STRUCTURAL PROBLEMS IN THE GERMAN HOSPITAL SYSTEM

Krukemeyer M.G.
Paracelsus-Kliniken, Osnabrück, Germany

SUMMARY

The German health care system has been based on the Hospital Financing Act, which the German government introduced in 1972. According to that, the federal states plan hospitals and make investments. The health insurance funds finance the operating costs. But now the Hospital Financing Act is obsolete, because both the health insurance funds and the federal states are in financial trouble and try to avoid the costs, which are nevertheless rising. In order to freeze costs, the legislators have introduced a new remuneration system, called DRGs (Diagnosis Related Groups), which will be mandatory from 2007 onwards. In this system, the treatment provided will be coded and remunerated on the basis of the primary diagnosis. Periods of hospitalisation and different remuneration systems will no longer be relevant. Transparency and quality will thus be promoted, and the upshot will be more competition among the hospitals. Hospitals that cannot meet quality standards will lose patients and will ultimately have to close. Other participants in the health care system, such as, for example, nursing staff, physicians, pharmacies, rehabilitaion centres and patients, will also be concerned in many ways. The consequences of the DRGs for the health care system, its future development and possible alternatives are discussed in this article.

Key words: German health care system, costs, DRGs, consequences, quality

Address for correspondence: M.G. Krukemeyer, Paracelsus-Kliniken, Sedanstrasse 109, 49068 Osnabrück, Germany. E-mail: info@pk-mx.de

According to an international comparison in a WHO survey (1), Germany is the country that provides one of the best health care services to its citizens. Despite the progress and achievements in practically all fields of medicine, there are growing concerns among hospitals, medical associations and independently managed bodies that it will soon be impossible to continue financing the health care system in Germany in its present form. These concerns are growing and it is regrettably obvious that although our health care system is one of the most efficient in the world, we can no longer continue financing it. In other words, the health care system in its current form can no longer be financed on the basis of the principle of solidarity.

The Cost of Hospitals

Modern-day anaesthetic procedures enable the treatment of increasingly older and younger patients. Although, in the past, very elderly patients and newborn infants often succumbed to their fate, it is now possible to treat increasingly old and multimorbid patients and to provide them with the best possible medical or nursing care. A definition now exists for 'quality of life' during and after the therapy (2, 3). The costs of hospital administration are also rising at a disproportionately high rate as a result of the growing number of new legal requirements, which although necessary are expensive. In addition to numerous regulations on hygiene, hospitals are confronted with more and more building regulations, fire safety regulations and equipment regulations that cost billions of euros every year to implement. New occupational groups in the areas of nursing care, technology and nutrition, as well as the additional forms and statistics that have to be filled in and processed, drive up personnel requirements and necessitate the establishment of new departments, which also cost money. Certifications are absolutely essential. Yet, they are not refinanced on the profit side. The increasing number of patients receiving surgery on an out-patient basis – which is contemporary and correct – has changed the case mix at hospitals and is leading to a higher number of complex and cost-intensive in-patients. The development of the health care system in Germany resulted in the dualism of the public health service and municipal health care (4) and the pressure of costs for medical services necessitated financing by the national health insurance funds, which also face financing problems of their own. Over the last 10 years, more than 200 hospitals in Germany have been abolished or closed. This means that the number of hospital beds in Germany alone has been reduced by more than 150,000. Nevertheless, the health insurance funds are still spending around € 45 billions per year – which constitutes more than 1/3 of their income – on German hospitals, and this figure is still increasing.

Hospitals are also focussing on defensive medicine because, as is the case in the USA, physicians are now confronted on a more frequent basis with patient law suits if the success of their treatment does not match their expectations (5, 6). This means additional costs as a result of multiple examinations, which further drives up the pressure of costs within the hospital. In the past, the physician was considered to be the highest authority. Today, this picture is gradually changing. The patient – or, rather, the politically mature patient – wants to know what therapy is appropriate and what the chances of recovery are. Physicians are taking more and more precautions to ensure that they have done everything possible, even though not all (additional) examinations are necessary. Coupled with the apparatus-based medicine that is necessary today, this has triggered another cost avalanche that is impossible to stem.

The General Public and Hospitals

Members of the general public either know their hospital or are at least aware that there are one or several hospitals in their locality. However, they are not generally aware of the rapid pace of medical and structural developments that the hospitals have experienced in recent years. In particular, there is no public awareness that hospitals are now an economic factor that has to be financed. They still believe that hospitals simply exist and will provide them with medical treatment whenever they require it. Large sections of the population have no idea that it is now impossible to finance the present-day hospital system. They believe that hospitals are owned by the state – who else?

