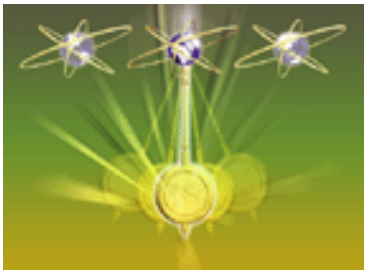
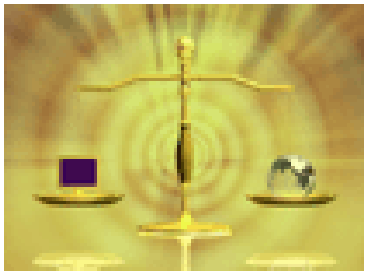
PASCAS HEALTH SANCTUARY

QUALITY MANAGEMENT in HEALTH CARE





"Peace And Spirit Creating Alternative Solutions"

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SCHEDULE Page

NOTES taken from the book: QUALITY MANAGEMENT in HEALTH CARE
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This MANUAL is to be adopted by PASCAS HEALTH SANCTUARY as a foundation document on QUALITY.

PASCAS HEALTH SANCTUARY:

The Quality Management program for the Pascas Health Sanctuary hospital and clinics is holistic.

Structured quality review has two goals:

- Quality assurance - confirming that care is delivered to standards, to reassure patients of the hospital's quality of care;
- Quality improvement - identifying quality problems so that quality managers can eliminate their root causes and prevent their recurrence, and hence improve the quality of future care.

The Hospital's goal is to institutionalise hospital-wide structured quality review. Structured quality review provides the means to:

- Assure the quality of care - by reviewing samples of cases and documenting that patients received care processes that they needed and wanted and that the hospital implemented properly these processes;
- Improve the quality of care - by identifying quality of care problems and subsequently eliminating their root causes.

Most quality problems result from poorly-designed processes, not individuals' malfeasance.

Structured quality review involves the following three steps:

- Screening - systematic case-by-case assessment using automated outcome / process assessment screens to identify potential quality problems.
- Review - structured medical record review to confirm potential quality problems and to characterise them.
- Analysis - statistical (pattern) analysis of screening information and medical record review results to reveal patterns of care and illuminate quality problems.

Agfa PACS (pictorial archiving and communication system) enables the integration of medical record documents and diagnostic imagery being digitised Xrays. Installing a QSM system from Quality Standards in Medicine Inc, Boston, Massachusetts, enables the Hospital to review 100% of all discharges. The QSM system is the only structured quality review system (using automated outcome / process assessment screens) available commercially to hospitals. It employs sophisticated screens (that the hospital can tailor to its practice policies), provides automated support for further review of cases failing screens, and integrates the results of both screening and structured medical record review for reporting purposes. Further, because QSM clients agree to provide their data to Quality Standards in Medicine, they can compare their performance against one another.

Computerised diagnostic imagery storage, medical record documents and the automatic screening of outcomes is now possible, thus greatly enhancing the opportunities to improve quality without enormous costs in skilled resources.

TOTAL QUALITY MANAGEMENT:

It's a matter of putting lots of pieces together, in a systematic way, into a complete management system.

To achieve this then we must focus on the management philosophy in our initial training and then follow with the techniques.

No matter how skilful we are in determining what needs to be done, we must address the over-arching issue of getting the medical providers and the employees to want to do it - with focus and enthusiasm. We must build quality in, not inspect it in.

We represent a new organisation, new leadership, new empowerment, new ways to install quality-consciousness, and new incentives to get every employee committed to eliminating errors at the source - and to continuous improvement in every process and every activity.

Individuals and organisations define TQM in terms of employee involvement and cross functional teams; or statistical process control; or the use of tools such as quality function deployment; design of experiments; and other structured problem solving problems. All could be considered an element of TQM, but neither individually nor collectively do they capture the concept of Total Quality Management. The unfortunate result is that many are convinced that their view of TQM is correct and complete and cease to pursue any deeper understanding.

Total Quality Management truly is a cultural change. It involves a change in both the stated and unstated rules which govern the behaviour and beliefs of an organisation. Adopting new techniques, tools, or programs such as problem solving working groups can be important - but in themselves do not represent cultural change. The critical difference is that unless we modify the stated and unstated rules that govern behaviour, we will not achieve the required cultural change. Total Quality Management can make a significant difference, but all of us need to exert the effort to understand it.

We need a broader holistic focus when it comes to how one should achieve quality orientation and performance throughout the organisation - in every nook and cranny.

Quality is a serious and difficult business. Like finance, it has to become an integral part of management.

We at "PASCAS HEALTH SANCTUARY" are going to embrace **TQM** with all our resources and energy.

When will we at "PASCAS HEALTH SANCTUARY" nominate for the Malcolm Baldridge National Quality Award?

QUALITY MANAGEMENT IN HEALTH CARE:

QUALITY MANAGEMENT CAN IMPROVE QUALITY - BUT ONLY IF ACTION REPLACES TALK.

Quality management (QM) portends a revolution in health care's production function: what health care is provided and the way that services are delivered. It promises a paradigm shift: from an emphasis on providing services to one of improving outcomes.

Most hospital managers, doctors and other health care professionals are quite unfamiliar with quality management and the revolution it portends in health care. They can either shape the revolution or allow it to shape their work. Health care quality management promises to fulfil a cherished dream: knowing realistically what one can expect from medical intervention and being sure of getting it. Quality management can be as liberating for hospitals and doctors as it is reassuring for patients.

In the late 1980s hospitals and other health care facilities began to notice quality management's success in industry. Industry's motivation is clear: increasing profits, by avoiding the cost of reworking or fixing defective products, and by delighting customers. Hospitals' interest in quality stems from regulatory requirements and a desire to follow fashion, to market themselves as high quality providers, to reduce malpractice and other risks, to counter external quality assurance initiatives and cost containment pressures, and, at least in some cases, to improve practices.

To date, hospitals' renewed interest in quality has resulted in more talk than action, especially at the clinical level where it matters the most. The current quest for quality, inspired by industrial example, is only one of a number of historical forces driving health care toward quality management. Others include: payment strategies, utilisation management, risk management, quality assurance, medical technology assessment and, most recently and perhaps most importantly, the ability to quantify quality. The quality management activity that has occurred in Australian hospitals to date has been patchy, fragmented, and lacking any integration within an individual hospital.

HEALTH CARE IN TROUBLE.

Health care is (one of) the largest economic sectors.

Government's guarantee that all citizens should have access to health care, and the concomitant growth in the health care system, is one of this century's most important social changes. In all industrialised countries, health care has become one of the largest economic sectors. Countries continue to devote more of their resources to health care, although in Australia the Commonwealth government has capped it at about 9% of GDP (gross domestic product). In the USA, the healthcare industry is about 15% of GDP. Growth in health care expenditures provided the means to develop and deliver medical technology, which in turn stimulates demand for more health care services. This spiral is stressing the health care system and threatens to propel expenditures out of control. Despite the supposed miracles of modern medicine, people are increasingly dissatisfied with the health care system.

The health system is a conceptual entity.

The health system represents the totality of interventions that intend to maintain or to improve the population's health (which is the summation of individuals' health). The health system and its component systems are conceptual entities that consist of myriads of interrelationships among their

various elements, including government, each under the control or influence of different groups and with its own sociopolitical traditions. The health system is not the result of rational design efforts to achieve some predetermined purpose; it is not managed. It has no identifiable clients (or customers); merely everyone collectively regardless of such things as philosophy, purpose or desires. The health system consists of the following five principal components:

- personal health services;
- public health programs;
- research and development;
- resource development; and
- system policy management.

Personal health services (referred to collectively as the health care system) respond to individuals who seek help. They account for the largest share of total health care expenditures; hospital care accounts for a substantial fraction of these expenditures. Public health programs target populations and some, particularly health education, may impact on personal health services. This manual focuses on personal health services.

Health care is one, perhaps minor, determinant of health.

A person's health status is the result of four sets of interrelated factors and their interactions. They are: biology and our genetic programming; behaviour; the prenatal and postnatal environments, encompassing such physical factors as climate and pollution, biological factors such as viruses and bacteria, economic factors such as food, shelter and clothing, and social factors such as population aggregation, workplace and support systems; and the health system.

Increasing wealth, better nutrition and public health measures are often credited with improving life expectancy because, until recently, effective medical interventions are thought to have been lacking. The age of modern medicine is less than fifty years old. Modern medicine's contribution to health is controversial. This controversy stems from the failure to assess adequately medical technology and to measure meaningful health care outcomes in relation to health care processes. Each day, worldwide, we spend billions of dollars on health care interventions on the presumption that they are effective.

Large increases in expenditures; modest gains in health status.

In the past decade, substantial increases in per capita health care expenditures have been accompanied by relatively modest gains in health status, measured inadequately by life expectancy at birth (an established way of measuring the population's health that tells us nothing of the health quality of life). Health status (the preferred measure) quantifies a person's health throughout life (or for a defined period) and includes the number of years lived and the health quality of life, taking into consideration morbidity, institutionalisation and functional ability. It provides the common metric necessary to evaluate all of the health effects of alternative, disparate interventions. However, to date, health status has not been measured routinely - in fact, it has hardly been measured at all.

Medical care may not be as effective as presumed.

Questioning the effectiveness of medical care is a relatively new phenomenon. For far too long people have simply assumed that health care services result in health status improvement, the ability to palliate translates into the ability to cure, and advances in medical science result in more effective interventions. Two principle perspectives cast doubt on the effectiveness of modern medical interventions: large

increases in health care expenditures have produced modest gains in life expectancy (and perhaps even less health status improvement); and inadequately designed research studies show medical interventions to be effective, whereas well-designed research studies show that most medical interventions are ineffective.

Little is spent on science; little is known scientifically.

Too little useful research is being done, too few research results are useable, and information that is relevant and valid is too hard to find. Most interventions are introduced in practice without scientific assessment of their effectiveness, let alone their cost-effectiveness. Knowledge of cost-effectiveness of medical interventions is essential for meaningful quality management. For example, in an era of increasing scarcity, cheaper treatments that are as effective as those that exist now may be more valuable socially than marginally more effective treatments whose cost is so high that few people or health financing scheme can afford them.

PROBLEMS IN AUSTRALIAN HOSPITAL.

Like most of the industrialised world, Australia is experiencing problems in its hospitals. Many of the difficulties relate to the great expansion of medical technology and the consequent increasing rate of specialisation.

The hospital industry in Australia, as in any industrialised society, is large and complex. While common wisdom suggests that Australia enjoys hospital services which are soundly based, hospitals and society cannot ignore the rising rate of hospital and medical litigation over recent years, and the rising tide of complaints and dissatisfaction with hospitals. Rising health care costs coupled with the community's expectations for better value for money from hospital services is adding a further dimension to the problem.

There has been an insidious emphasis on how many patients individual facilities treat, rather than on the extent to which hospital episodes improved patients' health status, the cost of services provided, and patients' satisfaction with the care they received. Certainly, anecdotal accounts and insurance company experience suggest that the quality of care and services in hospitals has suffered. There is insufficient evidence to know if the apparent linkage between the number of patient complaints and the level of litigation and the quality of care and services is real or whether it merely reflects a greater community awareness and a greater propensity to complain.

Few if any hospitals can guarantee patients that they monitor routinely their quality of care, let alone inform them of the quality of care they can expect to receive. There are few if any hospitals in Australia that can demonstrate an effective quality management program. This situation persists despite historical initiatives pertaining to hospital accreditation, credentialing of medical staff and, more recently, quality assurance in the context of quality management.

The reasons for this failure are many and varied, but boil down to the lack of incentives for hospitals to introduce quality management programs and no sanctions if they do not. Moreover, doctors, not unlike their counterparts in many comparable industrial settings, find quality management threatening and, in the case of doctors, quite foreign to their culture and traditions. Put very simply, doctors tend to believe, incorrectly, that their efforts alone reflect the quality of care and hence quality assurance efforts must be about finding fault with doctors. However, quite unlike there counterparts in industry, doctors' failure to embrace quality management does not lead to the demise of their organisation with consequential loss of employment.

QUALITY REALLY MATTERS: INDUSTRY LEADS, HOSPITALS FOLLOW.

Worldwide, industry has recognised that it is 'quality or else'. In the West, many people attribute Japanese manufacturers' success to their relentless pursuit of quality. The idea that quality is the key to success has spawned a series of movements with various names, such as TQM (total quality management), CQI (continuous quality improvement), the Deming method, and a host of management techniques such as QCs (quality circles), SPC (statistical process control), and QFD (quality functional deployment).

Companies are devoting considerable time, attention and resources to quality management; not for competitive advantage, but for their survival. Some have succeeded. But in many companies the quality revolution is on paper rather than on the shop floor; lip-service to quality management cannot improve quality. In others, quality management programs have simply ground to a halt because they have failed to produce expected results. Often they focused on the structure of quality management processes, rather than on their outcome or effectiveness, and failed to focus on what matters most to customers: the quality of goods and services.

Hospitals have yet to come to grips with the quality revolution. Quality management is, or should be, an essential component of hospital management. It provides the information to reassure patients about the hospital's quality of care and to improve continuously the quality of that care. Hospitals, and everyone who works in them, must gear everything that they do to improving patients' health status. In this decade and beyond, quality management will be one of the hospital's most significant challenges.

QUALITY MANAGEMENT IS A PRODUCTION-LEVEL TOOL.

Quality maturity is the goal; quality improvement, the product; quality management, the process.

Quality management (QM) is customer centred, product focused, measurement oriented, improvement driven and all pervasive. Its goal is quality maturity - the state of striving ceaselessly to continuously improve quality (and its inseparable twin, productivity) to produce greater value for money. Quality management encompasses all of the forms and functions necessary to achieve quality maturity.

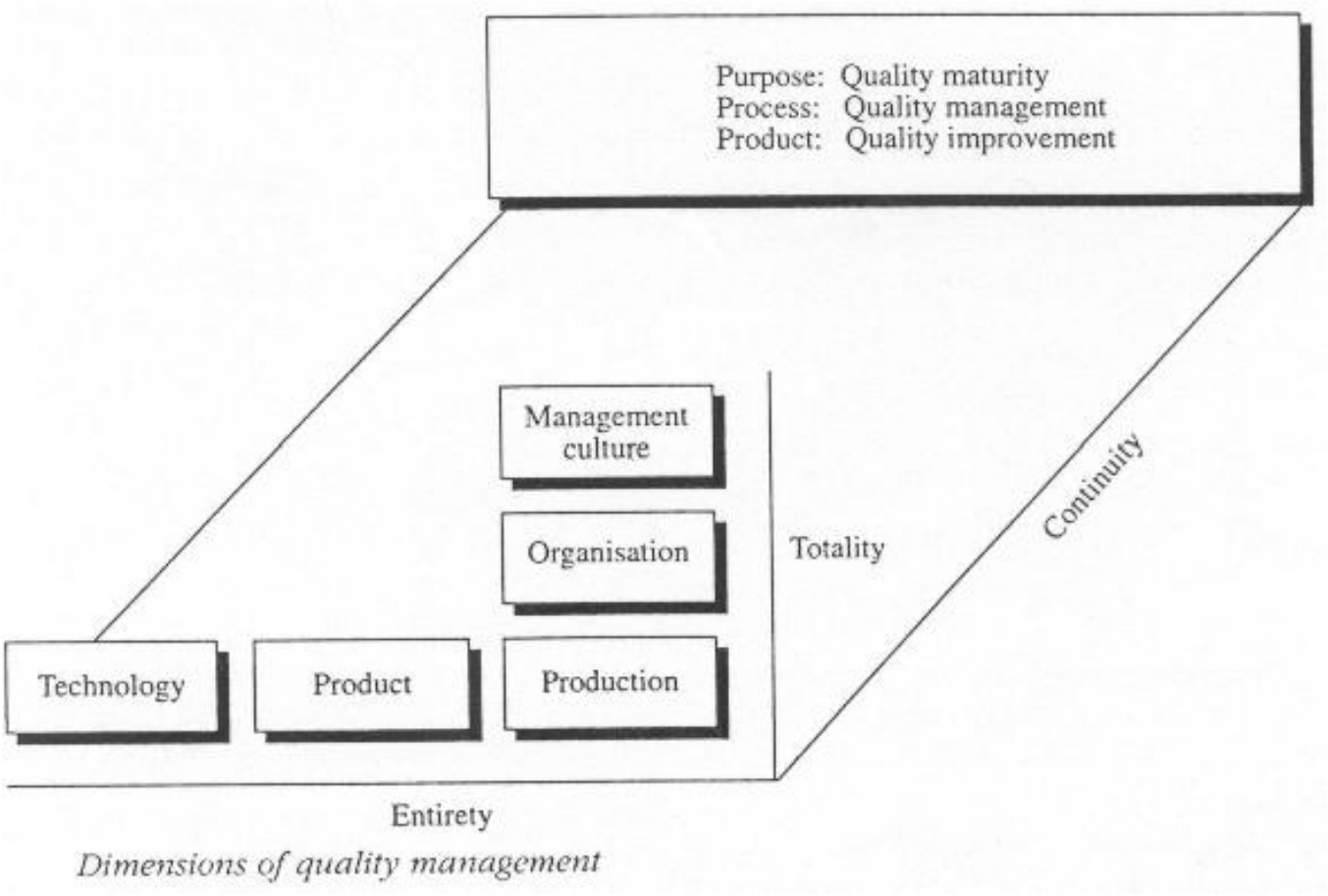
A quality-mature hospital increases patients' health status maximally, at least cost, with greatest patient satisfaction, and perfects trade-offs among these objectives if they cannot all be met simultaneously. Quality is measured explicitly; results used continuously to review and, if necessary, revise practice and process policies and change care systems and processes to improve quality. Changes in culture, organisation, incentives and the hospital's operating environment are needed to facilitate progress toward this end.

Quality management is a production-level tool, useful to manufactures in production of goods and to hospitals in caring for patients. Viewing a hospital as a complex production system is difficult for many health professionals, but necessary if they are to really understand quality management. Key concepts include the following:

- Quality and costs are so intertwined that one cannot be managed without regard to the other.
- The quality of goods (produced by manufacturers) or services (health improvement produced by hospitals) results from production systems, not the efforts of individuals working in isolation (e.g. production workers or doctors).
- Quality management is synonymous with, and required for, good management: achieving an

organisation's purpose by improving its product and production system.

- Quality management is an integral part of production or service delivery, not something separate.
- Quality management can, and should, be subjected to the same scrutiny and continuous improvement to which it subjects an organisation's production function.
- Concepts and techniques needed to implement quality management exist already but, as with all aspects of production, can be improved continuously.



Dimensions of quality management

Quality management means meaningful measurement.

Measurement is essential for quality management, which involves considerable use of statistics. Health care has been devoid of meaningful feedback to improve its quality. Actions may be hit-or-miss, and without feedback no one will know that anything has really improved. Feedback of results to improve practice policies, care processes and quality control elements is the principal missing link to integrate systems and improve the quality of care.

Health care is a far greater management challenge than manufacturing.

Virtually all quality management experience stems from manufacturing, necessitating constant reference to industry and industrial analogies. Health care, however, represents a more complex quality management challenge, even though the same basic principles apply. Industrial quality management techniques cannot be applied uncritically, and have limited applicability, to clinical care. Health care quality management requires use of more sophisticated techniques than those used in industry; however, industrial techniques can play a part in improving operational efficiency.

Variance reduction: as important in health care as in manufacturing.

The greatest difference between manufacturing and health care is what constitutes quality and how to achieve it. Manufacturing quality gurus often define quality simply as meeting specifications; zero defects is a quality absolute to be achieved through zero variation in inputs and of manufacturing processes. Since hospital patients often exhibit large variation in factors affecting outcomes, simple statistical analyses can exhibit large, but quite appropriate, variation in the processes applied to patients. Achieving zero defects in health care requires perfecting the fit between what patients need and desire and what they receive. Achieving a perfect patient-process fit and ensuring that specified processes are implemented properly, thereby ensuring zero production defects, is far more difficult than achieving zero defects in manufacturing. Variance reduction must strive toward improving poor performance (and, secondarily, eliminating poor performers) to protect patients while encouraging good performers to do even better, to improve the average, and reduce variation in, quality of care.

Technology, product design and production determine quality.

The quality revolution began in production (making the product to specifications) and spread to product design - first to enhance products' 'manufacturability' (thereby improving production quality) and then to produce designs that delighted customers at value-for-money prices. Now the quality revolution is spreading to the generation of the technology that improves production processes and product designs.

Quality is determined ultimately by technology (which usually limits product designs and production processes); mostly by product and process specifications; immediately by conformance to specifications; and additionally by operational efficiencies that reduce production costs. In health care, product technology is knowledge about disease processes and interventions to alter their course; process technology is knowledge about how to deliver interventions most cost-effectively. Product specifications are manifest in practice policies (standing rules on how to treat types of patients and what to expect as a result) and process or procedural policies (process specifications or step-by-step procedures, for example for conducting specific surgical operations).

