

Reform of medical services and changes of some patients movement coefficients in a psychiatric hospital

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Summary

Selected empirical data relating psychiatric hospital morbidity from Lower-Silesian province in years 1998-2000 was analysed. Official statistics became the main source of information about occurrences and epidemiological processes, because of lack of population studies from psychiatry domain. Three limitations of such inferences was pointed:

- *inter-regional moving of patients;*
- *imperfection of procedures connected with accumulation of empirical material;*
- *influence of various administrative factors.*

These last exert essential influence on changes of patients' movement coefficients in hospitals during implementation of Health Care reform in Poland. Number of admitted patients in general and for first time increased, simultaneously time of stay in hospital grew shorter. No reasons have been found, for of which these observed changes would be able to have reference in real epidemiological processes, quality of treatment. These changes are rather caused by realised reform, and precisely adaptative mechanisms

Key words: reform in psychiatry, epidemiology, hospital patients movement

Introduction

During the last 35 years there was no epidemiological research in population of mentally ill, yet the survey performed in the course of the national health care reform disclosed great demand for it [1]. After the reform implementation, the problem of excessive bed number in psychiatric hospitals in Lower Silesia was strongly emphasised [2]. There are more and more questions concerning valid epidemiological data, perceived as one the important determinants of the observed changes. Reforms planned in the field of health care [3] impose some serious issues:

- Which model of health care service system should be adopted?
- What is the percentage of bed utilisation (optimal bed number) in hospitals?
- Which hospital beds should be eliminated?
- Where is the need for new health care centers to be established?

In this aspect, the results of epidemiological studies may provide useful information in support of the transformations planned in psychiatric health care. However, they can appear supportive of the transformations planned in psychiatric health care. Until now, morbidity rate registered by the health institutions remains as the only descriptor of epidemiological processes [4]. There is still doubt about accuracy of deduction based on such selected data as well as about the usefulness of routine statistical data for evaluation of psychiatric health services.

Purpose of the study

The aim of this study was to assess the influence of factors, having a potential impact on official hospital statistics used for evaluation of morbidity caused by psychiatric disorders and functioning of psychiatric hospitals. These factors are suspected to contribute to the limitations connected with epidemiological deduction. In this analysis the following limitations were selected:

1. The group of patients treated in analysed hospitals was not identical with the population of mentally ill persons coming from the region of health care facility location. Some people which are not inhabitants of the “catchment area” might also have been treated.
2. Procedures of data generation and collection were not standardised, producing results which are not comparable.
3. It is difficult to estimate the role of administrative factors, which have the potential impact upon the shape and function of health care system and are independent of actual incidence of psychiatric disorders in population.

Methods

Analysis was based on empirical data concerning the area of Lower-Silesia voivodeship and included hospital treatment in the last three years (1998-2000). The first year was a period directly preceding implementation of the reform of the national health care and administrative system. In the second year the reform was implemented. During the third year transformations of the system became more stable. Based on data analysis from this three-year period some trends emerged in relation to the incidence of psychiatric disorders (scores from the year 2000 were obtained by extrapolation of data from the first six months in 2000).

The evaluation refers to 7 psychiatric hospitals, names of which were given below. In the next part of presented study they will be introduced by the names of location (Wrocław, Lubiąż, Krośnice, Bolesławiec, Sieniawka, Stronie Śląskie, Złotoryja).

Interregional migration of patients

Regarding epidemiological processes in a selected region, it should be noted whether in the studied group of patients treated in psychiatric hospitals all people are inhabitants of the same region. It seems of particular importance in regional research, as according

to the Polish studies interregional patient flows are mostly balanced. Table 1 shows percentage of patients from other regions (about 4%) treated in psychiatric hospitals in Lower Silesia in the year 1999. Only in Krośnice, where in fact are admitted child patients from entire Poland, the percentage reached 24%. This hospital was excluded from further analysis as not representative for its specificity.

Table 1

Patients treated in psychiatric hospitals in Lower-Silesia in 1999

Hospital	Patients from Lower Silesia	%	Patients from other Province.	%	Total patients
Bolesławiec	data missing		data missing		2002
Krośnice	1546	76%	489	24%	2035
Lubią	1830	96%	79	4%	1909
Sieradzka	1434	95,48%	68	4,52%	1502
Silvnie OE	data missing		data missing		
Uroślaw	3614	95,11%	186	4,89%	3800
Złotoryja	data missing		data missing		

In 2000, 21033 patients underwent therapy in observed hospitals. According to the Health Insurance Office, at the same time 709 citizens of Lower Silesia benefited from health services outside the province, which accounted for 3% of all in-patients. There was a similar small percentage of in-patients from other provinces treated in Lower Silesia. Concluding, the described limitation within the studied period was not significant.

