysis such as ours is precisely to unveil problems at a very early stage. The rationale is that if the participants are aware of the challenges the audit poses to them, they will be better equipped to deal with them. Third, our analysis refers to the expected reaction of practitioners exposed to clinical audit in that they would initiate quality improvements. However, these expected reactions are perhaps largely related to circumstances specific to pilot projects. These may not be present in routine conditions. It is precisely our objective to identify the contextual elements which affect the mechanisms by which clinical audits trigger quality improvement.

### 4.2. A web of constraints in routine practice questions the strategy of rapid scaling up

Pilot sites volunteering to implement new approaches are often selected because they are better off in many aspects, including their absorption capacity for new initiatives. In routine conditions, field actors of district hospitals face a web of technical constraints to the implementation of CBCA. For instance, it was not anticipated that the level of computer expertise would be so limited in average hospital settings. It points to the need of upgrading computer capacity before going further with the implementation of criterion based medical audits in a given hospital.

At this initial stage, the medical audits compete with other tasks because it is time consuming for the staff who feels already overworked. It is expected that with routine practice, it will be less demanding in the future. It is therefore important to monitor whether the benefits of clinical audits through quality improvement

and improved care management will eventually outweigh the investment it requires and that it will be perceived as such by the staff.

The wide variation in the level of appropriation of the practice of audits questions the fast standardised countrywide implementation initially envisaged. It may be more realistic to adopt prudent, district tailored diffusion in order to prevent failure. A close monitoring of the implementation constraints and of their effective solutions will be useful. The challenge is to set up a learning mechanism at organisational level in order to inform continuously the implementation process.

### 4.3. Clinical audit as part of a wider quality management system

The difficulties faced to design and implement improvement strategies show that clinical audit as such have a limited capacity to improve quality. Clinical audits have a potential to identify quality of care gaps and contribute to a diagnosis of problems indeed (Wagaarachchi et al 2001). However, the strong focus put on the data collection and analysis technique and conversely little investment in change management techniques calls for the integration of clinical audits as good diagnostic tool in a wider quality management system. Among the hospitals involved in Casablanca, those who had experience in quality management techniques spontaneously related audits with their quality assurance experience and were more capable to implement change.

For the audits to contribute to quality improvement, they must therefore be conducted synergistically with other quality improvement approaches. As it has been pointed out elsewhere, failure to articulate audits and quality improvement is likely to lead to frustration. Moreover, the quality system must be able to go beyond locally applicable improvement strategies in order to address issues such as personnel, equipment and pharmaceuticals shortages. The quality system must also be able to address issues in a systemic perspective given the level of interdependency across and beyond hospital services. Clinical audit can indeed be a good entry point to develop quality management. However, if it is implemented in isolation, it may only induce frustration of identifying problems without solutions.

### 4.4. The striking reluctance from doctors or midwifes to writing down clinical intervention

The discussions revealed a striking ambiguous relation of practitioners with the act of writing. During their training, clerking patients is one of the first responsibility to junior and trainee doctors. The importance of good medical records to manage the hospital stay of a patient is stressed by senior doctors and professors. Unlike the in-depth and long term relation in primary care, particularly in family medicine, hospital care is characterised by the intervention of many different type of health personnel, doctors, nurses, laboratory technicians, radiologists and all kind of specialists, supposed to work in a coordinated way as a team. In such a context, writing down in a common file what is done, what is to be done next and by whom, and what effect it has on the condition of the patients seems the most obvious requirement. However, as is the case in these Casablanca hospitals, it is common that patients' files are poorly filled. The partogramme, a useful tool to monitor delivery, is often filled in after the delivery, if it is filled at all. Only medication prescriptions and temperature charts which are filled in by nurses, seems better off as far as written documentation is concerned. Moreover worldwide, medical doctors are known to have poorly legible handwriting. One of the justification as mentioned in our interviews is the precedence given to caring rather than writing in emergency or affluence situation. Another is the fear of having written down evidence being called upon before the court. A hot discussion was engaged during the restitution of initial results. For some midwifes writing down afterwards is the right thing to do as otherwise it may provide retrospective evidence of wrong doing which may be used against the practitioner. For some surgeons, once a procedure is over, there is no need to write it down and surgeon's memory is reliable enough if the patient presents again later. For other clinicians, written down documentation of clinical management is a good mean to evaluate and improve, thanks to the lesson learnt with clinical audit. The latter emphasise the importance of accountability and of the commitment to continuous improvement, a feature of a professional attitude. The argument was not developed enough in this group discussion to draw firm conclusions; however the issue of the ambiguous relation between medical personnel, especially doctors, and the requirement to write down clinical management merits further exploration.

### 4.5. The theory underlying the rationale for clinical audits is put into question

Earlier in this paper, we defined clinical audits as follows: *a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. […] Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery.* We further formulated the theory underlying the rationale for the implementation of clinical audits as follows: *the practice of self evaluation against preset criteria triggers practitioners' reflexivity and prompts quality improvement initiatives*.

