

Quality assurance in dentistry: the Dutch approach

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Abstract

Purpose. To describe the definition of quality, as used in the Dutch literature, and to discuss the policy concerning quality assurance of dental care of both the Dutch government and the Dutch Dental Association.

Data source. Study of relevant literature.

Results. Quality is described as the degree to which the entire set of characteristics of a product, process or service satisfies established or obvious needs. With respect to quality assurance, the government merely tends to frame the setting, through legislation and stimulation, whereas the professional organization supports the responsibility of individual dentists by developing a quality assurance system and by delivering tools for quality assessment. Possible activities within such a quality assurance system are continuing education, peer review, the use of practice guidelines and horizontal referral.

Conclusion. In Dutch dentistry a start has been made with the development of a quality assurance policy, which is aimed at the improvement of oral health and the increase of patient satisfaction. However, further research should still be focused on quality of dental care and its assessment in practice.

Keywords: dentistry, peer review, quality assurance, quality of care

A great deal has been written about quality of health care over the years. Although the topic is far from new, there has been a growing interest in many countries for the past two decades. One reason for this is that members of the public have become more sophisticated consumers of health care and are demanding more accountability from all professions. Furthermore, health care reforms are leading providers, consumers and insurance companies to pay more attention to quality, frequently associated with analyses of cost-effectiveness. Despite the fact that the term 'quality' is often used, a widely accepted definition has been lacking for many years. The first aim of this article is to describe the definition of quality, as used in the Dutch literature on quality of care.

The basis for the quality of dental care is found in the legal demands that are required for graduation as a dentist. The knowledge and skills acquired during academic education should qualify a dentist to practise dentistry using the full range of techniques. However, professional and social changes constantly demand adaptation and extension of dental practice. As a result of the accomplishments of dental research over the last 30 years, several major advances have been made that have changed our view of oral health care and

added new methods of treatment [1]. This multitude of new developments finds its way to dentists through courses, congresses, professional journals, advertising material, etc. Dentists must then consume this abundance of information, on the one hand to maintain their level of professional expertise, and on the other hand to be able to answer the rising number of questions about dental possibilities and to fulfil the higher expectations of patients. Not every dentist seems to manage this with sufficient success. For example, the results of a Dutch study revealed that 36% of the dentists interviewed cannot keep up with recent developments in periodontology [2]. In addition, a study among American general practitioners showed a substantial gap in the knowledge of prevention of bacterial endocarditis [3]. In a recent Dutch study among general practitioners it was found that on average only 26% of traumatic dental injuries were treated following an optimal protocol [4].

Responsibility, after finishing dental professional education, to maintain a certain level of knowledge and skills needed to practice dentistry properly, lies first of all in the hands of the individual practitioners themselves. Secondly, the profession needs to set down this responsibility in a quality assurance

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policy, in conformity with the agreements made with the Government, insurance companies and patient organizations. One of the main issues of this policy is the establishment of a quality assurance system. The second aim of this article is to explore the possible activities within such a quality assurance system in general dentistry.

A definition of quality

Changes in the health care system have received a lot of attention in The Netherlands, professionally as well as publicly. ‘Quality’ is one of the key issues discussed, in the context of both medical and dental care. However, the concept of quality is difficult to define.

Definition of quality

A common characteristic in describing the concept of quality is that quality is considered to be the degree to which an actual situation at a certain moment and an expected, desired or required situation match. So, the issue of quality is an issue of comparison.

To be able to discuss the quality of health care it is important to formulate a definition that is agreed upon by all organizations and professional groups involved. In April 1989, the participants of a Dutch conference on ‘quality of care’ jointly formulated a nominal definition of quality, which was later revised by the National Council for Health Care: ‘quality is the degree to which the entire set of characteristics of a product, process or service satisfies established or obvious needs’. To specify the quality of a product, process or service, first of all, the various characteristics or aspects have to be determined. Then every aspect can be judged on its own quality and on its contribution to the overall quality of this product, process or service.

