

Economic aspects of day surgery

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Day surgery is rapidly increasing in the Netherlands. The pressure on hospitals for greater efficiency is one of the most important factors behind this trend. Figures giving type of patients treated in day care and costs are presented.

Key words: Day surgery, economic aspects, efficiency, type of patients

Introduction

This paper deals with three main subjects. Firstly, there is a description of some general aspects of the hospital system in the Netherlands. Subsequently, some facts and figures are presented about the developments in day surgery within general hospitals in the Netherlands and, finally, there is a discussion about the costs of day care and incentives and disincentives within the budget system, as it functions in the Dutch situation.

General aspects of the hospital system in the Netherlands

In the Netherlands there are, at present, 113 general hospitals and eight university hospitals. These are the hospitals in which day care surgery takes place. Apart from these, there are also a number of special category hospitals, but these have been excluded from discussion in this paper. The number of hospitals has been decreasing since 1975, from 191 in that year, to not more than 113 in 1992. This substantial reduction in the number of hospitals is mainly due to the large number of mergers. In the Netherlands, there have been two periods of mergers. At the end of the 1970s and the beginning of the 1980s, hospitals were confronted with an enormous merging process because of the building policies of the government. The government issued permits for building and rebuilding of hospitals under the terms of an enforced merging process between two or more hospitals within each particular city. After 1985 there was a second surge of mergers which, in particular, had a more strategic background, resulting from a huge merging process

which took place within the health insurance companies. Because of this new system, as adopted by the Dekker committee, and later by the government, the health insurance companies obtained a greater influence in the health care business. The surge of mergers and concentration by the insurance companies brought about a similar kind of merging surge on the part of the hospitals.

At the same time as this reduction in the number of hospital beds occurred, there was a corresponding increase in the size of hospitals and an extension of specialist functions. In 1975 the average general hospital had 315 beds, whereas in 1992 this had increased to 436 beds. The extent of the package of specialist functions has grown considerably as well. In contrast to 1975, in which the average hospital had 13.9 specialist functions, this had almost doubled to 26.4 in 1992. Parallel to this development, the number of beds per 1000 inhabitants has dropped, on the one hand as a result of the reduction in the number of beds and on the other hand because of the growing population. During the last few years, therefore, there has been an increase in waiting lists, particularly for surgical treatment, by more than 50 000 patients, who have had to wait for over four weeks for admission.

An important prerequisite for the efficient functioning of hospitals is defrayment. In 1983 an important change occurred in the budget financing system of hospitals. Up until then there had been an open-ended financing system which was product-oriented, but after 1983 hospitals had to work within fixed budgets, under which the total patient intake had to be admitted, treated and taken care of. This system underwent a further important change in 1988, when the fixed budget financing system became related to the package of functions a hospital had to offer. That is, the system was based on the number of beds and specialist functions on the one hand, and the population and use of different hospital functions on the other. Every hospital had to make annual agreements with the health insurance companies about the use of

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Table 1. Admissions, day-care patients, outpatients in general and teaching hospitals (000s)

	1975	1979	1985	1988	1991
Admissions	1394	1513	1520	1481	1512
Day-care patients	–	51	214	342	456
Outpatients	3608	4222	4287	5434	6480
Total patients	5002	5786	6021	7257	8448

Table 2. Average yearly increases 1975–1992

	%
Admissions	0.5
Day-care patients	22.3
Outpatients	5.0
Total patients	4.3

hospital functions and the number of beds. This was done in terms of the number of admissions, patient days, first outpatient visits and day care. These agreements are made in advance of each particular year and are laid down in terms of reference. Deviations from these fixed budgets are not allowed.

Developments in day surgery

In this section some facts and figures are presented on developments in day surgery within hospitals, as well as in relation to other developments in the use of hospital services. In Table 1 the development in the number of admissions, number of day-care patients and number of first outpatient visits are presented. In 1991 there was a total patient intake of about 8.5 million, which represents a huge increase in the number of patients treated in general hospitals since 1975, when there was a total intake of 5.0 million. Looking at the underlying figures, the number of clinical admissions has increased slightly from 1.4 to 1.5 million. The number of outpatient visits, on the other hand, has increased from 3.6 to 6.5 million. The number of day-care patients has also increased considerably from 0 (zero) in 1975 to 450 000 in 1991. In Table 2 these developments are presented in percentage terms. The total intake of patients has increased annually by 4.3%. Subdivided into the three different ways in which patients can be admitted to hospital, this results in the following picture: the number of clinical admissions has increased by about 0.5% per year; the number of day-care patients by over 20%; and the number of first outpatient visits (that is, the number of times a patient visits the polyclinic for the first time) by about 5%.

