Average Length of Stay in Hospitals

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Abstract: The average length of stay is essentially an important and appropriate index for hospital bed administration. However, from the position that it is not necessarily an appropriate index in Japan, an analysis is made of the difference in the health care facility system between the United States and Japan. Concerning the length of stay in Japanese hospitals, the median appeared to better represent the situation. It is emphasized that in order for the average length of stay to become an appropriate index, there is need to promote regional health, especially facility planning.

Key words: length of hospital stay, average length of stay, index for economic use of hospital beds.

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Introduction

In Japan, the average length of stay in hospitals has increased yearly. As is apparent in the proposed revision of the Medical Care Law, this tendency has led to controversy. The problem of hospital beds which is one of the factors of this issue, should be considered in the regional health plan of a geographically limited area based on the concept of WHO's Regionalization and taking in consideration regional characteristics (Kurata *et al.*, 1977).

However, in Japan, according to the Medical Care Law, medical facilities are classified into hospitals based on the number of beds which it has. Hospitals are further divided into psychiatric, communicable disease, tuberculosis, leprosy and general; the clinics into general and dental, and the general further into those with beds and those without. The required number of beds is calculated basically for the national and public hospitals in an administrative district by law using the type of bed per population as a uniform measure. Private hospitals do not come under this law, but if they wish to obtain a loan for construction from the pertinent government body, it is only possible if the number of beds in the area is less than the required number of beds set down by law. Therefore, even private hospitals are subject indirectly to this law. The required number of beds in an area should be decided based on the needed medical care function as defined in the regional health plan, taking into account the clinics and private hospitals, the present activity of medical facilities and the regional characteristics which influence the use of medical facilities by the residents. A basic attitude of taking into consideration these results of the demand-supply analysis should be present.

The factors which show the use of the present beds are number of new admissions, average length of stay and bed occupancy rate. The problem of hospital beds is said to be decided by having a harmonious balance of these factors (Kurata, 1972). A model for deciding the number of general beds in a region based on this relationship has been attempted (Nobukawa, 1982). Their methods are based on the promise that the average length of stay is accurately measured.

However in Japan, hospitals are not divided based on the medical care function (Kurata *et al.*, 1977; 1978) but on the number of beds. Therefore, the utilization of facilities is dependent on the patient's selection (Egawa, 1975; 1976). In addition, as acute and chronic patients are indiscriminately hospitalized in the same facility, the average length of stay is longer when compared with the United States and other countries and it is thought that it will further lengthen due to the aging of the population. Therefore, it should be fully evaluated whether the average length of stay is a good index for hospital activities.

The Appropriateness of the Average Length of Stay Index "Average Length of Stay"

The demand for hospitalization is translated into a need by the physician and the length of stay is decided by medical reasons such as the patient's disease, the severity of symptoms and the speciality and/or characteristics of the clinical department. Moreover, the quality and number of physicians and other health workers and the supply and demand relationship of the various hospital departments are equally important (Nakamura, 1971). Other factors of the hospitals, the patient's family situation, socio-economic factors such as the geographical limitation of visiting the hospital inter-relate complexly in deciding the average length of stay (Egawa, 1975).

The average length of stay, as is well known, is one of the ten factors which were proposed by T. Ponton and M. MacEachern in 1928 to form an objective medical audit. A medical audit based on these 10 indices was first started in the United States and various methodologies have been developed. In the United States, it has progressed to an utilization review system for the improvement of medical care and management under Medicare (Sheps, 1955; McGibony, 1963; Sigmond, 1963). To this has been added the Professional Standard Review Organization, resulting in a system which deals with the problem of regional health and how to best utilize the limited health resources of the region. The utilization review should be concerned with evaluating the quality of hospital care, however, it appears that the review is centered on the length of stay of the patient (Brown & Sale, 1974; Davidson, 1974; Goldberg & Holloway, 1975). The utilization study of the United States is not limited to each individual hospital but has developed into a regional based National Health Planning and Resources Development Act.

In Japan, from the present fragmented system of delivering health care, there has arisen a need for a systematic, continuous and comprehensive health care based on the individual life cycle. The regional medical association has taken a lead in this area. On the other hand, the central government has pushed for legislation based on its original ideas resulting in an increasingly complex health care situation. Both parties have not yet developed an organizational basis as in the United States. Further, many health care workers think that the effective use of beds is more important, and they are only interested in maximizing bed usage in their own hospital (Zimmer, 1974; Norris, 1971). Therefore, the basic indices of medical audit, especially bed occupancy rate and average length of stay, are used without any new innovations. Although for the hospital administrator these indices are no doubt indispensable, to serve as a scientific basis for decision making in hospital bed planning, they are insufficient and leave big problems unsolved in health care planning.