Quality of care

To be able to work with the aforementioned definition of quality it is obligatory to provide insight into the system of health care. This is possible by dividing health care into subsystems that can be separately assessed for quality.

The Dutch National Council for Public Health has developed a conceptual framework to describe the quality of professional practice. Using a so-called ‘aspect-approach’, the concept of quality is divided into various aspects that can be classified into three categories:

- quality of treatment in a methodical–technical sense;
- quality of the professional attitude;
- quality of the professional organization (Figure 1).

In spite of the fact that some aspects are more important than others and that the various aspects have an influence on each other, this division offers the opportunity to consider quality in parts. In this way quality can be made more manageable so that it can actually be improved and, in the end, be evaluated more easily.

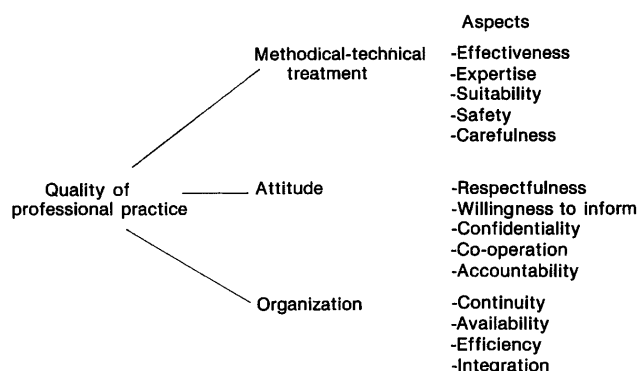


Figure 1 Aspects of quality of professional care.

The Council for Health Research has published similar aspect-approaches, based on the perspectives of patients, practitioners, institutions, insurers and government. This accords with the fact that each separate aspect of care can be considered from different points of view, and that a difference of opinion can exist about the desired quality or even about the importance of one aspect of care.

From a professional point of view, quality of dental care focuses on all the major components of providing and receiving dental services including diagnosis and treatment planning, technical skills, patient communication and organizational aspects. An essential part of any attempt to assess the quality of care is the development of explicit criteria. Subsequently, the dental profession has to adopt objective, well-defined and widely accepted standards of performance, which serve as quality indicators and without which quality assessment and improvement are simply not possible. These standards are basic tools needed for the evaluation of dental services and the appropriateness of treatment, and for the measurement of outcomes of care. In combination with methods for the assessment of dental practices a realistic and effective quality assurance system should be designed.

Quality assurance policy

Basically, quality assurance has two goals [5]. It should include attempts both to assure the continuous improvement of the work of all practitioners, and to correct those practitioners who prove to be incompetent in practice. A quality assurance system should assure the quality of dental care by proper assessment, identifying strengths and weaknesses [6]. The strengths should be reinforced and the weaknesses rectified, in concordance with an approach based on continuous improvement [7]. In addition, the profession needs to develop methods for dealing effectively with performance in dental care that is found to be continually unsatisfactory. Indirectly, quality assurance efforts contribute to improving the public trust in dentistry [8]. More directly, quality assurance policy and the subsequent implementation of a quality assurance system in dentistry should aim at the improvement of oral health and the increase of patient satisfaction.

In the following sections, a sketch is given of the policy that is carried out by the Dutch government and the dental professional organization with respect to quality assurance of (dental) care. In co-operation with the Dutch insurance companies and the consumer organizations, the Dutch Dental Association ['Nederlandse Maatschappij tot bevordering der Tandheelkunde' (NMT)] is responsible for this policy in The Netherlands at present and will be in the future. These organizations are obliged to reach mutual agreement, according to the guidelines drawn up during the national conferences on quality of care held in April 1989 and June 1990 [9].