Today, most if not all hospitals lack, and for the foreseeable future will continue to lack, the means to develop technology, and to formulate *de novo* practice and process policies. Consequently they must usually limit their quality management efforts to adopting or adapting practice and process policies developed, for example, by professional societies (that are based on knowledge and technology developed, for example, by government-funded research) and to improving conformance to these policies. By measuring outcomes in relation to processes, hospitals can contribute significantly to improving knowledge, as well as the quality of their care. This manual focuses on practice policies and their use to define and, through structured quality improvement, to assure and improve hospitals' quality of care.

Quality management is more than traditional quality assurance.

Traditionally, at least in the United States, the term quality assurance (QA) has been associated with postproduction (retrospective) review of care, sometimes called medical audit. In North America, medical audit has been confined largely to episodic, sporadic or haphazard retrospective case-by-case review of medical records and, if deficiencies were found in care or its documentation, feedback to the doctor - who was as likely to argue about the so-called deficiencies as to reflect on or change his or her practices to prevent their recurrence. Almost certainly there was no follow-up to see if problems recurred or not. Three factors virtually precluded meaningful efforts to change practice and improve the quality of care: Limiting QA to doctors' activities, with its implicit, erroneous assumptions that doctors

alone produce patients' health status improvement and that they are the cause of, or their (re)education would resolve, all problems; lack of pattern analysis to identify problems and investigate their underlying causes; and absence of systems to rectify any problems for which causes could be elucidated. In Australia, the term quality assurance has been used loosely to embrace almost any activity intended to review clinical or non-clinical services. Most of such activity has been unstructured and rarely associated with review of patients' medical records by colleagues.

Assuring quality requires attention to all production phases.

The idea that health care is a production function and that quality management is a production-level tool for its improvement suggest classifying quality control mechanisms by their temporal relationship to production processes: preproduction, intraproduction and postproduction. Health care quality control mechanisms include the following:

- Preproduction - to control the inputs to production processes, for example:
  - Admission policies: to control the types of patients the hospital treats.
  - Credentialing: to control who treats patients.
  - Practice policies: to control how patients are treated.
- Intraproduction - to assure conformance to practice policies (product specifications) during the process of care delivery, for example:
  - Decision support technologies, to help providers make the right decisions at the right time, will be increasingly common in the next thirty years.
  - Robotics, to help implement procedures flawlessly - here today, more tomorrow.
- Postproduction - to measure and monitor performance toward its improvement, by comparing what is being done and achieved to what should be being done and achieved, and making necessary changes in the production system to close any gaps, for example using:
  - Structured quality review (SQR), which involves automated screening of medical records to identify, and structured medical record review to confirm, quality of care problems, and statistical analysis of findings to describe patterns of care and illuminate quality problems, toward improving conformance with practice policies.
  - Structure outcome measurement (SQM), to examine long-term outcomes (end results) of care and their relationship to practices, to improve practice policies and care processes.

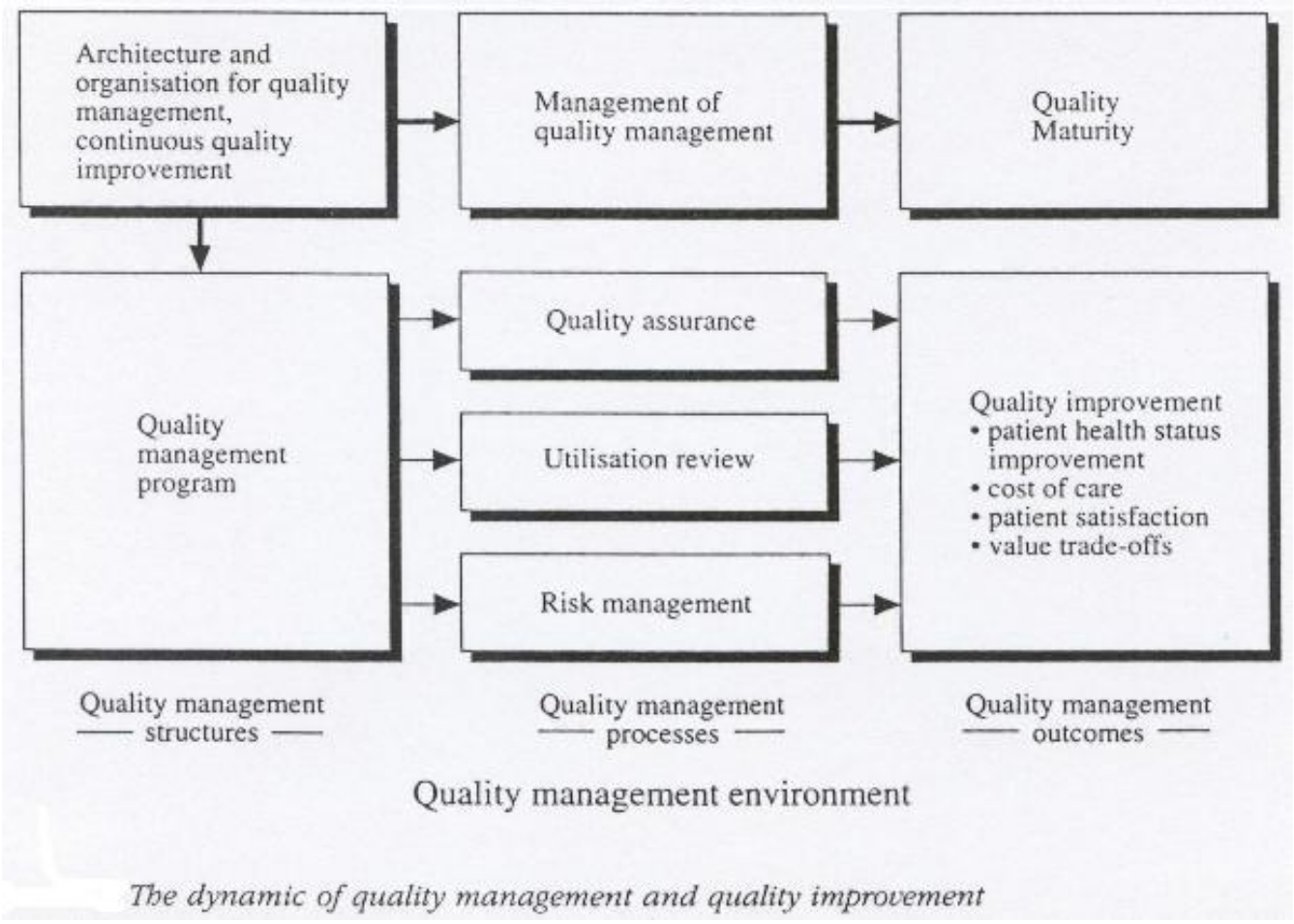
Hospital accreditation, relying as it has until quite recently on preproduction surveillance of structures, is insufficient to assure quality. Hospitals must develop and deploy a complete quality management system that encompasses mechanisms to assure and improve quality at all three production phases.

Quality management encompasses all quality improvement activities.

Quality management embraces all the multiple and various functions and activities which together are required to ensure quality maturity. In hospitals, quality management includes:

- Quality assurance / quality improvement (QA/QI) - to ensure that care conforms to practice policies (pre-established process and outcome criteria and standards); to provide information to validate and improve practice policies; and to correct identified deficiencies in performance, thereby improving the quality of care.
- Utilisation review (UR) - to ensure patients receive only needed (but all necessary) interventions (procedures, days of care, etc.), in the least expensive setting, for the shortest possible duration. In practice, UR is best subsumed within QA.
- Risk management (RM) - to reduce the hospital's exposure to financial loss consequent to

providing care. Such exposure is reduced inherently by effective QA/QI.



The dynamic of quality management and quality improvement

QUALITY: FOREMOST IN CUSTOMERS' MINDS.

System quality differs from production quality.

At the health system level, access to care is clearly an important quality consideration and may obviously influence a population's health. However, it is irrelevant at the production level, which involves patient - provider interactions. Maximising providers' performance for individual patients does not necessarily maximise system performance, although it may contribute to improving it. Moreover, the last units of achievable health status improvement may be gained at considerable cost, and if some of these resources were used elsewhere, they may yield more population health improvement per dollar. This manual focuses on production-level quality, that is, patient health status improvement by individual hospitals.

Quality defines a product or service; it is not an aspect.

Quality is good; high quality is very good; low quality is, well, to say the least, not good. 'Quality' evokes a powerful and positive image that somehow encompasses the ideals of truth, beauty, and abundance; the quest for it is eternal, a crusade that sometimes is as compelling as the search for the holy grail. Its attainment is elusive, its accomplishment ephemeral.

Customers can gauge manufacturers' quality by a number of dimensions, apart from price, including: product performance, reliability, durability, serviceability, aesthetics and image. In contrast, patients have virtually no measurements of the quality of care to use in selecting among providers and doctors have little information to select among interventions for their patients.

Health care's principal purpose is to maintain and improve patients' health status. To assure and improve health care quality, this functional product definition must be translated into product specifications. All quality assurance and improvement activities begin with quality assessment. Quality assessment begins with practice policies (or practice criteria) that state what should be done for particular types of patients to maximise achievable health status improvement and what to expect consequently.

Quality must be measured to be improved; defined to be measured.

Quality is defined operationally by how it is measured. Measuring quality requires defining essential attributes of interest to the person who intends to use the results - the customer. Products and services that rank high on all aspects of quality, the very best, are few and far between; they are also often very expensive. Quality has many characteristics; trade-offs among them must usually be made. Quality and costs are so intertwined that one cannot be managed without regard to the other.

Provider performance is paramount.

Health care quality (provider performance) has the following four essential dimensions:

- technical quality - measured by health status improvement;
- resource consumption - measured by the cost of care;
- patient satisfaction - measured by patients' perceptions of the subjective or interpersonal aspects of care;
- values - measured by the acceptability of any trade-offs that must be made among the three previous outcomes.

Practically, hospitals must measure provider performance with reference to conformance to practice policies and their expected patient outcomes. Today, interventions' effect on health status must usually be assumed because it is not - but ought to be - known scientifically. Today, hospitals do not measure, and patients do not know, providers' quality of care. Consequently hospitals cannot improve the quality of their care and neither hospitals nor patients can select rationally among providers.

After 5,000 years, a breakthrough in the quest for quality.

Patients and providers have long been concerned about the quality of their health care. However, lack of technology has precluded its meaningful measurement. In this century, and particularly in the last decade, great strides have been made in measuring the quality of health care. They are principally advances in: health care quality concepts, knowledge engineering and computer technology. The last few years have seen the emergence of the first practical methods for routinely assessing and measuring health care quality.

Quality measurement is more than quality assessment.

Quality measurement is necessary to quantify quality and to conclude that improvement has occurred. Quality (performance) measurement quantifies a hospital's or a doctor's performance in diagnosing and treating patients. It provides an actual measure of a hospital's performance; patients or payers can

choose among hospitals based on their quality scores. Quality (of care) assessment determines whether or not care provided to an individual case met specified standards of medical practice. It provides a judgement about the quality (appropriateness or acceptability) of an episode or continuum of health care; hospitals can use these assessments to improve the technical quality of their care. If these assessments involve all aspects of the quality of care and appropriate probability samples of or all cases, hospitals can aggregate them into a quality score in order to measure quality and to monitor quality improvement.

Measuring quality: outcome / process assessment is better than outcome risk adjustment.

Two approaches are emerging to measure quality:

- Outcome risk adjustment systems adjust statistically a hospital's patient health outcomes (e.g. deaths) for factors affecting the outcome that are beyond the hospital's control in order to obtain a measure of its performance.
- Outcome / process assessment relies on specifying the processes that if implemented properly would result in the maximum achievable patient health status improvement (given the patient's preferences for ends and means and society's resources), and case-by-case assessment to see if a provider followed specified processes and achieved expected outcomes. Outcome / process assessment reveals what quality problems exist and may illuminate their causes; outcome risk adjustment does not.

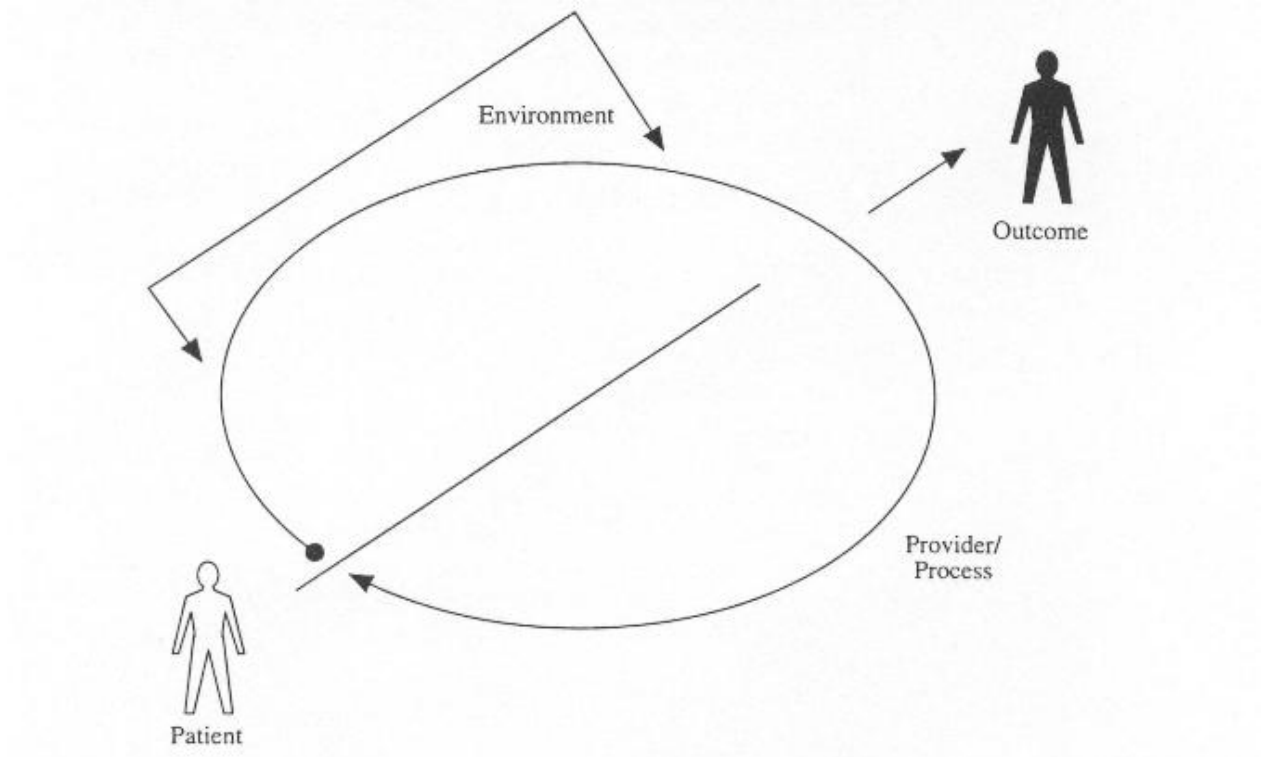
HEALTH CARE IS A PRODUCTION FUNCTION.

Health care's purpose is to improve patients' health status.

Health care's purpose is to improve patients' health status to the maximum extent possible, using specific interventions consistent with patients' preferences and constrained only by patients' means, providers' circumstances, and society's resources and mores. Hospitals exist to manufacture health. The idea that health can be 'manufactured' or that hospitals are health-producing 'factories' is a perspective on health care that is rarely articulated, and foreign to most doctors. Quality management requires viewing hospitals as health-producing facilities - organisations designed to 'produce' health. However, hospitals are not industrial factories and the production of health in hospitals differs markedly from the production of manufactures in factories. Consequently, industrial quality management methods may not be, and often are not, useful for improving the production of health.

Care processes, patient characteristics, the environment - and their interactions - produce outcomes.

Health care production systems consist of a series of processes (shaped by structures), each of which may be a production subsystem with its own process elements. The output of one process is an input to a subsequent process. Three sets of variables - and their interactions - produce patient outcomes: health care production processes (producer); patient's characteristics at the time of entering the process, including his or her health problems; and the environment in which production processes take place (coproducers). Interactions among variables may be the greatest determinant of patient outcomes. An effective medical intervention (process) transforms patients (input): patients' postprocess health status (outcome) is greater than it would have been at that point in time without the process. Knowing the determinants of health does not mean that we can alter them favourably; knowing health status does not tell us what produced it.



The production of outcome: Health care process (intended producer), patient, environment (coproducers), and their interactions

It is easier to measure outcomes than to attribute them to interventions.

Attribution of patient outcomes to care processes is the key to quality improvement. Measuring a postprocess outcome tells nothing about whether or not the process produced the outcome. A patient's recovery or death may have everything, nothing, or something to do with care processes. It is one thing to observe an effect and quite another to confidently attribute that effect to the preceding intervention.

Attribution of outcomes to processes must either be assumed or inferred. The strength of the inference depends on the strength of the evidence. Attribution may be based on judgement, examination of interventions and events preceding outcomes, or, preferably, on research results. Plausible mechanisms are not necessarily valid chains of cause and effect. The greater the period between intervention and measurement, the more uncertain becomes attribution of outcomes to processes because of the increasing opportunity for occurrence of postprocess outcome-influencing events.

Quality management requires that outcomes be assessed, not assumed.

Outcomes measurement provides information on the end results of care in relation to the processes that preceded them and other coproducers, for example patient characteristics. This information can improve the design and content of practice policies, confirm or cast doubt on interventions' effectiveness, point to the need for better interventions, and help set research priorities. However, outcomes measurement cannot provide incontrovertible evidence about interventions' effectiveness and can never be a substitute for clinical trials or other experimental research. Patients select doctors and doctors select interventions; substantial patient-provider selection bias may exist.

Design of health production systems requires scientific evaluation.

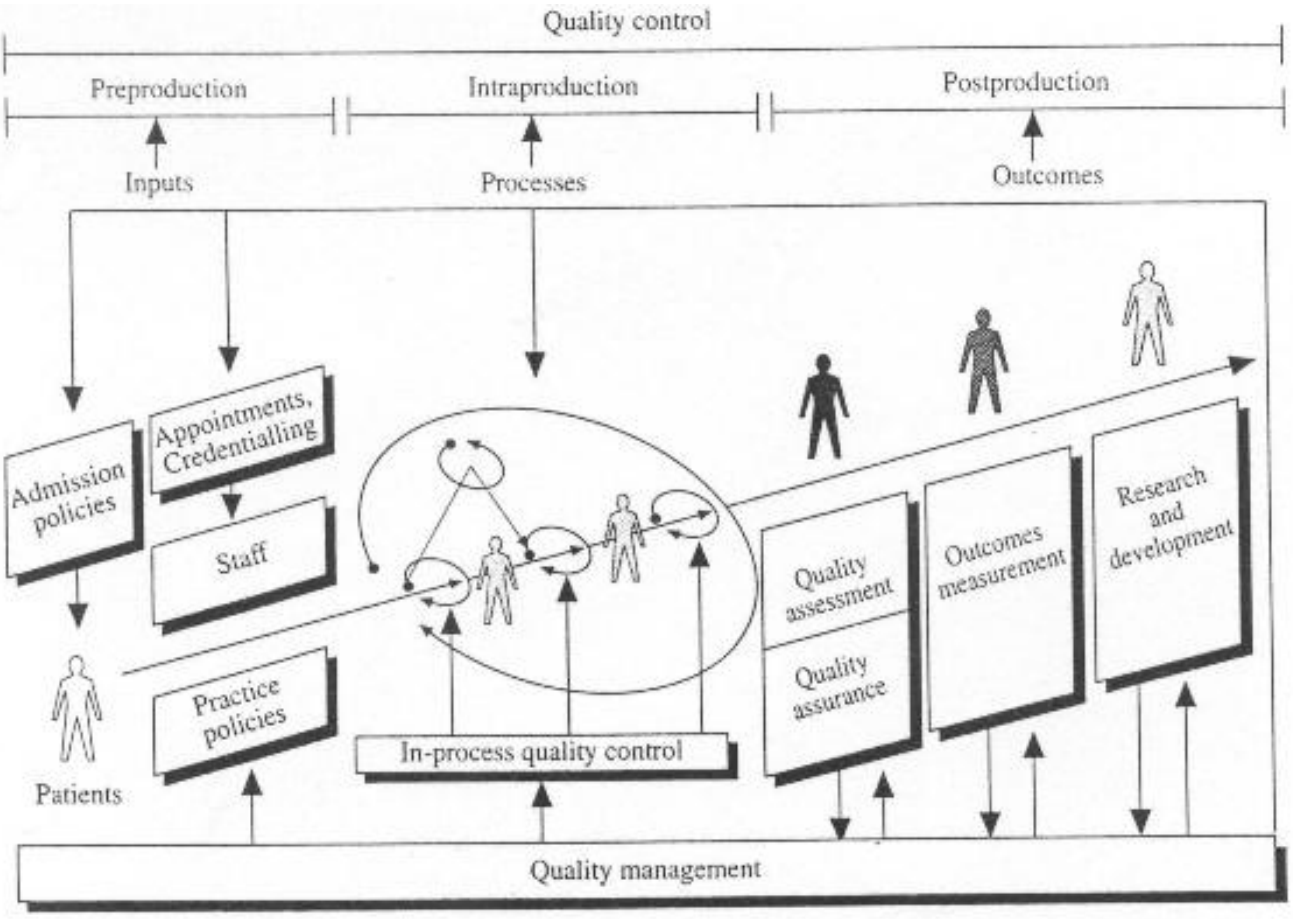
Research studies, especially randomised controlled clinical trials (which can overcome patient-provider

selection bias), provide the best information for designing practice policies and production processes. Only through scientific evaluation can one produce the certain knowledge necessary to (re)design health production systems to realise achievable health status improvement and to raise the level that is achievable. Today we spend far too little on such research; it is too narrowly focused to be useful for quality management and often too poorly done for its results to be useable.

