Internal and External Auditing in Health Systems: An Integrative Approach

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Abstract: Traditionally, auditors are apprehensive when it comes to auditing clinical decisions. A novel model might lead to better integration of auditors into the core activities of health system medical care, while creating common interests among all participants in the process.

When it comes to resource allocation and expenses, the health system comprises one of the largest sectors in developed countries. In Israel, approximately 8.8 percent of the GNP is allocated to the provision of health services. Health institutions include hospitals, HMOs, Mental Health Facilities, Institutions for Chronic Illnesses, Rehabilitation Centers, Emergency Medical Systems (EMS), and more. As in many modern public organizations, various auditors evaluate the health system: internal auditors from within the organization, as well as external auditors, such as the State Comptroller and certified public accountants.

Key words: auditing, control, health, quality, risk management

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The first mission of a medical organization is to provide health. The core activity of this health system is disease prevention and healing. All existing administrative systems within health organizations are geared to serve both processes.

Traditionally, the healing process is influenced primarily by the clinical decisions of attending physicians, who place the greatest demands on the health system. They decide the magnitude of resources to be invested in each individual patient.[1] The healing process is greatly affected by nursing services and other paramedical disciplines. Clinical and nursing decisions activate the administrative and financial systems. There are numerous pressures exerted on the health provider, who is responsible for making clinical decisions and for the consequences thereof; to do more (and sometimes less) than he perceives necessary.[2]

There are two different types of pressures that are placed on the system: inherent pressures that are part of the profession itself and extrinsic pressure, particularly from the legal system and the media.

INHERENT PRESSURES THAT ARE PART OF THE PROFESSION ITSELF

The difficulty in reaching right and sometimes urgent decisions in an uncertain environment, based on inconclusive and often incomplete data, often leads to the decision to "do more—as much as possible." In addition,

patients demanding additional diagnostic tests and treatments in vague situations, also adopt this attitude.

EXTRINSIC PRESSURES, ESPECIALLY FROM THE LEGAL SYSTEM AND THE MEDIA

To avoid litigation, "defensive medicine" which uses exaggerated resources may be requested, even though some of the procedures are inefficient.

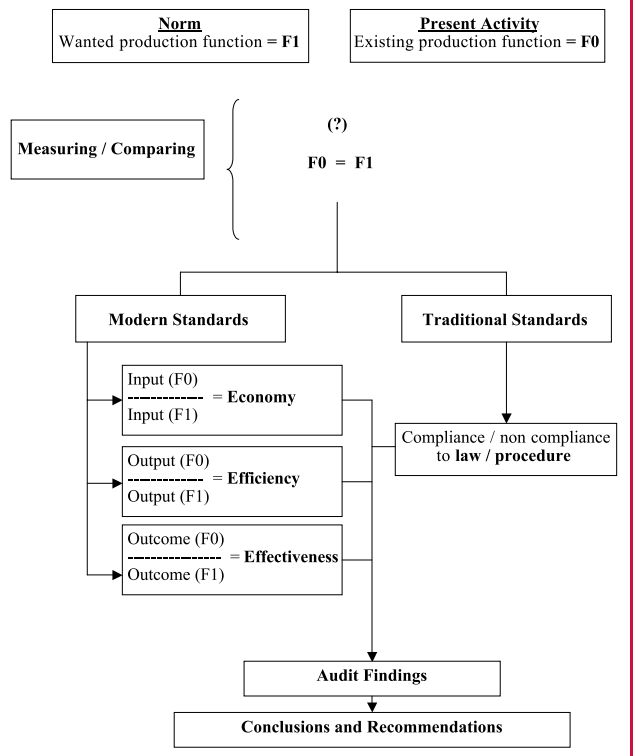
The influence of these demands on a health system's management leads to the overutilization of already limited resources. Often, identical results or even better ones could be obtained with less investment. In addition, medical errors caused by excessive or insufficient use of resources may bear a heavy economic burden on the system's public image. In 1993, one study showed that a million avoidable medical errors resulted in 120,000 annual deaths.[3] These are basic indications that should spur the audit mechanism into action, examining clinical activities in order to locate areas in which excessive "defensive medicine" and overuse occur or can be predicted.

In an attempt to reduce the over use of resources and "defensive medicine," ongoing auditing of a health institution may be a beneficial, cost-efficient, and cost-effective tool. Yet, very often non-medical auditors are apprehensive with regard to auditing clinical decisions.

This article describes the traditional reasons for this apprehension to audit clinical decisions and offers a model which could lead to the integration of auditors into the core activities of health systems.