Government policy

Under article 22 paragraph 1 of the Dutch Constitutional Law, which says that the government should take measures to promote public health, the government has the obligation to oversee that every citizen has access to a well functioning health care system, that is offered at an adequate level of care. To fulfil this duty, various policy documents have been published over the years about quality and quality assurance of health care. These indicate that the government will regulate less and leave more to the responsibility of the field, this being the professionals, the insurers and the patients. Moreover, laws and regulations will be drawn up to guarantee the quality of health care. Recently, in the years 1993–1996, new legislation regarding the quality of professional care, either as given by individuals or by institutions, and regarding the formal positions of patients in the health care system has been agreed to by the parliament.

In the document, 'Quality of Care', published in May 1991, the Government indicates that the responsibility to provide adequate care is primarily in the hands of the professional organizations involved. These organizations are to attend to the development of criteria for quality assessment and are responsible for the subsequent monitoring and improvement of quality on the basis of these criteria. Furthermore, a major role in the future health care system is reserved for the insurance companies, which will be released from their obligation to contract with medical professionals. This means that professionals will have to deliver medical care of a quality that meets the standards required to get a contract with an insurance company, which in this way is held partly responsible for the quality of the care provided. The consumer will not only pay attention to the content of the insurance package and its price but also to the quality of contracted health care.

The Government has retained for itself a role in this system that consists mainly of frame setting, stimulating and supervising. However, by legally requiring the health care to be of an adequate standard, the Government can take measures against professionals who deliver care of substandard quality. The Government will also make demands concerning the presence and functioning of an internal policy for quality assurance run by the professional organization. In practice, the goal of the Government is to implement a system for registration of dental professionals, in which each individual practising dentistry on a regular basis (for example at least 1

day a week) is checked individually and subsequently notes from the review are recorded. Additionally, as a governmental organization, the Inspectorate of Health Care has a major function in screening and controlling health care practices.

The NMT policy

As stated above, first of all the professionals themselves are individually responsible for quality assurance. They are, however, supported by their professional organization, the NMT, especially by the Association's provision of tools for quality assurance. As a participant at the conferences on quality of care, the NMT was involved in the discussions on quality from the start. A note entitled 'Professional Standard' was drawn up which serves as a starting point for the NMT's policy for quality assurance. The definition of the professional standard reads: 'the judicious and appropriate manner of dental practice, based on scientific knowledge and experience, as a professional acting with a reasonable standard of conduct would do in similar circumstances, employing methods that are in proportion to the aim of treatment'. This standard is subject to four requirements: experience, efficiency and effectiveness, professional ethics and quality assurance.

At the present time, the NMT is developing a quality assurance system in which the professional accepts responsibility for providing patients with a well formulated plan of dental care delivered in an appropriate manner. Four important spearheads within this system are continuing education, the formation of peer review groups, implementation of practice guidelines in dental practice and the introduction of a systematic approach to the referral of patients.

Quality assurance activities

Continuing education

A first important item in a quality assurance system is the possibility of attending continuing (dental) education. Under this heading a multitude of activities can be subsumed: courses, congresses, clinical meetings, presentations, keeping up with professional literature, participation in study groups, etc. These activities are organized by a variety of institutions, such as faculties of dentistry, commercial institutions and scientific societies, implying a rather fragmented structure. But analysis of the demand for and supply of postgraduate education, subsequent planning of manpower and means, and evaluation of continuing education, indicate a need for far-reaching co-ordination and co-operation of the institutions dealing with the various forms of postgraduate education. No such co-ordination is available at this moment.

Currently, the quality of dental courses and other similar activities is assessed on a regular basis. When all criteria are met, a Q(uality)-mark is obtained to provide a certain guarantee for the dental consumer. Furthermore, the NMT is currently developing a 'quality information system' to register participation in these dental Q-courses and peer review.

