Toward Quality Improvement in a French Hospital: Structures and Culture

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This paper describes the evolution of quality improvement efforts over the past decade in a 600-bed French teaching hospital, after reviewing some characteristics of the French hospital system. The sequential attempts to improve drug dispensation illustrate the evolution of quality improvement efforts. Initial studies conducted in voluntary medical wards led to the modification of traditional prescription forms. Resulting improvements were presented in Evaluation Committee meetings, inducing other wards, to undertake similar changes on their own. A more systemic program currently is underway.

The success of initial efforts can be credited to the willingness of physicians and nurses to engage in changes when the need for change was evident in their daily work experience. In spite of the questionable validity of some of the original findings. Focusing on systemic processes rather than on individual faults allowed this involvement. Reassessing the validity of so-called medication errors also highlighted the importance of careful process analysis, which should be stressed during the development of quality assurance procedures. The variability inherent in clinical conditions calls for a flexible, outcome-oriented approach, as used in quality improvement methods.

Quality improvement efforts are spreading throughout the hospital. However, diffusion of change from motivated work groups to the larger community remains a challenge. To obtain a consistent performance level across all parts of the organization, and to avoid losing impetus due to uncoordinated efforts, innovation must become a consistent feature of the hospital and to avoid losing impetus due to uncoordinated efforts, consistent performance level across aD parts of the organization, groups to the larger community remains a challenge. To obtain a hospital. However, diffusion of change from motivated work cultures [7]. The identification of quality improvement programs with cost-containment or marketing objectives may also generate skepticism among health providers, who generally are more concerned with technical expertise or patient outcomes [8].

STRUCTURAL OBSTACLES TO THE DEVELOPMENT OF A COLLECTIVE QUALITY CULTURE IN FRANCE

The 1991 law reforming French hospital administration mandates that: "health care facilities should develop policies to evaluate professional practices, organization of care and any action contributing to patient care so as to guarantee its quality and efficiency". The National Agency for the Development of Medical Evaluation has been engaged over the past 10 years in the development and dissemination of clinical practice guidelines. Within the Public Assistance Hospitals of Paris, which includes 40 teaching hospitals in the Paris area, a Division of Evaluation has existed since the early 1980s. The first article of regulations, recently introduced as a part of a new comprehensive reform of the health system, includes the following statement: "The quality of patients' care constitutes an essential objective for health care facilities". Nevertheless, developing an effective quality improvement culture within hospital institutions raises several challenges.
The prevalent culture within French public hospitals can be better understood through an analysis of the relationships between the hospital system and its environment, and of the interactions among professional groups within the hospital itself. Key characteristics of current structures impede the development of global and client-oriented quality approaches. Public hospitals have little incentive to consider external competition or to value customer demands. Most public hospital investment decisions are regulated tightly by national or regional health authorities. Hospital funding emanates from the National Health Insurance system under a capped budget and is still, for the most part, unrelated to the type, volume, or outcome of the hospital's activity. For each hospital, current budget figures are currently based on 1982 activity, with an annual multiplier fixed by the government.

Working under a capped budget induces internal competition for hospital resources. Competition among physicians is also a natural outcome of the relative scarcity of faculty and hospital positions, at least with respect to the number of candidates. Hospital appointments are endorsed by national health authorities after positions have been approved by the regional health administration, and a final nominee has been selected by the hospital consultative Medical Commission among candidates presented by competing medical departments. Physicians' merits typically are assessed with respect to their level of technical specialization, and their record of biomedical research publication but also through the associations derived from the medical tradition of apprenticeship.

Most physicians working in public hospitals hold full-time hospital appointments or, in teaching hospitals, joint faculty and hospital appointments; they usually have little direct experience of the health system outside the hospital. Neither initial medical training nor the current promotion system promote critical evaluation of medical practices. The pre-eminent value given to specialized expertise favors viewing patients in terms of each physician's specialty, rather than considering how combined skills may address each patient's problems. Health professionals working outside the hospital may refer their patients, but usually have little input into hospital care.

While the medical structure of the hospital is characterized by separate, specialized and relatively independent wards, nurses are organized hierarchically under the central authority of the Director for Nursing. The growing demand for recognition of nurses' specific roles and responsibilities makes them a driving force in the development of evaluation and quality improvement activities. Reinforcing this vertical structure can facilitate enforcing hospital-wide programs; however, centralized decision-making may interfere with dynamic decentralized team approaches. The rigidity associated with strong hierarchical traditions may also constrain participative management efforts.

The function of hospital administrators has long been confined to procurement of the resources demanded by the medical heads of clinical wards. As internal budget constraints and external demands for accountability increase, hospital administrators tend to get more involved in quality of care issues. However, this new role may be seen as an illegitimate intrusion by the health providers, and hospital administrators may be challenged to demonstrate new capabilities above and beyond traditional bureaucratic control.