Hospitals must strive to establish a complete quality management system.

Hospitals are health care's principal production facilities - organisations designed to 'produce' health. They must put in place a complete quality management system -the structure and processes necessary to improve continuously the quality of their products and production processes. An effective quality management system assures and improves continuously the appropriate treatment of individual patients and treatments' effectiveness. It encompasses mechanisms to:

- control or assure product quality at each of production's three phases: preproduction, intraproduction and postproduction;
- generate the information needed to validate and improve practice policies and their constituent product and process technologies;
- manage and improve quality management.



Health care quality management system

Quality control takes place at two levels: the organisation and the workface. Organisations design production systems to produce products to specifications. What occurs at the workface determines

products' quality. Ideally, organisational quality control mechanisms promote workface quality and workface experience shapes organisational quality control mechanisms,

Analyse variation in processes, outcomes to identify improvement opportunities.

Quality management's central goal is to improve product quality and to reduce production variance. Variation in patient outcomes or deviations from specified processes or expected outcomes may signify a quality problem. Hospitals' goal is to reduce the variation in the fit between what patients need and want, and what they receive. They must implement interventions, for example a surgical operation, as uniformly as practical. Uniformity of process facilitates assessment of variation in outcome by eliminating the obvious factor - variation in process. Variation in outcomes detracts from quality because it represents risk to patients. Quality managers must reduce variance in outcomes while simultaneously increasing average patient health status improvement. In some circumstances they may face trading-off increased average health status improvement and reduced variation in such improvement.

All strategies for improving the quality of care depend ultimately on analysing variation in production performance and resultant outcomes. They are principally:

- structured performance benchmarking;
- structured quality improvement;
- structured outcome measurement.

Identify the best performers; find the difference that makes the difference.

Structured performance benchmarking refers to the strategy of measuring competitors' (colleagues') performance to identify the best performers, to discern what processes, patient flows, and organisation seem to produce this performance, and to establish where one's performance stands in relation to the best. Consequently, one can align one's production system with that of the best performers toward improving one's performance. Today, structured performance benchmarking is beyond the means of all but large-scale hospital systems or those that engage in collaborative arrangements for this purpose.

Find and eliminate quality problems' root causes.

Structured quality improvement refers to a hospital-wide strategy to systematically identify quality problems, discover their root causes, and routinely eliminate these causes. Quality-focused hospitals must design and deploy mechanisms for these purposes. This is the basic strategy for improving hospitals' quality of care, and it is now practical.

Relate long-term outcomes to care processes to validate and improve practice policies.

Structured outcome measurement refers to the strategy of measuring the long-term (end results) of health care interventions. It examines the extent to which conformance to specifications actually improves patient health status, and produces information to improve them. It is not a substitute for, but may help prioritise, needed research. Only the largest hospitals are likely to have the resources necessary to launch a structured outcome measurement program or conduct the clinical trials that its results suggest.

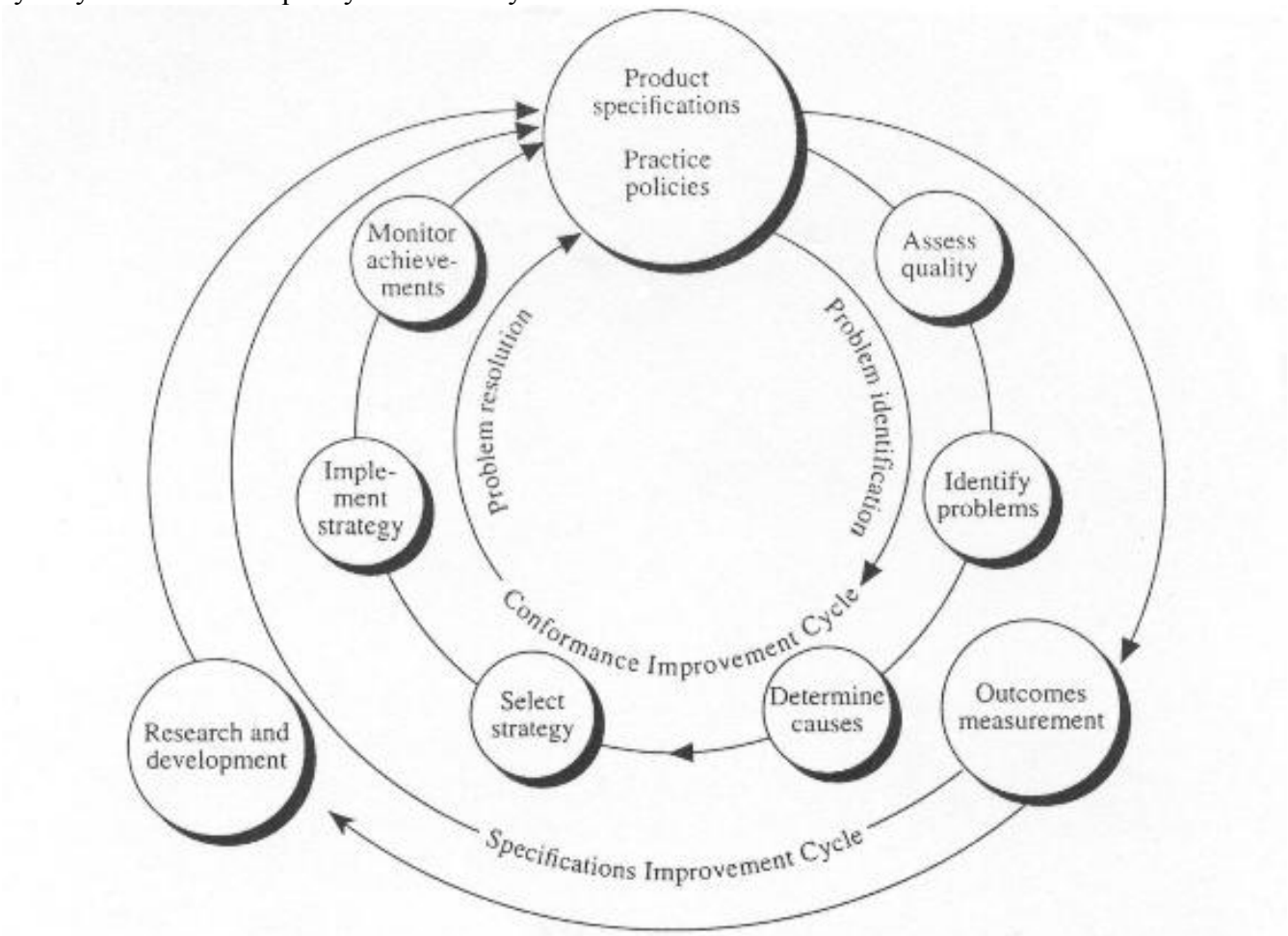
THE WAY FORWARD: STRUCTURED QUALITY IMPROVEMENT.

More health benefits than pursuing cures for diseases.

Structured quality improvement (SQI) is likely to be the greatest advance in the next twenty years. If implemented successfully, SQI has likely greater potential to improve health care's cost-effectiveness in the next twenty years than any other technology - even 'cures' for such specific diseases as cancer. It operationalises the quality improvement spiral. Structured quality improvement pertains mostly to conformance improvement (getting done what needs to be done in the way it should be done each and every time) but also informs specifications improvement. Structured performance benchmarking and structured outcome measurement provide information mostly for specifications improvement (what to do and how to do it).

Quality improvement results from conformance to, and better, specifications.

The quality improvement spiral is the combined continuous operationalisation of two interlocking cycles: the conformance improvement (CI) and specifications improvement (SI) cycles. Practice policies are their common point of origin. The CI cycle refers to the process of perfecting conformance to specifications. The SI cycle refers to that of reviewing and revising product specifications (practice policies that are the basis for QA activities). The CI and SI cycles must be repeated endlessly to assure and improve quality continuously. For all practical purposes, the conformance improvement cycle is synonymous with the quality assurance cycle.



Continuous quality improvement through conformance and specifications improvement cycles

Quality assurance cycle: repeat endlessly to improve quality continuously.

The term quality assurance denotes a cyclical process involving retrospective quality assessment - retrospective review of care outcomes and processes based on documentation in the patient's medical record - and subsequent steps to improve care processes to close any performance gaps. Quality assurance (QA) and quality improvement (QI) are important but distinct aspects of production and product quality; continuous quality improvement (CQI) is performing QA/QI on a continuous basis. Quality is improved both by better conformance to specifications, and by better specifications (those that produce more health status improvement, or the same improvement at less cost or with greater patient satisfaction, and/or less variation in outcomes).

Specifications improvement: knowing right things to do.

The specifications improvement cycle intends to improve quality through better product specifications - the practice policies that are the starting point for the conformance improvement cycle; ideally, those that if implemented properly would result in maximal patient health status improvement within patients' preferences and society's resources. Quality managers can derive information to formulate or revise practice policies from their or others' clinical experience, structured quality improvement, structured performance benchmarking, structure outcome measurement and research reports.

Conformance improvement: doing right things right.

The conformance improvement (or QA) cycle intends to improve quality through conformance to product specifications and thus to reduce variability in health care processes and outcomes. It starts with specifying what should be done and achieved, continues with assessing the extent to which it was done and achieved, and ends with efforts to close any performance gaps. Quality managers must put in place mechanisms to identify systematically and resolve routinely quality of care problems.

First find, then fix, quality problems.

Structured quality improvement involves a hospital-wide system for:

- structured problem identification - to identify systematically quality problems, and their root causes. This involves:
  - defining and measuring or assessing quality;
  - identifying quality problems;
  - determining quality problems' root causes.
- structured problem resolution - to resolve routinely quality problems and eliminate their root causes. This involves:
  - evaluating and selecting among alternative improvement actions to remedy quality problems and eliminate their root causes;
  - planning and implementing chosen improvement actions;
  - measuring quality to ascertain if it has improved, to attribute any observed improvement (or its lack) to improvement actions, and to identify any other problems that they may have created.

Quality improvement begins with quality assessment.

Quality assessment - measuring and monitoring provider performance - is presently the key to quality improvement in hospitals. Quality assessment results can inform admissions policies, credentialing decisions and practice policies - the starting point for quality assessment and hence of the quality

assurance cycle.

PRACTICE POLICIES: THE KEY TO QUALITY ASSURANCE AND IMPROVEMENT.

Effectiveness is a statistical concept; providers' performance depends on interventions' appropriate use.

One must distinguish between an invention's effectiveness and providers' performance - the extent to which providers use an intervention appropriately and implement it properly. Effectiveness is a statistical concept. An effective intervention improves a population of patients' health status. Measuring an intervention's true effectiveness depends on determining the difference in health status between intervention, doing nothing, and a disease's natural history in such a way that one can confidently attribute the difference to the intervention, for example through a well-designed, well-controlled randomised clinical trial. An appropriate intervention can reasonably be expected to benefit a particular patient because he or she fits the profile of patients for whom it is known or assumed widely to be effective.

Specifications are the heart of quality.

Only by specifying a product can its quality be assured (by producing it to specifications) and improved (by specifying a product that meets customers' desires better). Health care's product is defined by practice specifications: what providers should do for patients (care processes) and what to expect as a result (outcomes). They may take the form of practice policies - standing rules for treating patients - (referred to sometimes as guidelines or parameters) or practice criteria (referred to sometimes as criteria and standards) - rules for judging whether or not patients were treated appropriately.

Process specifications define health care's product; an individual patient's outcome cannot be attributed to care process.

Process specifications define health care's product because it is impractical to measure routinely patients' health status improvement and virtually impossible to attribute reliably any measured improvement to specific interventions. Practice policies - pre-established clinical decision rules for treating individual patients that take into account their preferences regarding ends and means - are the starting point for defining these processes and their expected resultant outcomes. For all practical purposes, in the immediate future, quality management relevant to clinical care will be limited in most hospitals to adopting and adhering to practice and procedural policies, and to ensuring conformance to these policies.

Practice policies express how to achieve achievable patient health status improvement.

Practice policies:

- are the basis for practice, providing direct guidance or instructions to providers about how patients should be managed, including who should manage them and where they should be managed;
- represent the best way to manage individual patients;
- make explicit assumptions between health care processes (specific medical interventions) and stated patient outcomes;
- must take into account:
    - hospitals' facilities and other resources (and doctors' and other providers' skills) for treating patients;
    - patients' preference regarding ends to be achieved and means to achieve them;

- may encompass socioeconomic considerations.

One must clearly distinguish synthesising knowledge to determine best practices (which involves only technical issues) from formulating policies - what should be done in specific circumstances (which involves such social issues as judging an intervention's cost-benefit). Practice policies must be highly specific to be useful. Their complexity virtually requires that they be computerised at the point of service delivery, in decision support technology. Nevertheless, even simple practice policies, if formulated and used consistently, can improve the quality of care.

If available, which usually they are not, fully-elaborated practice policies can be translated easily into practice criteria, to assess retrospectively the quality of care. If not available, practice criteria serve this latter purpose. Practice criteria are the basis for quality assurance, guidance or instructions to QA personnel, including medical record reviewers, about judging how patients should have been managed. They provide indirect guidance or instruction to providers about how patients should be managed.

Technology limits achievable patient health status improvement.

Conformance to practice policies will only improve patients' health status if they embody effective interventions. Conformance to valid practice policies will improve quality, but only to the limits of the underlying technologies. Additional health status improvement requires better technologies. Nevertheless, conformance to valid practice policies - doing what is known or assumed to be effective - may provide greater additional health status improvement than the introduction of new treatments under development or that could plausibly be developed in the near future.

QUALITY PROBLEMS: SEARCH SYSTEMATICALLY, RESOLVE ROUTINELY.

Systematic surveillance is essential to find quality problems.

For effective quality management, hospitals must have in place systems to identify systematically and resolve routinely quality problems - deficiencies that if resolved would improve the quality of care. Hospitals can employ the following problem identification mechanisms:

- systematic review of care or cases (patient records that document care processes and outcomes);
- systematic surveys of people's perceptions and suggestions;
- incident reports, including patient complaints and allegations of malpractice, and compliments;
- quality assurance studies;
- group problem-solving techniques, for example quality circles.

At a minimum, hospitals must perform hospital-wide systematic surveillance of care or cases, using either, or preferably both, of the following methods:

- Structured quality assessment - reviewing care case-by-case - for example structure quality review or unaided structured medical record review to identify and characterise quality problems;
- Structured quality monitoring - population-based screening - watching rates of events in populations of cases to trigger review of providers' care if rates exceed pre-established limits.

Structured quality review (see below) is the most cost-effective way to identify quality of care problems. The careful tracking and reporting of hospital incidents, and patients' complaints, is an important supplemental mechanism for identifying potential or actual problems. An incident is something that happened as a result of or in connection with patient care, especially something that merits reporting.

Hospitals should track all incident reports, including patients' complaints, investigate individually all serious incidents, and analyse statistically incident reports and investigations' results in order to identify patterns with a view to reducing incidents. Patient satisfaction surveys help to assess the interpersonal aspects of quality of care and are an important tool in overall quality management and quality assurance (see below).

Screening can be a cost-effective way to identify quality of care problems.

Screening's central purpose is to focus expert clinician reviewers' attention on cases likely to exhibit quality problems, thereby reducing their workloads to manageable levels and improving their productivity. It substitutes data analysis or less expensive medical abstracter or nurse reviewer personnel for expensive expert clinician reviewers. Case-based screens identify cases that exhibit potential quality of care problems and their nature. Population-based screens identify providers whose cases exhibit specified events at a higher or lower rate than that specified (threshold) or whose performance lies at the extremes of statistical distributions (cut-off). Ultimately, quality assessment depends on expert clinician review of medical records - either those failing case-based screens or those of providers identified by population-based screens. Case-based screens are more useful than population-based screens for identifying potential quality of care problems.

Structured quality assessment intends to identify quality problems by employing mechanisms to look either for a given problem (e.g. nosocomial infection) in all cases or for all problems in a given case, or, preferably, both (all problems in all or relevant statistically significant samples of cases). It may involve use of case-based screens to identify quality of care problems. These screens divide cases into those that can be presumed acceptable because they met screening criteria and those that require further review by expert clinicians to confirm or deny quality problems. Their utility depends on the extent to which they can accurately classify cases as containing an important quality problem or not. Ideally, case-based screens must identify all cases with important quality of care problems (sensitivity) while rejecting those with no quality problems (specificity). The sensitivity and specificity of emerging computerised quality assessment screens is now sufficiently high to make their use worthwhile.

Structured quality monitoring may involve the use of population-based quality of care screen (referred to often as rate-based or clinical indicators). Such screening may trigger the further investigation of provider's cases to confirm (or deny) a quality problem's existence and to identify problem processes, including those that might have produced observed maloutcomes. Clinical indicators are rate-based screens that depend on thresholds or cut-offs to trigger further review. Sentinel events are indicators with zero thresholds. Population-based screening can only identify providers who seem to be experiencing quality problems and may miss those who are delivering substandard care but who do not exceed screening thresholds or cut-offs. Population-based screens' - clinical indicators' - sensitivity and specificity is largely unknown.

Determine problems' root, not only their apparent, causes.

To fix problems and ensure they remain fixed, hospitals must establish problems' root causes, those that if eliminated would prevent the problem's recurrence, not only their apparent causes, which are merely the problem's antecedent manifestations.

Problems are fixed only if they remain fixed.

Hospitals must put in place a system for fixing quality problems and checking that they stay fixed. Hospitals that attempt to identify quality problems without institutionalising the means to resolve them

are wasting their resources.

Structured problem resolution involves: selecting among potential improvement actions (solutions to problems); implementing chosen solutions; and assessing quality to ascertain if it has improved. Problems are resolved only if they stay resolved and do not reappear after so-called improvement activities end. Resources and other constraints are likely to mean that not all problems can be resolved immediately; priorities must be set. Some problems are likely to be more important than others and therefore should be resolved first. For some potential improvements, the cost of their attainment may not be commensurate with their benefits and therefore they should be deferred.

Resolving quality problems may require changes in one or more of the following three areas:

- care processes - how doctors and other health care providers treat or manage patients;
- patient flows - how patients are routed into and from clinical processes, how the hospital manages care delivery, and the interrelationships among care processes;
- organisational management - how the hospital structures the production system or enterprise, and how it manages people and processes.

QUALITY: THE CHALLENGE OF HISTORY.

The challenge of measuring providers' performance.

Interest in formal quality assurance activities has waxed and waned throughout history. In recent times - 1858 - the English founder of modern nursing, Florence Nightingale, was concerned about the outcomes of hospital care, and thought of statistical adjustment of mortality data to permit proper comparisons, although she lacked the technology to make the necessary measurements. Early this century in the United States, a Boston surgeon, A.E. Codman, wanted to tally patient outcomes (the end results of care) to give credit for success and to fix responsibility for failure, although he too lacked the necessary technology. His efforts led ultimately to the formal accreditation of hospitals with the creation, in 1952, of the Joint Commission for the Accreditation of Hospitals (now the Joint Commission for the Accreditation of Healthcare Organisations). Now, after 5,000 years, the technology is emerging to meaningfully measure health care providers' performance. It represents the key to quality management and promises to unlock untold improvements in the quality of care.

Meeting the quality management challenge in Australia.

To look at the current Australian quality management scene with the benefits of historical perspective is to add a logic and understanding to three developments on the road to quality management that many medical practitioners see as threatening intrusions into their professional lives: hospital accreditation, credentialing of medical staff and quality assurance.

In the late 1950s and early 1960s concerns about the standard of care in public hospitals in New South Wales led to efforts to introduce hospital accreditation. In retrospect, these efforts could be seen as the first step toward quality management in Australian hospitals. After more than a decade of effort, the concern about the standard of hospital care resulted, in 1974, in the establishment of the **Australian Council on Healthcare Standards** (ACHS). It took some thirty years for accreditation to be accepted throughout Australia.

In the early 1970s two serious incidents in New South Wales hospitals brought the issue of what doctors do in hospitals to the public agenda and resulted in the development of the concept of credentialing of

medical staff, which had the effect of easing the widespread government and community concern. The first of these episodes involved the death of a young woman during an operation for thyroidectomy. The surgeon was a qualified anaesthetist and the anaesthetic was provided by a series of three general practitioners. The second episode involved a solo GP in a small country hospital conducting a total hindquarter amputation with the Director of Nursing giving an open ether anaesthetic. Unfortunately, once the concerns had subsided, credentialing remained purely conceptual and has never been effectively implemented in Australia, although it is the norm in the United States.