An important question related to continuing education

concerns the obligation to attend this type of education. There is much discussion about this subject. In a discussion of this problem it was recommended that continuing education should be linked with a review system. In this model practitioners are regularly examined by a peer, either individually or in groups, with respect to the quality of their professional practice. When in certain instances the previously determined criteria and standards are not met, the need for brushing up on these points is noted. Under these circumstances the possibilities are to offer the person concerned a specific educational program or to give the individual a free choice in filling up the gap in knowledge or skills. Success in this can be judged during a subsequent examination. By designing continuing education courses specifically to meet these areas of weakness, this model offers a reasonable guarantee for efficient use of educational capacity and financial resources.

A second question related to this issue concerns the benefit of continuing education. In the literature, little information is reported about the effect of postgraduate education on the quality of dental care. Generally, a positive relationship is assumed between the two. In the USA, where postgraduate education is obligatory in a few states, evidence is found that attending theoretical courses does not always have the desired results [10]. More research into the relationship between an assumed increase in knowledge and an actual improvement in quality of care is certainly warranted.

However, differences in the quality of dental care provided was found between dentists who participated actively in postgraduate forms of education (such as taking courses or being a member of a study group) and dentists who limited themselves to passive forms (such as reading professional literature) [11]. This does not mean that there is a causal connection between the level of care and participation in continuing education. Probably, there is another factor which explains both the quality of dental care and the attitude towards active forms of postgraduate education. This factor could be the level of professionalism of the dentists concerned [12], resulting in an individualized standard of care as a basis for practical performance.

Peer review

In the Dutch medical literature peer review is defined as a systematic evaluation by a group of colleagues of their own or each other's dental care based on clear criteria and standards, with the intention of bringing their care provision more in line with those criteria and standards [13]. The concept of peer review was introduced into Dutch dentistry with the start of the so-called '13-year-olds project' in 1975. In this project children were examined when they reached the age of 13. If they were in good dental health, a larger insurance package was made available to them. The main objective for the introduction of peer review in this project was the belief that it could contribute to the improvement of quality in dental care. Furthermore, society is increasingly concerned with the methods and results of health care. Peer review should encourage the profession to take responsibility for the care it provides. Finally, peer review should offer the

possibility for discussion of the quality of dental care, as delivered by fellow dentists, and thus serve an educational purpose within the profession. In the project mentioned earlier, review consisted of a qualitative examination, without sanctions, of the 13-year-old participants. The examination was carried out by the dental profession itself with the help of slides and bite-wing radiographs. This method of assessment did not prove a great success at that time. However, it certainly provided an impetus within the NMT and other professional organizations concerned with the quality of dental care to discuss quality assurance in dentistry and the place of assessment as an essential part of this.

Nowadays in The Netherlands, the concept of peer review in dentistry is associated with the activities of a group of colleagues whose goal is to improve the quality of their dental practice by their collective efforts. The NMT has started the so-called Alpha Project that consists of a number of such peer review groups active in various regions of the country. At the end of 1996 about 15% of Dutch dentists were participating in this project. Also, several dentists have formed study groups on their own initiative. These meetings offer, among other things, the possibility of evaluating individual models of dental practice, discussing extensive treatment plans and providing lectures on a variety of topics.

The Government requires that the professional organizations should be responsible for the development and implementation of a (internal) quality assurance system. One of the main items in this system could be peer review if all dentists were to participate. The organization of a system for peer review could be built on the structure of the Alpha Project. It is, however, questionable whether the principles used by the Alpha groups should be continued. These consist roughly of the participating dentists choosing a subject from their own practice, formulating criteria and standards, and conducting an evaluation. Such an evaluation is generally considered to be self-evaluation rather than peer review. The latter is characterized by a qualitative examination of dental care, not only by the dentist himself but also by a peer. As yet, peer review does not always take place in the Alpha project.

