

Day surgery in Sweden

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In order to investigate the extent and organization of day surgery in Sweden a questionnaire was sent to all hospitals. The frequency of day surgery was investigated for 34 different specified operative procedures. The study showed that there were major differences in the frequency of day surgery between different hospitals and for the same type of procedure. There is thus a considerable potential to expand day surgery. The survey also showed that there are no free-standing or satellite units for day surgery in Sweden. At three of the 94 hospitals there are hospital-integrated but dedicated units for day surgery. In the remainder of the hospitals day surgery patients are integrated amongst other patients at the general operating departments. There are, however, plans to separate day surgery from the inpatient operative activities in many hospitals.

Key words: Day surgery, ambulatory surgery, Sweden

Introduction

The increased use of day surgery is one of the most exciting changes in surgical practice during the last few decades. During the 1980s day surgery centres have mushroomed in the United States. The impetus for change has now reached Europe. We therefore decided to do a baseline study of day surgery in Sweden, in order to be able to monitor the changes that undoubtedly will take place in the future.

The Swedish health care system

Sweden is a large but sparsely populated country. The population of 8.7 million is mainly concentrated in the coastal regions and in the south. The number of elderly is high – about 18% are older than 65 years. The health care system has always been regarded as an important part of the Swedish welfare system. A fundamental principle is that all citizens have the same right to good health and equal access to health care, regardless of where they live or their economic circumstances.

Swedish health care is mainly a public responsibility. This responsibility is decentralized to 26 regional political authorities – 23 county councils and three municipali-

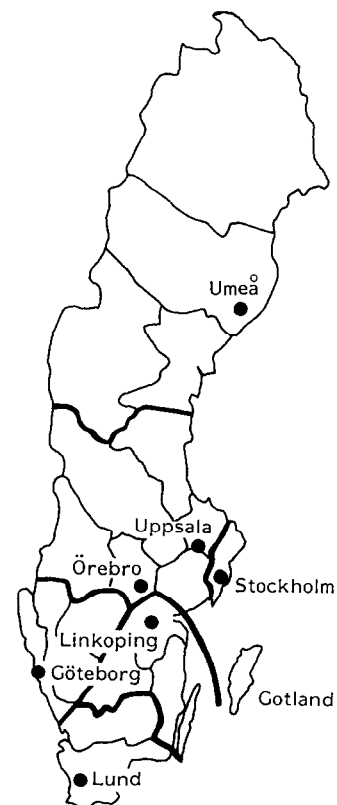


Figure 1. The regional organization of health care in Sweden. — Counties; — medical regions.

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ties (Figure 1). The county councils levy taxes directly, which is the main source of financing. Other sources of

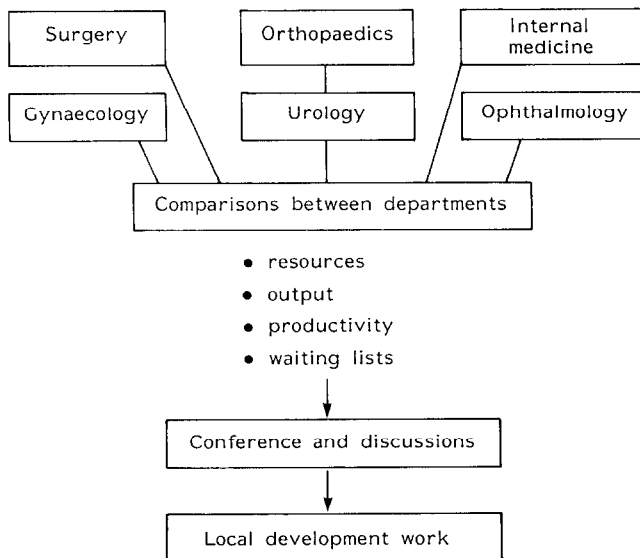


Figure 2. The DAGMAR 50-project.

income are national government grants, about 19%, and patient fees, about 2%, of the total costs¹.

