

Institute of International Management and Marketing, Warsaw School of Economics

IZABELA K. KOWALIK

*Hospital rankings – evaluation criteria and role  
on the Polish and American health care market*

During the recent few years there has been a marked increase in the number of hospital rankings published in the Polish press. It is worth considering whether they are prepared according to the right evaluation criteria and whether they have an important role on the Polish health care market.

According to literature, rankings published by the press and coworking scientific institutes contribute to the shaping of the hospital image. Publicizing positive information in a proper way or denying and explaining unfavorable news are elements of public relations (PR) activities (3). The importance of such activities as part of marketing communication in the health services market has been growing recently, which has been reported by many PR agencies. According to a survey of more than 150 top public relations firms in the USA health care is one of the three fastest-growing areas of public relations, along with high tech and financial means (5). According to some other sources, the level of interest in public relations in the American health care has never been so high as now (15). These trends are due, among others, to the growing concern of patients with the health issues and a healthy lifestyle but also to the growing coverage of these topics in the media, which may be connected with the bioterrorist threats and recent epidemics. In Poland the efforts of health care providers to shape a positive reputation are caused by health care market changes, connected with privatizing some facilities, development of competition and introduction of so-called internal market, where contracts for providing these services are being signed with the authorities (18). In addition, just like abroad, in Poland there is also an increase in patients' requirements on health care quality connected with growing awareness of their rights and the widespread interest in current health care system reforms.

From the marketing point of view, the role of the rankings is to place a hospital in a specified position in the perception of patients, doctors and others, which is called positioning (2). Positioning is seen as one of the most important marketing strategies helping to gain a sustainable competitive advantage (12). As a result of scoring high in a ranking, the hospital clients will be assured of its satisfactory performance and that other people, based on their experience, also evaluated the hospital well. The positioning should be based on credible characteristics, so that the service will be differentiated from the competitors (8). Therefore, it is important to conduct rankings in such a way that they are based on criteria truly reflecting the quality level of services which are offered. What is more, the ranking users are aware that they have access to professional knowledge of specialists who evaluated the hospital according to specified criteria concerning the ways of providing care. In sum, the credibility of information contained in rankings can be attributed to using the right information sources and reliable evaluation criteria.

The aim of this analysis is to evaluate the most popular hospital rankings in Poland and the USA, to compare the used assessment criteria and to suggest some improvements.

## MATERIAL AND METHODS

The analysis concerned two most popular Polish hospital rankings and two most popular American hospital rankings. During the analysis the evaluation criteria used in rankings were compared. The detailed structure of rankings was described, including the division of evaluated hospitals into specialty groups and the use of preliminary selection criteria. Attention was also paid to the types and sources of data used for ranking preparation.

Moreover, based on current literature, the results of research on clients' opinion about the reasons and circumstances of using rankings were presented. They were later used, together with the results of ranking analysis, to prepare some suggestions of improvements for the Polish market.

## RESULTS

The contents of the most popular Polish hospital ranking published annually in "Rzeczpospolita" are prepared by the Center for Monitoring Healthcare Quality in Krakow. In 2006 the ranking covered 278 hospitals, both public and private, and the evaluation methodology has been unchanged for the previous 3 years. The results are divided into 4 categories: the main ranking, containing multispecialist and oncological hospitals, the ranking of monospecialist hospitals, the private hospital ranking and the regional list of hospitals for each of 16 Polish regions. Evaluation of each hospital was divided into 3 parts: management, quality of care and patient service. The part concerning management included physical facilities evaluation, health and safety at work, investments in new equipment and renovations, level of profitability and indebtedness, and the existing IT systems.

Within the part concerning the quality of care, points were given for the presence of a quality monitoring team in the hospital, the patient complaint level and some criteria concerning the comfort of patient stay (size and equipment of wards, etc.).

In the part concerning patient service there were points for safety systems in the operating rooms, access to quick diagnosis, the qualification level of staff, rational management of available medicaments (formal rules of management of antibiotics supplies). In addition, a criterion of using a monitoring system for unforeseen complications was introduced (complications after administering some medications, using anesthesia or blood transfusion) (14, 16).