**DEVELOPING NEW HOSPITAL STRUCTURES FOR QUALITY IMPROVEMENT**

Since 1990, the consecutive creation of new organizational structures has involved different professional groups in the promotion and coordination of quality improvement efforts. Following a series of uncoordinated initiatives, the Evaluation Committee was created in January 1990 by the Medical Consultative Commission. Its composition and title evolved over the years. The original Committee comprised physicians from each clinical ward (either the medical director of the unit or the director's representative), representatives of the hospital administration, and the Director of Nursing. This “Medical Evaluation Committee” soon became the “Evaluation of Care Committee”, integrating non-medical health personnel among hospital staff, and then physicians and nurses from the surrounding area. It eventually became the “Evaluation Committee”, as interactions between clinical and organizational issues became manifest.

Most studies conducted during these early years were carried out without outside help or specific resources. Recognition of the need for specific expertise and resources in order to involve multiple clinical units in coordinated efforts led to the creation, in 1992, of an evaluation unit to provide technical assistance in the development of evaluation studies and the application of their results.

Between 1992 and 1994, the Louis Mourier Hospital served as a pilot site for adapting industrial quality assurance approaches to hospital settings. One product of this experience was the creation of a new organizational structure to oversee quality improvement efforts, with legitimate decision-making authority. The “Committee for Quality” brings together the Administrative Director of the hospital, the (elected) President of the Medical Consultative Commission, the Director of Nursing, and delegates from each of the consultative commissions of the hospital. A position also was created for a “Director of Quality”.

**A CASE STUDY: IMPROVING DRUG DISPENSATION**

Creating new organizational committee structures is only one feature of quality improvement efforts. Cumu-
tative attempts to improve drug dispensation over the past 5 years illustrate the evolution of the assumptions underlying these efforts.

Adverse drug events (ADE), defined as injuries resulting from medical intervention related to a drug, are a major cause of injury among hospitalized patients; a significant fraction of these injuries, and of the larger number of potential ADEs, results from preventable errors [9]. While only a fraction of medication errors — defined as any error in the process of ordering, dispensing, or administering a drug — actually produce ADEs, informal verification and correction chores add significantly to the workload of hospital staff [10]. Most literature has focused either on the pharmacological adequacy of medical prescribing, or on the deviation between the treatment prescribed and the medication actually administered to the patient. Administering the right drug at the right time to the right patient is the final step of complex processes involving physicians, pharmacists and nurses [11]. Errors may be related to multiple causes, ranging from lack of knowledge or information to drug-stocking and delivery problems [12]. Developing effective prevention systems requires systematic analysis of these processes and identification of actual and potential sources of error at each step.

In 1991, initial studies were conducted in two voluntary medical wards to determine whether oral medications were dispensed to patients as prescribed, and to assess intermediate outcomes of prescribing, transcribing and dispensing steps. Evaluation criteria included the adequate formulation of medical prescriptions (identification of the prescribing physician, specification of drug presentation, rhythm of administration, and total daily dose), as well as the accuracy of nurse transcriptions and of drugs prepared for distribution, compared to the medical prescriptions. No judgment was made regarding the pharmacological adequacy of the prescriptions, and the individuals involved in the processes observed were not identified. The contents of the trays containing medications to be administered to patients were inspected by independent observers for all patients present in the participating wards on a given day. Medical prescriptions and nurse transcription forms were duplicated after inspection of the trays containing medications.

The findings were quite striking: the formulation of medical prescriptions was incomplete for 20% of the drugs prescribed, affecting 40% of the patients in both wards; nurse transcriptions were judged to be inadequate for 50–60% of the patients; and the drugs prepared for distribution differed from the medical prescription for 38–57% of the patients [13]. Following presentation of these results, physicians and nurses of these two wards engaged in collaborative efforts to overhaul traditional prescription forms in order to improve their clarity and to eliminate the need for nurse transcription.

The studies were repeated in both wards about 1 year after introduction of the modified forms. The study protocol was modified to include the observation of drug administration to the patient by an external observer, blind with respect to the written prescription. Specific conditions interfering with administration were also recorded.

Improvements in the formulation of the medical prescriptions were impressive: the rather stringent criteria defined for the evaluation were fully respected for 81 and 93% of the patients in the two wards, and for 96 and 99% of the drugs prescribed, respectively. Direct observation of drug administration provided additional insights. While the medications delivered to the patients still differed from the written prescriptions in a significant number of cases, so-called medication errors were found to reflect more complex and diverse situations than thought initially. Temporary modifications of the treatment due to specific diagnostic procedures were not recorded systematically on prescription forms; the patients could present acute conditions interfering with oral drug intake; drugs could be temporarily unavailable in the ward, or even in the hospital. On the other hand, drugs missing on the medication trays frequently were replaced, as the result of time-consuming effort and constant vigilance.