FIGURE 1

Flow of Auditing



THE AUDIT DISCRETION LIMIT

The International Institute of Internal Auditors recently reformulated the definition of "auditing" as[4] "...an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes." Audit work can be described as comparing and measuring an activity to a norm and searching for ways to bridge the gaps between the existing and the desired (Figure 1). The International Institute of Internal Auditors[5] has defined professional standards, by which the auditor will measure findings using traditional standards of legality and regularity, and modern standards of economy, efficiency, and effectiveness. These standards are implemented by internal auditors all over the world and in certain countries by state audit institutions, as is the case in the United States,[6] England,[7] and Israel.[8]

Auditors' accessibility to clinical activities are possible due to hierarchical and authority mechanisms. These mechanisms are designed to ensure the independence of the auditors as well as their effective ability to conduct an audit. Part of the independence is achieved by ensuring that all matters concerning engagement, terms of employment, as well as methods to discharge the auditor, are conducted by those not governed by the audit. In addition, auditors have direct access to all information, including clinical information, despite laws that protect classified medical information,[9] as well as to employees in the organization. These means protect the audit work from irrelevant influences and pressures and support the ability to audit clinical activity.

However, auditors tend to shy away from auditing clinical activity, for fear of exceeding the "Audit Discretion Limit"[10] thereby entering into limit conflict. This limit is set by the auditor in cases in which management does not define policy or procedures. The Audit Discretion Limit ensures that the audit will not be the sole actor that defines the norms and that the audit findings will be based upon objective measurements rather than on subjective judgment. When auditing by traditional standards there is an objective norm, set by

external mechanisms that define the desired process. Auditing according to modern standards assumes that the auditor himself measures the inputs and the outputs of the current production function. He is also expected to suggest alternative modes in order to improve effectiveness, economy and efficiency.[11]

Auditors often fail to define clinical norms, usually due to a lack of adequate biomedical background. Most medical audit units do not employ physicians or nurses. Most auditors are economists, business and public administrators, or accountants. With today's emphasis on operational auditing, auditors are recruited for their expertise in operations, engineering, finance, information systems, or accounting.[12] These skills do not facilitate the analysis of custom clinical production function. It is therefore advisable that the auditor in health facilities has some medical education and has access to physicians and nurses for consulting purposes. However, even if the auditor has the relevant background, he may have inherent difficulty defining and assessing medical outcomes. The assessment of medical outcomes is complicated since complete healing is often not the immediate target and therefore knowing when the desired outcome has been achieved may be difficult. In addition, the quantification of outcomes within the organization or between similar organizations (i.e., standardization) is complex, as a result of different case-mix or non-dependent variables. Experts may be able to define these difficulties in order to create a comparative basis, for benchmarking, essential for measuring and assessing medical outcomes and avoiding bias.

Finding that the physician or nurse's decision is deficient and only comparing it to the auditor's judgment means disruption of the "discretion limit." There is a conflict in the auditor's procedural ability to present professional and independent information on the organization's clinical activities, due to most auditors lack of medical background, thereby missing definitions for outcomes and being able to measure difficulties. In the authors' opinion it is inappropriate that the auditing of clinical activity be excluded from the audit. It is not acceptable that core activities of an organization are not submitted for independent evaluation.

BRIDGING THE GAP

The equilibrium point, between "no audit" versus "policy making by the audit with insufficient measurements tools" can be identified as the process of setting norms for measuring clinical activities. Transferring this process to a group of medical and nurse specialists will enable auditing of the core activities of a health organization. Mechanisms designated to set guidelines for measuring clinical activity are an integral part of modern health organizational management. These mechanisms are allocated in two major ways, each dealing with measuring effectiveness and efficiency:

A. Risk management (RM) is based on the concept that there are considerable risks in medical practice. Risks affect the patient, health providers, institutions, and society. Therefore, it is crucial to manage risk in order to reduce the probability of its occurrence. RM deals with incidents in which it is clear that the medical activity exerted was associated with a negative outcome (e.g., the patient died unexpectedly during treatment; the patient was readmitted shortly after discharge due to unwanted side effects). Important benefits of this process are reducing possible future expenses and negative public image damages resulting from litigation. An obvious benefit is to learn lessons from failures and apply them in an attempt to improve future processes and quality of care. Emphasis is placed on inputs that went wrong. This is done when undesired and undisputable outcomes are recognized. Lessons may indicate the need for a change in the common production function. The proposed mechanism involves three basic steps with regard to risks:

   1) identification of the risk and analyzing the probabilities that it will occur;
   2) assessment of controls designed to reduce the risk itself or its unwanted effects; and
   3) inducing clinical guidelines and algorithms or changing actual guidelines.