Hospital bed capacity is often fully utilised and one doctor is generally available. Citizens respond with amazement to the brief periods of time that they spend as in-patients and whenever the health insurance fund contributions are increased. Yet they are generally not aware of the relationship between supply shortages and over supply.

We should not speak negatively about modern-day medicine. Medical progress and developments at hospitals are achievements that should be sustained and promoted. However, it is necessary to generate awareness about the fact that these achievements must also be affordable.

Hospital Financing

Until 1972, German hospitals were financed by the health insurance funds' per diem hospital allowances. Every year, the health insurance funds negotiated a new per diem hospital allowance that was generally higher. The inadequate level of health insurance fund contributions and the first indications of the cost avalanche in the health care system meant that the health insurance funds were no longer able to finance hospital costs. As a result of divergent political interests, the German Government entirely restructured the German hospital financing system in 1972. The introduction of the Hospital Financing Act provided the federal states with the authority to plan and make investments in hospitals, i.e. investments in building new hospitals, in the extension of existing ones or in major structural measures and/or medical equipment. The operating costs were financed by the health insurance funds' per diem hospital allowances. This marked the beginning of dualism in the hospital system and, after only a few years, the first problems became evident. As a result of their inclusion in the hospital plan, the federal states could easily control the number of hospitals and hospital departments because of their inclusion in the hospital plan they automatically entered into a contract with the statutory health insurance funds. The hospital plan is therefore a contract with detrimental third-party effects and its weaknesses soon became evident because despite the often extremely efficient hospital planning measures, it was impossible to halt cost explosion in the hospitals.

The Hospital Financing Act is now obsolete because both the health insurance funds and the federal states attempt to avoid the costs. Despite the fact that the federal states are required to finance the costs of investments in hospitals, their own financial difficulties make it impossible for them to meet this obligation. Although the figure differs from state to state, this has resulted in a backlog of investments in German hospitals over recent years of between 10 and 20 billion euros and some experts believe that this debt mountain will continue to increase. The federal states only provide financing when absolutely necessary. Although many hospitals have been converted or renovated, the federal states are not able to meet the numerous liabilities. The statutory health insurance funds are attempting to cut costs because they have to report billions in losses ever year that can only be offset by increasing contributions. Despite all the efforts that have been made, this situation is not acceptable in the long term.

The introduction of a multicultural remuneration system, such as a basic per diem hospital allowance, a special allowance, flat--rate case allowances or similar allowances, may have postponed the problem, but they haven't solved it. Not only has the cost price coverage principle at hospitals been abolished, it is simply no longer feasible.

The Future Development of Hospitals

We know that modern therapies enable us to more frequently influence disease processes in order to provide patients with effective treatment that would not have been possible in the past. This leads to a reduction in the length of in-patient hospitalisation, which is also in the interests of patients, and to an increasing level of out-patient care. Hospital in-patients now tend to be more care--intensive, which drives up the pressure of costs and has obvious consequences. The length of in-patient hospitalisation has decreased from an average of 14 days in the past to 9.6 days, although the German figure is still high by international comparison. For example, patients in France spend an average of 5.5 days in hospital, and US patients 5.9 days. This means that fewer hospitals or hospital departments are required.

The local authorities, as hospital operators, face high budget deficits due to the tax reform and, as a result, have less disposable funds to support the hospitals either in the form of investments (which are actually the responsibility of the federal states) or by covering losses. The Federal Supreme Court's ruling on optional benefits has led to a reduction in benefits paid to patients with supplementary insurance. As a result of budget restrictions, the hospitals have no option but to remain within the given cost framework, which is a near impossible task for many hospitals (and not only the local authority-run ones).

The more research and development projects we implement, the more we can realise and practice in our hospitals every day. However, we should not labour under the misapprehension that research and development activities at the hospitals or within the medical profession should cease. In the long run, this would result in a disproportionately high increase in hospital costs relative to medical progress.

The development of new medical equipment necessitates regular investments in hospitals that neither the federal states nor the hospital operators can finance. Also, the shift in the age pyramid will lead to higher flat-rate case allowances (7). Over the next few decades, the number of senior citizens will increase compared to those in the younger age groups.