The average duration of inpatient stay for clinical patients has almost halved since 1975, from 15.4 days to 8.2 days in 1991. This can largely be explained by the increase in outpatient treatment, and especially by the increase in day surgery. In Table 3 the total number of operations performed in general hospitals is divided between the three kinds of surgical treatment. The

Table 3. Operations in general hospitals

	1975 %	1991 %
Clinical operations	58	32
Outpatient operations	42	52
Day treatment	–	16
	100	100

Table 4. Type of specialty in daycare

	%
Ear, nose and throat	24.3
Gynaecology/obstetrics	14.1
Internal medicine	13.6
General surgery	13.3
Orthopaedics	9.6

number of clinical operations has decreased from 58 to 32%. The number of polyclinic operations, however, shows an increase from 42 to 52%, and for day surgery from 0.75 to 16% in 1991. From these figures it is clear that ambulatory surgery has increased considerably since the second half of the 1970s.

Table 4 presents day-care patients divided into types of specialty, which shows that the majority of day surgery is taken up by ENT, gynaecology and obstetrics, internal medicine and general surgery and orthopaedics. Table 5 shows the type of procedures involved and also gives a comparison between 1985 and 1990. It is possible to infer from this table that the operations in question show a major shift from clinical treatment to day care. On average, the percentage for these day-care treatments is 14.7 for 1985 and, for the same category, 28.4 in 1990. This represents a doubling of the number of patients that are treated in day care within these categories. However, it is not only day surgery that is performed by hospitals in the field of ambulatory care. Table 6, for example, shows the percentage of diagnostic tests for outpatient visits to general hospitals. In 1991, 75% of tests carried out by the X-ray department were on behalf of polyclinic patients, and for laboratories this figure was over 50%. The number of diagnostic tests in laboratories and X-ray departments that are carried out on behalf of general practitioners has also increased considerably (see Table 7).

Table 5. Type of patients in day care

Operation groups	1985		1990	
	% clinic	% day care	% clinic	% day care
Eye operations	91.4	8.6	79.1	20.9
Ear operations	45.2	54.8	20.9	79.1
Heart & thoracic vessels	98.8	1.2	94.1	5.9
Varices operations	96.7	3.3	71.8	28.2
Gall bladder operations	100.0	0.0	98.4	1.6
Hernia operations	95.2	4.8	83.4	16.6
Bone & muscle system	90.5	9.5	78.4	21.6
Total	85.3	14.7	71.6	28.4

Source: SIG.

Table 6. Percentage of diagnostic tests for outpatients in general hospitals

	1975 %	1991 %
X-ray	73.8	75.6
Laboratory	48.4	55.7

Table 7. Percentage of X-rays and laboratory tests on behalf of general practitioners

	1981 %	1991 %
X-ray	20.1	25.4
Laboratory	13.1	14.7

Costs of day surgery and the budget financing system

Table 8 presents the structure of the budget system for general hospitals in the Netherlands. This table shows that the total variable component of the budget for day care is about 2%, and for first outpatient visits this figure is 14%. This means that the total percentage for day care and first outpatient visits represents only a small proportion of the total budget. Despite this, previous figures

Table 8. Proportion of total budget for day care

	Share %	Cost Dfls
Fixed component:		
Adherent	15	80
Semi-fixed component:		
Specialists	25	353 000
Beds	9	11 000
Variable component:		
Admissions	20	1150
Days of hospitalization	12	60
First outpatient visits	14	150
Day care	2	410
Special functions	3	
Total	100	

Source: Het Ziekenhuis, December 1991.

show that there has been a considerable increase in ambulatory surgery in general hospitals. It is therefore of major importance that changes are introduced in the budget system to give incentives for the further development of day surgery. A closer relationship needs to be established between the actual costs of day care and day surgery and the provision made for them in the budget. Current inconsistencies in the system need to be removed so that the benefits to be gained from the development of ambulatory surgery are made clear.