The formal introduction of quality assurance into Australia commenced in 1977 following a challenge by the Commonwealth government to the medical profession. Attitudes to quality management and its subset - quality assurance - have changed for the better since the late 1970s and early 1980s, and considerable activity is occurring in a number of areas. For example, in 1991 the ACHS introduced its clinical indicator project and revised its standards to introduce quality management as a requirement for hospital accreditation. Nevertheless, the fact remains that today there is no Australian hospital that can boast an effective quality management program, and one has to question the effectiveness of many QA projects in improving the quality of care for patients.

Hospital accreditation challenges governments and providers.

The development of hospital accreditation in Australia provides a good illustration of the difficulties encountered when attempting to introduce change into an extremely conservative industry. The greatest resistance in Australia, where public hospitals dominate the industry, was initially from state government authorities which saw hospital accreditation as an intrusion into their area of responsibility.

Members of the medical profession, with some notable individual exceptions, have never felt comfortable with hospital accreditation. Accreditation's focus on structure, and to a lesser extent on process, while ignoring outcome, has added to doctors' dissatisfaction because they have a subjective view of quality which relates almost entirely to the value of the medical care that individual doctors provide. In fairness to doctors' concerns, while accreditation may help to expose organisational deficiencies, it neither ensures that patients receive quality nor documents that care improves patients' health status.

Hospital accreditation is still evolving in Australia. While it has played the major role in upgrading the quality of Australian hospitals, there is no doubt that it has not met its founders' expectations in all respects. Until quite recently, one could criticise accreditation for not raising standards of medical records to the level necessary for quality management and case-based payment, and not explicating those pertaining to quality management and quality assurance. Now the ACHS is applying considerable efforts to address these issues. The ACHS has revised its standards on medical records and quality management and, if implemented with vigour, they should have far-reaching effects on the industry. However, the ACHS must still face the widely-held view that accreditation is a paper tiger: many forms but little substance. Whether true or not, such perceptions provide the ACHS with a continuous challenge to its role and credibility.

Technology challenges doctors' competence.

Concerns about the quality of services in Australian hospitals emerged in the late 1950s for which, in retrospect, it is difficult to pinpoint clear reasons. Most importantly, hospitals were not able to adjust to the enormous changes brought about by the technological explosion following World War II. With the technology came a concomitant elevation of expectations, a factor fuelled to some extent by the enthusiasm of the medical profession. In the late 1960s, problems associated with medical staff

undertaking procedures for which they were inadequately trained or experienced was a manifestation of this failure to adjust to a rapidly changing hospital environment.

Until quite recently, the Australian hospital and medical cultures have been derivatives of those of the United Kingdom. Attitudes of medical staff, training of doctors and nurses, and hospital staffing arrangements bore the unmistakable stamp 'made in the UK', in part because many specialists had trained there. However, the geographic, political and medical environment of Australia is very different from that in the United Kingdom and consequently problems began to appear in the early 1960s. Instinctively, answers were sought from a more comparable environment - that of the United States. Hospital accreditation in Australia was deliberately fashioned on the US model developed by the Joint Commission on Accreditation of Healthcare Organisations. A system of credentialing of medical staff (delineation of clinical privileges) was developed in the first instance without any knowledge of the US model. Significantly, a blueprint for a system ultimately emerged that was identical with that pertaining in North America.

Unfortunately, formal credentialing of medical staff has posed too big a threat to long-established traditional attitudes derived from the United Kingdom. In Australia, as in the Unite Kingdom, quality of care in hospitals has been seen to equate with the postgraduate qualifications of medical staff and there has been a failure to implement effective credentialing. This failure has meant that one of the most important elements of quality management and minimisation of the risk of medical and hospital malpractice litigation is missing in the overwhelming majority of Australian hospitals. The Royal Australian College of Obstetricians and Gynaecologist was the first of several colleges to acknowledge problems inherent in granting good-for-life qualifications by demanding recertification at periodic intervals. Credentialing is not only about the training of doctors but also about the link between their training and the hospital's resources. Postgraduate qualifications may certainly indicate a general competence at a point in time. However, credentialing is about specific, often procedural, competence, and the hospital's ability to provide the resources needed to conduct procedures to standards.

The government challenges the medical profession.

The third phase in the historical development of quality management activity in Australia commenced in 1976 when the Commonwealth government challenged the medical profession to engage in what was referred to as 'peer review'. Significantly, issuing this challenge to doctors and not to hospital managers reflected a lack of systems thinking which still exists to the present day. The Australian Medical Association took up the challenge and effectively engaged in technology transfer following a study tour of the United States, Canada and (West) Germany. The AMA embarked on a massive educational program that resulted in a considerable lessening of apprehension as doctors for the first time began to hear something of the techniques and principals of assuring quality of care. Nevertheless, there is no doubt that a degree of concern remains among doctors who have conceptual difficulty moving past the individuality of clinical care to the systems approach required for quality management.

HOSPITALS MUST FOCUS ON, COMMIT TO AND ORGANISE FOR QUALITY.

Quality pertains to everything hospitals do.

Everything that hospitals do must be geared to improving patients' health status, reducing the cost of its attainment, and increasing patient satisfaction with the interpersonal aspects of care. Quality management applies to everything that goes on within hospitals, including clinical and patient care such as doctors' decisions, nursing and physiotherapy. It also includes clinical support services such as clinical laboratory and imaging services, and operational services such as laundry and housekeeping, and

administration. However, this manual focuses sharply on clinical care - the core business of hospitals' production function - and, because they play such a vital role in its provision, on doctors' performance. To date, quality improvement in hospitals, where it has been attempted at all, has been limited generally to such operations services as the laundry because they are simple situations and most resemble industrial operations. While useful, such isolated efforts can achieve little quality improvement.

Quality management is about improving patients' outcomes and hence providers' performance. It is not about the condemnation or judgement in isolation of doctors, nurses or anyone else in hospitals. Quality management is primarily about continuous improvement in the quality of care, solving problems in a complex production system, and only rarely about weeding out 'bad apples' (poor performers resistant to or incapable of improving their practices through encouragement and education).

Quality improvement requires a quality management program to improve quality.

An effective quality management program is the hallmark of a quality-mature hospital. It institutionalises the structures and processes necessary to assure and improve quality, and the mechanisms to administer, control, and evaluate them to permit their adaptation to changing circumstances and to ensure that they continue to produce these outcomes.

The quality of a hospital's product defines the reason for its existence. Quality management is the process for assuring and improving quality. It involves interlocking structures and processes and outcome-based feedback to manage the production of health. Quality management is, or should be, a hospitals' primary business, not an incidental activity to be thought of only after the daily pressures of caring for patients have ceased. To achieve quality maturity, a hospital's quality management program must institutionalise:

- the hospital board's and management's commitment to quality, manifest, for example, in the existence of appropriate hospital by-laws and adequate budgets;
- a systems view of product and production quality, to develop a complete quality management program;
- an organisational structure to operationalise the program.

A proper organisational structure is essential for success.

An effective quality management program includes the following organisational elements:

- a well-constituted quality management committee and an effective committee system;
- a quality manager with the knowledge and management skills to guide and control the program successfully;
- a quality management department, with appropriate staff, to focus, co-ordinate and support quality management activities;
- clinical information systems to ensure the adequacy of data in medical records and to provide the necessary technology to aggregate, manage and use such data.

The absence of all or a number of these key elements of an adequate organisational framework is the major reason for failure to implement quality management in Australian hospitals. Methodologies for assessing the quality of care, and for identifying and resolving quality problems, have been a focus of interest for many health professionals. However, this focus on methodologies has occurred to the exclusion of the organisational structure necessary to effect quality improvement. A quality management program's structure and organisation are this manual's central themes, because most

Australian hospitals frequently do not consider these critical elements sufficiently, and sometimes they ignore them completely.

Small hospitals (100 beds or less) face additional difficulties in implementing quality management. However, there are a number of strategies to maximise the use of their limited resources and to allow a small hospital to embark meaningfully on quality management and, eventually, to achieve quality maturity. Such strategies include: making use of resources and services from a common network of hospitals or developing an association with a larger nearby hospital; and organising such functions as credentialing of medical staff on an area or regional basis and reducing the number of committees by combining them.

HOSPITALS' POLICY AND RESOURCE ALLOCATIONS MANIFEST COMMITMENT TO AN EFFECTIVE QUALITY MANAGEMENT PROGRAM.

Directors and managers must commit to quality.

The initiation of quality assurance in Australia in 1977 saw the burden for this activity placed on the shoulders of the medical profession. In the ensuing years, the medical and nursing professions were criticised for failing to undertake effective quality management activity. While doctors and other health professionals must play a key role in any quality management program, the prime decision makers in the process are hospitals' directors and managers. Quality management is a subset of management. A hospital's board of directors has the main responsibility. Without the board's and manager's commitment and involvement, very little will happen.

Commit totally to total quality.

The most important impression that the hospital's board and its manager must convey to the rest of the hospital is a total commitment to the concept of quality. Directors on hospital boards show great concern about building a new car park or running the hospital canteen and, unfortunately, have a limited understanding or concern for their primary responsibility - **THE QUALITY OF CARE AND SERVICES THEY PROVIDE TO PATIENTS**. Hospital managers likewise have seen quality of patient care as something to be left to health professionals. Directors' and managers' total and continuous commitment to quality is essential to quality management's successful implementation.

Boards must direct, managers lead the quest for quality.

A hospital's board must first develop and approve a quality management policy and then insist that the manager implements its policy decisions and provide the day-to-day leadership to drive quality. The board must ensure that the hospital manager establishes a quality management committee to guide hospital-wide quality management and a quality management department to support the hospital's quality management program. It must monitor reports to ensure that the hospital manager is properly conducting the program that embodies the board's policy.

To a large extent directors and managers generally have failed to accept or even understand their responsibilities for the quality of care and hence for quality management. Included in their responsibilities is the development and approval of appropriate hospital by-laws that clearly spell out everyone's quality management responsibilities and obligations. Further, quality management and all its attendant activities requires resources. Such resources include a quality manager and staff, a quality management department, external consultants when necessary, and the funds to meet these costs. The allocation of resources in a hospital is the responsibility of its directors, not doctors or nurses. Quality

management deserves a separate line item in the hospital budget.

Mercedes-Benz spends 8% of its operating expenditure on quality control. Most Australian hospitals spend little or nothing. While no one would suggest that Australian hospitals should (or would know how to) begin spending immediately this proportion of their operating expenses on quality management, without a specific allocation of resources to a quality management program Australian hospitals will never be in a position to achieve excellence, and the quality of patient care will continue to be compromised. Clinical information systems in particular are an essential ingredient of quality management and should be seen as a top resource priority for any hospital board.

Educate to change attitudes, maintain commitment.

A quality-mature hospital implies attitudes and behaviour on the part of everyone in the hospital that will realistically require major change from those that pertain in most Australian hospitals today. Changing attitudes and behaviour is a large undertaking and cannot be achieved easily overnight. Hospital boards of directors, managers, medical and nursing staffs, and the entire range of professionals and workers who constitute a modern hospital must adopt appropriate attitudes towards health care quality. The educational effort required is extensive and continuous and is perhaps the main reason why it may take five to ten years or longer to achieve quality maturity. Further, while attitudinal and behavioural change justifies a large educational commitment, technical education also plays an important role. Hospitals are responsible for ensuring that nurses who require continuing technical education, or medical staff who have been shown to be unaware of certain technical aspects of care for which they bear responsibility, actually receive such eduction or training.

HOSPITALS MUST (RE)ORGANISE FOR SUCCESS.

An effective committee system is the hospital's central nervous system.

Quality management requires an organisation geared to improve quality. A hospital cannot succeed by creating another committee and grafting it onto an ineffective organisational structure. It must organise for quality and ensure that all of its committees function effectively as a coherent whole and, if they do not, reorganise them to achieve this end. The failure of hospital committees is a critical element in the failure of their quality management and quality assurance activity. Instituting a well-functioning system of multidisciplinary committees is an important, albeit difficult, task in any hospital. Empowered teams, not talk feasts-committees, is what we want.

The quality management committee (team) is a policy decision-making body that sits at the apex of an extensive, integrated system of committees. These committees (teams) are a hospital's nervous system. What committees exist, and how they interrelate, to whom they report, and the presence of properly prepared terms of reference for individual committees, bear greatly on their effectiveness as part of a quality management program. Committees are a necessary forum for discussion and decision making, a critical element in democratic or participatory management, a mechanism to permit the orderly generation and transfer of information, and the means to bring together diverse expertise and perspectives.

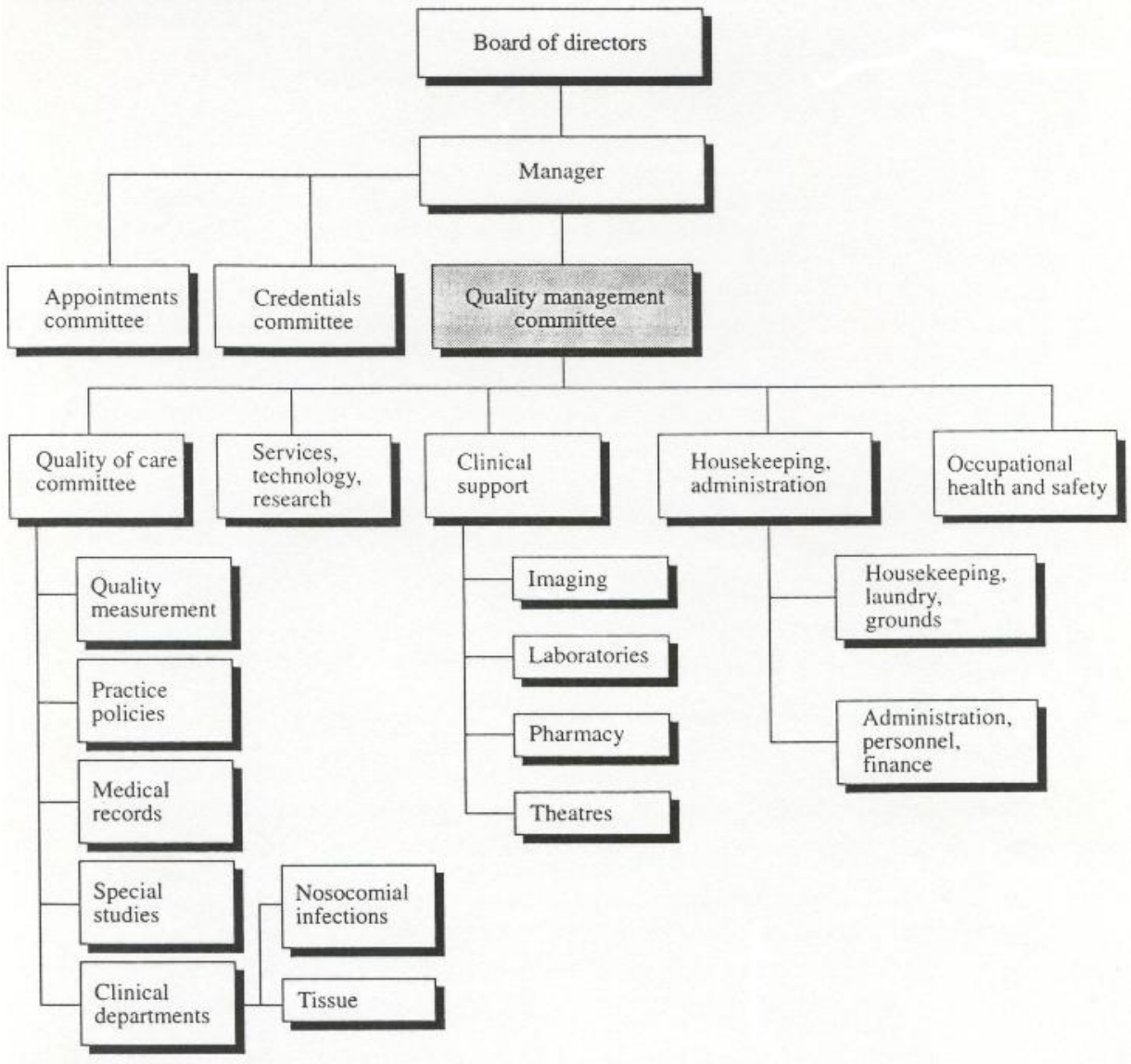
The quality management committee is the hospital's most important committee.

The quality management committee (QMC) plays a central role in quality management. It is the hospital's instrument for developing and co-ordinating policy on quality management throughout the hospital. It sets reporting requirements and reviews and acts on reports from subcommittees,

departments and divisions, and it advises the hospital manager and board. The QMC should be multidisciplinary and comprise members from most, if not all, of the hospital's major clinical and non-clinical departments. However, this committee (team) should not comprise more than ten to fifteen persons.

The quality management committee is the apex of a complete committee system; all other committees must relate to it.

The number and types of committees reporting to the quality management committee will vary from hospital to hospital. Such factors as a hospital's size will obviously influence the number of and interrelationships among committees. A range of committees (teams) is needed because a single committee, namely the quality management committee, cannot do everything. Essential committees include the following for example: medical appointments advisory committee; credentials committee; quality of care committees; practice policies committee; medical records committee; infection control committee; various clinical support committees; housekeeping and administration committees; and occupational health and safety committee. In many, if not most hospitals, many of these committees already exist. However, their existence is not enough: they must be efficient and integrated to be effective.



Quality management committee structure

Committees must function effectively and efficiently.

Far too little attention is paid to hospital committees (is it because they are not teams?) and how they function, and in many instances members of hospital committees function in isolation, unaware of the greater purpose and role of their committee. All too often a new standing committee is formed when an ad hoc working party would have sufficed, resulting in simply too many committees, with a consequential waste of valuable professional time.

From a clinical viewpoint, most hospitals to date have functioned almost in spite of their committees. Quality management, and the more circumscribed quality assurance, cannot function effectively unless the committee system, on which its implementation relies, is both effective and efficient. Achieving this end poses a significant challenge.

Doctors in particular hate committees. Presently, most hospital committees are indeed a wast of busy medical practitioners' time. Agendas are poorly prepared, minutes follow no set pattern and are sometimes even legally suspect. The standard of chairmanship more often than not is poor, and committee members themselves have little understanding of how they should effectively conduct themselves in a committee. In this environment, busy doctors tend to vote with their feet, which renders the committee even less effective. While readers may think this situation only applies to their hospital, experience suggests that unsatisfactory committee functioning is the rule rather than the exception. A group of well-intentioned people sitting down around a table and talking about a problem does not automatically produce an effective committee. In most committees, in most hospitals, an attitude prevails which sees discussion of an issue or a problem as being all that is required of committee members. Not only must committees serve as vehicles for exchanging information, but they must also be effective decision-making bodies that can initiate action.

Chairpersons must know how to run committees.

Of all problems probably none represents a greater hurdle to a committee's effectiveness than the standard and capacity of the chairperson. Nurses, medical academics or scenario members of the visiting medical staff are not born with the understanding needed to chair a committee. Chairmanship is a skill which has to be learnt and, hopefully, can be taught. Hospital managers must provide committee chairpersons with the training necessary to acquire this skill.

Multidisciplinary committees are essential.

Patients receive hospital care from a complex matrix of providers from a variety of disciplines. Assuring the quality of care similarly requires a multidisciplinary approach. It is a misnomer to talk of quality assurance for doctors, for nurses, or for allied health personnel, as if there was some quarantined arrangement for the care conducted by these different disciplines. The only form of quality assurance or quality management that hospital staff should discuss is that for patients. All committees, therefore, should be multidisciplinary. The only exceptions should be the medical appointments advisory committee and the credentials committee which should consist solely of medical practitioners (and, if they exist, the equivalent committees for nurses or for other providers should be composed only of those types of practitioners). Frequently, however, a covert hesitancy on the part of hospital professionals to expose themselves to what they mistakenly anticipate will be a critical environment in multidisciplinary committees places additional barriers in the way of implementing effective committee structure.

HOSPITALS MUST HAVE A QUALITY MANAGEMENT DEPARTMENT HEADED BY A QUALITY MANAGER.

Hospitals need resources to support quality management and to improve quality.

For over fifteen years Australian hospitals and health professionals have been attempting to introduce meaningful quality assurance activity, with remarkably little success. Reasons for this lack of success include a lack of commitment from hospital managers, a lack of structure, and the inadequacy of resources that have been made available to them to carry out this complex task. In the complex service environment of any hospital it is simply insufficient to initiate a quality management program, or any part of it, and assume it will automatically be carried through successfully and without difficulties. This reality is no reflection on health professionals, but rather a realistic posture for activities that are new and, because of the complexity of hospital services, are subject to a variety of obstacles and difficulties.

A quality management department and a quality manager are new concepts for Australian hospitals. They are integral elements of the organisational structure necessary for quality management. The collection into one functional unit of all those hospital professionals involved in quality management is an important ingredient in the management of a very extensive program. A properly resourced quality management department is essential for successful implementation of a hospital-wide, integrated quality management program that embraces the necessary range of activities. Medical staff often greet this suggestion with apprehension and believe it is merely another management stratagem to control them. Similarly, the suggestion is likely to provoke fear in hospital administrators that it is just another cost burden for the hospital.

The quality management department: the key resource for quality management.

