QUALITY ASSURANCE IN HEALTH CARE

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Most doctors take it for granted that concern for quality is an integral part of the practice of medicine. Medical education emphasizes the tenet that "only the best is good enough for your patient", and generations of doctors have accepted this as an article of faith. Yet, what do we really mean by "quality" in health care? And, does the passive acceptance of a principle ensure that it gets translated in concrete terms into impact on the health and well-being of patients?

WHAT IS "QUALITY" IN HEALTH CARE?

During the past decade, the concept of "quality" has been much debated, discussed and written about. The medical profession has tended to "interpret quality of care in terms of documented compliance with the state of the art . . . as practised by outstanding colleagues in the peer group."[1] This has often meant application of the "best" (i.e. latest and most sophisticated) in terms of technology. However, such technology is usually expensive and it is an indisputable fact of life that no country can afford to provide the "best" that medicine can offer for all of its citizens. A vivid illustration of this is provided by Vuori[2] who calculated that if a recommendation of the American Cancer Society for detection of silent colonic cancer by doing six sequential stool examinations on all persons above 40 years of age was implemented, the marginal cost of the cancer detected on the sixth examination would be more than US$47 million!

It is apparent that the concept of quality of care has perspectives other than those traditional to the medical profession. Patients are concerned with the immediate outcome of the care they have received and with the quality of their interpersonal experiences during the process of care (technical skills, information about their illness and the treatment they receive, empathy shown by health staff, physical comfort, convenience, etc.,). Policy-makers, governments and health system managers view quality in terms of equitable access to and utilization of the health resources available in the country by all sectors of the community in accordance with their respective health status and health needs; the cost of care provided in relation to its effectiveness in terms of improving health status; and the safety of the care provided.[3]

Considering the multifaceted nature of the concept of quality, a consensus seems to be emerging in the current literature that a single comprehensive philosophically-acceptable definition for "quality" may be difficult to achieve. However, for functional purposes, a workable definition that captures the essential facets defines

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quality as ". . . . the optimum achievable result for each patient, avoidance of iatrogenic complications, attention to patient and family needs in a manner that is cost-effective and reasonably documented."[4] In applying this definition to practical patient.care situations, it is important to note that it is not concerned with results that are theoretically achievable if there are unlimited manpower, skills, money, equipment, etc., but rather with the **optimum** results that can be achieved in a particular hospital or clinic, given the number and type of resources actually available in that situation.

WHY "QUALITY ASSURANCE"?

Since no rational person is likely to dispute that every medical practitioner and health facility should aim at providing "quality care", within the ambit of this definition what is the need for "assurance" of such "quality"?

Although concern for technical/scientific excellence is recognized to be an integral part of the education of almost every doctor, medical education programmes are generally lacking when dealing with issues of cost-effectiveness. Therefore, few doctors consider the cost and resource utilization aspects of their daily clinical decisions. Another constraint is that the nature of the practice of medicine is such that many clinical decisions are made on the basis not only of knowledge but also of personal experience and judgement. After graduation, few doctors have the continuing opportunity to calibrate the "correctness" of their own clinical decisions against those of their peers. Therefore, even though doctors might have the best of intentions and the firmest belief in providing the "best" in terms of quality, numerous studies have shown that in practice there is wide variation in terms of the care patients actually receive. For example, a study[5] of age-adjusted rates for common surgical procedures in similar populations in various American states (as well as in England and Norway) showed, e.g. hysterectomy rates of 25 per 10,000 in some places compared to over 80 per 10,000 in others. In another review[6] of 19 selected hospitals in Michigan, the pathological examination of tissues removed at appendectomy showed that "no disease" was reported in the removed tissue in as few as 5–10% of operations in some of the hospitals, while it was as high as 40–50% in other hospitals. Such data suggest that in some of those communities, the patients were unknowingly exposed to a fairly high risk of an unnecessary operation, while in others there was a risk of not having a needed operation. This surmise is further supported by the fact that when such data have been made available to the doctors in the respective places, their practices have changed so that follow-up studies have shown considerably less variation in practice patterns. Unfortunately it is not routine practice to collect and analyse such data nor to provide such feedback regularly to medical practitioners or medical institutions. And therefore, doctors (and hospitals) practise to the best of their personal beliefs and knowledge, rather than in accordance with objectively determined standards of care.

Quality assurance attempts to rectify this situation by developing a formal system to measure the quality of care and to change it, if necessary.

THE CONCEPT OF QUALITY ASSURANCE

In practical terms, quality assurance is concerned with determining the difference between the "optimum achievable result" and the result being actually achieved. This is the "achievable benefit not achieved"[7] (ABNA) and quality assurance is concerned with reducing ABNA (Fig. 1). As Williamson[7] describes it, ABNA could arise from sins of omission, sins of commission and sins of inefficiency (cost-effectiveness).

