

HOSPITAL MANAGEMENT FACTORS FOR BETTER QUALITY OUTCOMES

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ABSTRACT

One of the important issues in health care and life sciences field is hospital management. Poor health service quality wastes resources that could be used to treat more patients, and the public is becoming more critical of the quality of hospital care; while strong managing can prevent clinical and administrative problems, continuously improve the organization's processes, increase patient satisfaction, and provide healthcare services as good, or better.

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INTRODUCTION

Ensuring the safety of patients and personnel and improving quality have become important objectives for national health systems in developed and developing countries alike. Health care organizations are expected increasingly by governments, funders and of course patients to introduce quality control systems and outcome improvement strategies. There is a general belief that there are effective methods to improve quality and safety (Leatherman *et al.*, 2010).

Regarding to the increasing demands on hospitals for improved quality and lower costs, hospitals have been forced to reevaluate their manner of operation and quality assurance (QA) programs.

Hospitals focus on creating mental, physical, and social environments that are good for both customers – patients, and staff to deliver safe, efficient, timely, patient-centered, and equitable healthcare to all people (Reeves *et al.*, 2010; Aiken *et al.*, 2012).

Many health care managers and practitioners also believe that action must be taken, but are unsure of how to proceed, particularly within resource constraints. Poor health service quality wastes resources that could be used to treat more patients, and the public is becoming more critical of the quality of hospital care; while strong managing can prevent administrative and clinical problems, increase patient satisfaction, continuously improve the organization's processes, and provide healthcare services as good, or better (Goldfarb *et al.*, 2007; Mitchell, 2008).

There are many approaches for hospital managers to improve quality and safety, and diverse strategies to do so. The aim is to enable decision makers to better implement, formulate and evaluate strategies. Research puts competing claims made by proponents of each approach into perspective and can help avoid costly mistakes from choosing the wrong strategy or implementing it incorrectly.

Effective Quality System Requirements

Data

The data collected to inform quality practice must be both robust and clinically relevant. Hospital managers should be consulted in the method of data collection and indicators measured. Data should be easily accessible, up-to-date, and delivered in a logical format. Hospital managers should not bear an unreasonable burden of data collection or data entry. All managers need adequate access to appropriate information technology.

Local Design and Relevance

To be effective, the quality system must have “buy-in” from local hospitals. While consistency of definitions is useful for comparison with peers, local relevance is a key to hospital engagement.

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Improvement Philosophy rather than Blame

The quality cycle involves reviewing past practice, implementing improved processes, and assessing results. The aim of investigating errors or perceived failures must genuinely be to bring about improvement in performance – not to punish individuals.

Focus on Outcomes over Process

While there are advantages to standardisation of processes in some areas of practice, a quality system should not allow the process to become the goal. Work processes must not be changed unless there is good evidence that the change will improve outcomes in a systematic way.

Acceptance of Reasonable Risk

A quality and safety system must recognise that no human system will ever be 100% reliable or 100% safe. While attempts to reduce human error should be made (for example, simplifying complex processes, reducing fatigue), it should be recognised that unpredictable human error will never be eliminated. Quality indicators must distinguish between known and expected complications and potentially preventable adverse events.

Realistic Peer Comparisons

Where quality data are used to compare institutions, only peer hospitals must be directly compared. Account should be taken of factors like patient case-mix, and hospital drainage population.

Quality Improvement Approaches in Hospitals

Many strategies are reported in the literature, and some of them are listed below. The research referenced refers to descriptions of the approach rather than to studies of effectiveness.

Resource Increasing: increasing the financing, personnel, facilities or equipment used in a hospital or health system, with the aim of treating more patients or treating the same number faster, better and at lower cost-per-person.

Large-Scale Reorganization or Financial Reform: changing the structure of a hospital or health system so as to facilitate better decision-making or use of resources. The change in financing methods are made as a way of improving quality.

Strengthening Management: improving quality by increasing management responsibilities, competencies or authority. It is sometimes used as part of other types of strategy.

Standards and Guidelines: Formulating standards of what is expected from health providers, providing training in, communicating, and enforcing the standards. Most medical and clinical audits fall within this title, as well as some approaches called “quality assurance” and “clinical pathways”.

Patient Empowerment and Rights: giving patients a voice, for instance through complaints systems or patient satisfaction questionnaires. There may also be methods to strengthen patient power through legal entitlement, advocacy or other institutions, for example a right to treatment within 30 minutes of arriving at an emergency room. Some of Nordic countries have patient guarantees as well as patient rights in law, and other schemes to strengthen patient power.