At this early stage of clinical audit development, this theory is far to be confirmed by our findings. Although some professionals engaged into a genuine reflexive process, in several instances, audits were perceived as an opportunity to bring evidence about failure of others, i.e. the lack of means and a potential negotiation instrument to claim more resources. In some instances the audits were done as a formal requirement from which little was expected. In extreme instances it was perceived as a wasteful intervention, time and personnel consuming, with little tangible output. The expected practitioner reflexivity did not always operate and the blame for not meeting the criteria was often put on others: patients, other departments other categories of personnel or the central ministry.

Failure of clinical audits to trigger improvement initiatives following a reflexive process does not mean that the theory is falsified and that the intervention must be rejected, but it calls for better understanding the conditions in which the "mechanism" underlying audits can operate. One of the premises is that hospital health workers are "reflexive". The reflexive practitioner is a typical feature of workers belonging to the category of 'professionals' (Blaise & Kegels 2004). According to (Freidson 2001), the professional 'ideal type' builds on the premise that the nature of the medical act and its reference to specialized technical knowledge which needs to be tailored to individual conditions, justifies the considerable autonomy granted to health professionals. Because of the specialised expertise required to appreciate the relevance of medical acts, and because of the complexity of clinical decision making, the control of work rests on the medical profession itself through peer control rather than on patients or managers. To balance the considerable power resulting from this autonomy, it is expected from professionals that they guarantee the quality of their work, that they ensure continuously the maintenance of their competence and that, given the asymmetry of information on their side, they commit themselves to serve the interest of their patients and put them before their own in all circumstances. For clinical audits to operate according to the theory and engage professionals into a reflexive process, it may be required that hospital health workers are socialised as 'professionals' as specified above. However, our analysis shows that the willingness to exert a genuine peer quality control over their practice is in its infancy. The conflict of interest between improving providers working conditions and responding to patients' expectations exemplified in the interviews put into serious question the level of commitment of providers to defend the patients' interest before their own. Consideration for patients' expectations is indeed very weak in the discourse. Health professionals' discourse remains ambiguous. On one hand, it is a 'professionalism' discourse with the claim for autonomy in clinical decision making. On the other hand, there is a discourse of 'bureaucratic dependency' when professionals expect solutions to their problems to come mainly through the bureaucratic procedures led by the ministry. A question however still remains unanswered: if a degree of professionalism is a prerequisite for reflexivity and accountability to operate, and if this is lacking, how can it be brought about?

In short, the limited willingness to exert reflectivity and the instrumental use of CBCA as a tool for negotiation with their administration in order to get more resources, shown by the CBCA actors discourse, questions the assumption that professionals' exposure to the self-evaluation of their practice against their own standards will trigger behaviour change towards professional excellence. The support provided by the ministry to CBCA shows its concern with district hospitals' difficulties in providing high quality care. However, it may have raised expectations from professionals who are now challenging their hierarchy. The ministry of health who took up the challenge of scaling up audits now faces the challenge of responding to health professionals frustrations and expectations.

### 4.6. Other issues and unanswered questions

One aim of the group discussions was to support the teams of clinicians and administrators by giving them a platform to unveil and discuss their perception about the implementation process while doing it. When asked whether the discussions were a waste of precious time, the participants expressed a high satisfaction of having their concerns concerning the audit implementation being heard. Although there was some uncertainty as to whether the researchers were supposed to give technical support or to transmit their grievances to the hierarchy of the ministry, this was easily clarified.

The sustainability remains a serious issue. It is clear that the ministry of health will not be able to provide the extensive support to all hospitals that it provided during this study. Clinical audits must be self administered if they are to be sustainable. On the other hand, the sustainability also depends on the pressure put on hospitals to conduct audits. The question remains as to how is this pressure to be exerted, to what extent and in what way does audits need to be made an obligation or else how to make quality improvement (and audit as its diagnosis procedure) a genuine professionals' concern?

Two questions indeed remain about the perception of audits: To what extent are clinical audits perceived as one more problem for hospitals team to manage? and, conversely, how long will it take and what is the best approach to make clinical audits eventually a welcome approach to solve existing problems?

## 5. CONCLUSION

The implementation of CBCA in Moroccan hospitals aimed at improving the quality of clinical care through a change in providers and organisational behaviour towards an improved compliance to professionally preset standards. The routine implementation faced important technical constraints as the experience of Casablanca public hospitals showed. The documentation of clinical processes in patients' files was found to be poor, a situation which was anticipated to some extent and is amenable to improvement. In addition, the capacity of the hospitals to analyse their data was unexpectedly low, an area which deserves attention if routine practice of clinical audit is expected.

The appropriation of the audit remained limited and showed variability, going from implementation failure, or 'bureaucratisation' of the process as a means to avert reflectivity, to a more instrumental form of appropriation.

The discourse analysis confirmed the fear of blame generated by CBCA, perceived as an external control potentially leading to sanctions. Where acceptance was higher, professionals viewed audit primarily as a negotiation instrument to reveal working constraints and to claim additional resources from their administration and central ministry. They attributed the gap between actual practice and standards to resources shortage, putting the blame on the administration, and to the behaviour of the patients. However, they only marginally questioned possible competence or professional behaviour deficiencies, justified by the need to cope with practising under resource poor conditions. They called upon different frames of reference in their discourse, claiming simultaneously professional independence and stronger involvement of the administration.

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