Definition of "Mean"

There is need to return to the basic question of the meaning of "mean." Basically, to use mean for displaying the central tendency of a phenomena, it has to be limited to when the frequency distribution is clustered and the variation is not too large. Even if the frequency distribution is fairly clustered, when two frequencies are compared, it has to be limited to when their distribution is of the same pattern. The "mean" cannot be used to represent the frequency distribution when knowledge of the whole distribution is needed or if the distribution is non-symmetrical. When non-symmetrical, the mean represents the middle and demographically it is defined that the median is better than the mean for displaying the central tendency (Neter & Wasserman, 1961).

Therefore, it is more important for the administrator to consider the result of the analysis of the patient's qualitative state in the hospital when considering the hospital bed plan. To think that the bed occupancy is summarized by the average length of stay and to consider only this figure is going to cause mistakes (Egawa, 1975; 1976).

Background of "Average Length of Stay"

Professor Kurata has pointed out referring to R. Brown that the hospital system in the United States did not arise from a careful plan. There has been mal-distribution and differences in facility allocation. In 1946, the Hospital Survey and Construction Act was enacted and since then, especially in 1959, hospital planning reappeared as a concept in Metropolitan or Urban Area Planning. In 1961, the Joint Committee of AHA and PHS on Areawide Planning of Hospitals and related Health Facilities was inaugurated. As a new direction from the standpoint of comprehensive health care, the organic management of health related facilities was sited as indispensable (Kurata, 1966).

In Japan, the trend towards the organization of health care facilities began with the Organization Plan Draft (Ministry of Health and Welfare) in 1960 centered on public hospitals with Regionalization serving as a basis. This together with the idea of a Regional Health Survey Committee by the Health System Commission served as a basis for further discussion. The Japan Medical Association proposed the Comprehensive Health Care Measures to supplement the idea of a Regional Health Survey Committee in 1969 and this developed into the Specialist Committee concerning the Regional Health Care Plan. However, no regional legal nor actual activities have developed.

When comparing the average length of stay with the United States, the difference in definition of the hospital should be first taken into consideration. In Japan, a hospital is a health care facility with more than 20 beds. In the United States, hospitals are divided into acute general hospital, long-term hospital and nursing home. The classification has been made from the systematic arrangement of the health care resources. The average length of stay of seven days which has served as an index is only for acute-care general hospitals and therefore can not be compared with the situation in Japan. The average length of stay is a reflection of the various health care systems. The average length of stay in the United States has been pointed out to be increasing and various comprehensive measures have been tried to combat this trend (Greenberg & Rogers, 1967; Jones, 1967; Heasman & Carstairs, 1971; Sanders, 1974).

In Japan, health and health related facilities have developed from a strictly longitudinal structure. General hospitals tend to be concentrated in the cities and after their bed capacity has been increased competition begins. There is no effort to emphasize the speciality of each hospital, to take responsibility of each needed health care function in the community or to derive an actual methodology for improving the quality of health care as in the utilization review. The major issue continues to be the inpatient capacity of their own hospital, that is, the problem of increasing beds based on the bed utilization rate and the average length of stay. This trend stands as an obstacle to the development of the regional health care system and this is especially true in private hospitals.

Examination of the Number of Patients and the Length of Stay

The facility function of the hospital is made up of the patient accommodation function and the divisional function of each paramedical department. These functions can not operate independently of each other. Especially the accommodation function, is activated and evaluated by the medical function and divisional function. The problem of beds which is central to this function should be considered based on the relationship between these functions.

To analyse this problem, data should be compiled to ascertain what kind of patients are using which kind of hospital beds and the qualitative aspect of facility utilization such as the difference in bed usage due to the speciality and/or characteristics of the clinical

department and the patient's type of disease. The author analysed in 1973 a total number of 10,904 patients who were discharged from three hospitals (a university hospital, a public hospital and a private hospital) in Tokyo to make a qualitative comparison of each hospital and length of stay of patients. The patients consisted of those discharged from April 1971 to March 1972 and excluded obstetric admission. An attempt was made to derive a measure to summarize the various factors relating to length of stay. In addition, in Japan, as chronic and geriatric diseases have recently become a large issue and as patients with these diseases are mostly hospitalized in the department of internal medicine of general hospitals, a similar observation was also made. From the relationship between the clinical department and the patient's residence, a regional utilization tendency of the hospital and clinical department has become apparent. As there may also be a difference in the contribution to the facility use and service of each hospital, as these hospitals are representative of the primary, secondary and tertiary function, a comprehensive survey was thus made.