Quality Management System: defines responsibilities for quality and puts into place the structures and systems to ensure that. The International Organization for Standardization (ISO) issues guidelines used by some European hospitals to design quality management systems. The composition of such a system is interpreted differently from country to country in the absence of overarching standards (Aiken *et al.*, 2002).

Quality Accreditation and Assessment, Internal or External: There are many assessment systems; the best known in Europe is the European Foundation for Quality Management system. A related strategy is voluntary or compulsory external quality assessment by a third-party peer review organization, or governmental body. Accreditation systems differ in which aspects of hospital operations are assessed and whether quality outcomes are considered in the assessment.

Total Quality Management (TQM) and Continuous Quality Improvement (CQI): TQM is a set of principles and methods applied in many various ways, coming from organization-wide industrial quality programs. Such strategy focuses on attention of personnel and on providing the best patient experience and outcomes. The quality tools are used by multidisciplinary teams of workers to make changes, and the

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approach is generally thought to require strong management leadership. It is based on a view that quality problems are more often due to poor organization than to individual faults (Jordan *et al.*, 2004).

Quality Collaboratives: a national and regional strategy in Australia, Norway, Sweden and the United States, promoted by United Kingdom's National Health Service, and being tested in developing countries with middle-income. The strategy is to bring together project teams from many different hospitals. The teams typically meet every 3 months over 9 months to learn and apply quality methods and to report their progress. It was devised to provide an economical way to learn models of effective practice and quality methods, to get faster results than are usually obtained by CQI/TQM strategies.

Quality Indicator Comparison: seeks to motivate patients, clinicians and others to use information about quality to make improvements, but it is not prescriptive. It can be used by one hospital taking part in a comparative data gathering programme, or as a voluntary or compulsory strategy for hospitals in an area to collect and report the same data.

Key Factors for Better Quality Outcomes

Quality-enhancing activity is not an all-or-nothing phenomenon. In fact, all the hospitals we contacted are involved in various types of efforts to improve quality. They are collecting data, asking questions, comparing themselves to various benchmarks, establishing quality committees and mission statements, and beginning to invest in better information technology.

What distinguishes the leading hospitals is not that they are taking on challenges that others are either unaware of or not participating in. Rather, the top performing hospitals are marked by the depth and breadth of their commitment. This was reflected in leadership that practiced as they preached; willingness to invest in high-quality staff, processes, and supportive tools; and institution-wide commitment to dig beneath surface measures to uncover causes of quality problems and to press relentlessly for solutions (Lindenauer *et al.*, 2007).

The key factors of a successful strategy can be organized into the following categories:

- developing the right culture for quality to improve;
- attracting and retaining the right people to promote quality;
- updating and devising the right in-house processes for quality improvement;
- giving to staffs the right tools to do the job.

Some certain forces external to the institution, like local market competition and standards and resources developed by outside organizations also play a role in successful quality and QI.

The following diagrams organize and summarize our key findings. Figure 1 illustrates the relationships among the essential elements and outcomes.

The Right People

The leading hospitals place great emphasis on recruiting and retaining top-level physicians and nurses. It is accompanied by an effort to encourage these professionals to form working teams, including pharmacists, case managers, social workers, and others, to promote quality. There are specific features of successful strategies:

1) Selective hiring, retention, and credentialing of physicians and nurses, even in an era of shortages. This includes monitoring of doctors on staff (or with privileges) and ensuring that they must continue to meet certain performance and practice standards to retain credentials.

2) The ability to attract and employ adequate number of high-quality nurses through specific approaches to human resource management such as:

- Generous staffing levels that ensure a reasonable caseload; this includes setting minimum staffing ratios and abiding by them (e.g., closing down units if there is not adequate nurse staffing). Comparing hospitals in terms of nurse-to-patient ratios is problematic. However, top-performing hospitals do place a great emphasis on keeping staffing levels high and vacancy rates low;
- Competitive salaries;
- Empowerment and deserved reputation of respect for nurses;
- Programs of residency and relationships with nursing schools to ensure an ongoing supply of nurse trainees and graduates; and

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• Opportunities for improvement and continuing education, as well as opportunities to be true partners with physicians in caring for patients.

3) Establishment of multi-disciplinary teams to manage and coordinate patient care and to conduct QI analysis and projects with IT support. Nurses are often given a key role in the QI process as team leaders with authority and accountability. All staff are expected to be team players.