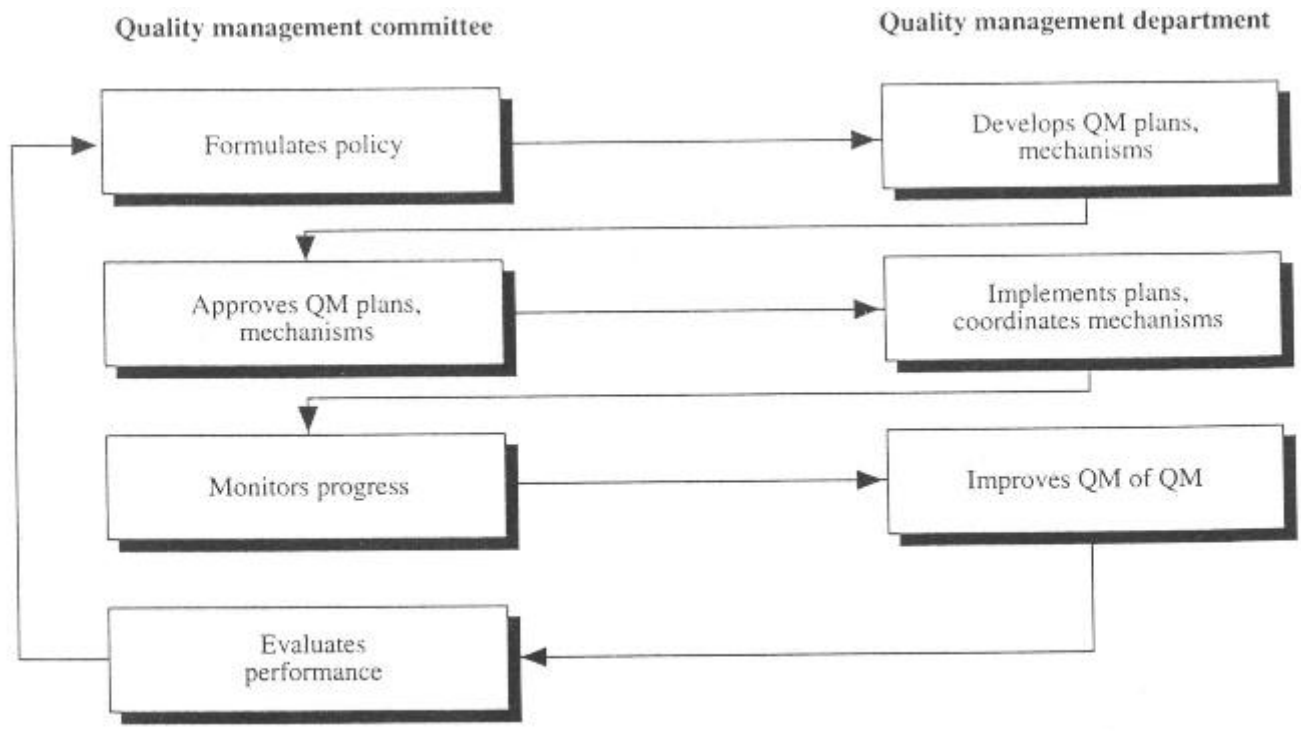
The quality management department is responsible for implementing the hospital's quality management program. Busy doctors and nurses will not have the time or authority to conduct the range of requisite activities, even if they have the expertise and inclination. They need competent professional support. The quality management department exists to teach, support and assist doctors, nurses, and others in the hospital to operationalise mechanisms and implement techniques that can assure and improve the quality of their care and services. It is not a mechanism for interfering with the clinical work of doctors, nurses, or anyone else.

Certainly, quality management bears a cost; but administrators must weigh this cost against the cost of needless deaths, iatrogenic illness, extra days in hospital, and defending and paying malpractice claims. No administrator would deny the need for a finance or accounting department, for example, merely because there is an intrinsic cost. Moreover, the cost of establishing a department of quality management is not as great as might seem at first glance. Rather it can be seen as a rationalisation and better use of staff, most of whom will already be employed in the hospital.

In many hospitals such staff as quality assurance 'co-ordinators', medical record personnel, infection control nurses, occupational health and safety officers, and staff involved in the hospital's preparation for accreditation exist already. Bringing them together under the umbrella of a quality management department adds a cohesion and co-ordination to their activities that is frequently absent now. Being part of the establishment of the quality management department, under the quality manager's competent professional leadership, would help to improve their productivity and to focus their effort on the principal goal of improving patient care.

The functional relationship between the quality management committee and the quality management

department is often a cause for confusion. The chart below sets out the functional interrelationships between the quality management committee and the quality management department.

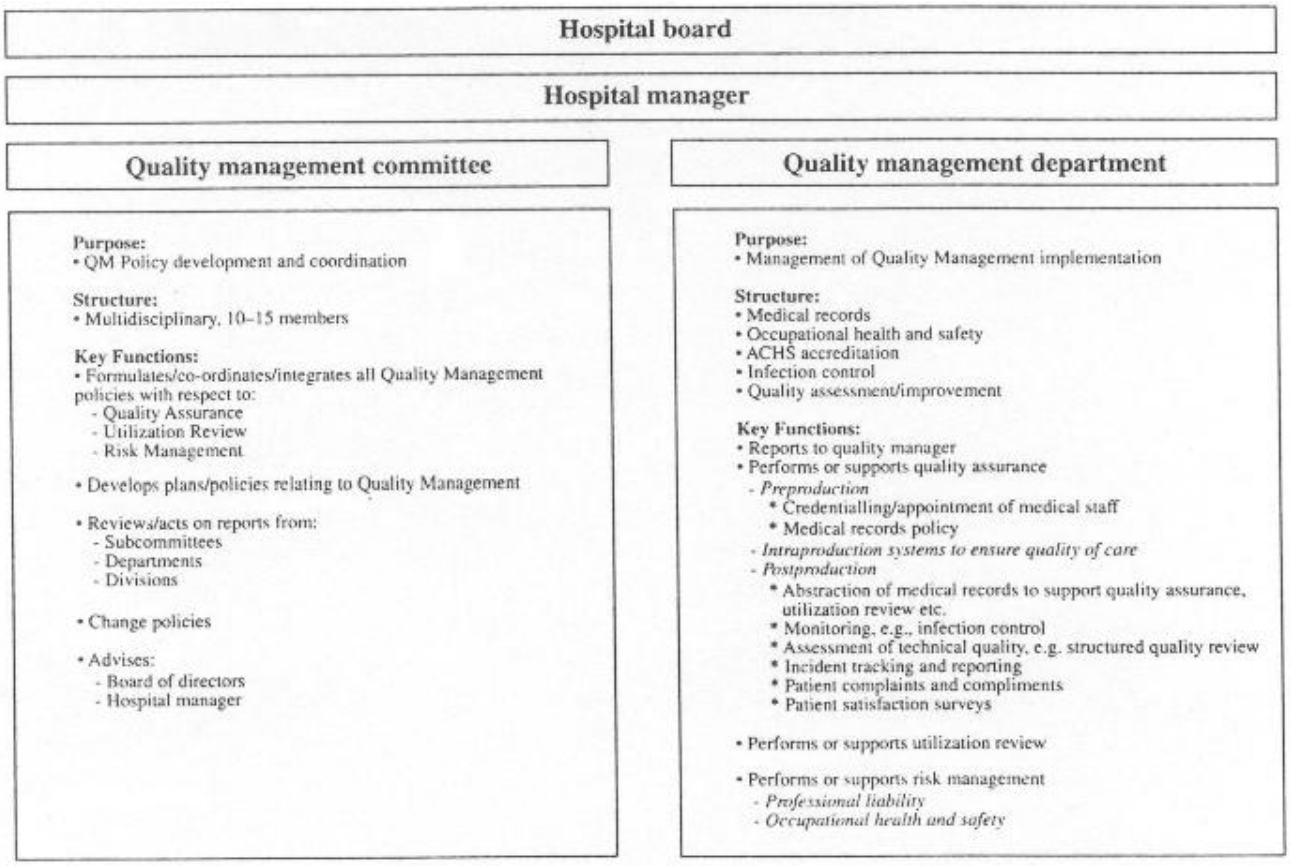


Functional relationships between quality management committee and quality managemen department

The quality management department facilitates and supports quality management.

The quality manager, who heads the quality management department, is responsible for implementing the hospital's quality management policy and program. As depicted in the chart below, the department's responsibilities include:

- Planning: producing plans to implement the board's policy - both a five to ten year strategic plan and an annual implementation plan.
- Supporting: staffing the quality management committee (team) and supporting the quality management program.
- Implementing: maintaining the structures and operating the systems necessary to conduct and/or support conduct of quality management activities, for example credentialing, risk management, quality assessment, and improving care processes and hence the quality of care.
- Informing: operating clinical information systems and keeping medical records.
- Controlling the program: matching plans against progress.
- Managing quality management: evaluating the benefits of solved quality problems against the cost of solving them.
- Monitoring progress: reporting to the quality management committee, hospital manager and board of directors in relation to all aspects of the program.



Comparison of role and functions of quality management committee and quality management department

Key functions of the quality management department include:

- Preproduction quality control, for example:
  - ACHS accreditation;
  - credentialing / appointment of medical staff;
  - medical records policy;
  - admission policies;
  - practice policies.
- Intraproduction quality control - production systems and practices to ensure quality of care.
- Postproduction quality control, for example:
  - abstracting medical records to support QA, UR, etc;
  - monitoring process and outcomes, for example nosocomial infections;
  - assessing technical quality, for example by means of structured quality reviews;
  - tracking, analysing, and reporting incidents and patient complaints / compliments;
  - conducting patient satisfaction surveys.
- Utilisation review:
  - monitoring the appropriateness of use of services;
  - measuring the cost of care.
- Risk management, for example:
  - professional liability;
  - occupational health and safety.

The greatest barrier to improving quality: lack of trained professionals.

No quality management program can succeed in the absence of a quality manager who has the knowledge and experience necessary to guide its implementation. In most states of Australia, over the past five years or so the number of quality assurance 'co-ordinators' has increased markedly. However, many of these professionals lack either the motivation, the knowledge or the management skills - or sometimes all three - to enable them to run an effective program. The present dilemma for Australian hospitals is that very few health professionals exist with adequate education, knowledge and management skills to adequately match this role.

Perhaps one of the greatest barriers to improving the quality of care in Australia at the present time is the lack of an adequately trained pool of quality managers. The course in quality management that La Trobe University in Victoria established in 1993 through its Lincoln School of Health Systems Sciences is a welcome beginning and should be replicated around Australia. However, for some time to come hospitals themselves will need to make arrangements to identify and train appropriate professionals for this new role.

The quality manager must be a highly trained professional.

Hospital need a quality manager whose job is to implement the hospital's quality management policy and to direct its quality management department. The quality manager should be second only to the hospital manager. He or she must:

- be a health professional who has a deep understanding of hospitals;
- have a sound knowledge of quality management and quality assurance theory, technology and application;
- know how to manage;
- report directly to the hospital manager like any scenario manager, and unlike most quality assurance (QA) 'co-ordinators', even if a nurse, must not be part of the nursing establishment reporting to the director of nursing.

Up to the present, the majority of QA co-ordinators in Australia have been nurses. Indeed, nurses perceived the need for quality management before most other health professionals. Many nurses possess all the qualifications and other criteria to fulfil the role of quality manager. However, hospitals have often selected QA co-ordinators on the most haphazard of criteria; consequently they often possess little or no background knowledge and certainly have a minimum of management expertise. In many hospitals QA co-ordinators are part of the nursing staff establishment rather than part of the hospital's central management team. From the medical staff's perspective, this position does not allow the nurse QA co-ordinator to institute programs that may involve major changes in clinical care.

Quality management is a central management function; the quality manager cannot be part of the nursing establishment, even when he or she is a nurse. Instituting a program of quality management needs a senior professional (who may well be a nurse) who is in a position to affect policy decisions and have some standing and authority.

CLINICAL INFORMATION IS THE BASIS OF HIGH QUALITY PRACTICE AND OF QUALITY MANAGEMENT.

Quality management and the assessment and improvement of clinical performance (QA/QI) are primarily about statistics. Aggregating and analysing clinical data enables staff to identify and analyse

patterns of care. In the absence of good clinical information systems, including a disease index and the capacity to manipulate the data into a range of reports, quality assurance and improvement is simply not possible. Good clinical information starts with the raw clinical data entered into patients' medical records. What data clinicians and others record, and how well they record such data, determines a quality management program's effectiveness. Quality relates not only to what is done and how well it is done, but also to how well it is documented. High quality care is also care that is well documented. Quality management programs must target - and they result in - improved recordkeeping, which improves care directly and makes possible further quality improvement through data analysis and use of resultant information.

The quality of medical records in many instances is simply not good enough to meet the demands of quality management. This unfortunate state of affairs exemplifies the poor quality (risk) management that exists in almost all Australian hospitals: inadequate medical records are common additive factors in instances of hospital and medical litigation. In many cases even where no negligence has occurred a hospital or doctor cannot defend a charge of negligence because supporting evidence is absent from the medical record. So important are medical records to quality management that medical records personnel should form part of the quality management department.

METHODOLOGIES MUST NOT STAND IN ISOLATION BUT MUST BE INTEGRATED WITH OTHER ELEMENTS OF THE QUALITY MANAGEMENT PROGRAM.

Separate wheat from chaff.

Pundits advocate that hospitals use this or that technique to manage or improve quality. Few of these techniques have universal application and even fewer are suitable for use in Australian hospitals presently, because of the current stage of their development or the current sophistication of Australia's hospitals. Most importantly, use of isolated techniques will likely achieve little quality improvement. Hospitals must articulate a complete quality management system, implement it through an effective quality management program, and use suitable techniques that will lead to documented quality improvement.

It was not so long ago that a genuine claim could be made that assessing quality of care simply could not be done, or was only possible by researchers. That excuse no longer exists. The technology is now available to assess and assure the quality of clinical care. This manual describes in some detail those techniques that are most appropriate for use in Australian hospitals, in their present stage of quality maturity, and that are generally not being conducted or are not understood. Other techniques, such as infection control and incident monitoring, that Australian hospitals commonly perform, attract only a passing reference. The following three techniques receive special emphasis. Their implementation would bring immediate, substantial and substantiated improvements in the quality of care if hospitals were to act upon their results:

- **credentialing and formal appointment of medical staff - which are vital components of quality management program;**
- **structured quality review (SQR), which involves retrospective assessment of the quality of care by examining patients' medical records to compare what was done and achieved to what should have been done and achieved;**
- **patient satisfaction surveys to assess the interpersonal dimension of quality.**

Credentialing medical staff is critical for quality management.

While most public hospitals in Australia have formal appointment and reappointment procedures, very few hospitals have effective credentialing procedures. Credentialing, or the delineation of clinical privileges, is the mechanism by which the board, acting through the medical staff, determines precisely what each member of the staff is permitted to do in that hospital at any one time. There is probably no more vital aspect of quality management than ensuring that doctors undertake only those activities for which their training, experience and competence has prepared them, and the hospital has adequate resources to support.

At present, most hospitals consider higher qualifications to be the only requirement indicative of competence. Moreover, once appointed to a hospital a doctor is permitted to continue to practise based on this qualification until his of her retirement, regardless of lack of efforts to keep up with advances in medicine, illness, infirmity, or differing standards of moral behaviour which is part and parcel of the human condition. It were as if the only guarantee of the quality of an automobile manufacturer's products were its engineers' qualifications on joining the company. Qualifications are important but not sufficient. Manufacturers emphasis the quality of their products, not their workers' qualifications, regardless of their products' quality. Hospitals must do the same.

The existence of an effective credentialing process is one manifestation of the hospital board's commitment to quality management, and it is also an important component of the hospital's risk management, and it is also an important component of the hospital's risk management activity. To be effective, credentialing must be annual and must be specific, each doctor applying for the precise practice he or she wishes to carry out. It is the one part of a quality management program that the medical staff alone must conduct. However, if credentialing is to function smoothly, the quality management department must provide proper administrative support. The credentialing requires hospitals to:

- constitute a credentials committee, composed of five to nine medical practitioners from the hospital's principal specialties;
- prepare carefully and observe strictly the credentials committee's terms of reference;
- prepare carefully and check rigorously the credentials committee's minutes, to avoid any chance of them being legally vulnerable;
- ensure that committee members adhere absolutely to confidentiality requirement;
- observe strictly the rules of 'natural justice';
- conduct the entire credentialing process with a proper degree of formality;
- subject all medical staff (visiting and hospital staff) to the same process;
- obtain information concerning individual doctors' performance from a number of sources including the medical staff association, the hospital manager, and the results of such quality assessment activities as structured quality review.

Structured quality review: an effective and efficient way to find quality of care problems.

Assessing quality is the first step toward its improvement. This seemingly obvious fact is often one that hospital staff either do not recognise or choose to ignore. Quality assurance implies a mechanism to identify quality problems and a mechanism - and the will - to fix problems and eliminate their root causes. Only when a hospital has investigated and eliminated problems' root causes, and evaluated improvement actions' effectiveness can it state that it has improved the quality of care.

The process of structured quality review (SQR) is probably the most effective method that is available presently to assess the quality of care. It is a practical, and the most potent, way to identify technical quality of care problems. Because it can be implemented easily with a minimal commitment of

resources, SQR is likely to be the initial method for, and remain the mainstay of, problem identification in hospitals for some time to come. Problem identification is the first step toward problem resolution and should be seen primarily as an educational process. Since SQR is the first step towards problem resolution, hospitals must commit to changing their care processes and institutionalise mechanisms to plan and implement change before attempting structured quality review.

Structured quality review is a postproduction (retrospective) technique for assessing the quality of care, based on an examination of patients' medical records. It involves the following three steps necessary to identify, confirm and illuminate quality of care problems, and to reveal patterns of care:

- screening - use of automated outcome / process assessment screens to identify cases that harbour potential quality problems and thus that require further review;
- review - use of structured medical record review, a structured process for examining medical records, to assess the quality of care (of cases failing screens) and to characterise quality problems;
- analysis - use of statistical (pattern) analysis of screening information and medical record review results to reveal patterns of care (the nature and distribution of quality problems) to illuminate their causes and to guide subsequent investigations.

Medical staff play an important part in the process of assessing quality of care. However, because of the time and skills required to support quality assessment, hospitals should rely on automation or support staff to do as much as possible, thus preserving doctors' time for what only doctors can do. The quality management department is responsible for managing the structured quality review process, including:

- selecting or assisting clinical departments in their selection of cases to review;
- tracking review cases;
- ensuring reviews are conducted in a timely fashion;
- assuring the quality of reviews; and
- processing review results.

Decisions need to be taken on which medical records to review and which medical staff are to review them. Setting up the review process is likely to require expert assistance and training medical staff in the review process.

Structured quality review should result in:

- a judgement about the appropriateness (acceptability) of care that encompasses all aspect (by all providers) of clinical care (including support services) and its documentation;
- a list of process problems, deviations from practice policies or criteria (standards), that if resolved would improve the quality of care, and who is responsible for them, for example individual doctor, nursing service, pharmacy or the system of care;
- a list of maloutcomes with a judgement as to whether or not each more likely than not resulted from malprocess (for subsequent analysis) and their putative antecedent malprocesses;
- statistical analyses of patterns of care (processes and outcomes) found in these case-by-case reviews, to examine the distribution of problems and to identify the nature and magnitude of improvement opportunities.

Interpersonal aspects of quality are important.

Properly conducted patient satisfaction surveys represent an important instrument for assessing quality of care. They assess principally the interpersonal aspects of quality, but may also shed light on such other aspects as the effects on patients of changing service arrangements. Conducting patient satisfaction surveys requires a good deal more than asking a convenient handful of patients a few off-the-cuff questions relating to the quality of hospital food. Such surveys are intended to collect systematically patients' opinions about the quality of care they received. In particular, clinical care should be a prime target of such a survey.

Conducting patient satisfaction surveys requires a structured approach to sampling and questionnaire design and administration if their results are to be credible. Hospitals should appoint a subcommittee (public relations officer) of the quality management committee to act as survey users group. Its functions include: setting priorities among questions; reviewing and approving protocols (including samples, questionnaires and data analysis plans); and assisting in the evaluation of survey results and their implications for changing care processes. Once again, it is essential to have mechanisms in place to assure that any changes demonstrated as necessary by the survey actually take place.

UTILISATION REVIEW: THE GREATER THE DEMANDS ON RESOURCES THE MORE EFFICIENTLY THEY MUST BE USED.

As the twin spotlights of efficiency and economic reality focus on hospitals, their use of resources becomes increasingly important. Given the increasingly fierce competition for resources in today's hospitals, their unnecessary or inappropriate use for one patient means less resources for others whose need may be more genuine. The appropriateness of admissions, the length of hospital stays, and the justification for such things as investigations, treatments, and the use of drugs are some components of utilisation review. In practice, hospitals can best subsume most utilisation review activities with the processes of quality assessment and improvement.

RISK MANAGEMENT: MINIMISING FINANCIAL LOSS BENEFITS EVERYONE.

Hospitals must evaluate and reduce risks.