The frequency distribution according to length of stay tended to be more closely distributed as the function of the hospital became more advanced and the pattern of the graph was sharp, mono-polar skewed to the right. The Pearson's skewed coefficient of the three hospitals were all between 0.8–0.9 (Egawa, 1976 ; 1978). When the pattern was analysed for patients who had high contribution, although there were differences characteristics between the three hospitals, the skewed coefficient was about 0.7 and positive (Egawa *et al.*, 1979). Therefore, in all three hospitals, the mean length of stay was skewed to the tail and in such circumstances, the dominant tendency should be represented by the median.

The socio-economical change in Japan has been tremendous these past ten years. Its influence greatly differs according to each region. This is apparent especially in Fukuoka Prefecture as this region once was one of the largest heavy industry centers. The structural change due to energy resolution and industrial technology has changed the demographical and regional characteristics (Egawa *et al.*, 1980 ; 1982). It can be conjectured that these changes have influenced the regional health care characteristics. A patient survey was made in November, 1981 of all medical facilities, with the exception of dental clinics, in Kitakyushu City, the center of a large heavy chemical industry, with the cooperation of Kitakyushu Medical Association (Return rate : outpatients 98.3%, inpatients 68.5%, discharged patients 62.0%). An analysis was made of the length of stay in general hospitals, using the methods explained earlier, according to the administrative unit. Patients discharged within 30 days amounted to about 60–74% of the total in all hospitals with an exception of hospitals having patients staying a very long time in all administrative areas. One of the high function medical facilities is the University of Occupational and Environmental Health (UOEH) Hospital. In this hospital, the situation was reviewed for the three years from its opening in 1979 to 1981. Contrary to expectation, the result was identical to that of the three hospitals in

Tokyo. Therefore, in Japan under the present health care system, the central pattern of the length of stay should be represented by the median (Egawa *et al.*, 1983). Table 1 shows the median and mean of the length of stay divided into three stages according to clinical departments in the UOEH Hospital. Table 2 shows the same content according to the disease category of ICD large classification.

Both frequency distributions are of the log-normal pattern. The length of stay which could be approximated to a normal distribution may be divided roughly into 2–3 groups. If the length of stay could be divided in short and long with 30 days as a dividing day, then with the exception of extraordinary cases, over 70% of the patients were discharged within 30 days. The exceptional cases are from the following disease categories and clinical departments. In the disease category, malignant neoplasm and some circulatory diseases which many patients suffer from, and the corresponding clinical departments of internal medicine and the surgical departments with the growth of operations for geriatric patients, hospitalization of less than 60 days amounted to 80–90% of the total (Table 1, 2). Therefore, the proportion of patients with long stay is very small. The question of whether these patients should be continuously hospitalized in general hospitals is one of the problems of hospital administration.

But on the other hand, one can not be allowed to neglect patients needing prolonged hospitalization. There is need to arrange various facilities in the community from the standpoint of comprehensive health care as seen in advanced countries. A new kind of cooperative system should be planned in conjunction with welfare services (Egawa *et al.*, 1983). One method which deserves attention is the approach of organized homecare as seen in the United States. The way to efficiently cope with patients grouped under the short term stay should also be considered. One example is the Garfield's model or the neighborhood (or rural) health center in the United States which pursues efficient management of hospital beds with a continuous follow-up system. The planning and promotion of patient accommodation according to the present characteristics of the hospital and the medical characteristics of the patient's disease and state are the best ways to eliminate misutilization of hospital beds. Only with the presence of this kind of comprehensive health care plan is it possible to use the average length of stay as an index to summarize the total hospital activities in Japan.