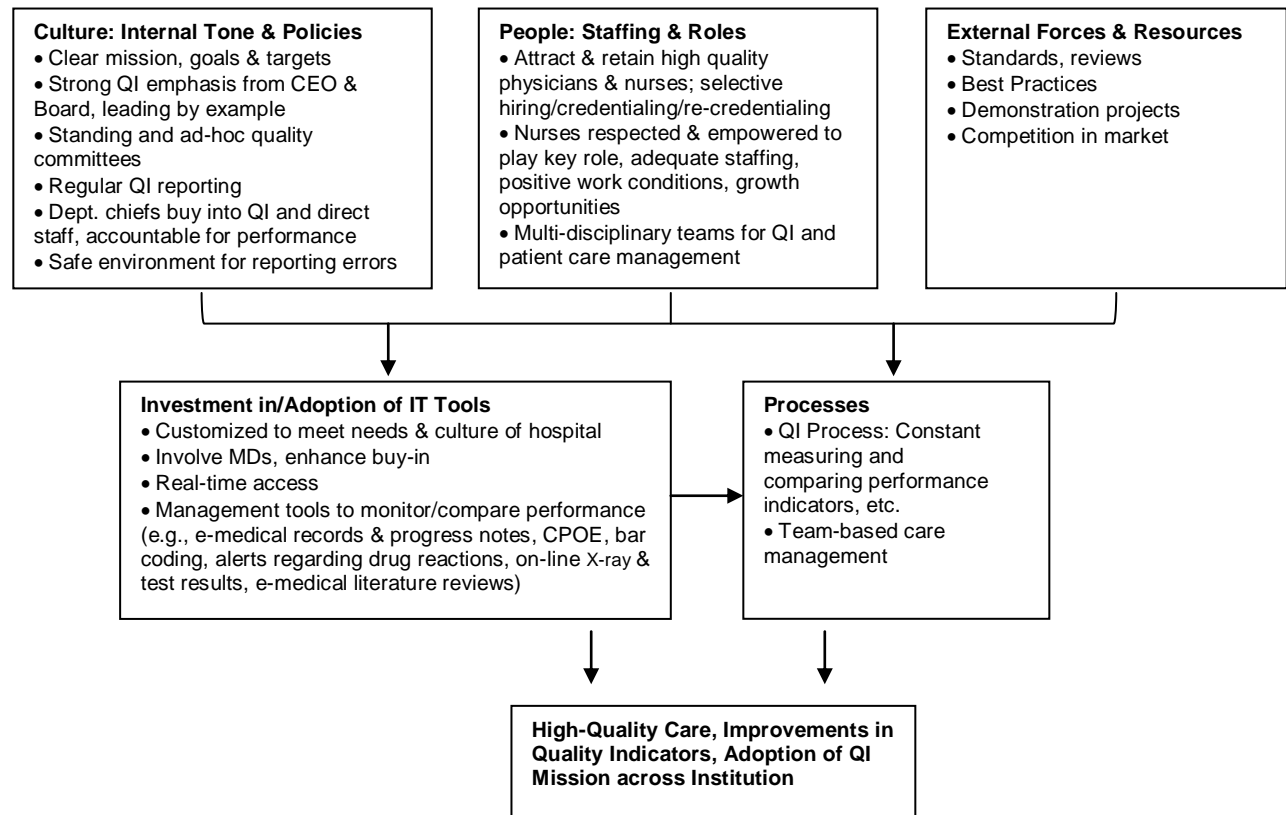


Figure 1: Elements for Hospital Quality Outcomes and Mission

Commitment and Culture

The right organization culture is essential to achieving a successful approach that creates good hospital outcomes and effective QI. Merely going through the motions of QI—whether due to outside pressure or directives from the top of the organization—will not likely bring significant results. Rather, the culture of the entire organization must reflect true motivation and commitment to quality across the institution. Though the term “culture” is somewhat amorphous, we identify concrete actions that seem to both instill and support a culture of quality. They include the following features:

- 1) Establishment of an obvious quality-related mission, and performance measurement and targets consistent with the mission.
- 2) Strong leadership from Board and CEO. Particularly, this involves:
 - Regular reporting of quality reflecting select performance indicators to senior management and Board of Trustees;
 - Setting targets for advancement and follow-through via monitoring progress;
 - Leading by personal involvement and example;
 - Making QI part of employees’ daily functions, rather than an extra burden on top of routine responsibilities; and
 - Holding all staff accountable for meeting quality goals and making appropriate improvements.