Risk management as a distinct activity is almost unknown in Australian hospitals. Any hospital faces many risks of financial loss. Such risks can be arranged in four categories: professional liability, occupational health and safety, environmental hazards, and commercial risks.

Every hospital should periodically evaluate the risks it faces and plan accordingly. This plan must include, for all types of relevant risks: prevention (avoiding risks or controlling hazards); damage control (minimising damage when a hazard has not been avoided); and risk transfer (getting someone else to pay for any damage that occurs in exchange for a fixed insurance payment). Such a plan must include common risks and the very infrequent risks that, if they were to occur, would be disastrous or materially affect operations. Prudent risk management requires assessment of risks that cannot be prevented entirely, and the purchase of appropriate insurance. Some risks are not insurable, emphasising the need for preventive risk management. An effective quality management program can minimise risks; one by-product of improved quality is effective risk management.

Ultimately, quality management can reduce malpractice litigation and financial loss.

Risk of professional liability, where hospital and doctor are so frequently involved in joint legal action, is of greatest interest to medical staff. An effective quality management program results in a diminished

level of malpractice litigation or in the total amount of awards, and is a potent element in risk management. Surprisingly, this link between professional liability and quality management does not seem to have been adequately make in Australia. Credentialing is a very important aspect of risk management, as is incident reporting and the handling of patient complaints. Patient satisfaction surveys may also minimise risk, as well as improve quality. A satisfied patient rarely becomes a litigant.

Eliminating malpractice may reduce but not eliminate malpractice suits. Not all bad outcomes result from malpractice. Medical care involves risks that cannot always be prevented. However, bad outcomes which were once seen as acts of God increasingly are seen as evidence that something went wrong and someone was at fault. Nevertheless, an effective quality management program can reduce the risk of a suit and improve the chances for defending oneself against allegations of malpractice if one is brought. Inevitably, a few patients will suffer serious adverse outcomes, and some may have involved malpractice. The hospital can control the losses resulting from such outcomes by having a well-formulated management strategy, prepared well in advance, for handling such incidents when they occur.

Hospitals are potentially dangerous worksites: occupational health and safety is an important part of quality management.

Hospitals are potentially dangerous places in which to work and staff must be constantly alert to these dangers. The range of hazards encountered in hospitals is greater than that of almost any other type of workplace. Incidence rates for compensatable injury and illness are about double the average rates of all combined service industries and equal to those of manufacturing industry. Despite high incidence rates of work-related disease and injury, most hospital workers are poorly served by health and safety programs. It is an ironic paradox that hospitals bristling with health professionals whose whole ethic is caring for patients on many occasions give the appearance of either failing to recognise worker health and safety as deserving attention, or, at least, giving it low priority.

Hospitals should strive to prevent occupational injuries and diseases if at all possible, since in many cases there are no satisfactory treatments for, by way of example, degenerative back disease (from inadvisable patient lifting), AIDS (from needle sticks), or mesothelioma (from exposure to asbestos). Hazard control results in risk reduction. Management, through the hospital's quality management program, has an obligation to minimise occupational health and safety hazards, and to diminish the risks that employees face. It may need to correct the traditional attitudes that occupational health and safety is a benefit bestowed by an industrial award and is therefore separate from hospitals' health culture.

An effective occupational health and safety program should be an integral part of the hospital's quality management program. In the broadest sense, it encompasses such functions as hazard control (its core business), health promotion, stress management, employee health services and employee management. It can contribute to product (health care) quality in the following ways: prevent injury to patients; prevent direct injury to staff; and improve the work environment and worker morale, thereby contributing to improvements in both health care quality and productivity.

The hospital's occupational health and safety (OH&S) committee (officer) should be a subcommittee of the hospital's quality management committee (team). It carries out the QMC's responsibilities pertaining to OH&S. Principally, it recommends policy to the quality management committee (team), develops the program, and evaluates efforts to improve occupational health and safety and the OH&S program. The OH&S director should chair the hospital's OH&S committee, and be a member of its quality management committee. The quality management department should generally be responsible for all OH&S activity, and the OH&S director should report to the quality manager. In large referral

(especially teaching) hospitals, there may be a separate OH&S department. Its director would report to the hospital manager (as would the quality manager). Such an OH&S department may engage in consulting, teaching and research.

GETTING STARTED IS THE GREATEST HURDLE.

The following program of three years would be completed at the end of the first year of operations by a hospital complex under design and construction as the quality management systems would be designed and implemented as standard practice before the complex opens to the public.

Table *Getting started*

The time frame for completion of these activities will vary greatly from hospital to hospital depending on individual circumstances. The three-year implementation suggested here may be reasonable for some hospitals and overly optimistic for others. Achieving quality maturity may take 10–12 years.

When	*What*	*Who*
To start	obtain board commitment	hospital manager
after commitment	establish QM planning group	medical nursing staff/hospital manager, outside consultant
next	appoint quality manager	hospital manager, outside consultant
next, or at same time	assessment of QM activities with report	outside consultant
next	develop QM policy, QM plan	quality manager, planning group
next, or at same time	begin hospital-wide education for QM	quality manager, planning group
next	form QMC from planning group; terms of reference	quality manager, chair planning group
next	commence committee restructuring; agenda, minutes, chairmanship	quality manager, consultant
at end of 1st year	review progress and revise plans	QMC, quality manager
next	consolidate 'QA' activities, functions in separate QMD	quality manager, MRA, OH&S officer etc.
with committee restructuring completed	establish mechanisms to effect changes identified by assessment, monitoring activities	QMC, QMD
next	begin to implement QM plan	QMC, quality manager
at same time	plan and initiate patient satisfaction survey	quality manager, outside experts
at same time	review and co-ordinate system for recording & tracking incidents, complaints, compliments	quality manager, DON, OH&S officer
at same time	reinforce education, communication program to hospital staff	quality manager
next	review needs to focus attitudinal, behavioural change program	QMC, quality manager
next	commence upgrade of medical record dept. if necessary	quality manager, MRA

continues

Table *continued*

When	*What*	*Who*
next	initiate simple projects e.g. study blood products' usage	relevant clinical, support depts., quality manager, QMC
at same time	review and upgrade infection control	quality manager, infection control sister, clinical & support depts.
at end of 2nd year	review progress and revise plans	quality manager
QMC, QMD functioning well	formalise risk management, including OH&S, programs	quality manager, OH&S officer, chair QMC, HM
12 months before reappointment triennium	commence discussions with medical staff about credentialling	quality manager, HM, medical staff, consultant
next	review need for additional QM staff	quality manager
next	form additional committees if necessary	quality manager
QM program established and a core of supportive medical staff	commence quality assessment using SQR	quality manager, medical staff, MRA, consultant
next	review needs to focus contents of education program	quality manager, QMC
next	begin process of charting progress in improving care	QMD
at same time	expand studies, extend quality assessment, extend monitoring	QMC, quality manager, clinical, other staff
at end of 3rd year	review progress and revise plans	quality manager
at end of 5th, 10th, 15th years	evaluate QM program, revise policies, structures, activities etc.	quality manager, QMC, HM, board, medical and other staffs
on continuing basis	assess, improve, and continue hospital-wide education program	quality manager, QMC
on continuing basis	manage QM implementation	quality manager
on continuing basis	monitor QM program's cost-effectiveness	quality manager, HM, board

List of abbreviations:

DON	director of nursing	QM	quality management
HM	hospital manager	QMC	quality management committee
MRA	medical records administrator	QMD	quality management department
OH&S	occupational health and safety	SQR	structured quality review
QA	quality assurance		

Commitment is the key to success.

One of the greatest hurdles hospitals face in establishing an effective quality management program is how to get started. No three words sum up the requirement better than: commitment, commitment, commitment. The commitment must exist with the directors, the management, and medical, nursing and other staffs.

Align attitudes to commit to quality.

Commitment and a mind-set which sees quality of care and services as the hospital's prime purpose, are both the most important and, at the same time, the most difficult aspects of a quality management program to achieve. Commitment is essential for action. Attitudes, which are inherent and which act as barriers to effective implementation, also inhibit commitment if people believe that one cannot change them. Attitudinal barriers include the following:

- Quality of care is something only for health professionals.
- Doctors are responsible for quality.
- Quality can be assured through training and qualifications.
- If a problem occurs, the doctor's qualifications or his or her education are at fault.

This set of assumptions and attitudes is an unfortunate misrepresentation of the problem and leads to the concept of 'weeding out bad apples' or to seeking solutions for unacceptable care in the continuing education of doctors. Correct attitudes and a useful formulation of the problem include the following:

- Quality is a subset of management.
- The hospital produces quality.
- Quality can only be assured through appropriate processes implemented properly.
- If problems occur (maloutcomes attributable to malprocess), they can only be corrected by improving the system of care or care processes.

This formulation of the problem obviously predicates a very different solution, which this manual describes. Quality-focused organisations emphasis education to rectify attitudes, ensure a productive, quality-producing climate and facilitate learning. Employee education is an important aspect of introducing a quality management program into any hospital. Obviously, where appropriate hospitals should also focus education efforts and training to rectify any performance deficiencies and to improve doctors', nurses' and others' skills. An effective quality management program permits such focused education and training.

Communication, education must begin early, continue indefinitely.

A hospital cannot expect to impose a quality management program on hospital professionals who have no real understanding about its aims and objectives and who are told little if anything about the ways and means. Communication and education must commence on day one and must continue indefinitely. Hospitals must employ all appropriate methods of communication for different staff members, including, for example, meetings, seminar, workshops, videos, audio-tapes, newsletters and articles.

Achieving quality maturity requires a long-term commitment.

The time frame for implementing an effective quality management program will obviously vary from hospital to hospital. However, as a guide, we suggest:

- Board education, establishing the quality management committee and the quality management department could take one or two years.
- Getting activities underway to produce meaningful results could take two to five years.
- Refinements to the program could take an additional two to five years.
- Achieving quality maturity will take five to twelve years.

For a greenfield hospital, this targeted program should be achievable within three years.

While every hospital will have differing needs and will probably be at different stages of commitment, knowledge and implementation of the various aspects of quality management, the following activities require attention.

First establish a quality management planning group.

The biggest problem most hospitals and hospital staff face is where to start and what to do. Every hospital must have the resources to provide the structures and processes necessary to conduct meaningful quality management and to assist and support its individual departments, divisions and professional groups to plan projects, explain the correct methodologies, assist with decisions about priorities and generally guide them through what initially will be strange territory.

For the hospital that is starting from scratch, the first step is to establish a quality management planning group (officer). This group (officer) will eventually become the nucleus of the quality management committee and hence its membership should go some way toward reflecting this fact. Everyone involved in starting quality management, including board directors and managers, should read the manual, in whole or in part. For the quality manager, reading the manual from cover to cover is essential. The quality manager (officer) must be capable of instituting and running a program that results in documented improvement in the quality of care.

Appoint the quality manager early: select the right person.

The appointment of a quality manager is the next step. A hospital should take it early so that it can involve the quality manager in the program's development. Most hospitals would be well advised to seek outside consultant advice to delineate the quality manager's role, develop a proper job description and assist with personnel selection. The right appointment to this position is crucial to ultimate success. The identification of suitable qualified quality managers is not an easy task at this time. The appointee needs management skills, technical knowledge, and, ideally, should understand and have experienced hospital culture.

The newly-appointed quality manager should develop a quality management implementation strategy. It consists of an initial assessment, a resultant plan, and such decisions as those regarding the appropriate form of and timing for the establishment of an organisational structure, education and communication, and specific quality management activities.

The quality management plan must be flexible and dynamic.
A hospital must:

- decide where it is going and where it wants to be;
- assess where it is in relation to where it wants to go;
- develop a strategic plan to close any gap;
- develop a year-by-year implementation plan to implement the strategy;
- annually review progress against the plan and determine why it has been better or worse than expected, and plan for the following year accordingly. At the same time, the strategy should be reviewed for appropriateness and, if necessary, so should quality management objectives and policies.

Hospitals must first - or preferably retain a consultant to - assess whatever quality management activities are under way. The quality management plan is the blueprint for action and its contents will vary according to the results of each hospital's assessment.

Claims about existing quality management activities often do not match reality.

The current understanding of quality management in Australia, and the focus to date in hospitals on isolated quality assurance projects, means that most hospitals will have little conceptual understanding about where they are, let alone where they should be going. Further, most hospital managers when asked about quality assurance respond in a manner which completely belies the reality of the situation when assessed by an independent observer. The assessment should include the organisational structure for quality management including committees and their effectiveness; the attitudes of directors, managers and staff; clinical information systems; and factual evidence of what existing quality management efforts have achieved. This assessment's timing will vary from hospital to hospital. For some, it will trigger the hospital's journey toward quality maturity. For others, it will occur after the quality manager's appointment.

Change requires planning and implementation mechanisms.

Effective change requires planning and appropriate implementation mechanisms. Existing organisational units and mechanisms should be able to resolve most quality problems. The quality management department is responsible for co-ordinating changes that cross organisational lines and, when necessary, establishing task forces to investigate, plan and co-ordinate implementation of planned changes. Implementation plans should describe what is to be done, how it is to be done, who is responsible for doing it according to what timetable, with what resources etc., and must specify expected results, expected implementation and operational costs (or savings), and the means to measure results and costs (or savings) and to attribute them to the chosen strategy (or other factors).

Directors must persist, managers must insist on a proper quality management structure.

Establishing the quality management program's organisational structure must be one of a hospital's earliest initiatives and, after gaining commitment, is perhaps the most difficult step of all. Medical staff are likely to resist creation of the quality management department on the grounds that it is merely another management instrument to 'control' them. Most hospitals will need to restructure and revise their committee system. Modifying or revamping committees is also likely to provoke further resistance, as entrenched members attempt to preserve what they see as their rightful prerogatives. Hospitals must approach this aspect of getting started with patience, and good communication and negotiation skills. Above all, the board must persist and the manager must insist that a proper quality management organisational structure exist.

Integrate committee functions.

The review of existing committees' functions should now occur. Pay attention to terms of reference, interrelationships, lines of reporting of the entire committee system, and the means to service and support the committee system. Where appropriate, disband or merge unneeded committees and add vitally-needed committees - or empowered teams who do things - such as quality management team, etc., - in individual departments.

Improve clinical information systems to improve care.

Quality management depends on good clinical data and the capacity to aggregate and analyse that data. Hospitals should give the quality manager responsibility for medical records and clinical information systems. The hospital manager should transfer existing staff who carry out these activities to the quality management department at the earliest possible opportunity. One of the quality manager's first tasks (after establishing the QMC and the QMD) is to ensure that medical records (which contain vital raw data) are of an acceptable standard, and that the department has the resources and the appropriate technology to use these data effectively.

Quality management must include occupational health and safety.

Occupational health and safety is an important aspect of risk management and the hospital should integrate such activities into its quality management program. Transferring responsibility for occupational health and safety (OH&S) to the quality management department is an important step toward this integration. At the very least they must be linked.

Credentialing medical staff requires long lead times.

The credentialing of medical staff cannot be implemented overnight. A long lead time of discussions with and explanations for the medical staff will be essential. In this area, in particular, most hospitals will require outside assistance. A hospital should have an effective credentialing program in place within the first two years.

Early on, be content with modest achievements.

Once the quality management officer and the quality management department are in place - and not before - is the appropriate time to commence some specific quality management activity. The usual tendency is to try to do too much initially. Most medical staff, in their initial enthusiasm, will claim to be able to undertake quality management without the need for a quality management department. We cannot over emphasise they cannot, because they do not know what they do not know. In the absence of the quality management team and quality management officer, medical or nursing staff's initial enthusiasm will only end in failure and frustration.

The quality manager's expertise and guidance, the QMD's support, the QMC's active participation, and the hospital board's commitment and authority, are all necessary to contemplate and complete the long and complicated journey toward quality maturity. Once they are in place, the hospital and/or its individual departments can begin to undertake productive projects that fit into its overall quality management plan. The hospital should attempt only one or two projects in the first instance. One example might be a patient satisfaction survey. Activities should emphasis end results. If we do so-and-so, what can we improve subsequently? Are we committed to make such improvements, if results warrant? Unless the answer to this latter questions is a resounding 'yes', the hospital is only wasting the time and effort it is about to put into quality management activities. Simultaneously, the quality management department should assess what resources are available to conduct these activities, determine what additional staff and consultant resources may be required, and plan to obtain them.

Progress toward quality maturity requires evaluation of progress.

Periodic evaluation is the only effective method of ensuring that quality management activity is achieving its intended goal and is really worthwhile, and that the hospital is productively using its quality management resources. It is very easy to create the impression of extensive quality management activity without in fact achieving very much. It is therefore essential, particularly in this day and age of

fiscal responsibility in hospitals, to ensure that a great deal of time and money is not being wasted on projects that do not achieve their stated aims.

The hospital must assess and evaluate its quality management activity on an ongoing basis. It must subject it to the same degree of scrutiny to which quality management subjects clinical care to improve processes and outcomes. Evaluation is necessary to find the most cost-effective way to conduct quality management. Monitoring the extent to which problems are resolved, determining the extent to which observed changes are attributable to chosen improvement actions, and evaluating their cost-effectiveness provides vital information for improving future quality improvement efforts. The quality management department should systematically record this information, for example in a project completion report, and store it in a computerised database for subsequent analysis. Presently, such quality management activity that does exist is largely unevaluated, precluding efforts to improve its cost-effectiveness. These issues highlight the need for effective information systems in hospitals that can track quality management activity's costs and benefits.

Each year the hospital's quality manager should compare what the quality management program achieved and spent with what it planned to achieve and spend. This evaluation focuses on the program's ability to identify and resolve quality of care problems.

QUALITY MANAGEMENT AND THE LAW: MUCH OF THE APPREHENSION IS UNWARRANTED.

There is a widespread concern among medical staff about their legal exposure if and when they engage in quality management activities. This concern, while genuine, is largely unwarranted and doctors' fears are exaggerated. The legal risks incurred in quality management programs, particularly by doctors, are risks of legal liability for negligence, defamation and denial of natural justice. By structuring quality management programs with a proper degree of formality, as described in this manual, hospitals and doctors can certainly minimise any risks that might exist, particularly with respect to activities such as the credentialing of medical staff. Further, an effective quality management program is the best way of minimising the risk of malpractice litigation, and the mechanisms described in the manual are the answer to doctors' concerns relating to defamation.

QUALITY MATURITY DEMANDS PATIENCE AND PERSISTENCE; THERE ARE NO QUICK FIXES.

Quality management must include - and focus on - all clinical activities.

Quality improvement depends on describing through data, understanding through analysis and improving through action. Quality management is useful for improving the quality of hospitals' care. It must include all of the hospital's activities, especially clinical care, the core of its production function. Improving catering or the laundry, while useful, will make very little difference if the quality of clinical care remains unaltered.

Health care system policy decision makers and hospital managers must provide the will, the means, and the incentives to measure care processes and outcomes, and to use the resultant information to improve quality. There are no quick fix solutions. Managers must stay the course and avoid sounding the retreat at the first sign of resistance. Managers must also back demands with deeds. They must recognise excellence and reward success. Managers' failure to change can doom quality management efforts every bit as much as their lack of commitment to the structures and processes necessary to implement quality management.

Managing quality costs money. But the lack of quality (quality-cost) can be, and almost invariably is, even more costly. Initially, quality management may increase costs because the hospital must pay for the quality management program and, in some cases, doctors may be undertreating patients now (in comparison to best practices). But in principle a quality-mature hospital can expect lower costs from:

- reduced liability insurance premiums, malpractice claims and monetary damages;
- reduced iatrogenesis, specifically preventable errors and clinical complications;
- reduced unnecessary tests and treatments;
- improved clinical efficiency resulting from quicker diagnosis, better treatment selection etc.;
- improved operational efficiency, with resultant better use of resources;
- improved productivity through enhanced employee protection, job satisfaction and morale.

Quality management's main benefit is improving the quality of care and reducing variability, giving patients more health status improvement with greater certainty. If quality-focused care costs less than present care, that is an added benefit. Certainly it provides better value for money.

Toward quality maturity: the longest journey starts with the first step.

For many years, manufacturers have recognised quality as the key to success and sustained commercial profitability. Because hospitals' success has never been - but should be - measured in terms of successful outcomes of care, cost-effectiveness in care processes, and patient satisfaction, very little if anything has ever been done to manage quality. In health care, the intention to do good (improving patients' health status), manifest in the processes of health care services has been confused with doing good (measured improvement). The hesitancy to recognise the link between the level of litigation - which is too high - with this failure to introduce effective quality management programs is surprising, to say the least. Perhaps it has all been too hard. Attitudes in any professional group are difficult to change - and the hospital and medical professions must recognise the importance of health care quality management, and the considerable shift in intellectual paradigms and individual attitudes and behaviour that must take place to implement it. The establishment of model pilot programs in each of the Australian states would be a useful first step. These pilots will demonstrate that once a program has commenced it must be continued indefinitely with the objectives of improving quality and reducing costs. It will not be easy - but the time to start is now.

This manual offers a vision of the destination - and a map.