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Table 1-1. Discharged patients according to clinical department (1979)

Clinical department	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period				Mode		Median		Average length stay
			less than 1 wk.	1 wk. to 1 mo.	more than 1 mo.	No. (pt.)	length of stay	No. (pt.)	length of stay		
Total	1437	42335	180	785	472	69	11	31	22	29.5	
Internal medicine I	85	3020	6	47	32	5	13,24	4	25	35.5	
" II	106	3532	10	46	50	6	19	3	30	33.3	
" III	96	3276	13	44	39	4	10,11	2	27	34.1	
Respiratory											
Neurology	43	1813	5	15	23	3	37	2	32	42.2	
Neuro-psychiatry											
Pediatrics	146	2803	37	85	24	13	9	8	11	19.2	
Surgery I	134	4764	18	47	69	6	37	3	32	35.6	
" II	31	1352	4	8	19	2	3,12, 26,39	2	39	43.6	
Orthopedics	104	3046	16	48	40	5	21	2	24	29.3	
Neurosurgery	61	1815	12	31	18	4	3	3	21	29.8	
Dermatology	50	1572	8	22	20	5	17	2	18	31.4	
Urology	46	1608	2	27	17	3	29	3	29	35.0	
Obstetrics-gynecology	43	370	8	34	1	22	8			8.6	
	138	3600	12	102	24	10	12,23			26.1	
Ophthalmology	142	4414	7	76	59	10	22	3	29	31.1	
E.N.T.	178	3287	16	143	19	32	11	11	13	18.5	
Rehabilitaion	19	1863	0	2	17	2	44, 85,117	2	85	98.1	
Anesthesiology	3	36	2	1	0	2	3	2	3	12.0	
Radiology											
Dental-oral surgery	12	164	4	7	1	3	8	22	8	13.7	

Table 1-2. Discharged patients according to clinical department (1980)

Clinical department	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period				Mode		Median		Average length stay
			less than 1 wk.		1 wk. to 1 mo.		No. (pt.)	length of stay	No. (pt.)	length of stay	
			1 wk.	more than 1 mo.	1 wk.	more than 1 mo.					
Total	3353	117630	368	1261	1724	154	8	69	23	35.1	
Internal medicine I	210	9903	16	104	90	10	24	6	31	47.2	
" II	250	10427	24	120	106	13	19	3	30	41.7	
" III	175	7255	16	86	73	6	20,33	4	31	41.5	
Respiratory											
Neurology	124	7170	8	70	46	6	27	2	34	57.8	
Neuro-psychiatry											
Pediatrics	339	5514	90	37	212	30	8	14	11	16.3	
Surgery I	295	10490	51	136	108	14	6	9	28	35.6	
" II	158	8221	9	94	55	7	13	3	42	52.0	
Orthopedics	290	9595	30	101	159	14	10	7	22	33.1	
Neurosurgery	119	5395	7	59	53	6	10	4	31	45.3	
Dermatology	87	3887	8	40	39	4	7,12	2	30	44.7	
Urology	127	4775	14	54	59	7	16	1	28	37.6	
Obstetrics-gynecology	189	2612	29	13	147	60	8	27	9	13.8	
	243	9787	22	115	106	12	33	6	30	40.3	
Ophthalmology	232	8179	11	111	110	10	24	5	28	35.3	
E.N.T.	388	8581	18	63	307	34	9	21	15	22.1	
Rehabilitaion	54	4344	2	44	8	2	17,37,67, 81,85,101, 120,124	2	81	80.4	
Anesthesiology	11	302	4	3	4	2	3.5	1	18	27.5	
Radiology											
Dental-oral surgery	62	1193	9	11	42	6	13	5	15	19.2	

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Table 1-3. Discharged patients according to clinical department (1981)

Clinical department	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period			Mode		Median		Average length stay
			less than 1 wk.	1 wk. to 1 mo.	more than 1 mo.	No. (pt.)	length of stay	No. (pt.)	length of stay	
Total	4366	165681	547	2061	1758	177	9	74	25	37.9
Internal medicine I	289	13375	29	126	134	10	24	6	29	46.3
" II	304	13010	22	126	156	14	34	4	32	42.8
" III	229	11964	24	66	139	8	2	5	41	52.2
Respiratory	89	3332	2	45	42	6	29	5	30	37.4
Neurology	168	11984	7	49	112	8	31	3	47	71.3
Neuro-psychiatry										
Pediatrics	407	8584	134	201	72	26	5,7	20	11	21.1
Surgery I	362	13488	43	132	187	21	4	9	32	37.3
" II	245	11708	17	82	146	9	41	4	36	47.8
Orthopedics	348	13430	47	172	129	14	7	3	22	38.6
Neurosurgery	165	6724	26	66	73	8	2,29	8	29	40.8
Dermatology	119	5439	8	53	58	5	12,17	2	31	45.7
Urology	152	5576	16	71	65	6	11	3	26	36.7
Obstetrics-gynecology	339	4898	76	232	31	75	8	37	9	14.4
	275	10928	9	137	129	15	31	15	31	39.7
Ophthalmology	310	12453	32	158	120	13	22	4	26	31.0
E.N.T	400	9620	36	276	88	59	9	10	14	31.1
Rehabilitation	73	7234	2	8	63	3	65,71,84	2	83	99.1
Anesthesiology	8	169	1	5	2	2	12	2	12	21.1
Radiology										
Dental-oral surgery	84	1765	16	56	12	10	9	7	15	21.0

Those hospitalized for more than one month are seen in only 4 clinical departments in 1981.
The qualitative relationship can be observed in diseases having prolonged course.