Quality assurance is a cybernetic activity consisting of: the measurement of quality through the systematic collection and analysis of data; the detection of shortfalls in the achieved level of care as compared to the predefined professionally acceptable "optimum achievable standard"; the development and implementation of strategies

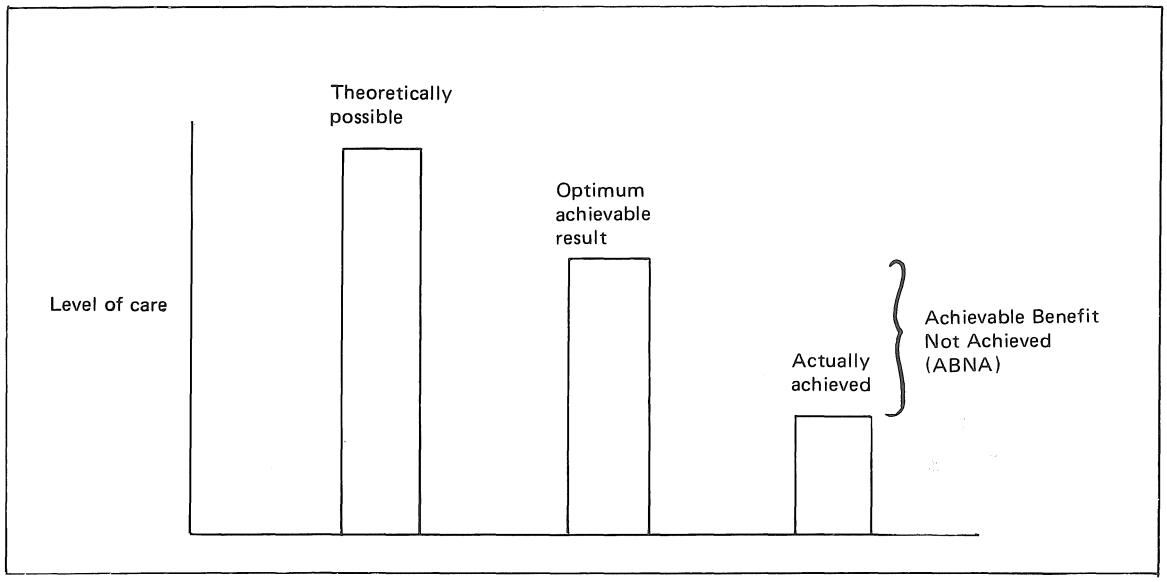

Fig. 1 The concept of Achievable Benefit Not Achieved (ABNA).

for improvement; subsequent reassessment of improvement (Fig. 2).

This concept of quality assurance can be applied to almost any aspect of health care. For example, in clinical care it can be applied to: technical aspects, e.g. diagnosis, clinical management follow-up, etc.; psychosocial aspects, e.g. patient compliance with therapy, patient satisfaction, etc.

In management of resources, it can be applied to: providing "efficient" services viz., services that are prompt, adequate, appropriate, comfortable, etc.; cost-effective use of resources, e.g. in relation to the productivity and appropriateness of use of skilled manpower, abuse or waste of expensive resources like hospital beds, investigative procedures, expensive drugs, etc.

It is only in the last decade that there has been widespread interest in the development of effec-

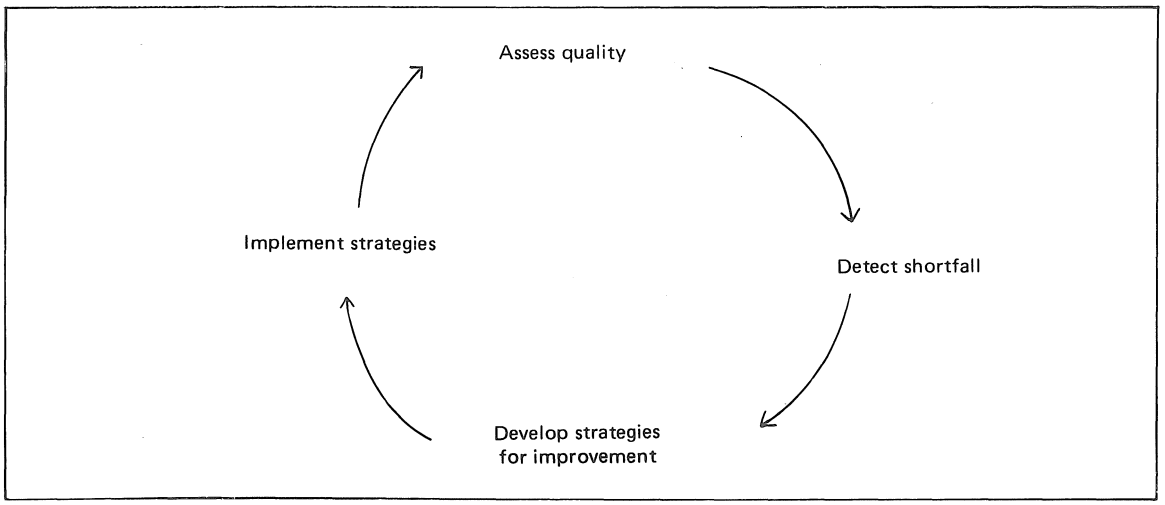

Fig. 2 The quality assurance cycle.