The ranking prepared by "Rzeczpospolita" is based on data from surveys completed by the hospitals. It is often quoted, especially in the medical community, and the hospitals use the results as an element of self-promotion.

Other, commonly known rankings have been published by the weekly magazine "Wprost" since 2004. The evaluation of health care units and the quality of provided service in "Wprost" is based on methodology prepared by specialists from medical associations and national consultants from respective specialties. The results are presented in the form of 8 lists grouping different hospital categories: cardiological, cardiac, orthopedic, ophthalmological, gynecological, otolaryngological, psychiatric and plastic surgery.

The evaluation concerned individual procedures and conditions, in relation to which the hospital representatives were asked about the range of available diagnostic procedures, equipment level, the number of conducted medical procedures and how they are performed, the experience in performing specific procedures, the number of patients readmitted to the hospital, the number of postoperative complications and the average length of patient's stay after operation.

The next element of evaluation concerned the personnel education statistics, some points were also given for fulfilling general criteria concerning hospital management (they were included in so-called general questionnaire). These questions concerned mainly the risk of interhospital infection,

the comfort of a patient's stay in the health care unit, the range of postoperative care and access to basic tests. Considerable weight was also given to participation in external quality monitoring systems, such as ISO certification and accreditation by the Center for Monitoring Healthcare Quality. This ranking, similarly as the previous one mentioned was based on survey data obtained from the hospitals.

After adding up the results, a list of best clinics and units was compiled, showing where the planned procedures are performed in the best way (19, 20).

The rankings analyzed above have been prepared only for a few years, so it can be said that the experience in this field is just being accumulated in Poland. On the other hand – on the American market the “U.S. News & World Report's” *America's Best Hospitals ranking* has been published annually for the last 16 years. It covers more than 6000 hospitals in the studied group, and they are divided into 17 specialties. Unlike other hospital rankings, *America's Best Hospitals* looks at entire specialties rather than at specific procedures. That is because it tries to identify hospitals that excel in a variety of tough cases across a specialty (4). To be considered at all for the 12 data-driven specialties, a hospital must first meet at least one of three requirements: be a member of the *Council of Teaching Hospitals*, be affiliated with a medical school, or make available to patients at least nine out of 18 technology-related services deemed worthwhile (such as positron emission tomography). To be considered in a particular specialty, a hospital also had to perform a minimum number of specified procedures on Medicare patients in 2001, 2002, and 2003 (at least 1,270 procedures for heart and heart surgery, for example), or the hospital had to have been recommended by at least one physician in “U.S. News” surveys in 2003, 2004, and 2005.

The remaining hospitals got a numerical assessment made up of three equal parts: reputation, death rate, and care-related factors such as nursing and patient services. These parts were calculated as follows:

1. Reputation among physicians – about 200 physicians from *American Medical Association* participate in a survey for each ranked specialty (a total of 3400 physicians participate in the study), where they point out 5 best hospitals, where they would send most severe cases from their specialty, regardless of the transportation cost. Then they assign a grade ranging from 1 to 5 to the chosen hospitals. The physicians also take into account the following elements during evaluation: personal knowledge about a given center, patients' opinions, knowledge of fellow physicians, published rankings, personal knowledge about specific physicians from a given center, scientific articles from a given center, knowledge about modern treatment methods used in the center, graduating from a medical school in a given center, doing residency in a given center.

2. Death rate – calculated based on historical data processed by special software.

3. Care related factors – describe the nursing care and the patient-related services (7).

Data for this part of survey is acquired from surveys conducted previously by *American Hospital Association* among members of this association.

For 5 specialties (ophthalmological, pediatric, psychiatric, rehabilitation, rheumatology) only the first criterion, i.e. the reputation among physicians is considered for the ranking. The reason is that mortality data for pediatric facilities are unavailable and are irrelevant or unreliable in the other specialties.

In 2005, after preliminary qualification and detailed evaluation, just 176 hospitals scored high enough to rank in even a single specialty out of all 6,007 U.S. medical centers.