Table 2-1. Discharged patients according to disease category (1979)

Major classification of diseases	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period				Mode		Median		Average length stay
			less than 1 wk.	1 wk. to 1 mo.	more than 1 mo.	No. (pt.)	length of stay	No. (pt.)	length of stay		
01 Infective and parasitic diseases (001-139)	44	890	12	24	8	4	6	2	14	20.2	
02 Neoplasms (140-239)	200	8428	14	77	109	7	7	6	42	42.1	
03 Allergic, endocrine system, metabolic, and nutritional diseases (240-279)	52	1842	4	26	22	4	24	1	28	35.4	
04 Diseases of the blood and blood-forming organs (280-289)	17	689	2	7	8	2	8, 9,19	2	19	40.5	
05 Mental, psychoneurotic, and personality disorders (290-319)	12	420	1	6	5	2	8	1	30	35.0	
06 Diseases of the nervous system and sense organs (320-389)	220	7855	11	121	88	13	22	7	27	35.7	
07 Diseases of the circulatory system (390-459)	116	3709	18	50	48	5	18, 22,30	4	28	32.0	
08 Diseases of the respiratory system (460-519)	153	2310	19	124	10	34	11	34	11	15.1	
09 Diseases of the digestive system (520-579)	163	4263	31	85	47	10	8	3	19	26.2	
10 Diseases of the genito-urinary system (580-629)	135	3736	8	88	39	7	10,11	4	21	27.7	
11 Deliveries and complications of pregnancy, childbirth, and the puerperium (630-676)	64	1003	8	51	5	24	8	5	9	15.7	
12 Diseases of the skin and cellular tissue (680-709)	30	1178	3	14	13	3	11,23	3	23	39.3	
13 Diseases of the bones and organs of movement (710-739)	50	1522	2	23	25	3	21,38, 40,46	1	32	30.4	
14 Congenital malformations (740-759)	52	1627	8	30	14	6	5	3	18	31.3	
15 Certain diseases of early infancy (760-779)	11	146	7	3	1	4	3	2	6	13.3	
16 Symptoms, senility, and ill-defined conditions (780-799)	25	418	9	11	5	3	3	2	11	16.7	
17 Accidents, poisoning, and violence (800-999)	85	2065	20	41	24	5	3,10	2	15	24.3	

Table 2-2. Discharged patients according to disease category (1980)

Major classification of diseases	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period				Mode		Median		Average length of stay
			less than 1 wk.	1 wk. to 1 mo.	more than 1 mo.	No. (pt.)	length of stay	No. (pt.)	length of stay		
01 Infective and parasitic diseases (001-139)	82	2327	18	40	24	5	6, 7	2	12	28.4	
02 Neoplasms (140-239)	577	29995	33	183	361	15	34	8	39	52.0	
03 Allergic, endocrine system, metabolic, and nutritional diseases (240-279)	126	4943	7	55	64	6	24	2	32	39.2	
04 Diseases of the blood and blood-forming organs (280-289)	43	1411	9	22	12	3	2, 10, 16	1	18	32.8	
05 Mental, psychoneutrotic, and personality disorders (290-319)	24	1142	3	7	14	3	35	3	35	47.6	
06 Diseases of the nervous system and sense organs (320-389)	412	16045	25	200	187	15	27	7	28	39.8	
07 Diseases of the circulatory system (390-459)	280	12292	31	120	129	9	26, 32	4	29	43.9	
08 Diseases of the respiratory system (460-519)	356	5758	45	292	19	37	9	16	12	16.2	
09 Diseases of the digestive system (520-579)	364	11735	53	179	132	12	10	5	20	32.2	
10 Diseases of the genito-urinary system (580-629)	243	8373	23	131	89	13	16	8	24	34.5	
11 Deliveries and complications of pregnancy, childbirth, and the puerperium (630-676)	189	2866	25	149	15	60	8	28	9	15.2	
12 Diseases of the skin and cellular tissue (680-709)	61	2918	5	29	27	3	10, 24, 27, 39	3	27	47.8	
13 Diseases of the bones and organs of movement (710-739)	192	8049	15	82	95	7	33	3	26	41.9	
14 Congenital malformations (740-759)	106	2351	18	57	31	6	10, 16	4	18	23.9	
15 Certain diseases of early infancy (760-779)	62	1169	20	33	9	6	5	3	14	18.9	
16 Symptoms, senility, and ill-defined conditions (780-799)	41	718	9	28	4	6	5, 9	4	11	17.5	
17 Accidents, poisoning, and violence (800-999)	177	4474	28	103	46	13	10	3	16	25.3	