At the Hadassah Medical Center, physicians, nurses, and lawyers staff the RM team. The team is most often mobilized by adverse events reports. Cases are studied with the purpose of both preparing for a possible future trial as well as for drawing conclusions needed for system changes in order to improve the quality of medical care.

B. Quality assurance (QA) and improvement (QI) are based on the concept that clinical activity can be broken down into intermediate stages. By measuring the intermediate stages, management can point out the controls needed in order to improve effectiveness and efficiency, by inducing clinical guidelines. This is a process, usually performed by multidisciplinary teams comprised of physicians, nurses, and other paramedical staff, with an emphasis on management commitment. It may be suggested by some that using clinical guidelines might cut expenses, without influencing health indexes such as mortality, morbidity, and quality of life. The United State General Accounting Officer[13] found that among health providers who implemented clinical guidelines, patients had improved outcomes and cost savings was achieved.

The Hadassah Medical Center is a tertiary 1050-bed university medical center. Hadassah is affiliated with six academic schools: Medicine, Dentistry, Nursing, Pharmacy, Public Health, and Occupational Therapy. Hadassah has many task forces that deal with medical quality. Some of them are subject oriented (e.g., trauma); others are horizontal (e.g., morbidity and mortality forums); all are multidisciplinary. Many of the groups are guided by filter audits, such as the span from the time of the injured arrival to admittance areas to time of performance of explorative laparotomy when needed.[14]

RM and QI personnel lack audit training during their attempts to assure appropriate clinical care. In addition, they are not subject to procedural mechanisms designed to protect their work from influences and pressures. In fact, as per the model suggested by Friedberg[15] (The POSDCoRB model) for checking the dependency of audit and control systems (Table 1), we see that the dependence of RM and QI is highest among systems that deal with the evaluation of clinical activity. However, the outputs of RM and QI can be utilized in an attempt to set new norms for evaluating medical activity, by auditors trained to measure regularity, effectiveness, efficiency, and other economic aspects of the process.

Hence, the authors propose an integrative model, which enables the auditors to evaluate portions of the clinical activity, without the apprehension of disrupting the audit limit. Such a model will enable the evaluation of clinical care in a more professional and independent way.

THE INTEGRATIVE MODEL

The model is based on collaboration between the audit and clinical expert groups. The model suggests involvement of the audit in RM and QI on three levels:

1) The professional administrative level: initialization of clinical guidelines

The audit contribution to starting the process can be expressed by supporting the formulation of guidelines which will emphasize the most risky practices, costly activities, or those practices/activities that are overused.

The Israeli State Comptroller performed such evaluations on the use of orthopedic transplants in 1994[16] and published reports concerning mammography in 1995[17] and dialysis in 1997.[18] In all of these reports the audit found that although it was relevant and important, the health authorities formulated no clinical or economically oriented guidelines.

The flow of information should be bilateral. Audit reports on administrative matters can be useful for RM and QI group interventions (e.g., audit evaluation of the periodic maintenance of medical equipment, sterilization practice, data integrity and security, obtaining informed consent, expired dates of medication, drug storage, etc.).

2) The technical level: setting clinical guidelines

The audit, based upon the view of a senior physician or nurse consultant, might give an opinion on the efficiency of different quality group performances, e.g., encourage focusing on specific topics, which better address medical issues, ease of implementation, and evaluation of guideline use.[19]

The United States General Accounting Officer (GAO) checked the efficiency of clinical guidelines in 1995.[13] The GAO found that clinical guidelines were not "user-friendly" (topics were too broad, guidelines were too long and difficult to follow) and therefore difficult to implement. For example,

– It took approximately five hours to read the long version of a guideline and the short version was insufficient.
– Some of the diagrams are confusing.

