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*Selected determinants of the quality of hospital care. I. Accreditation
and effectiveness of managing a therapeutic team*

The main objective of health care managers is the provision of conditions for the maintenance and improvement of the state of society's health. The responsibility for treatment and nursing rests with physicians and nurses and depends on the procedures applied by them (2). Medical procedures, apart from pharmacotherapy, are most often mentioned as factors determining the quality of care. This is reflected in medical scientific literature, which mainly presents the results of clinical studies. Hospital managers, however, may contribute considerably to the improvement of care by their proper cooperation with medical staff (1, 3, 7). Hence, widening the scope of studies by non-medical factors which guarantee good quality of care is fully justified (5, 9). These factors will be the subject of the three subsequent articles in the "Annales UMCS".

Among the above-mentioned factors accreditation is mentioned, as supported by the WHO. The importance of activities undertaken by the Joint Commission for Accreditation of Health Organization (JCAHO) is indicated, which recommends the system of constant quality improvement (CQI) as a basis for the provision of optimum services (7).

Accreditation is defined as an external process of assessment concerning health care institutions which voluntarily submit themselves to evaluation based on the determination of the level of accordance with previously known accreditation standards (6). In Poland, accreditation is a relatively new phenomenon which was popularized in the 90s by the Centre for Quality Care Monitoring in Cracow.

Obtaining an accreditation certificate by hospitals depends to a large degree on knowledge and engagement of the staff in activities improving quality as well as an effective managing of the therapeutic team by heads of wards/managers of clinics (4, 8). Therefore, two problem issues have been posed: 1. What is the scope of knowledge requirements concerning the possession of a Quality Certificate among medical staff? 2. How do medical workers evaluate the effectiveness of managing the therapeutic team?

The problems pertaining to the second issue will be discussed both in Part I and II of the article published in the present journal.

MATERIAL AND METHODS

The studies were conducted in 1999 in 85 wards at 21 hospitals. The study covered: 4 hospitals with 29 wards which possessed the Quality Certificate in the regions of Lublin, Rzeszów and Cracow (Group A), and 56 wards at 17 hospitals without the Certificate (Group B) in the regions of Lublin, Łódź, Cracow, Warsaw, Gdańsk, and Kielce. A total number of 560 physicians and nurses participated in the study, including 55 ward heads/managers of clinics, 72 ward head nurses, 106 assistant doctors and 327 charge nurses.

The research method was diagnostic survey, and the technique were questionnaire forms specially designed for each occupational group. The study material was subject to statistical analysis. Statistical analyses were performed by means of chi square test – χ^2 for uniformity, and *u* test for the difference in percentages, chi square test – χ^2 for compatibility, and V^2 Cramer test.

RESULTS

Asking the respondents whether the hospital possessed the Quality Certificate might seem a truism. Nevertheless, the results of the analysis showed that the knowledge of this problem was obvious only to the staff of Group A, while in group B only 58.2% knew that the hospital in which they were employed had no accreditation. As many as 38.1% of

Table 1. Respondents' knowledge of requirements concerning the possessing of the Quality Certificate (Group A and B)

No.	Answers	Group A No. = 206		Group B No. = 354	
		No.	%	No.	%
1	Yes	206	100.0	13	3.7
2	No	-	-	206	58.2
3	I don't know	-	-	135	38.1
In general		206	100.0	354	100.0
Yes: <i>u</i> = 22.5 (***) <i>p</i> < 0.001					

people in the study had no knowledge if the hospital had the Quality Certificate or not, whereas 3.7% mentioned that the hospital possessed accreditation, which was not true.

The lack of knowledge whether the hospital possessed the Quality Certificate or not among over 40% of the staff in hospitals without accreditation was so surprising that the researchers decided to find out if any differences were observed according to individual occupational groups (physicians and nurses) and those performing managing functions (ward heads/managers of clinics, ward head nurses) – Table 2. The results of the analysis

Table 2. Respondents' knowledge of requirements concerning the possessing of the Quality Certificate and the type of position held (Group B)