Procedures of data collection

Information concerning patients treated in psychiatric hospitals are routinely transferred to the institutions given below:

1. Institut of Psychiatry and Neurology in Warsaw (IPiN).
2. Voivodeship Center for Health Care Monitoring (WCMSZ).
3. Marshall's Office of Lower-Silesia Voivodeship (UMWD).
4. Lower-Silesia Health Insurance Office (DRKCH).

Although aim of the study was not evaluation of the type and quality of data collecting procedures, it is worth noting that every sender (hospital) passed different scope of information to each of the recipients (institutions mentioned above). Furthermore, additional data were demanded for presented study than those gathered in routine manner. Another problem could be related to applied terminology, often associated with lay language or fields of science other than epidemiology. Therefore, it is essential from methodological point of view to define precisely the concepts used on every level of data transfer. Example could be miscalculation of hospital bed utilisation prepared

by DRKCH. In this case came to overestimation as a result of summing up stationary and day department beds.

Role of administration-related factors

During the years 1999–2000 dynamic changes in the health preservation regulations were observed, mainly due to the implementation of health care system reform.

Although difficult for precise assessment, administrative factors may impair epidemiological results of in-hospital morbidity.

This raises a question as to the influence of administrative reorganisation on number of hospital admissions. In 1999, in spite of the reform introduction, there were no remarkable differences in terms of social, economic or environmental phenomena. No circumstances occurred, which would involve modifications of epidemiological processes connected with mental disorders.

What was in this situation the relationship between reform implementation and in-patients admission rate? In 1999, a marked 30% rise in total number of admissions and 50% in first admissions was observed (Tab. 2).

Table 2

Changes in cumulative and first admission number in 7 psychiatric hospitals during the years 1998-2000

Disorders	1998		1999		2000		99-00		00-01		01-02		02-03	
	0	1	0	1	0	1	0	%	0	%	1	%	1	%
Organic	155	567	2270	195	2762	770	475	37,76	402	2167	220	40,21	275	27,04
Addiction	474	115	6254	254	6392	2544	700	36,73	80	221	0,73	52,22	-4	0,76
Schizophrenia	255	74	567	809	662	802	244	32,76	993	1167	560	14,71	73	14,74
Affective	803	565	2713	695	2562	734	590	37,27	309	1190	130	23,71	39	5,61
Neurosis	260	420	124	567	126	736	-144	-17,66	302	2667	140	35,00	79	29,71
Other	732	501	147	732	279	602	301	37,50	-140	271	151	25,00	-50	4,73
Total	1867	2057	7059	2646	2708	7200	4002	37,27	2704	1153	2009	45,74	562	10,76

The described situation could result predominantly from administrative, not epidemiological factors, in great part from the policy developed by health insurance companies. It was based on the assumption of financing medical services by payment for units calculated as a sum of all days of patient treatment in the hospital. Consequently, the more patients and the longer their stay in hospital, the higher hypothetical income was achieved by the hospital. In contrast, there was only 10% increase in total and first admissions number in 2000. The reason might be a shift in financing policy by DRKCH, from payment per patient day of hospitalisation to strict time limitations of the single (up to several weeks) as well as cumulative stay throughout the year (180 days) (Table 3 and 4). In 2000, compared to 1998, there was over 40% increase in the number of patients treated for no longer than 2 weeks and from 3 to 13 weeks. This was accompanied by the growing tendency in the increase rate of hospitalisa-

tions (fourfold and twofold respectively). The described trends resulted rather from economic reasons (generated by administrative measures), than from alteration in diagnostic procedures, therapeutic management or prevalence of less serious psychiatric diseases at this time.