Changes in prescription forms and resulting improvements were presented in Evaluation Committee meetings. Other wards then undertook similar improvements on their own. A more systematic program is currently underway with the support of a multicenter Quality Assurance (or quality improvement) program funded by the Ministry of Health's Directorate of Hospitals. The objective is to generalize the experience gained from these earlier efforts and from adaptation of quality assurance methods. Four multiprofessional groups have been set up, with the following objectives: (1) to improve the medication prescription process and related forms; (2) to simplify and facilitate drug-ordering and management processes in the central pharmacy and in the medical wards; (3) to improve the reliability and safety of medication preparation and administration; and (4) to facilitate patients' adherence to treatment.

As an example, the group working on prescription focused on defining quality criteria for prescription forms, based on an initial audit of current prescribing processes throughout the hospital. Initial attempts to define a common prescription form met with strong resistance from some wards, whose staff expressed reluctance to adopt a form developed without their own contribution, or stressed that a standardized form would be insufficiently adapted to their specific needs. After a long debate, it was clear that emphasis should be placed on common requirements (identification of the prescribing physician, clear specification of medication dosage, rhythm, and presentation, etc.) rather than on uniform prescription forms.

WHAT HAVE WE LEARNED?

Most evaluation efforts carried out in the initial years
assessed the quality and effectiveness of care through development of indicators to identify and measure inadequate performance. However, this approach focuses on detecting non-desired events after they occur. Furthermore, it does not ensure that appropriate corrective actions can or will be taken. In this light, the success of initial efforts to improve drug dispensation can be credited to the individual motivation of physicians and nurses in the participating wards. Physicians saw benefits in reducing medication errors, and in improving their ability to review directly each patient’s treatment. Nurses welcomed the reduction of time-consuming and error-generating transcriptions, and also decided to improve the form to track the actual administration of medications. All were willing to engage in changes when the need for change was evident in their daily work experience, in spite of the questionable validity of some of the original evaluation results.

Given the shortcomings of these first evaluations, their value rested on the relevance of the indicators used for specific sub-processes. Their acceptability to hospital staff depended on the transparency of the objectives pursued (no hidden objectives) and of the methods used. Focusing on systemic processes, rather than on individual faults, allowed active involvement of motivated individuals. Actively involving the service providers in evaluation or quality improvement efforts improved the validity and relevance of the observations. It also was critical to the acceptability of the changes proposed.

Recognition of the limitations of the traditional evaluation perspective generated increasing interest for “Quality Assurance” methods to prevent non-desired events. Reassessment of the validity of so-called medication errors also highlighted the importance of careful process analysis during the development of quality assurance procedures. Similarly, insights gained while developing or adapting clinical guidelines may be critical benefits of these normative approaches.

The variability inherent in clinical conditions calls for flexible and outcome-oriented approaches, such as those used in quality improvement methods. Difficulties encountered in attempts to generalize common procedures or forms were alleviated greatly when expected quality outcomes could be stated explicitly. It is obviously easier to motivate health professionals when positive outcomes can be identified for the patients, and by the reduction of unnecessary burdens, than when the proposed change is perceived as an additional bureaucratic burden.

Recognizing the legitimacy of professionals’ perspectives is another key point. A significant benefit of multidisciplinary approaches within and across departments is to provide an opportunity to reconcile the diverse and often complementary viewpoints of the professionals involved at different stages of the patient’s trajectory. Decentralized approaches allow for flexible adaptation to specific conditions, and facilitate professionals’ adherence to change. Issues of power and professional control also should be analyzed carefully and taken into account.

In France to date, the patient’s perspective has only been addressed marginally in hospital quality improvement efforts, and almost never directly. Health professionals still see themselves as valid patient advocates. Involving the patient in quality improvement as a source of information as well as a valid decision-maker, should become easier as systematic questioning of professional practices becomes a regular component of the hospital’s culture. Efforts currently are spreading throughout the Louis Mourier hospital, ranging from quality assurance of in-service training to the development of local clinical practice guidelines. However, diffusion of change from motivated work-groups to the larger community remains a challenge. While in some cases such diffusion can happen almost by itself, this spontaneous diffusion process may be more difficult to reproduce at will. Appropriate communication is an issue: health professionals are not impressed by pompous keywords or grandstanding. To secure a consistent performance level across all parts of the organization, and to avoid losing impetus due to uncoordinated efforts, innovation must become a consistent feature of the hospital structure.

Sustainability of quality improvement efforts thus relies on complementary functions and structures: the Evaluation Committee provides a forum to discuss the relevance of specific proposals, to share information, and to develop collaborative efforts; the Committee for Quality can make decisions to achieve organizational changes; the Director of Quality can see to the effective implementation of these decisions; and the Evaluation Unit provides technical assistance to ensure the validity of studies and to facilitate their utilization. The effective articulation of these complementary functions will require, however, more time and experiential learning.

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