No.	Answers	Group B No. = 354								TOTAL	
		ward heads/ managers of clinics		ward head nurses		assistant doctors		charge nurses			
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Yes	1	2.9	2	4.2	4	6.6	6	2.8	13	3.7
2	No	23	67.7	38	80.9	23	37.7	122	57.6	206	58.2
3	I don't know	10	29.4	7	14.9	34	55.7	84	39.6	135	38.1
In general		34	100.0	47	100.0	61	100.0	212	100.0	354	100.0
I don't know →		Ward head nurses vs. charge nurses: = 10.3 (**) $p < 0.01$ Ward heads/managers of clinics vs. assistant doctors: = 6.1 (*) $p < 0.05$ Ward head nurses vs. assistant doctors: = 18.8 (***) $p < 0.001$ Charge nurses vs. assistant doctors: = 5.01 (*) $p < 0.05$ Ward heads/managers of clinics vs. ward head nurses: = 2.5 (-) $p > 0.05$									

showed that assistant doctors were the most numerous group of the staff who had no knowledge concerning the Certificate – 55.7%, followed by charge nurses – 39.6% and ward heads – 29.4%. In hospitals without accreditation ward head nurses constituted 14.9% of the managing nursing staff who had no information whether “their” hospital possessed the Quality Certificate or not.

The results of statistical analysis concerning lack of knowledge about accreditation varied according to the position held. The answer “I don't know” provided by ward head nurses (14.9%) significantly differed compared to charge nurses (39.6%) – $\chi^2 = 10.3$ (*) $p < 0.01$. Differences were also observed between ward heads/managers of clinics and assistant doctors. Heads/managers of clinics (29.4%) had a significantly better knowledge $\chi^2 = 6.1$ (*) $p < 0.05$ compared to assistant doctors (55.7%). Ward head nurses less often replied “I don't know” $\chi^2 = 18.8$ (***) $p < 0.001$, compared to assistant doctors. This also concerned charge nurses $\chi^2 = 5.01$ (*) $p < 0.05$, compared to assistant doctors. No statistical differences were noted between the answer “I don't know” provided by ward heads/

managers of clinics (29.4%) and ward head nurses (14.9%) – $\chi^2 = 2.5$ (-) $p > 0.05$. A short period of respondents' employment in the ward examined exerted an influence on an incorrect answer. In this group there was the largest number of doctors and nurses with a period of employment from 0-5 years and from 6-10 years.

The evaluation of the respondents' knowledge concerning the possessing of the Quality Certificate was followed by the evaluation of effectiveness of managing a therapeutic team by ward heads/managers of clinics. The evaluation of effectiveness as perceived by this group of respondents consisted in the selection of a defined value of scores (from 0-6) and marking it on the axis. The greatest number of respondents from Group A evaluated it as very good (44.7%) – 5 scores, followed by good (30.6%) – 4 scores, and excellent (13.1%) – 6 scores, whereas in Group B the evaluation good (25.7%) occupied the first position, followed by very good (17.8%) and satisfactory (16.1%) – 3 scores (Tab. 3).

Table 3. Evaluation of the effectiveness of managing therapeutic teams by ward heads/managers of clinic as perceived by respondents (Group A and B)

No.	Evaluation	Group A No. = 206		Group B No. = 354		Total No. = 560	
		No.	%	No.	%	No.	%
1	6 scores	27	13.1	26	7.3	53	9.5
2	5 scores	92	44.7	63	17.8	155	27.7
3	4 scores	63	30.6	91	25.7	154	27.5
4	3 scores	14	6.8	57	16.1	71	12.7
5	2 scores	4	1.9	43	12.2	47	8.4
6	1 score	2	1.0	14	4.0	16	2.8
7	0 score	-	-	11	3.1	11	2.0
8	lack of evaluation	4	1.9	49	13.8	53	9.4
In general		206	100.0	354	100.0	560	100.0
6, 5, 4 scores: $u = 8.9$ (***) $p < 0.001$ 3, 2, 1, 0 scores: $u = - 6.7$ (***) $p < 0.001$ lack of evaluation: $u = - 4.6$ (***) $p < 0.001$							

The statistical analysis showed that physicians and nurses from hospitals with accreditation evaluated the effectiveness of managing the therapeutic team by ward heads/managers of clinics in more positive terms, compared to Group B, the number of evaluations: very good, good and excellent being significantly greater $u = 8.9$ (***) $p < 0.001$. The respondents of group B significantly more often evaluated the effectiveness in negative terms $u = -6.7$ (***) $p < 0.001$. The lack of evaluation was noted significantly more often statistically in Group B, compared to Group A $u = -4.6$ (***) $p < 0.001$ (Tab. 3).