tive and workable systems of quality assurance. A variety of approaches have been tried in the United States and in some European countries, notably Holland and the Scandinavian countries. Many of these approaches were primarily concerned with cost-containment and the lowering of public expenditure on medical care and, as such, generated little interest and support from the medical profession.

However, a recent review of the accomplishments of quality assurance programmes in the United States cited a wide range of other quality of care benefits including, e.g. improved outcome of patient with diagnosis of myocardial infarction, increased provision of needed services that were underused (e.g. preoperative visits by anaesthesiologists), reduced use of powerful antibiotics when not indicated, improved practices of evaluating the level of post-operative pain and the need for pain medications, etc.[8]

It is evident that the potential offered by the application of quality assurance concepts is of immense value not only to the western world that is currently concerned with escalating health care costs but also to the "developing" world where increasing demands are being placed on relatively scarce resources and it behoves the conscience of the medical profession to ensure that their skills have the "optimum achievable impact" on the health of the people of their country.

There are many problems to be resolved before quality assurance can be successfully applied in a health care system. Firstly, the concepts of "quality of care" and of "ABNA" have to be understood and accepted by the medical and related professions and translated into practical, everyday terms. In order to do this, it is necessary to identify the elements of care for which quality will be measured. For example, it is possible to measure quality in terms of the outcome of care, e.g. rates of survival, levels of functional status or "quality of life", or rates of complications, iatrogenic problems, etc. Or, the measurement could be of specific aspects during the process of care (technical processes or interpersonal interactions, etc.) or even of "structural" aspects of health care, e.g. the quality of resources available and their organization. The American experience during the past decade has shown that it is necessary to be extremely careful in selecting the aspects of care to which quality assurance (QA) activities are applied because some aspects are very responsive to QA efforts, while in others, QA efforts have been found to be expensive and counter-productive.[9] Obviously, quality of care problems that are highly prevalent or have a high degree of adverse effects on patient well-being are the most productive areas for attempts at reducing "achievable benefit not achieved".

The second major problem in implementing QA is the need for adequate documentation of medical care (i.e. adequate medical records), and a practical and feasible system of extracting, compiling and analysing the relevant items of information from patient records. In the absence of a computerized data system, efforts at analysing the type of care provided and its impact on patients' health must necessarily be limited to a few gross indicators of quality.

The third major constraint in QA is that thus far, little work has been done in evaluating the appropriateness and effectiveness of different strategies for improving various aspects of quality.

These different strategies include: dissemination of information to doctors regarding variations in their "achieved level of care" as measured by various outcomes of care (e.g. percent of hypertensives achieving "control status" or procedures done, e.g. (operations) for similar groups of patients); educational efforts aimed at updating knowledge and skills; organizational changes aimed at instituting procedures to improve efficiency; development and use of protocols for the management of various clinical conditions. Such protocols are commonly used to guide clinical decision-making. (The Scandinavian countries have also developed protocols that are used to guide the level of care that should be provided at each type of hospital in accordance with the sophistication of technology available in that hospital.); peer

group pressure; the "carrot and stick" approach of providing incentives and disincentives.

In order to derive maximum benefit from QA, it is necessary to be able to select and apply the appropriate remedial measures for each situation where "ABNA" is detected.

THE FUTURE

Quality assurance offers challenges of the future for the medical philosopher, the medical educator, the policy-maker, the researcher, the health care manager and to the average medical practitioner. We have inherited a profession imbued with noble aspirations and heavy with the responsibility of contributing to safe-guarding not only life and limb but also the quality of life of our communities. In order to wear with pride the mantle that our forefathers have passed to us, we need to master new disciplines and explore the potential they offer us for achieving the spirit of our profession. Quality assurance is one with challenge for the coming decade.

The European member nations of the World Health Organization have decided that they should aim at having functional QA programmes in their health care systems by 1990, and the European WHO Regional Committee has proposed a number of strategies and targets towards the achievement of this goal.[10] In the United States, strenuous efforts are being made to evaluate, streamline and improve the various QA efforts that have been developed in the past decade.[6] In Malaysia, the Ministry of Health is initiating the first steps towards the development and adaptation of QA concepts in the local context. Are we in the medical profession ready to rise to the challenge of the future?

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