Another widely known American hospital ranking has been prepared by a consulting company Solucient for the last 14 years. It evaluates more than 6200 American hospitals with at least 25 beds. The results are presented in 5 categories according to the size of hospital and the level of teaching

activities. The evaluation criteria include: • Risk-adjusted mortality index and complications index (data from previous year) • Severity-adjusted average length of stay • Risk-adjusted patient safety index • Expense per adjusted discharge, case mix- and wage-adjusted • Profitability (operating profit margin) • Cash to total debt ratio • Tangible assets (net plant, property, and equipment) per adjusted discharge • Growth in patient volume.

As a rule, the indebted hospitals, regardless of the results concerning the service quality, do not participate in the ranking, because its main purpose is to reward the “hospitals that provide high quality care, operate efficiently and produce superior financial results”. The 100 Top List is a management award conceived to “offer the health care industry a direction for positive change” (17). The data concerning specific rankings, the sample characteristics and evaluation criteria are presented in Tables 1 and 2.

As it has been mentioned above, the significance of rankings, despite other ways of evaluating hospitals has recently been growing. According to some research, for the patients rankings are a preliminary indicator for the choice of service provider and a signal that the hospital which occupies a high position offers high quality service. Much more often the choice of place for treatment is based on localization and access to the service in the health plan of the insurance company. Regardless of the previous arguments, the qualitative research done in the USA shows that patients mainly pay attention to the opinion of their doctors. Moreover, according to the advertisers’ opinion the importance of data included in rankings depends on the type of illness. In complicated or non-standard cases patients use rankings more often in order to find a best center in a given specialty (6).

For the hospital personnel the ranking results can be an important element contributing to job satisfaction. They improve the staff morale, make it easier to hire valuable professionals and lower the level of worker turnover. Also, the new workers employed as residents pay considerable attention to rankings such as the “U.S. News&Word Report” in choice of their residency place.

The ranking results can be used in marketing activities of the hospital as an element of the strategy of building a strong brand and as a way of strengthening messages sent to present and prospective clients. In some hospitals special events are prepared for the staff, connected with the ranking results announcement, with the whole local community being informed about these results via outdoor advertisements placed all over the city (6).

There is still very little information about the role of medical provider rankings on the Polish market. Hospital managers say that participation in rankings improves the hospital brand image among the local community and patients, it also seems to be a pass to the government network of hospitals which is being developed (18). However, there should be some additional research conducted on this subject, to confirm these results.

## DISCUSSION

According to the data shown in Table 1, the Polish rankings cover a much smaller study group than the American ones. For example, in the ranking prepared by “Rzeczpospolita” it is less than half of the general hospital population, which can cause a lower reliability of results, caused by the sample error. The Polish rankings are based mainly on survey data supplied by the hospitals themselves. This is a subjective source and probably adding data from public statistics and external opinion sources would increase the reliability of rankings.

As can be seen in Table 2, the evaluation of personnel qualifications in the Polish rankings is not so complete and many-sided as in case of ranking provided by “U.S. News&Word Report”. That magazine used both qualitative criteria – opinions of other specialists on personnel competence level,

and the scientific achievements of employees as measures of their qualifications. This area of ranking requires a better development in case of the Polish providers and its weight in the overall grade could be increased (at present it is worth only 40 points out of 1000 possible in "Rzeczpospolita").

Table 1. Size of samples and type of source data in analyzed rankings

Author of ranking	Number of evaluated hospitals	Type of source data
"Rzeczpospolita"	278 of ca. 800 public and private hospitals in Poland	surveys completed by hospital employees
"Wprost"	Hospitals from the Ministry of Health database, number: n.a.	surveys completed by hospital employees
"US News & World Report"	<ul style="list-style-type: none"> <li>• ca. 3200 physicians</li> <li>• over 6000 hospitals - members of the American Hospital Association</li> </ul>	<ul style="list-style-type: none"> <li>• surveys completed by physicians employed outside of studied hospital,</li> <li>• information from hospital employees,</li> <li>• data from public statistics</li> </ul>
Solucient	over 6200 hospitals in the USA (all except government, specialist and long-term care units)	data from public statistics

Source: based on (4, 14, 16, 19, 20, 21)

When it comes to assessing the "general management" of a hospital, the rankings use a large variety of criteria. Both the typical financial criteria are used (Solucient), measures dealing with infrastructure ("Rzeczpospolita") as well as the fact whether the hospital received ISO certification or is accredited by CMJ ("Rzeczpospolita", "Wprost"). Perhaps such certification can be a sufficient criterion in terms of general management, as it is backed by thorough qualification procedure by specialized institutes and some questions in the current ranking surveys even replicate those from ISO certification or CMJ accreditation procedures.