As a result of this development, the legislators have decided to introduce an entirely new remuneration system called DRGs (Diagnosis Related Groups). This system will replace the system that was introduced in 1972 and is certainly revolutionary as far as the hospitals are concerned (8, 9, 10). From the year 2003 onwards, the hospitals have the option of switching to the new system and, from 2007 onwards, it will be compulsory. These DRGs will make a considerable contribution to introducing and promoting transparency, quality and competitiveness at all hospitals in Germany. This

means that all hospitals must compete with each other, as is the intention of the legislators. The inevitable consequence is personnel cuts within the hospitals, although this measure alone will not suffice to reduce their costs. The hospitals or their legal operators will have no option but to close departments and, in extreme cases, entire hospitals because they will no longer be able to finance them. In earlier decades, hospitals were almost exclusively operated by local authorities, clerical bodies or charities. However, in recent decades, an increasing number of private hospital operators have emerged and proved that they are equally capable of providing competent medical care to the general public.

The federal government's aim is clear: it wants to reduce the number of unprofitable hospitals by exposing them to competition and let them disappear from the market in a natural selection process in order to gain control over the permanent deficit of the statutory health insurance funds (11, 12).

The Increasing Costs of Public Health

Another problem is that costs are not only rising at hospitals, but also in medical practices and in the pharmaceuticals and nursing care sectors. The logical consequence is that all participants in the system of self-administration must pursue one single aim: to reduce costs. The self-administration structure that has evolved over decades and proved to be practical during this period must inevitably change or be changed. The health insurance funds will conclude an increasing number of direct contracts with hospitals, independently of the hospital plan, or with physicians or medical practices. The same factors of competition, transparency and quality will apply equally to hospitals and health insurance funds, whereby a process of consolidation will eliminate the unprofitable health insurance funds.

More and more physicians will join medical practices, reflecting the development that is already taking place in the legal community, and large-scale practices with 50–100 and more physicians will gain additional weighting and acquire power over the hospitals and health insurance funds, which will trigger a debate on the existence and function of the National Association of Statutory Health Insurance Physicians.

There will be more incentives for preventive medicine and it will be better remunerated. We no longer need physicians who diagnose and treat diseases. What we need most of all is physicians who prevent their occurrence. Breast screening and endoscopy are positive examples of preventive medicine. Patients are now more frequently required to accept partial responsibility by providing information on their lifestyle and physically damaging behaviour such as smoking, alcohol consumption, obesity etc. This also necessitates proper use of computer programs (13).

German pharmacies will cease to exist in their current form. A profit margin on pharmaceuticals per pharmacy of between 30 and 60% is impossible to sustain. The pharmacists, at the end of the distribution chain, will be the first to implement cost-cutting measures. In the long term, Internet pharmacies and pharmacy chains will dominate the market and inter-pharmacy competition will also prevent further cost increases and, indeed, result in cost reductions, especially in the pharmaceuticals sector.

The legislators and the financing bodies will introduce more and more financial incentives for hospitals, physicians and patients to cut down on costs. This is a novel situation that would have been inconceivable in the past. The health insurance funds and the physicians will implement measures to ensure competitiveness, maximum transparency and, at the same time, establish quality standards. The system of integrated care involving medical practitioners, hospitals, rehabilitation clinics and nursing homes that is prescribed by law will be promoted and barriers that emerge when this integrated care network is established will be successively eliminated.

The government will promote competition between the hospitals to save costs. This competition will be based on transparency and the adherence to quality standards. If there are deficits in the areas of quality or transparency, penalties will be imposed that have a double impact on the hospitals. The DRGs are the vehicle for this competition. According to Darwin's principle of evolution, only the most efficient and productive hospitals will survive. This competition will extend to other areas of the health care system that have the same basic problems, such as nursing care, the health insurance funds and the pharmaceuticals sector.

Although recently-coined terms such as ‚evidence-based medicine' (14) or ‚best practice methods' (15) offer approaches to problem solving, they only describe the fundamental problem, but do not solve it. The coding of patient records and medical conditions by the hospitals mean that records of diagnoses on admittance will exist, based on which further therapeutic measures can be coded and then remunerated. This will involve additional administration costs for the hospitals and the acquisition, processing and proper evaluation of a high volume of data. The independently managed hospitals are expected to provide this data within only a short period of time. Whether this is possible remains to be seen. A hospital's income will be calculated on the basis of the DRGs, multiplied by the relative weightings, multiplied by the rates of remuneration for the relevant DRGs. After the deduction of the hospital's operating costs, it will be left with a profit or loss. The hospital will have no option but to scrutinise costs in more detail because only costs = diagnosis will be available as an instrument of remuneration and quality standards will also be a more important factor. The hospitals that fail to concern themselves with this problem and find an optimal solution will lose their patients in droves. The legislators are finally pulling the right strings, although it is not yet certain whether they will consistently pursue the original objective.