The hospitals are of central importance in the Swedish health care organization. In 1992 there were 94 publicly-run hospitals in Sweden. The size of the hospitals and the degree of specialization differs widely. At almost half of the hospitals there are less than 100 surgical beds. Thirteen hospitals have more than 300 surgical beds. The maximum is a little more than 600 surgical beds. There are also a few small private hospitals. The Swedish hospital system has three levels – regional, county and district county hospitals. Almost all hospitals have concentrated most of their surgery in central surgical units. In mid-sized county hospitals these units usually have 10–15 operating theatres and the number of employees is around 100.

The project

In 1989 the government initiated a project that was named DAGMAR 50. This project had at its disposal 50 million Swedish crowns for studying new ways of increasing the capacity and accessibility of the health care system, within the limits of the existing economic framework². The background to the project was problems with long waiting lists and declining productivity in the Swedish health care system. In cooperation with medical experts in six specialties the Ministry of Health and Social Affairs, the National Board of Health and Welfare, the Federation of County Councils and the Swedish Planning and Rationalization Institute for the Health and Social Services (SPRI) made a common contribution to reverse the current trends. The work started in the autumn of 1989 and was in general completed towards the end of 1991. The planning of the DAGMAR 50 project is outlined in Figure 2.

During 1989 and 1990 the work focused on comparing resources and output between different departments in the six specialties. The comparisons indicated major

differences in productivity and performance and this was used to start discussions on different ways to improve the utilization of the present resources. One of the measures suggested for achieving higher productivity was to increase the use of day surgery.

The questionnaire

In order to investigate the present status of day surgery in Sweden this special study was undertaken in 1991³. A questionnaire was sent to all departments of surgery, orthopaedics, urology, gynaecology, ophthalmology and otorhinolaryngology – a total of 292 departments. In the questionnaire information was requested about the frequency of day and inpatient surgery for 34 different specified procedures. These procedures were selected so that in some cases it was expected that most of the procedures would be carried out on a day-surgery basis. Other procedures were selected so that very few were expected to be carried out as day surgery. The study was carried out in cooperation with the various organizations mentioned above.

In the questionnaire day surgery was defined as follows:

Day surgery is surgery that normally requires major anaesthesia (local, regional, spinal, epidural or general) and includes a period of postoperative recovery (commonly 2–5 h) before discharge.

Results

Complete replies to the questionnaire were received from 85% of the hospitals.

The present organization of day surgery

At three hospitals there are dedicated units for day surgery – Karolinska Hospital in Stockholm, Huddinge University Hospital, also in Stockholm, and at Lund University Hospital in Lund, in the south of Sweden. All three are large university hospitals. At a few hospitals some specialties have organized a day surgery unit within the department. This means that the staff and other resources are shared between day surgery and other activities normally carried out at the department.

The most common way of taking care of the day surgery patients in Swedish hospitals is to integrate them among the other surgical patients. In most hospitals there are, however, separate arrangements for postoperative care for day surgery patients. In some hospitals one or two of the operating theatres serve exclusively as day-surgery theatres. In some hospitals a specific day of the week (usually Friday) is reserved for day surgery. Many hospitals are planning to open day-surgery theatres adjacent to the wards. There are also a few hospitals which have far-reaching plans to set up a free-standing or satellite unit on the hospital campus. So far there are no true satellite units in Sweden but there are some private clinics that perform certain