Table 2-3. Discharged patients according to disease category (1981)

Major classification of diseases	No. of discharged (pt.)	Aggregate days hospitalized	No. of patients hospitalized per period				Mode		Median		Average length stay
			less than 1 wk.		1 wk. to 1 mo.		No. (pt.)	length of stay	No. (pt.)	length of stay	
			1 wk.	more than 1 wk.	1 mo.	more than 1 mo.					
01 Infective and parasitic diseases (001-139)	111	4361	28	43	40	7	4, 5	3	17	39.3	
02 Neoplasms (140-239)	902	48313	41	303	558	23	32	11	39	53.6	
03 Allergic, endocrine system, metabolic, and nutritional diseases (240-279)	122	4221	12	54	56	5	23, 24, 25	3	29	34.6	
04 Diseases of the blood and blood-forming organs (280-289)	57	1700	17	30	10	11	1	3	15	29.8	
05 Mental, psychoneurotic, and personality disorders (290-319)	29	715	6	13	10	2	6, 11, 17, 22, 32	2	22	24.7	
06 Diseases of the nervous system and sense organs (320-389)	538	23674	48	242	248	18	37	9	30	44.0	
07 Diseases of the circulatory system (390-459)	428	19727	40	161	227	16	2	11	34	46.1	
08 Diseases of the respiratory system (460-519)	344	6634	44	257	43	28	8	26	11	19.3	
09 Diseases of the digestive system (520-579)	402	13886	70	172	160	23	4	11	25	34.5	
10 Diseases of the genito-urinary system (580-629)	294	9487	26	168	100	16	11	9	24	32.3	
11 Deliveries and complications of pregnancy, childbirth, and the puerperium (630-676)	282	4572	35	216	31	71	8	21	10	16.2	
12 Diseases of the skin and cellular tissue (680-709)	63	2751	8	22	33	3	9, 40	2	32	43.7	
13 Diseases of the bones and organs of movement (710-739)	226	10750	24	93	109	6	11, 29, 31, 62	6	31	47.6	
14 Congenital malformations (740-759)	135	3191	23	81	31	8	13, 16	5	18	23.6	
15 Certain diseases of early infancy (760-779)	111	1969	50	44	17	15	4	3	9	17.7	
16 Symptoms, senility, and ill-defined conditions (780-799)	42	1132	14	17	11	4	2	1	18	27.0	
17 Accidents, poisoning, and violence (800-999)	250	7296	56	129	65	18	2	8	16	29.2	

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The qualitative relationship can be observed in diseases having prolonged course.

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病院の平均在院日数について

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要 旨： 平均在院日数は本来、病院病床管理の適切な指標の一つの指標として用いられるべき重要なものである。著者は1973年に在京の大学病院、公的病院、個人病院の三つを選び、同年間に退院した産科を除く患者総数1094人を対象にどのような種類の患者がどのように一般病院病床を利用しているであろうか施設により、また診療科の特性や患者の疾病構造によって病床の利用状況は異なるであろうかなど施設単位にその利用状況について質的関係から観察を行った。さらに1981年に北九州市の医療施設、ならびに産業医科大学のばあいには1979年から1981年の3年間についてICD傷病大分類別に疾病構造別の利用状況を加え同様の質的分析を試みたが10年前と同様の結果をみた。その結果から我が国において平均在院日数は必ずしも病院病床管理のための適切な指標とはなりえないと判断されたので、米国において平均在院日数が適切な測度として使用できる背景はなにか、我が国のばあいとの違いを中心に医療施設体系から考察し、併せて我が国の病院における在院患者と在院日数の関係から妥当な指標となるものは何かについて考究した。さらにまた、平均在院日数が我が国において妥当な測度となるためには、地域医療、特に施設計画の具体的推進こそが基本的要件であることを明らかにした。

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