In all analyzed rankings the most developed system of evaluation covers the medical procedures and the patient care (general service level), as can be seen in Tab. 2. If we take into account only these criteria, the Polish rankings match the American ones in their level of detail. It is also worth mentioning that some standards for assessment of specific therapeutic procedures are currently developed by the specialists from different fields of medicine, which will make it easier to compare results of different Polish rankings. However, also these procedures cannot be judged only on the basis of internal research but also using some opinions of external specialists, as in the US rankings.

According to literature, the criteria for evaluation which increase reliability of rankings, and should be used due to their equivalent meaning are: • the number of performed procedures of a given type • the level of medical staff turnover (the lower it is, the better the quality of care, because a longer period of personnel cooperation contributes to an improved care quality) • actual results of treatment (2). As has been shown above, the number of performed procedures is already used as an evaluation criterion, both in Poland and in the USA.

When considering the methodology of ranking preparation, the patient satisfaction measurements should be conducted on frequent, regular basis. If a postal survey method is used as a means of evaluating specialist services, a larger geographical area than in case of out-patients' clinics should be covered, because it gives access to a more representative sample. As has been proven in qualitative

research done by the author in the largest Polish hospitals, the patient satisfaction surveys are carried out regularly, and also some hospitals conduct on-site research on personnel satisfaction (9).

Table 2. Evaluation criteria used in hospital rankings

Author of ranking	Poland		USA	
	“Rzeczpospolita”	“Wprost”	“US News&Word Report”	Solucient
Evaluated area: Management	<ul style="list-style-type: none"> <li>• facilities,</li> <li>• health and safety at work,</li> <li>• investments in new equipment and renovations</li> <li>• strategic planning,</li> <li>• profitability,</li> <li>• level of debt,</li> <li>• information systems,</li> <li>• awarded certificates and accreditation</li> </ul>	<ul style="list-style-type: none"> <li>• general management criteria,</li> <li>• awarded certificates and accreditations</li> <li>• hospital ‘prestige’ according to opinion of medical community</li> </ul>	not evaluated	<ul style="list-style-type: none"> <li>• expenditures of the hospital,</li> <li>• profitability,</li> <li>• outpatient-care revenues,</li> <li>• asset turnover,</li> <li>• lack of debt</li> </ul>
Medical procedures	<ul style="list-style-type: none"> <li>• availability of technology-related services,</li> <li>• monitoring of treatment,</li> <li>• quality of acute care,</li> <li>• internal access to diagnostic procedures,</li> <li>• patient complaints</li> </ul>	<ul style="list-style-type: none"> <li>• evaluation according to standards for specific conditions,</li> <li>• available diagnostic procedures,</li> <li>• equipment level,</li> <li>• number of procedures per year,</li> <li>• availability of technology-related services,</li> <li>• number of postoperative complications,</li> <li>• average length of stay</li> </ul>	<ul style="list-style-type: none"> <li>• availability of technology-related services,</li> <li>• number of procedures per year,</li> <li>• reputation among physicians concerning the treatment quality,</li> <li>• mortality rate</li> </ul>	<ul style="list-style-type: none"> <li>• mortality and complication rate,</li> <li>• average length of stay</li> </ul>

Personnel	<ul style="list-style-type: none"> <li>• number of specialists, researchers,</li> <li>• participation in professional training,</li> <li>• expenditures for training,</li> <li>• number of absences,</li> <li>• availability of places for residents</li> </ul>	<ul style="list-style-type: none"> <li>• experience in performing procedures,</li> <li>• number of specialists, researchers,</li> <li>• participation in professional training</li> </ul>	<ul style="list-style-type: none"> <li>• reputation among physicians,</li> <li>• number of publications,</li> <li>• own experience of former employees</li> </ul>	not evaluated
General patient care	<ul style="list-style-type: none"> <li>• safety system,</li> <li>• availability of diagnostic procedures,</li> <li>• management of medicaments,</li> <li>• monitoring system for complications,</li> <li>• comfort of stay</li> </ul>	<ul style="list-style-type: none"> <li>• risk of interhospital infection,</li> <li>• comfort of stay,</li> <li>• postoperative care</li> </ul>	<ul style="list-style-type: none"> <li>• service quality index,</li> <li>• nursing care,</li> <li>• patient – related services</li> </ul>	patient safety index