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3) Leadership and quality improvement buy-in among department chiefs, with expectations that they will work with physicians in their departments to change practice patterns where necessary and ensure that certain practices are followed.

4) Supportive organizational structures such as standing and ad-hoc quality-related committees.

5) Clear communication and rules that encourage physicians, technicians, and nurses to report errors. It requires ensuring that those who report errors may remain anonymous and not be penalized.

Tools and Resources

The leading hospitals appear to give their physicians, nurses, and other staff the tools and also support their need to practice high-quality medicine on a daily basis, and to investigate and identify quality problems when they surface. This includes investments in IT and in QI/PI departments with qualified staff that abstract medical records, analyze data, and also facilitate the QI process. It includes access to guidelines and protocols, and offers support to physicians in developing a consensus around their own evidence-based best practices so that they have tools they are actually willing to use. Some other tools involve external training, peer networking, and conferences which provide guidance and feedback.

In order for nurses, physicians, case managers, and other hospital personnel to make their policies and procedures work effectively, they need a modern information system producing real-time data on patient health status, test results, and other key factors. A successful strategy employed by the top-performing hospitals involves four main commitments:

a) A willingness to invest in IT;

b) Working with physicians and others to customize an information system to meet specific needs and culture of the institution;

c) Nurturing and encouraging buy-in so new systems will be utilized and their benefits will be realized; and

d) Devising IT systems that provide real-time feedback to providers as they are caring for patients.

The main ingredients of a real-time system involve its timeliness. However, hospitals want to develop a system that allows all caregivers to have access to relevant information as soon as it is available.

Engaging physicians and nurses in developing or adapting IT serves to ensure that the resulting system meets the needs of clinicians. It also encourages buy-in, and helps create IT champions among the staff, who teach and encourage their colleagues to use the new system.

The newer IT systems reflect the hospitals' commitment and willingness to invest in the tools that promote quality. The kinds of quality-related IT investments include:

1) Moving to a paperless system that provides real-time information across the health system (e.g. e-hospital notes with input at bedside, electronic medical records);

2) Moving toward bar-coded medications and automatic dispensing;

3) Coordinating patient admissions with bed capacity and immediate tracking of filled beds and daily changes in nursing needs;

4) Using electronic dashboards linked to patient records that alert staff to test results and unresolved issues;

5) Enabling physicians to view imaging results and other test results on a PC in hospitals and in their offices;

6) Investing in Computerized Physician Order Entry (CPOE) and other types of decision support software to remind physicians about procedures or tests that are indicated and to reduce medication errors (e.g., through alerts about potential dosage errors and drug interactions);

7) Providing clinicians with computer access to up-to-date scientific and medical literature summaries on specific diseases, procedures, etc.;

8) Developing management tools for monitoring and comparing performance of physicians, units, procedures, etc.

The Right Processes

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The quality improvement process

Leading hospitals engage in a quality improvement process marked by constant measuring, comparing, and problem solving; a combination of customization and standardization; and a commitment to holding individuals accountable for improvement.

Performance measurement is a key component of the QI process. Keys to doing it right include:

- Selecting a rational number of measurable quality indicators.
- Dedicating qualified staff to work with and analyze the data.
- Comparing indicators with evidence-based medicine and benchmarks within and outside the hospital. It involves developing reliable data and learning how to slice it in different ways (e.g., across hospitals in a multi-hospital system; by service line, such as all thoracic surgeons in a hospital compared to the Society for Thoracic Surgeons national data base; by individual physicians compared to their peers).
- Identifying medical practice outliers and variation, and distinguishing between temporary blips and more chronic areas of sub-optimal care.
- Reporting performance data both up and down the administrative and clinical ladders. Once performance improvement opportunities are identified, problem-solving techniques are employed. The key components of this process that drive success include:

- 1) Developing multi-disciplinary teams which include representatives of all clinical or administrative areas that play a role in the problem being examined.
- 2) Enabling the team to question, pull apart and drill down the data, and helping them use the data to identify and explore possible factors contributing to suboptimal performance.
- 3) Developing and implementing an action plan (e.g., a plan to reduce variation and to change the practice patterns of physicians who are shown to be outliers in the data analysis) with timetables and goals.
- 4) Continue monitoring to ensure the intervention was successful and holding appropriate department chiefs or staff accountable for improving outcomes.
- 5) Making successful interventions into processes and policies like:

- Protocols and critical paths, based on expertise and internal experience as well as best practices;
- Policies that enhance efficiency, (e.g., improved patient flow, reduced turn-around time for test or lab results);
- Standardization in medical procedures, devices, and supplies, which reduces errors, saves space, and reduces costs;
- Communication about successful interventions across departments to extend the impact beyond the original QI initiative. Top-down mandates were viewed as ineffective. Instead, the top-performing hospitals prefer to use QI staff or designee to facilitate rather than mandate QI process. They stressed that QI must not be perceived as being forced upon staff or as an admonishment by upper management. Rather, QI staffers do their homework, present data and foster an interactive and participatory process with department leaders and staff taking the lead in developing solutions.