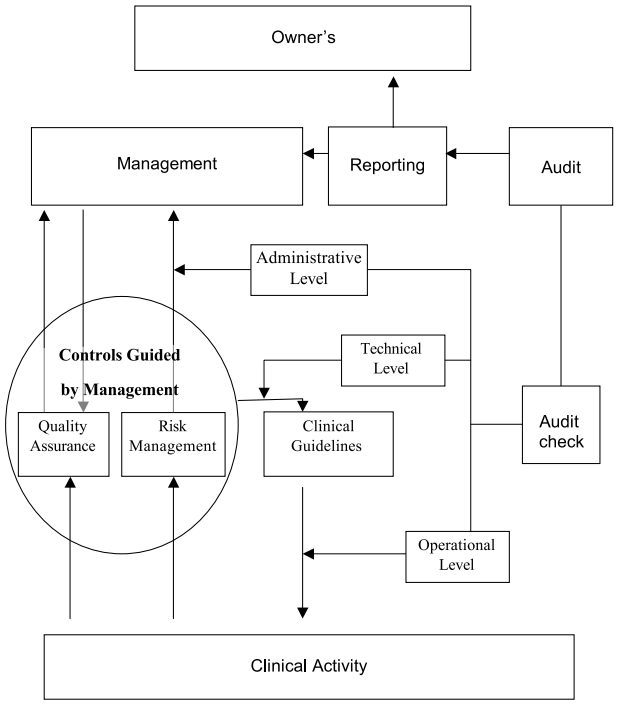
TABLE 1

Independence of Systems Designed to Evaluate Clinical Activities

The POSDCoRB Model			
QA and RM Forums	**Internal Audit**	**External Audit**	**Dependence/Administrative Factor**
Management	Board of directors	Public/parliament	P = Planning O = Organizing S = Staffing D = Directing Co = Coordinating R = Reporting B = Budgeting
	Board and management Management		
High dependence	Medium dependence	Low dependence	

FIGURE 2

Suggested Integrative Model: Auditing the Core Activity of a Health Organization



– Guideline recommendations were sometimes unclear because they were not explicit.
– Guidelines did not include specific information about the cost-effectiveness of alternative therapeutic approaches. This kind of information typically only appears in medical guidelines of managed care organizations such as the Harvard Community Health Plan.[20]

3) The operational level: implementation of clinical guidelines

After clinical guidelines are set, the audit can examine their implementation. Audit mechanisms are independent of management and auditee influence. Audit independence is fundamental and essential in the evaluation of clinical guideline implementation quality.[21] RM and QI forums are not expected to replace the audit role.

All of these evaluation and control mechanisms should be integrated. The suggested "Integration Model" (Figure 2) bonds all of the participants in the clinical activity with the participants in the control and audit activities. The model creates common motives among all those involved in the process:

1) public/board interest in receiving high quality and objective information on the controls in clinical activities;
2) management's motive to inform the public/board with regard to the control activities it governs and receive independent feedback on the implementation of its directives;
3) physicians' and nurses' needs to be involved in setting clinical guidelines in order to improve patient care and reduce extrinsic pressures; and
4) the model enhances the auditor's capability to conduct a professional audit of medical activities, based upon predetermined evaluation standards without fear of disrupting the "audit limits."

It is interesting to note that neither audit reports written by the GAO or Israel's State Comptroller over the last ten years, checked clinical activity on the third level: implementation of clinical guidelines. We found that internal auditors did check clinical activity on this level in cases in which clinical guidelines were formulated.[22] In more than a few health institutions,[23] the Board of Directors appointed an auditor of clinical standards[24] who reports directly to the Audit Committee of the Board.

CONFIDENTIALITY

As noted, one of the reasons that physicians do not work within the limits of necessity derives from environmental pressures, generated by the legal system, the media, and patients themselves who today are more acknowledgeable than in the past. External audit reports are by law public. Internal audit reports are usually classified and confidential. Therefore, another factor relevant to medical audit effectiveness is publicity (Table 2).

Publication of audit findings may cause significant adverse effects, because it may increase pressure on the medical teams. It seems that the publication of findings may delay the integration of external auditors within

TABLE 2

Parameters for Evaluation of Audit and Control Mechanisms in the Health System

External Audit	Internal Audit	Quality Control and RM Forums	
Low	Low	High	Professionalism
Low	Medium	High	Dependence
Public	Confidential	Confidential	Publicity of findings

clinical activities. Thus, the independence advantage of external auditing may be lost.

Hence, in the authors' opinion the most effective way to receive objective and professional information on clinical activity is to induce cooperation between RM and QI teams and internal auditing.

In conclusion, developing an accountability process is a central part of the checks and balances system in modern organizations. However, in health systems, audit mechanisms are handicapped in checking clinical activities, due to the gap in knowledge, the lack of relevant medical education, and the possible exceeding of audit limits. In contrast, RM and QI teams abound with medical professionals but do not enjoy the same procedural mechanisms designed to protect the audit work from influences and pressures. Since RM and QI forums are an integral part of policy making, these systems cannot be totally objective in examining the effectiveness of the clinical guidelines that they have formulated.

We suggest a model by which a modern, independent internal audit, assisted by consulting experts, could be integrated with the core activities of the health system, based on clinical guidelines. The success of this model may be affected by the magnitude of the audit findings publication. Excessive media involvement may cause additional pressure on physicians and nurses thus producing additional costs instead of restraining them.

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