In the literature about the planning and organization of peer review there is a difference of opinion about who should determine the criteria and standards that are to be used for the review process. In the Alpha groups members develop their own criteria and standards. This means that for every topic 'the wheel has to be re-invented'. This is a time-consuming activity which, although not without some merit, could get stuck in confusing and fruitless discussions. So it seems advisable to leave the formulation of criteria and standards to the 'experts' in the profession, for example university staff members or dentists who are competent in a specific area of dentistry. It goes without saying that these criteria and standards have to be established in co-operation with the dental field so that they are firmly based on a broad consensus within the profession. Without consensus it is questionable whether the participants in the review will accept such a system. Furthermore, when the criteria and standards are worked out in more detail, for example as in the case of

practice guidelines, they could, if necessary, be adapted by peer groups or individuals to their own special setting.

Practice guidelines

Practice guidelines can be defined as systematically developed statements which serve as an aid to practitioners and patients to decide about adequate care in specific circumstances [14] and which, preferably, are evidence-based or at least based to some extent on consensus within the profession [15]. Practice guidelines provide the dental profession with opportunities for monitoring and improving dental health care. For example, guidelines can support clinical decision-making in daily dental practice, they can support the realization of more uniformity in dental practice, and they can serve as an educational instrument or as criteria for self-evaluation. Until now, the universities, some of the scientific associations and the NMT have considered the development of practice guidelines as their task. Recently, all existing guidelines employed in dental care in The Netherlands were collected, analysed, and finally 21 guidelines were formally recognized [16]. However, the level of diversity in practice guidelines has proved to be considerable. To deal with this diversity we recommend that in future practice guidelines should be developed systematically, based on scientific research.

Horizontal referral

It is likely that dentists have difficulty keeping up with recent scientific developments in the various branches of dentistry and applying them in general practice. Also, when education and experience are considered, the average dentist is not always capable of solving certain difficult situations in the broad field of dentistry. A solution to this problem is the possibility of referring patients to a colleague with more knowledge and skill in the specific area of dentistry needed, such as gnathology, implantology and maxillo-facial prosthodontics ('horizontal referral'). When referrals are made systematically to practitioners with specific skills, and rules and regulations are established, this is called professional specialization. In addition to their activities as general practitioners, specialized dentists can train themselves by attending dental education specific to their areas of specialization. Colleagues in the same region can use these skills by means of horizontal referral. In this way a network of dentists has a broad package of dental possibilities at its disposal and can offer maximum care to the patient. More so than in the past, dentists can make choices in their ways of practising. This kind of system also gives an extra stimulus to co-operation with other dentists. Professional specialization should be seen as a new challenge for the dental profession which enables it to offer a wide range of possibilities on a qualitatively high level.

In June 1992 a protocol for horizontal referral was approved by the General Meeting of the NMT. The aim of the protocol is to structure the process of referral on the one hand and to take away the distrust concerning mutual referral on the other. In this protocol, in addition to criteria for informing the patient and the dentists concerned, agreements

are established to prevent referring dentists from losing their patients. This does not alter the fact that more often dentists will set eyes on each other's work. One may expect that in this way dentists will be additionally stimulated to guarantee the quality of their dental practice. A single American study indicates that patients are increasingly of the opinion that it serves the quality of dentistry when they are seen regularly by a second dentist [17]. This idea is shared by Dutch patients as well, as seen in the growing number of questions about information or second opinions put to the staff of the dental information centres. Differences between the assessments of dental work by the dentist in attendance and by a dental colleague have been studied. Both dentists assessed the work on the basis of well-defined criteria. It was concluded that dentists were more critical of their own work than of their colleague's work [18].

Concluding remarks

Reflections on the quality of health care have made a great leap forward during the last couple of years. By laying down a definition of the concept of quality an important start has been made with the development of a feasible policy for quality assurance. The aim of this policy in dental care is to improve oral health and increase patient satisfaction [19]. However, much research still needs to be carried out. These research efforts will have to concentrate mainly on the following questions: what is good dental care?; how can this be assessed in practice?; what do patients want? Obtaining an answer to these questions is of the utmost importance for the dental profession. By paying attention to these issues the dental profession can grasp the opportunity to meet the growing consciousness in society regarding quality aspects of health care.

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