Team care management

Another process that promotes high-quality care involves the use of case managers and multi-disciplinary teams to coordinate patient care. Depending on the patient's circumstances, the team can include a nurse, physician, pharmacist, specialists in OT and PT, social worker, and discharge planner. Usually hospitals designate a nurse "case manager" to coordinate care and serve as the team leader. This individual is responsible for ensuring communication among clinicians and family members, and for ensuring that patients get appropriate care in a timely fashion. A key to effective case management is making sure that physicians and other caregivers accept the case manager's role in coordinating and facilitating care.

CONCLUSION

Hospital managers has the overall responsibility for the quality and safety of care, and has an oversight role in integrating the responsibilities and work of its medical staff, chief executive, and other senior managers into a system that achieves the goals of safe, high-quality care, financial sustainability, community service, and ethical behavior.

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This report identifies and categorizes the factors and ingredients driving selected top performing hospitals to provide high-quality care and to perform successful quality improvement.

Most hospitals are committed to reducing inappropriate care, improving patient safety, and achieving good health outcomes for patients while holding down costs.

Unfortunately, hospitals were generally not feeling much pressure from private purchasers, employers, insurers or managed care organizations to improve quality. In this area, performance-based reimbursement and quality partnerships could make a difference. But hospital managers need not and should not wait. They can begin to take a number of action steps on their own, establishing the right culture, people, processes, and tools to move in the right direction.

REFERENCES

- Aiken LH, Clarke SP & Sloane DM (2002).** Hospital staffing, organization, and quality of care: cross-national findings. *International Journal for Quality in Health Care* **14** 5-14.
- Aiken LH, Sermeus W, Van Den Heede K, Sloane DM, Buasse R, Mckee M, Bruyneel L, Rafferty AM, Griffiths P & Moreno-Casbas MT (2012).** Patient safety, satisfaction, and quality of hospital care: cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *British Medical Journal* **344**.
- Becher EC & Chassin MR (2001).** Improving the quality of health care: Who will lead? *Health Affairs* **20** 164-179.
- Davis K, Schoenbaum SC, Collins KS, Tenney K, Hughes DL & Audet AMJ (2002).** Room for improvement: patients report on the quality of their health care, *Commonwealth Fund, Program on Health Care Quality Improvement*.
- Epping-Jordan J, Pruitt S, Bengoa R & Wagner E (2004).** Improving the quality of health care for chronic conditions. *Quality and Safety in Health Care* **13** 299-305.
- Firth-Cozens J & Mowbray D (2001).** Leadership and the quality of care. *Quality in Health Care* **10** ii3-ii7.
- Goldfarb NI, Maio V, Carter CT, Pizzi L & Nash DB (2007).** How does quality enter into health care purchasing decisions? Paper 34. Available: <http://jdc.jefferson.edu/healthpolicyfaculty/34>.
- Jha AK, Li Z, Orav EJ & Epstein AM (2005).** Care in US hospitals—the Hospital Quality Alliance program. *New England Journal of Medicine* **353** 265-274.
- Leatherman S, Ferris TG, Berwick D, Omaswa F & Crisp N (2010).** The role of quality improvement in strengthening health systems in developing countries. *International Journal for Quality in Health Care* **22** 237-243.
- Lindenauer PK, Remus D, Roman S, Rothberg MB, Benjamin EM, Ma A & Bratzler DW (2007).** Public reporting and pay for performance in hospital quality improvement. *New England Journal of Medicine* **356** 486-496.
- Mitchell PH (2008).** Defining patient safety and quality care. In: *Patient Safety and Quality: An Evidence-based Handbook for Nurses* **1**.
- Reeves S, Macmillan K & Van Soeren M (2010).** Leadership of interprofessional health and social care teams: a socio-historical analysis. *Journal of Nursing Management* **18** 258-264.