Today, a maximum of 30% of patients at acute hospitals are transferred to rehabilitation clinics for further treatment. From 2003 onwards, the hospitals will face a different situation. The hospital operators will attempt to discharge patients from hospital as soon as possible because remuneration will be on the basis of in-patient care episodes and the length of stay constitutes an additional burden to the hospital's finances.

Consequences for Hospitals

When the DRGs are introduced, neither periods of in-patient hospitalisation (bed capacity utilisation) nor the different remuneration systems will be relevant. The hospitals must learn to focus on the principal diagnosis. The treatment provided will be coded and remunerated on the basis of the principal diagnosis. The risk of incorrect coding, either because hospital auxiliaries or inexperienced doctors are assigned to this duty, will have prompt consequences for the hospital's managing director or administrative director. The coding of patient conditions, especially the principal diagnosis, is exclusively the responsibility of the hospital's junior consultants and senior consultants.

From 2003 onwards and, at latest, in 2007, the development that will take place at acute hospitals is clear: the hospitals will attempt to transfer the patients as soon as possible after the conclusion of therapy. One option available to the acute hospitals is to conclude contracts with rehabilitation clinics that enable the prompt transfer of patients from the hospital. This method of transferring patients, which is described as ‚bloody', will meet with vehement resistance from the rehabilitation clinics because they would incur additional costs for changing bandages, antibiotic therapy, respiratory therapy etc. which are not covered by the per diem hospital allowance. The pension insurance funds, which provide the major portion of financing for rehabilitation clinics, will not be willing to provide additional financing for acute hospital care that is exclusively remunerated by the health insurance funds. This will cause a conflict between the hospitals and the rehabilitation clinics which unless resolved will inevitably lead to additional tensions.

Alternatively, the acute hospitals could close clinical wards and convert them into rehabilitation wards. However, it is necessary to clarify the issue of who would finance these wards because the DRGs do not cover rehabilitation measures and the pension insurance funds will not finance these measures within acute clinics. Different salary scales for employees working in the rehabilitation wards within acute clinics would lead to inequality of pay for employees, which the unions would not tolerate.

The acute clinics have the opportunity to open nursing wards within the clinics, analogue to the establishment of rehabilitation wards. This would enable the acute hospitals to transfer patients directly to the nursing ward after the conclusion of therapy to ease their budgets. Here, too, it is not clear who would pay for these services because they are not financed by the nursing care insurance funds and the hospitals would also be in a grey area as far as remuneration is concerned because there is no competent body to ascertain whether the hospitals actually do transfer the patient on the prescribed date. Remuneration irregularities are a regular occurrence in the USA, where hospital operators are coming under increasing pressure from the legislators and health insurance funds to meet impossible demands. Unfortunately, it is the patients who have suffered due to the fact that no satisfactory solution could be found.

It is also necessary to look at the issue of who finances the investments in acute hospitals. The DRGs do not include investment costs and the legislators have established a new remuneration system without giving adequate consideration to the matter of who will finance investments in hospitals when the responsible federal states are not in a position to do so. The federal states do not have any money. The hospital operators cannot pay the investment costs either, which means that this unresolved question constitutes a gauge to establish whether the health policy makers genuinely intend to implement the new remuneration system. During the DRG transition phase, the dual system will remain intact. But who will provide the financing afterwards?

When the legislators introduced the DRGs they made provisions for exceptional measures, for example when there are urgent requirements. Yet how are ‚urgent requirements' defined. If hospital operators start initiating proceedings at the administrative court to establish whether their requirements are urgent, this will cause chaos not only for the hospital operators, but also in the entire legal system. Exceptional measures are and must be available to hospitals on the basis of a clear definition of urgent requirements. Urgent requirements pertain exclusively to the conditions for which treatment is provided and not to the organisations that support the hospital in question. Exceptional measures in connection with special patient care requirements must be accepted and firmly established. The legislator cannot have unrestricted control over competition between all hospitals and all federal states because the personnel structure and salaries in major cities have created different salary differentials than those existing in rural areas. Although this undermines the competition that the legislators have proposed, it must be taken into account for reasons of fairness and due to the social differences in the various federal states.