The journey to quality is long and difficult. The traveller needs a clear vision of the ultimate destination, and the will to get started and the commitment to keep going. Also essential is a map to find the way, and a preparedness to learn from the journey to correct one's course from time to time. This manual intends to create the vision, prepare readers to undertake this arduous journey toward quality maturity, and provide the necessary map.

We at PASCAS HEALTH SANCTUARY hospital, medi-hotel and clinics embrace wholeheartedly the holistic platform of QUALITY IMPROVEMENT.

PASCAS HEALTH SANCTUARY:

THE EIGHTEEN Cs of QUALITY MANAGEMENT:

Quality happens when quality counts. This section outlines how hospital managers must think and what they must do to develop an effective quality management program to achieve operational quality maturity - the perpetual state of striving ceaselessly for excellence and the reality of improving continuously the quality of care.

CENTRALITY: Quality is the heart of the job.

Hospitals are health-producing facilities. Quality involves improving people's health status, not merely providing health services. Quality is the hospital's main purpose, not something to be considered as a side issue at the end of the day. Hospital directors' and managers' policies and decisions must put quality at the core of everything that the hospital does. Doctors have a vital role to play. However, quality is the product of the care system, not of doctors alone. Quality management involves a hospital-wide program for achieving operational quality maturity.

COMMITMENT: Actions speak louder than words.

Directors and managers must commit to quality if quality management is to succeed. This commitment must be manifest in policies, budgets and actions. Hospital directors and managers must delegate responsibility to quality managers to establish and run effective quality management programs. They must insist on accountability for results, with both appropriate incentives and sanctions. Managers must communicate their commitment to quality to the entire hospital by words and, most importantly, deeds.

CONSISTENCY: Always hold steadfastly to the same principles.

Both commitment and action must be consistent with the hospital's policy and its plan for achieving quality maturity. Not only must there be a policy on quality management, but managers must also adhere to the policy and institute incentives and sanctions to promote this end. Providing incentives to do what needs to be done is perhaps even more important than devising sanctions for the occasional person who does not want to co-operate.

CONTINUITY: Stay the course; avoid stop-go.

Quality management demands a continuous commitment to action. A stop-go approach will achieve nothing. Hospital directors in particular must realise that there will be resistance, difficulties and problems, but they must persist. In particular, budgets must be adequate and maintained. Even though the quality management budget cannot be sacrosanct, if resources run short, cutting the QM budget in line with across the board cuts is short sighted and self-defeating.

COHERENCE: Clarity and harmony among ideas and actions.

An effective quality management program is coherent and is managed to ensure that its many complex aspects are functioning according to a predetermined plan in the most cost-effective manner. The various parts of the program must all be based on a common, articulated set of principles, and work in harmony. The effect of the whole can only be realised if all of the parts exist, work at sufficient performance levels, and are integrated. Isolated use of methodologies, for example, may achieve little if anything; and may be counter-productive.

COMPREHENSIVENESS: Cover all aspects in relevant detail.

Managers must direct their efforts to all areas of the hospital with equal vigour; not just too cleaning and nursing services, for example. Further, the program must cover in detail every relevant aspect of technical quality (quality assurance and improvement), cost (utilisation review and risk management), patient satisfaction and value trade-offs among these three competing aspects of quality. To pay lip-service to quality management, to emphasise form over substance, or to implement a program that focuses on selected projects results neither in an effective quality management program nor much quality improvement.

COMPETENCE: Everyone must be trained and perform properly.

Quality demands that everyone is trained sufficiently and works competently. Managers must be trained in management; quality manager, in quality management. Hospital managers and staff must accept that the introduction of new technology must automatically involve training in its use, if quality is to be assured. Learning on the job by trial and error is no longer acceptable. Hospitals and their medical staffs who are serious about the quality of patient care must establish a formally structured credentialing mechanism for medical staff to determine what any doctor is permitted to undertake in the hospital at any one time. Where needed, hospitals must put in place similar mechanisms to judge the training and performance of other technical staff, for example, critical care nurses.

CONFORMANCE: Adhere to, and improve, care policies and processes.

Quality improvement results from conformance to practice policies (that describe how patients should be managed and who should manage them) and from better practice policies that provide more health status improvement, lower costs, and/or greater patient satisfaction. Quality managers must:

- compare what is being done and achieved with what should be done and achieved;
- establish priorities to ensure cost-effective use of quality management resources;
- investigate root causes of variation in processes and outcomes, if not obvious;
- develop and implement plans to resolve quality problems and eliminate their root causes in order to improve the match between what patients need and desire and what they receive, and to reduce variability in processes and to improve outcomes.

Quality managers must also facilitate the acquisition of new knowledge and information to improve practice policies and production processes through benchmarking, outcome measurement, and research and development.

COMPUTATION: Measure, provide feedback, monitor improvement.

Quality management involves measurement, feedback, and the use of data to improve care. At present, the quality of care is largely unassessed; there is no feedback and, consequently, there can be no systematic improvement. Hospitals must:

- specify and assess the quality of their care; feedback information to improve care processes;
- monitor processes and outcomes to identify and resolve quality of care problems;
- support and maintain well-documented clinical records and good clinical information systems in order to aggregate and analyse clinical data, which is essential to good care and to quality management.

COMPARISON: Judge your performance against what colleagues and competitors are achieving.

Quality management involves relevant, valid comparisons among doctors and departments and, where possible, hospitals. Comparison is important as a spur to the continuous search for improvement. Without knowing how others are doing, one does not know what is possible, and hence how one is really doing - even if one's performance is improving.

CREDIBILITY: Success must appear likely.

The quality management program must be credible to all participants but, because they are so integral to its success, particularly so the hospital's medical staff. It must be based on sound concepts and successful experience - evidence derived from scientific assessment. Its mechanisms must be plausible. The key to credibility is communication: Why is quality management necessary? What must be done? This manual intends to provide credible answers to these questions.

COMMUNICATION: Tell everyone why quality matters and how to improve it.

Instituting quality management in a hospital demands attitudinal and behavioural change. Communication and education:

- is perhaps the most demanding of its requirements;
- must start on day one and continue indefinitely for all hospital staff, clinical and non-clinical, to ensure that they understand the meaning of quality management and to enable them to become the instruments of improvement;
- must be a two-way process to establish a meaningful dialogue.

Hospitals must enlist employees in the quest of quality. They must encourage them to suggest improvements, thus becoming part of the improvement process. Successful quality management requires shared concepts and common terminology.

CO-ORDINATION: the left hand must know what the right hand is doing.

Co-ordination of the various activities that comprise a quality management program is essential to ensure its effective functioning, the smooth integration of a series of complex activities, and to avoid wasting time and effort. Such co-ordination is the responsibility of the quality management committee, the hospital's most important committee. The quality management department, headed by a qualified quality manager, is the principal resource for implementing the hospital's quality management program including quality assurance, utilisation review and risk management.

COLLABORATION: One for all and all for one.

Hospitals are production systems. Quality depends on the proper functioning of system elements and the co-ordination of their individual purposes to achieve those of the whole. Such co-ordination requires collaboration between departments and among their members. Quality improvement is the central goal; quality management, the process for its achievement and the structure for collaboration. Interdepartmental, interdisciplinary teams must collaborate to identify and resolve quality of care problems, and to improve production processes. A well-articulated system of committees and teams is the appropriate mechanism for such collaboration, but must be a substitute for existing - and not merely another layer of - bureaucracy.

CO-OPERATION: The hospital is part of a larger system.

Hospitals must co-operate with community groups, regulators, suppliers and everyone else who affects the quality of what they do and how they do it. They must find out what customers - patients and communities - expect of them and organise to deliver it. Quality management is the delivery vehicle. Everyone's efforts must be guided by an understanding of what is required and the system organised to produce it. Individual goals must be harnessed for and subordinate to this common goal. Failure to satisfy customers and other stakeholders makes achievement of both individual and organisational goals difficult, if not impossible.

CELEBRATION: Success is not always its own reward.

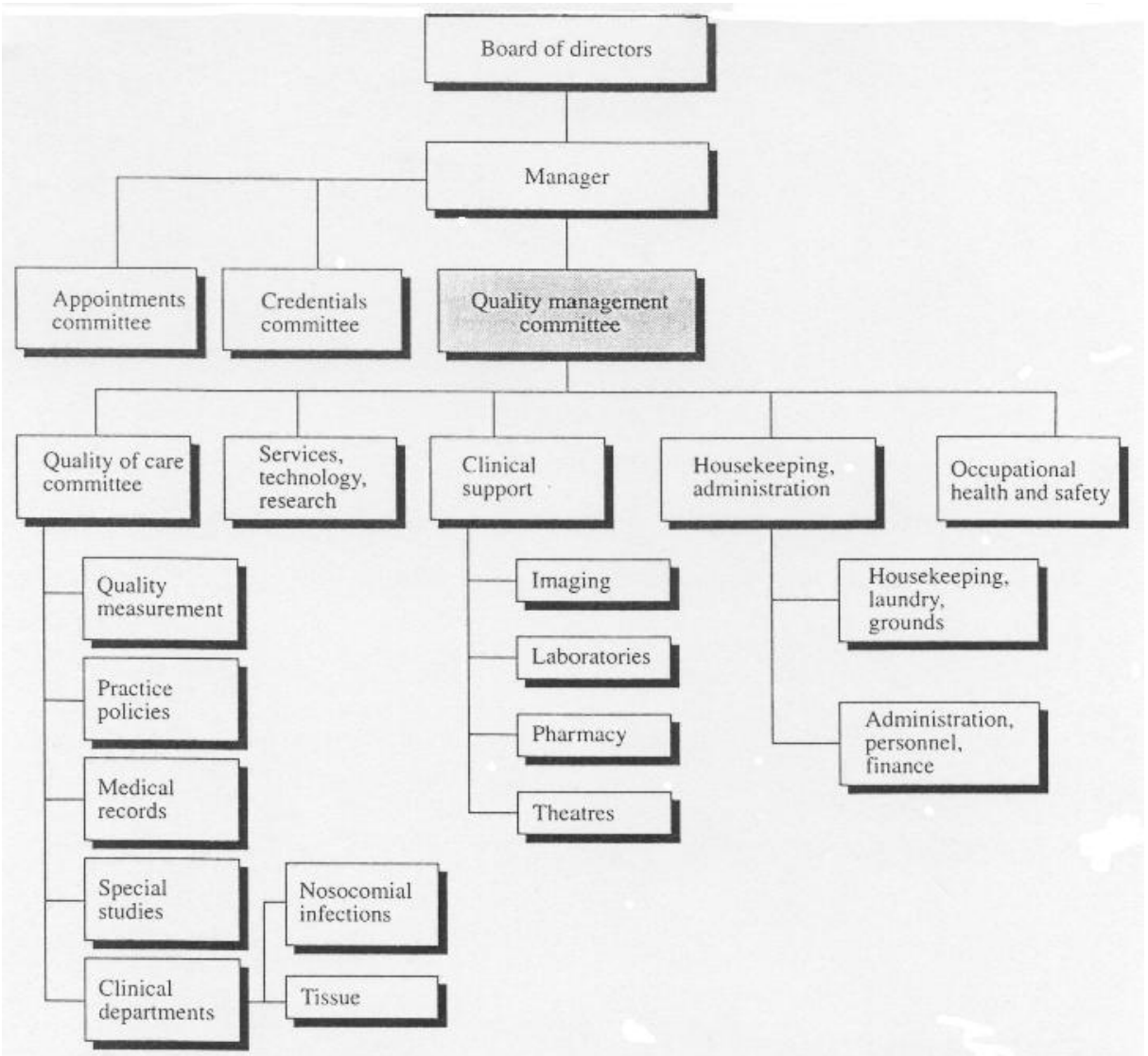
Success should be recognised and rewarded. Hospitals should honour and reward suggestions which improve quality or save costs. They should celebrate outstanding performers and performances. Pay and promotion should depend on measured performance.

CHANGE: People like to change, when not being forced to change.

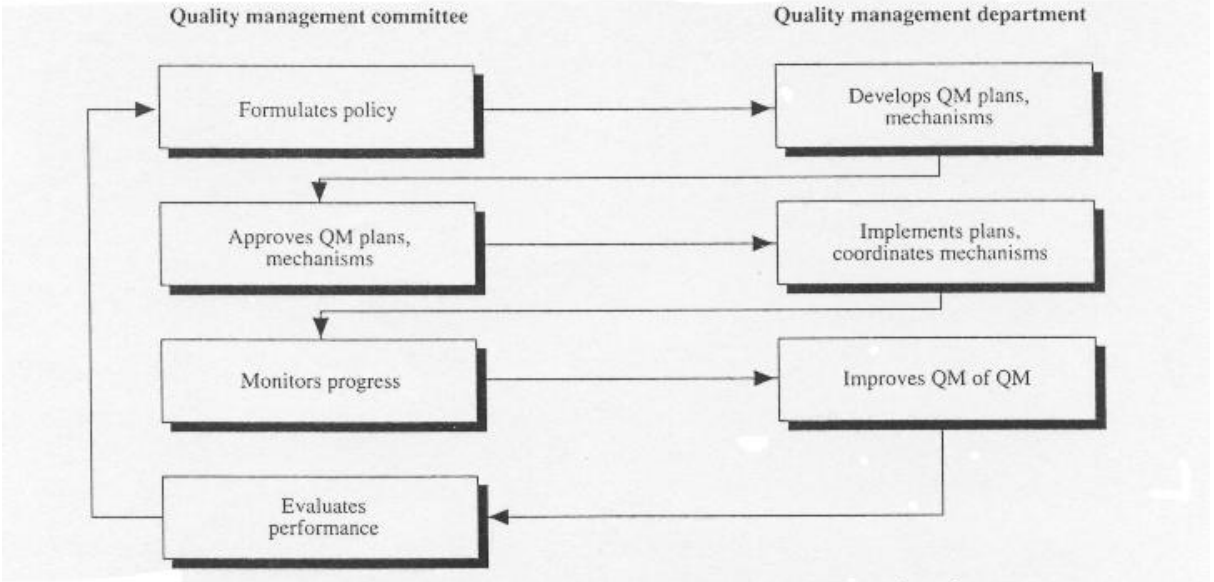
Quality improvement requires planned change. People may want to change, but may not want to be told to change. Managers must provide the environment, including incentives, that engenders a willingness to change and facilitates improvement. Hospitals must manage change. It must not be haphazard and uncoordinated, the latter resulting only in chaos. All change is painful, and education and incentives are necessary to make it understandable and acceptable. Quality management involves establishing mechanisms to ensure that if and when quality problems are revealed, they can be resolved by a process of relatively painless but effective change.

COST: Quality management is a cost of doing business.

The only relevant issue is deciding which quality management program best suits the hospital's circumstances. Quality management strives to improve value for money. Its principal benefit is giving patients health status improvement with greater certainty. Quality management can also reduce costs. Effective quality management requires bringing rewards in line with value added.



Quality management committee structure



Functional relationships between quality management committee and quality management department

PASCAS HEALTH SANCTUARY

QUALITY ASSURANCE & IMPROVEMENT:

Which scenario of medical advice and source of treatment would you prefer?

1. Consult a sole general practitioner.
2. Consult a group consultancy practice.
3. Consult a clinic.
4. Consult a clinic that has installed practice policies.
5. Consult a specialist clinic that has installed practice policies, credentialing, patient satisfaction surveys and medical record review.

A CLINIC is an organised medical service offering diagnostic, therapeutic, or preventive treatment to ambulatory patients. The advantages of group medical service, with facilities and technical personnel beyond the means of an individual practitioner plus the benefit of group consultation, have encouraged the establishment of such clinics. Such a clinic is essentially a voluntary association of physicians engaged in the practice of medicine on an organised group basis. Common administration and facilities are used, and the resulting expense and income are shared according to a predetermined plan.

PRACTICE POLICIES prescribe the interventions that maximise health status improvement consistent with patients' preference and society's resources. Practice policies inform doctors and other professionals how to change patients' state from poor health to better health, that is, to improve their health status. They focus on interventions. Procedural (or process) policies focus on how to implement the interventions specified in practice policies. Process engineering focuses on how best to implement practice policies and procedures to realise achievable health benefits, minimise the cost of their attainment, and ensure greatest patient satisfaction; workflow engineering on how patients should flow among processes.

Practice policies - and, by extension, the working of systems, procedures, machines, people, etc., that implement them - specify these practices and processes. Thus, for all practical quality management purposes, conformance to product specifications (practice policies) - and, by extension, production specifications (implementing processes) - is health care's product.

The purpose of incorporation of practice policies in decision support technology (DST) is to assure prospectively the quality of health care.

Continuous quality improvement results from greater and greater conformance to specifications (practice policies), but must rest ultimately on improving practice policies, which in turn depend on better information about best practice and better technology.

MEDICAL RECORD REVIEW has two goals:

- quality assurance - confirming that care is delivered to standards, to reassure patients of the hospital's and clinic's quality of care;
- quality improvement - identifying quality problems so that quality managers can eliminate their root causes and prevent their recurrence, and hence improve the quality of future care.

Clinical practice guidelines are useful only if they are used in practice and are valid. Once formulated, guidelines must be updated, that is, reviewed at least annually.

Valid practice policies relevant to the patient must be readily accessible at the time the doctor is seeing the patient. Computerised decision support technology (DST) is needed ultimately to achieve this end and is now beginning to emerge. Once fully developed, DSTs will make possible in process quality control, and result in an order of magnitude improvement in quality and reduction in cost.

Practice policies are more than treatment protocols because they take into account patients' preferences and society's resources. Practice policies are more than practice guidelines because they state how patients should be treated and who should treat them rather than espousing principles. Practice policies state explicitly expected outcomes, thereby informing patients and permitting them to choose among alternatives, as well as permitting comparison with observed outcomes for quality management purposes.

Practice criteria are the starting point for assessing quality of care and hence its improvement. Explicit criteria are useful for the structured review of medical records intended to identify quality of care problems. They are essential to the development of manual or automated screens to identify cases with potential quality of care problems that expert clinicians can then confirm or deny. Use of practice criteria is facilitated if practitioners who are to be subjected to review agree on the criteria before the review begins.

The principal reason to develop practice policies is the need to make the best information available to practitioners to help them make decisions in practice to improve patient management and hence the quality of care.

For quality management purposes, practice policies are embodied in credentialing and in explicit statement about how a patient should be treated. A hospital and clinic must start by collecting relevant practice guidelines produced by professional societies and others. The medical staff must evaluate these guidelines in light of their associates' experience and either adopt or adapt them to their circumstances.

This level of quality will be Pascas Health Sanctuary's foundation due to the installation of:

a. Comprehensive imaging department which digitises all x-rays.
b. Adoption of the Agfa PACS (pictorial archiving and communication system) which achieves integration of medical record documents and diagnostic imagery.
c. Use of practice policies and practice criteria procedures.
d. Adoption of the QSM system (marketed by Quality Standards in Medicine, Inc, Boston, Massachusetts) being the only structured quality review system (using automated outcome / process assessment screens) available commercially to hospitals.

High quality care demands good medical records and most quality problems result from poorly-designed processes, not individuals' malfeasance. The QSM system employs sophisticated screens (that hospitals can tailor to their practice policies), provides automated support for further review of cases failing screens, and integrates the results of both screening and structured medical record review for reporting purposes. Thus continuous quality improvement.