DISCUSSION

In literature it is emphasized that apart from diagnostic and therapeutic factors the quality of care is affected by the parameters associated with management (7). These parameters should be known and accepted by all medical staff. In Parts I and II of the article two factors are presented: awareness of physicians and nurses concerning accreditation as actions undertaken to improve the quality of care as well as the effectiveness of managing a therapeutic team. The analysis of the study material showed that a great number of staff in hospitals without accreditation did not know if their hospital possessed the Quality Certificate or not; some of them even admitted that it possessed accreditation, which was not true. The other phenomenon observed concerned the evaluation of the effectiveness of managing the therapeutic team by ward heads/managers of clinics, which was expressed in more negative terms by the staff of hospitals without the Quality Certificate, compared to physicians and nurses from hospitals with accreditation.

This may provide an evidence that the respondents from hospitals which did not possess the Quality Certificate were not aware or did not value non-medical activities biased towards the improvement of the quality of care. Therefore, it may be presumed that the actions aimed at optimization which are undertaken by the managers do not bring about the desired results, if not accepted by physicians and nurses.

CONCLUSIONS

1. Significant statistical differences were observed in knowledge of requirements concerning the possessing of the Quality Certificate among physicians and nurses from hospitals with accreditation, compared to the staff of health units which did not possess the Certificate.

2. The respondents from hospitals without accreditation evaluated the effectiveness of managing therapeutic teams by ward heads/managers of clinics in more negative terms than the staff of hospitals with the Quality Certificate.

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SUMMARY

In order to provide a higher level of the quality of medical services an external process of evaluation of health care units called accreditation has been implemented. Obtaining the Quality Certificate by a hospital greatly depends on knowledge and engagement of the staff in the accreditation process as well as on the effective managing of therapeutic teams by ward heads/managers of clinics. Therefore, studies were undertaken to discover the knowledge of requirements concerning the possession of the Quality Certificate and how managing therapeutic teams is evaluated by physicians and nurses from hospitals with and without accreditation.

The study covered 560 physicians and nurses from 4 hospitals with accreditation and 17 hospitals which did not possess the Quality Certificate. The research method was a diagnostic survey, and the technique – a questionnaire form. The material was subject to statistical analysis. Significant differences were observed in the knowledge of requirements concerning the possessing of the Quality Certificate between the staff of hospitals

with accreditation, compared to the respondents from health units without the Quality Certificate. Respondents from hospitals without accreditation evaluated the effectiveness of managing therapeutic teams by ward heads/managers of clinics in more negative terms, compared to the staff of hospitals which possessed the Quality Certificate.

Wybrane determinanty jakości opieki w szpitalu. I. Akredytacja a efektywność kierowania zespołem terapeutycznym

W celu zapewnienia wyższego poziomu jakości świadczeń medycznych wdrożono w polskich szpitalach zewnętrzny proces oceny zakładów opieki zdrowotnej, zwany akredytacją. Otrzymanie certyfikatu jakości przez szpital w dużym stopniu jest uzależnione od wiedzy i zaangażowania pracowników w proces akredytacyjny, a także efektywnego kierowania zespołami terapeutycznymi przez ordynatorów oddziałów. Stąd postanowiono zbadać, jaka jest wiedza o posiadaniu certyfikatu jakości i jak oceniają efektywność kierowania zespołami terapeutycznymi lekarze i pielęgniarki ze szpitali z akredytacją i bez certyfikatu jakości.

Badaniami objęto 560 lekarzy i pielęgniarek z 4 szpitali z akredytacją i 17 bez certyfikatu jakości. Metodą badawczą był sondaż diagnostyczny, zaś techniką kwestionariusz ankiety. Materiał poddano analizie statystycznej. Stwierdzono różnice istotne statystycznie w wiedzy o posiadaniu certyfikatu jakości wśród pracowników ze szpitali z akredytacją w porównaniu z badanymi z zakładów bez certyfikatu. Efektywność kierowania zespołami terapeutycznymi przez ordynatorów/kierowników klinik niżej ocenili badani ze szpitali bez akredytacji.