Table 3

Changes in numbers of patients with treatment duration not exceeding 2 weeks in the years 1998-2000 according to type of disorder

Disorders	Not exceeding 2 weeks					
	1998	1999	2000	99-98	00-99	00-98
	Number of patients			Ä	Ä	%
Organic	343	217	372	-126	155	8,45%
Addiction	1882	2175	2606	293	431	38,47%
Schizophrenia	341	354	536	16	202	63,05%
Affective	96	146	244	50	98	15,47%
Neurosis	88	129	206	41	79	16,36%
Other	276	275	336	-1	63	22,46%
Total	3025	3236	4524	270	1028	42,89%

Table 4

Changes in numbers of patients with treatment duration 3-13 weeks in the years 1998-2000 according to type of disorder

Disorders	Duration 3 - 13 weeks					
	1998	1999	2000	99-98	00-99	00-98
	Number of patients			Ä	Ä	%
Organic	237	520	648	283	128	17,42%
Addiction	944	1091	946	147	-145	0,21%
Schizophrenia	1468	1718	2360	250	642	60,76%
Affective	542	683	1048	141	365	93,36%
Neurosis	694	429	604	-265	175	-12,97%
Other	377	483	420	106	-63	11,41%
Total	4262	4824	6026	662	1102	4,139%

Administrative factors influenced also the number of people treated for a period 14 to 26 weeks (Table 5 and 6), with even a moderate fall in 1999. The fall was no more present in 2000, possibly owing to introduction of limits in hospitalisation duration for patients with chronic schizophrenia (marked 60 % increase) and organic disorders. For hospitalisation time exceeding 26 weeks, new care-treatment units called ZOLs have emerged, taking responsibility for therapy of chronically ill patients.

Table 5

Changes in numbers of patients with treatment duration 14-26 weeks in the years 1998-2000 according to type of disorder

Disorders	Duration 14-26 weeks					
	1998	1999	2000	99-98	00-99	00-98
	Number of patients			Δ	Δ	%
Organic	237	137	270	-100	133	13,92%
Addiction	414	324	38	-90	-236	-78,74%
Schizophrenia	629	601	1000	-28	399	58,98%
Affective	247	231	182	-16	-48	-25,32%
Neurosis	103	92	68	-11	-24	-23,98%
Other	109	119	158	10	39	44,95%
Total	1739	1504	1766	-235	262	155%

Table 6

Changes in numbers of patients with treatment duration exceeding 26 weeks in the years 1998-2000 according to type of disorder.

Disorders	Above 26 weeks					
	1998	1999	2000	99-98	00-99	00-98
	Number of patients			Δ	Δ	%
Organic	202	222	240	20	18	18,81%
Addiction	45	29	45	-16	16	0,00%
Schizophrenia	886	989	595	103	-394	-22,84%
Affective	164	148	82	-16	-66	-50,00%
Neurosis	43	34	34	-9	0	-20,93%
Other	65	82	96	3	14	12,94%
Total	1425	1504	1092	79	-412	-23,37%

Discussion

This study focused on the three limitations, which may interfere with epidemiological deduction processes in psychiatry, based upon empirical data available from reports.

The first one was associated with patients migration. It was proved that in the years 1998-2000 no such a problem existed in Lower Silesia at least on the interregional level.

The second type, imposed by need of a multi-step evaluation, until now not performed, has its origins in procedures of empiric data collecting. Errors can occur on every stage of those procedures implementation: at the beginning as patient misdiag-

nosis, irregular filling of records and charts with inaccurate description of the patient history, or at the end while generating error-biased information and passing it to the researcher. Information about problems with data accumulation came to the authors rarely. Some controversies were caused by the opinion that process of data gathering was not completed. No matter whether these impairments were purely isolated cases or made earlier, the researcher is obliged to show care while using them, particularly if the procedures were performed according to the pattern other than accepted standard or have been recently introduced. It is also important to acquire knowledge on the applied terminology used by administration staff and to preserve genuine meaning of concepts occurring in data collection procedures.

The third limitation refers to elements difficult for evaluation, defined here as administrative factors. Without searching for potential reasons administrative decisions may have impact on hospitalisation records, which in turn could potentially alter the psychiatric morbidity rate in population. The handicaps concerning data collection procedures were also briefly outlined, bearing potential effect upon the values of registered indices. The artificially created changes confirmed either the efficiency of administrative measures or their side effects.

In this article was presented point of view on psychiatric hospital treatment in time of health care system reform, in context to barriers and obstacles of epidemiological deduction. The presented statements and recommendations could become of certain value further health care system transformations, however they become of extreme value in times of breakthrough changes. Therefore, to manage the hospital data successfully, a modern computer system is necessary. An elaboration of modern network of centers dealing with hospitalisation-related data storing for epidemiological purposes would be advisable.

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