EVERY DEFECT A TREASURE:

"Every defect a treasure" refers to the value of recognising an opportunity to improve, as failures often provide more and better knowledge for improvement than successes. Hence, measurement systems that can accurately track failure rates in medical care are critically important. As health professionals

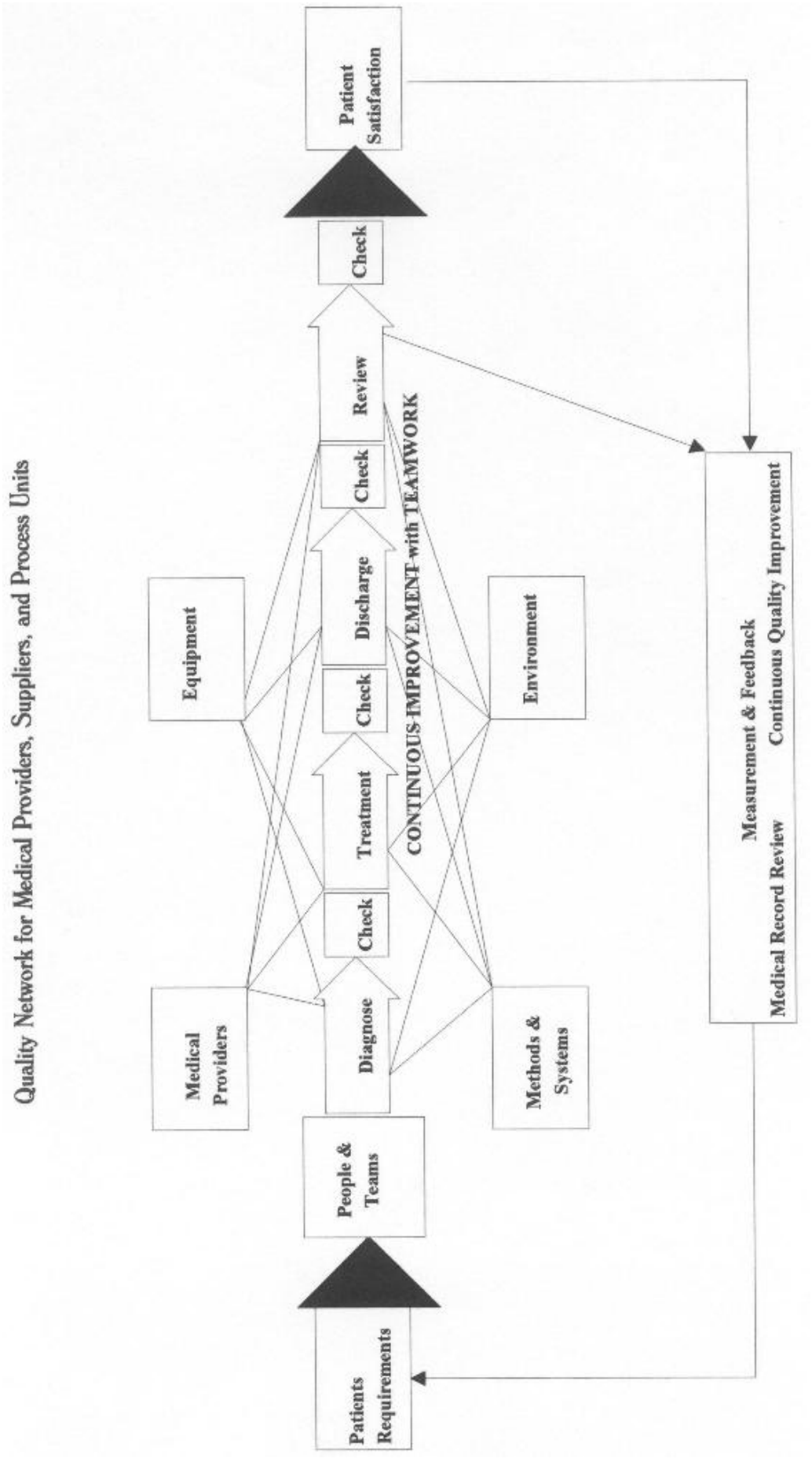
compare the rates of adverse events, their main emphasis should be on generating and testing ideas that could reduce adverse event rates.

The foundation of healing is an accurate diagnosis, and treatment is greatly aided by a method to track the patient's progress.

Clinical data on care delivery across groups of patients can be used to judge or to learn. Systems that judge inherently ask "who?". They attempt to identify care providers involved with poor outcomes, and hold them accountable through financial, professional or regulatory disincentives. This method is - to say the least - counter productive.

Learning systems inherently (and repeatedly) ask "why?", "what?" or "how?". They seek to understand basic causes, gathering data on the actual decisions and actions that produce better or worse results; thus, they attempt to manage the care rather than the individuals who deliver the care. Under a learning system the main purpose of comparative analyses is benchmarking.

Quality Network for Medical Providers, Suppliers, and Process Units



PASCAS HEALTH SANCTUARY

BENCHMARKING for BEST PRACTICE:

Pascas Health Sanctuary's testimonial to its pursuit of Best Practice is already evidenced in its policy documents, eg Quality Management in Health Care, etc, particularly in ...

- our commitment to building a centre of health care excellence using the world's best technology and systems;
- our commitment to recruit clinical experts (both medical and nursing) in all specialities – both Western and traditional;
- our commitment to recruit managers with expertise in health care management.

With the installation of the PACS system on HL7 (and higher) we are able to install the Quality Standards in Medicine program which enables periodic benchmarking with all the participating hospitals throughout USA and UK and elsewhere.

Healthcare Technologies International who have assisted in the development of more than 200 cancer care programs and has designed and/or constructed more than 100 cancer care facilities and who are the largest and most experienced cancer consulting firm in the world are to assist with our Pascas Health Sanctuary global program.

At the outset, Pascas Health Sanctuary will use the management tool of benchmarking to identify Best Practice in clinical, managerial and strategic issues that are critical to the success of a private hospital and associated clinics, competing in the arena of private health care. Our benchmarking partners will be other private hospitals throughout Australia, and we will tap into the benchmarking studies already being performed by third parties such as those coordinated by consultancies (specifically Best Practice Australia Pty Ltd) and those offered by associations - the Private Hospitals' Association of Queensland (PHAQ) and the Australian Private Hospitals' Association (APHA).

This puts us in a unique opportunity - to identify who is setting the benchmark in business critical areas, and to adapt these practices to a Greenfield site. To ensure we are providing excellence in clinical care our Best Practice Plan includes benchmarking such things as:

- **Clinical Indicators** - using the Australian Council on Healthcare Standards Care Evaluation Program we will use the clinical indicator data set as the foundation for collecting information on clinical outcomes. Along our quality journey, in addition to the ACHS clinical indicators we will establish our own clinical outcome indicators that are of specific relevance to our hospital. This is part and parcel of our commitment to a quality philosophy for Pascas Health Sanctuary.

- **Variance analysis** - using one Managed Care concept - the Critical Path Method - we will design multidisciplinary Critical Paths and track clinical outcomes by analysing patient variance from their path.

- **Casemix Indicators** - eg length of stay for [initially] the Diagnosis Related Groups (DRGs) that exhibit:

    - high volume
    - high cost

- high interest (in terms of clinical action research)
- high risk (in terms of the risk of complications)

Operational issues - We are already aware of the operational benchmarking activities coordinated by the APHA. We do not seek to re-invent the wheel, but to learn from this association's findings and participate in their benchmarking studies. Operational issues are critical to the day-to-day functioning of a large private hospital and measure the economic viability of specific functions within the hospital. Some of the operational indicators we will benchmark include:

- financial indicators e.g. expense ratios, profit per bed, workers compensation, overhead costs;
- utilisation (occupancy) levels;
- laundry consumption;
- hours per patient day.

Cultural issues - to ensure we create an organisational culture within Pascas Health Sanctuary that is high performing, we will regularly benchmark aspects of Service Culture including:

- employee motivation;
- communication within the hospital;
- how adaptable the hospital is to change;
- client / patient focus.

Client satisfaction - we will benchmark the views of three key stakeholders that are critical to the success of a private hospital:

- the Visiting Medical Officer (VMO);
- the patient / client;
- employees.

We will also benchmark other aspects that are peculiar to our facility, specifically the concept of the medi-hotel.

In our pursuit of Best Practice, Pascas Health Sanctuary has adopted benchmarking as a management tool to:

- measure our hospital's performance in areas that are business critical (as provided in the examples above ... clinical, operational, and strategic);
- compare our performance level against other private hospitals throughout Australia and overseas as indicated;
- look for the practices and strategies that underpin the highest performing hospitals;
- and adapt these practices and strategies into Pascas Health Sanctuary in order to increase our performance levels.

PASCAS HEALTH SANCTUARY

HIERARCHY of QUALITY:

1. Board of Management.
2. Specialist Director re Quality, Standards & Ethics.
3. Medical Advisory Committees.
4. Liaison Officers:
   Medical: Nursing:
5. Medical Advisory Sub-Committees:
   Representing:
   Medical Teams Nursing Teams
6. Chief Executive Officer will have reporting to him / her:
   a. Director of Nursing
   b. Risk Manager & Quality Improvement Officer
   c. Accreditation and Credentialing Officer
   d. Nurse Education Officer
   e. Commercial Manager
   f. Occupational Health & Safety
   g. Public Relations Officer
7. Accreditation is required and will be sought from:

   Australian Council on Healthcare Standards
   "Equip Program"

8. Standards to be adopted include those of the following among others:
   a. Australian Confederation of Operating Room Nurses
   b. Confederation of Australian Critical Care Nurses
   c. Royal Australasian College of Surgeons
   d. Emergency Nurses Association
   e. Australian Nursing Federation
   f. Australian Resuscitates Policy
   g. ANCI Competency
   h. ISO 9000 series
   i. etcetera.
9. Quality Improvement is part of a holistic Pascas Health Sanctuary program, the following foundation documents have been prepared and adopted:
   a. Pascas Health Sanctuary - Corporate Shared Values
   b. Pascas Health Sanctuary - Total Quality Management Philosophy
   c. Pascas Health Sanctuary - Teams: the Wisdom of and their Operation
   d. Pascas Health Sanctuary - Teams: the standards and application
   e. Pascas Health Sanctuary - Quality Management in Health Care
10. Quality standards are all embracing throughout every division and department.
11. Pascas Health Sanctuary corporate philosophy is represented within the following statements:
    OUR CREDO
    OUR CLIENT
    OUR FUTURE
    OUR MISSION
    OUR GOLDEN RULE
    OUR COMMON BOND
    OUR UNIVERSAL DECLARATION of HUMAN RESPONSIBILITIES

Clinical Indicators

UNDERSTANDING CLINICAL INDICATORS

Clinical indicators are defined as 'measures of the management and outcome of care'. Indicator monitoring is an important component in the evaluation of an organisation's performance. They are one means by which patient/ client care can be measured, assessed and demonstrated by health care organisations.

Clinical indicators are flags which can alert to possible problems and opportunities for improvement in patient / client care. They lend objectivity and interest to quality activities by allowing for comparison of performance against thresholds and national aggregate data. Their use may also identify areas for further quality activities, generate ideas for new studies and lead to the development of organisation specific indicators.

There are two main categories of clinical indicators, 'rate-based' and 'sentinel event'. Rate-based indicators are those in which it is common for a certain number of cases to be unfavourable. These are expressed as a percentage of a total population. Sentinel events are those which happen so rarely or which describe such a major event that they should be investigated individually.

ACHS CLINICAL INDICATORS

A number of clinical indicator sets are being developed by the ACHS Care Evaluation Program in cooperation with Australian medical colleges. Prior to their release the ACHS indicators are tested in a broad base of health care organisations around Australia. This field testing helps to ensure:

- data required for the indictors are available within health care organisations
- the indicators are relevant to clinical practice
- the measures are achievable

The following seven sets of medical clinical indicators have been used within the ACHS program since January 1996:

- Hospital-Wide Medical Indicators
- Obstetrics and Gynaecology Indicators
- Internal Medicine Indicators
- Anaesthetics Indicators
- Emergency Medicine Indicators
- Day Procedure Indicators
- Psychiatry Indicators

The ACHS is currently working with a number of colleges and faculties to develop indicators in the following areas:

- Rehabilitation Medicine
- Ophthalmology
- Pathology
- Surgery
- Paediatrics
- Dermatology
- Radiology
- Radiation Oncology
- Intensive Care

Once ratified by the relevant medical colleges, health care organisations will be advised well in advance which new sets are available for monitoring purposes.

IMPROVING PERFORMANCE USING INDICATORS

Clinical indicators are intended to complement the health care organisation's quality programs. They should be regarded as supplementary quality tools which allow for the objective measurement of the management and outcome of patient / client care. They are a means by which organisations can demonstrate how they are monitoring and improving performance. It is important that indicator data are used to assess and improve the quality of patient / client care.

Indicator monitoring allows organisations to compare their performance against established thresholds and to national aggregate data.

The ACHS clinical indicators monitor critical areas of patient / client care, but are by no means all embracing. Their use may help to identify areas that most warrant a focused quality activity or provide ideas for new studies or internal indicator development.

CHOOSING INDICATORS TO COLLECT

The ACHS clinical indicators will not be appropriate to all organisations participating in EQuIP. However, it is important that health care organisations address those indicators that are appropriate to their size, type and services. To help decide which indicators to collect consider the following points.

1 Consider the Context of Indicator Monitoring

It is important to consider: Why indicators are monitored? How will it be done? What is to be achieved? What problems may be encountered along the way?

The monitoring of clinical indicators to satisfy ACHS requirements alone will be of minimal value in improving performance and patient / client outcomes. Opportunities for improvement will be more clearly identified by monitoring indicators which are appropriate and relevant to the organisation, and by adopting mechanisms for ongoing monitoring.

2 Enlist Support

Indicators may embrace a number of disciplines, therefore the support and participation of personnel across disciplines and services will help promote an organisation-wide notion of clinical indicator monitoring. Consider devolving responsibility for data collection and collation to various services / units within the organisation. This approach will facilitate decision making, allow various services to show how they are assessing and improving their performance, more effectively utilise available resources for data collection and promote a team approach.

3 Identify Indicators That Could be Monitored

The ability to effect improvements in patient / client care will largely be dependent on the relevance of indicators being monitored. To identify those clinical indicators which are potentially relevant and appropriate, the following points should be considered.

Indicator Disciplines
Does the organisation provide this service (eg obstetrics, oncology, psychiatry, emergency medicine)?

Indicator Areas and Topics as Defined in Relevant Clinical Indicator Users' Manuals
Does the organisation treat patients within these categories (eg patients presenting with acute myocardial infarction or those diagnosed with non-Hodgkins lymphoma)?

Patient Throughput
Does the organisation treat sufficient numbers of patients / clients within these categories for meaningful data to be obtained?

Existing Interest
Does interest in the topic already exist?

Data Availability and Accuracy
Will data be available and accessible to allow for accurate monitoring of the indicator?

Resources for Data Collection
Are existing resources sufficient to allow for effective and ongoing monitoring of the indicator?

Potential Usefulness
Will the information potentially be useful to the organisation in demonstrating how the service is performing and ways that it may be improved?

4 Establish Which Indicators to Address

Having identified a list of relevant indicators, determine which of these will be monitored. It is important to:

- **Establish priorities**
  Can the organisation effectively monitor all those indicators identified as being relevant? If not, establish which indicators are priorities in terms of targeted areas for improvement and those which comfortably fit within current quality plans.

- **Be realistic**
  Address those indicators which can be managed with regard to existing resources. If necessary, start monitoring a small number of indicators and gradually include more with time. It is preferable to monitor a few indicators and to effectively use the information than to monitor all and not then have the capacity to use the data to improve patient / client care.

- **Be flexible**
  Over time, the ongoing review of monitoring programs will highlight indicator areas in which useful information is being generated. If results are consistently very low (or zero cases) for rate based indicators, it may be more appropriate to direct resources to the monitoring of other indicator areas for a period of time.

- **Be creative**
  Current medical clinical indicators identify areas of clinical practice considered to be important in assessing the quality of patient /client care within various disciplines. Organisations may wish to monitor areas not covered by existing indicator sets by developing and using 'in-house' indicators. This is consistent with the principles of EQuIP which encourage organisations to demonstrate their performance and improvements in services objectively.

5 Information Dissemination

A successful indicator monitoring program will be dependent in part on the levels of understanding across the organisation. Consider why and how indicators are being monitored, by whom and for what purpose. Having chosen the indicator topics to monitor, it is important to ensure that all relevant information is communicated to staff, particularly those on whom indicator monitoring may impact on a day-to-day basis.

ACHS CLINICAL INDICATOR POLICY

The ACHS Clinical Indicator Policy and Data Requirements state that:

- Health care organisations are required to address clinical indicators as a part of the Improving Performance Standard, by utilising the Hospital-Wide Medical Indicators and other relevant college specific indicators

- Surveyors should determine whether a health care organisation has genuinely addressed those indicators which relate to the services provided and reacted appropriately to indicator data where variance was noted

- The ACHS will observe the confidentiality of organisation-specific clinical indicator data and accepts that aggregate data be released to appropriate authorities

- The ACHS may recommend to a health care organisation that it consult the relevant College when a problem is identified but not resolved within the organisation

CLINICAL INDICATOR DATA REQUIREMENTS

- As from January 1997 all health care organisations participating in EQuIP will be required to collect clinical indicator data for each calendar year and report that data at 6 monthly intervals.

- There are some clinical indicators for which recommended data collection time frames will be nominated. These will be stated in the relevant Clinical Indicator Users' Manual

- As from January 1997, all health care organisations shall forward their clinical indicator results to the ACHS in the prescribed and relevant results booklet at 6 monthly intervals, that is, by the end of August for the period (January - June) and the end of February (for the period July-December)

- Completed copies of relevant Clinical Indicator Results Booklets and data for the year in progress, are to be presented to the surveyors at the time of survey

- Clinical indicator data must be collected according to the definitions in the current version of the relevant Clinical Indicator Users' Manual

These measures are important in enhancing indicator reliability and validity.

RECORDING CLINICAL INDICATOR RESULTS

Clinical indicator data should be recorded in specifically designed results booklets. A separate results booklet should be used for each set of clinical indicators being monitored. These booklets are available from the ACHS Publications Unit and will be forwarded to organisations in advance of a survey.

In 1997 it is anticipated that the results booklets will also be available electronically. New booklets are developed annually and it is imperative that information be recorded in results booklets that relates to that particular year.

Organisations should present their clinical indicator results to surveyors at the time of survey as a means of demonstrating how performance is being evaluated and improved. Results booklets are to be forwarded to the ACHS at six monthly intervals. On receipt of the results booklet the indicator data, once validated, will be included in the national aggregate database. Results booklets are destroyed after an appropriate storage period (approximately six months).

Confidential organisational reports will be forwarded back to each organisation, providing comparisons of performance to aggregate data for all like organisations at predetermined times. These six monthly reports will relate to the indicators being monitored and allow for trending of comparative results over time.

When a full year of data for each indicator set is completed and analysed, quantitative and qualitative aggregate results for that year are available in an ACHS publication.

HOSPITAL AND HEALTH SYSTEMS QUALITY MANAGEMENT

(Formerly Hospital Quality Assurance Manual)

Volume 1

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&
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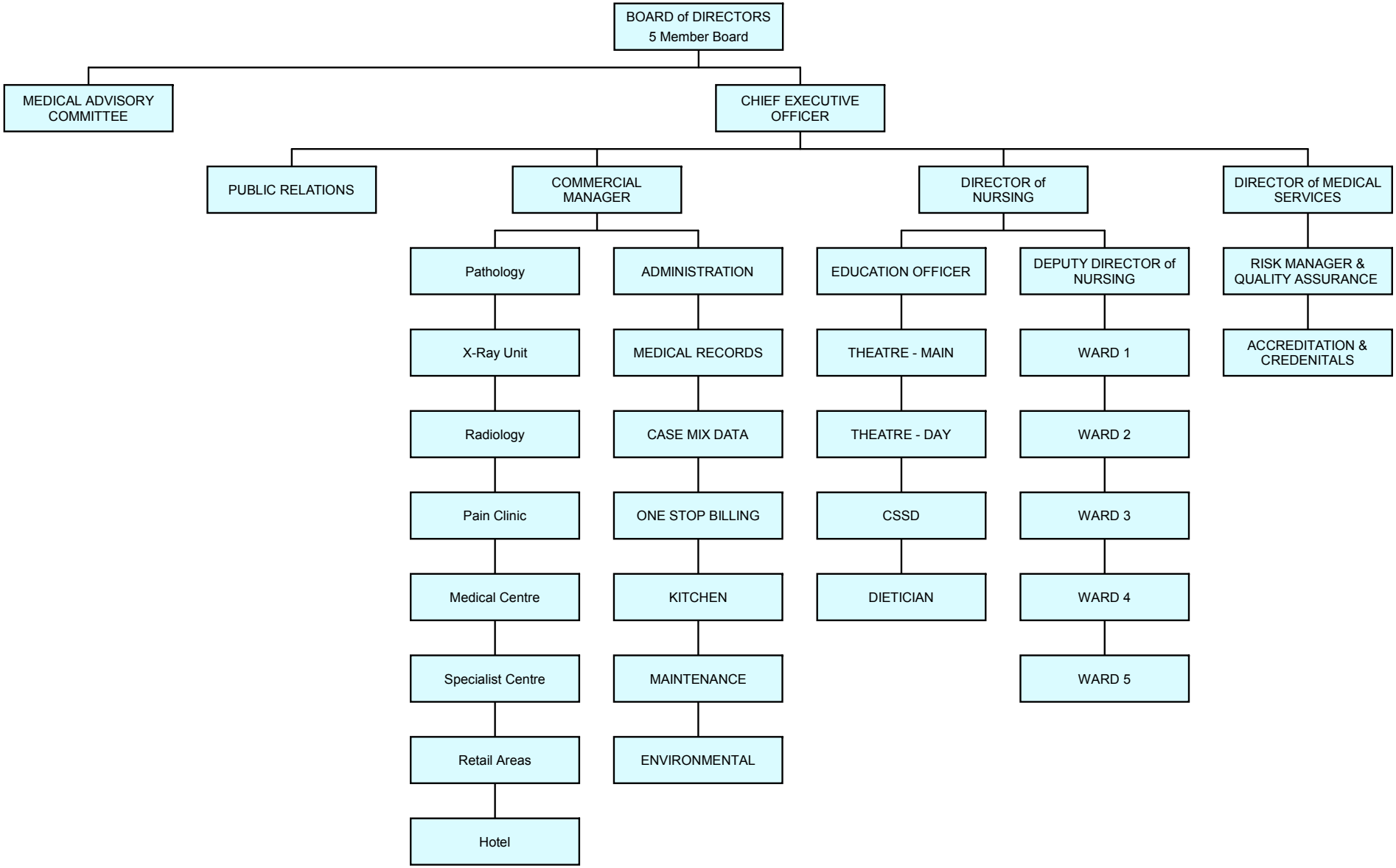
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