Although the federal states will no longer be responsible for financing the hospitals, they will remain responsible for planning. Because the federal states are not now in a position to finance the hospitals, irrespective of whether they are the operators or not, the onus of financing in the future will be back on the health insurance funds.

Cooperation between acute hospitals and high-quality rehabilitation clinics will enable the provision of optimum care to patients when the DRGs are introduced. Complex flat-rate allowances or complex DRGs are essential because they enable the hospital to cooperate effectively with partners in the treatment chain for the benefit of patients. In the future, complex flat-rate allowances will be the decisive instrument of remuneration and control in the German health care system. Integrative care will enable medical practitioners, hospitals and rehabilitation clinics to be involved in patient care and its remuneration. The acute hospitals will establish benchmark standards for patient and diagnosis remuneration coding.

Nursing care measures, like rehabilitation measures, must be provided outside the hospitals in order to enable genuine competition in an environment of operator plurality and eliminate the grey zones and temptations. Public health institutions will be necessary to professionally support political decisions.

Some of the above conclusions are extremely contradictory due to the very recent introduction of the DRG system at German hospitals, which means that no precise scientific parameters for comparison exist in Germany. Thus, the freedom of German physicians to establish the appropriate therapy is actually in opposition to the government's transparency requirements and the principle of competition. In future, it will become clear which side will prevail: the German physicians, with their therapy orientation, or the government, which aims to establish and implement the new remuneration system. In the USA, there have been countless cases of upcoding, payment being demanded for services that were never provided and ‚revolving door' effects, where patients are discharged on one day and readmitted the next day so that the hospitals can charge double for the patient. The negative effects of the introduction of DRGs in the USA will not occur in Germany. Special review groups have been established by the statutory health insurance funds to prevent incorrect statements of account as a result of upcoding or revolving door effects, based on experiences in the USA. Obviously, the DRG system was not originally designed as a means of establishing competition between hospitals. Based on the proposals of the government commission regarding the introduction of DRGs, it became evident in the course of the introductory phase that DRGs offer vast potential

as a means of establishing competition between the hospitals and transparency. The DRGs are thus a Trojan horse that enables the establishment of competition between German hospitals.

This brings us to the central aspect of the article. DRG's are being introduced in Germany to establish competition, quality and transparency between hospitals, irrespective of who the operator is, with the objective of eliminating unprofitable hospitals and leaving the decision of whether to remedy the deficits or close the hospital up to the operator.

In 1980, statutory health insurance funds in Germany spent € 45 billion on healthcare. By 2001, this amount had increased to € 130 billion. One third of these costs were accounted for by hospital services. The second-largest cost pool, which accounts for approx. 30% of total costs, is in respect of services provided by medical practitioners and dentists (22). Another significant cost pool is pharmaceuticals, which accounts for more than 16% of expenditure.

Based on the above figures, it is evident that cutbacks on expenditure for German hospitals are necessary. This means that the hospitals will have to convert their accounting systems to the new DRG model. They will also have to establish new occupational groups, such as hospital manager, controller and quality assurance officer. To a greater extent, the hospitals will offer access to medical practitioners, which means that physicians working on an out-patient basis can also implement diagnosis and therapy at the hospitals. The hospital operators are keeping a closer eye on patient and case costs because they will only be remunerated for documented costs in respect of services provided. In the long term, this will lead to changes in the organisational structure of individual medical departments, because not only the medical departments but also patient volumes will be of decisive significance. The DRG system opens up new therapy perspectives for other groups, especially medical practitioners, both in their own practices and within acute hospitals. For rehabilitation clinics, the DRG system means higher patient admissions, though on a more cost-intensive basis because the patients are hospitalised for a shorter time. An increasing number of rehabilitation institutes will be established.

Specific Changes for Patients

The government cannot pay for everything and should not be expected to do so. Patients must assume some responsibility for ensuring the necessary basic care if we want to retain our high quality health care system. This also includes prevention and making a contribution to costs if socially acceptable. The funding organisations will increasingly force patients to accept partial responsibility.

The transparency and competition between hospital operators will enable citizens to select treatment according to their personal preferences. A free choice of physician and the physicians' freedom to establish the appropriate therapy (17) are cornerstones of our democratic system and must be upheld. The quality and equality of health objectives (18–21) are also integral aspects of our health care system. However, if patients are not satisfied with the treatment they have received, they will take the matter of the hospital's future to the controlling authority. The above described cost reductions in conjunction with the adherence to quality standards will ensure the sustainability of our health care system and constitute insurance for our citizens. We can then offer them one of the best health care systems in the world and step up the pace of progress and further development in the field of medical research. The costs of the German health care system will continue to rise, though at a slower rate.