Source: based on (1, 4, 11, 17, 2)

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### SUMMARY

**Objective:** Evaluation of the popular hospital rankings in Poland and the USA regarding the method of their preparation. Analysing the role of rankings and suggesting changes. **Materials and methods:** Comparison of hospital rankings prepared by periodicals: "Rzeczpospolita" "Wprost", "US News&Word Report" and company Solucient, regarding the sample choice, structure, type of source data and the criteria used for assessment. **Analysis of current literature** concerning the influence of rankings. **Results:** The Polish rankings cover a smaller part of the hospital population than the American ones and they are mainly based on surveys conducted among the hospital management. In the USA the studied sample is much more extended and several research techniques are used. Both in the USA and in Poland there are 4 main aspects of evaluation and the methodology is most developed in terms of medical procedures and general patient care. In the USA rankings have been a source of information for patients and personnel for the past years, however, they rather play a complementary role. In Poland there has been no analysis of their role yet, but according to the hospital managers' opinions they mainly help in promotion and qualifying for the government network of hospitals. The Polish hospital rankings should be completed with data from objective sources. The area concerning personnel qualifications should be extended. The area concerning hospital management can be reduced, because of existing ISO certificates on quality management. The medical procedures evaluation criteria should be standardized, which makes the rankings more comparable. The Polish hospital managers could use rankings to build the hospital image and to motivate the personnel.

#### Rankingi szpitali – kryteria ocen i znaczenie na rynku ochrony zdrowia w Polsce i USA

**Cel artykułu:** ocena najpopularniejszych rankingów szpitali w Polsce i USA pod względem stosowanych metod badawczych; analiza znaczenia rankingów na rynku ochrony zdrowia oraz przedstawienie propozycji zmian co do ich budowy i zakresu wykorzystania. **Material/metody:** zestawienie rankingów opublikowanych w 2006 r. przez „Rzeczpospolitą” „Wprost” i „US News&Word Report” oraz przez firmę Solucient (2005 r.) pod kątem doboru próby, struktury, rodzaju danych źródłowych i kryteriów ocen szpitali; analiza literatury dotyczącej oddziaływania rankingów na różne grupy odbiorców. Rankingi prowadzone w Polsce obejmują mniejszą część populacji szpitali niż w USA i są oparte głównie na wynikach badań ankietowych wśród kierownictwa. W USA badana próba jest znacznie bardziej rozbudowana



i stosuje się jednocześnie po kilka metod badawczych. Zarówno w Polsce jak i USA kryteria ocen można podzielić na cztery obszary: zarządzanie szpitalem, procedury medyczne, ocena personelu i ogólna opieka. Najbardziej rozbudowana jest metodologia ocen procedur medycznych i opieki ogólnej. W USA rankingi od dawna są źródłem informacji o szpitalach dla pacjentów i potencjalnych pracowników, pełnią jednak rolę uzupełniającą i stanowią raczej czynnik kształtowania wizerunku placówki medycznej. W Polsce rola rankingów nie jest jeszcze dokładnie znana; zgodnie z opiniami dyrekcji szpitali mają one przede wszystkim znaczenie promocyjne i mogą pomóc w zakwalifikowaniu się do sieci szpitali. Polskie rankingi szpitali należy uzupełnić o dane z obiektywnych źródeł i statystyki publicznej, znacznego poszerzenia wymaga też obszar oceny kwalifikacji personelu. Natomiast obszar zarządzania szpitalem można by ograniczyć w przypadku jednostek posiadających certyfikaty ISO i CMJ. Należy ponadto ujednoczyć standardy oceny procedur medycznych, które obecnie są zbyt zróżnicowane. W szpitalach polskich można w większym zakresie wykorzystywać wyniki rankingów do budowania wizerunku tych placówek, a także jako kryterium nagradzania pracowników.