There will be several changes for patients as a result of the DRG system. Firstly, the length of hospitalisation will be considerably reduced, which means that patients will be discharged from hospital before they are healthy enough to return to work. As a result, they will have to reconvalesce at home or in a rehabilitation clinic. More and more patients will be required to supplement the costs of hospital treatment.

Insurance holders will conclude supplementary insurance policies, in addition to their statutory health insurance, in order to ensure that they can take advantage of all the diagnostic and therapeutic services that are currently still covered by statutory health insurance. The system will encourage responsible patients, who actively contribute to remaining healthy, although they will be required to pay a higher portion of treatment costs.

REFERENCES

1 . WHO: The World Health Report 2000.
2. Troidl H: Quality of Life. Theor Surg, 1991; 6: 138–142.
3. Troidl H: Lebensqualität als entscheidendes Kriterium im Alltag und in der Forschung des Chirurgen. Langenbecks Arch Chir 1989; Suppl. II: 101–107.
4. Labisch A: Entwicklungslinien des öffentlichen Gesundheitsdienstes in Deutschland. Öff. Gesundh-Wes, 1982; 44: 745–761.
5. Schreiber H-L: Behandlungsrisiko and Arzthaftung. Langenbecks Arch Chir, 1980; 352; 43–46.
6. Schreiber H-L: Notwendigkeit and Grenzen einer rechtlichen Regelung ärztlicher Tätigkeit. Chirurg, 1980; 51: 411–413.
7. Mansky T, Erben CM, Kleinschmidt S, Fassl HI, Scriba PC: Einfluß demographischer Änderungen auf Fallzahlen and Pflegetage hospitalisierter internistischer Patienten. DMW, 1989; 114: 368–377.
8. Mansky T, Erben CM, Scriba PC: Diagnosebezogene Fallpauschalen: Die Nachteile überwiegen. Dtsch Ärztebl, 1990; 87: 125–128.
9. Tuschen KH: Verpflichtendes Qualitätsmanagement, integrierte Versorgung und DRG-orientierte Vergütung. F & w, 2000; 17: 6–12.
10. Mansky T: Sind DRGs die Alternative zum deutschen Mischsystem? 1998; 12: 1916–1921.
11. Henke KD, Kücking-Kipshoven M: Gesundheitsversorgung und Krankenversicherung 2000: Grundlagen für gesundheitspolitisches Umdenken. Ersatzkasse, 1995; 8: 293–297.
12. Walzik E, Pfeiffer D: Sachverständigenrat: Sondergutachten aus Sicht der Ersatzkassen. Ersatzkasse, 1995; 9: 341–345.
13. Vader JP, Burnand B: Prospective assessment of the appropriateness of health care. Eurohealth, 1999; 5: 21–23.
14. Sackett D: Evidence based medicine: what it is and what it isn't. BMJ, 1996; 312: 71–72.
15. Perleth M, Jakubowski E, Busse R: "Best Practice" im Gesundheitswesen. ZaeFQ, 2000; 94: 741–744.
16. Von Ferber Chr: Die Reform des öffentlichen Gesundheitsdienstes – Notwendigkeiten und Perspektiven. Öff. Gesundh-Wes, 1991; 53: 242–249.
17. Laufs A: Therapiefreiheit des Arztes. ZaeFQ, 1997; 91: 586–592.
18. Robra B-P, Meyer MR, Schwartz FW: Positive Gesundheitsziele, Normative und pragmatische Positionen. MMG, 1984; 9: 170–176.
19. Selbmann HK: Qualitätssicherung aus der Sicht der Wissenschaft. Arzt und Krankenhaus, 1991; 11: 364–366.
20. Lehr H, Strosberg M: Quality improvement in Health Care: Is the patient still left out? QRB, 1991; 10: 326–329.
21. Reerink E: Defining Quality of Care: Mission Impossible? Quality Assurance in Health Care, 1990; 2: 197–202.
22. Beske F, Hallauer FJ: Das Gesundheitwesen in Deutschland. Deutscher Ärzteverlag, Köln 2002.

Received January 14, 2004,
Received in revised form and accepted March 30, 2004