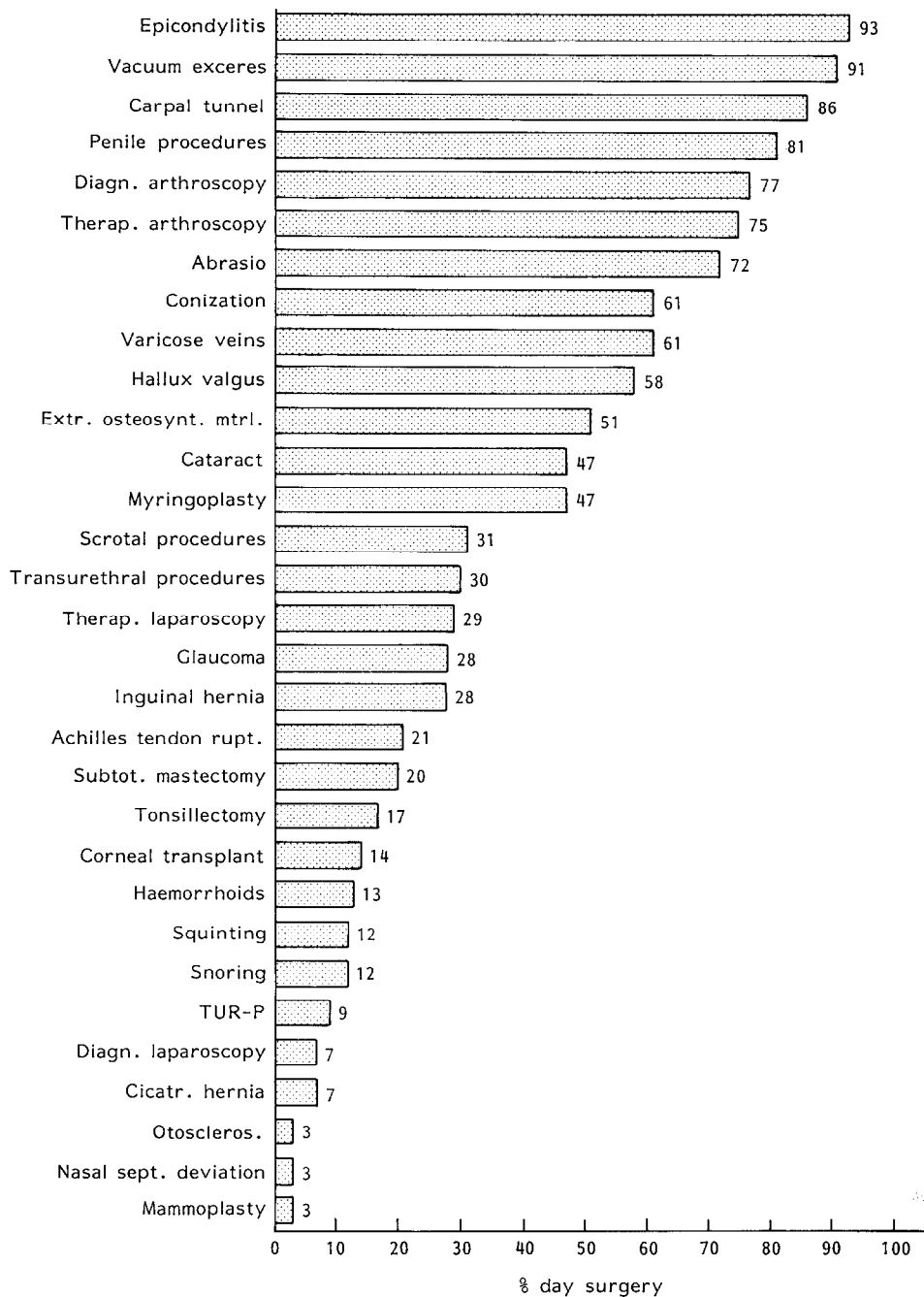


Figure 3. The percentage of day surgery for 34 different procedures during 1991. TUR-P, incontinence, prolapse = 0% day surgery.

operations in day surgery, e.g. cataracts and some plastic surgery procedures.

The frequency of day surgery

The annual rate of operations, excluding minor office surgery, for inpatient care at Swedish hospitals is around 500 000. The number of day-surgery operations is, however, difficult to measure because the National Patient Register only registers data on operation codes of discharges from inpatient care. A day-surgery case is registered as an unspecified office visit in the statistics. There is no way to separate the operations from other visits. There is, however, development work under way with the

intention of including day surgery in the national register of operations.

The frequency of day surgery in 34 different procedures

The departments were asked to report the total number of procedures during 1990 for inpatient as well as day surgery for 34 specified operations. In total there were about 200 000 operations reported and the proportion of day surgery was 48%. An overview of the results is given in Figure 3.

When we analysed the proportion of day surgery for different procedures in relation to hospital level there were obvious differences. Day surgery was generally

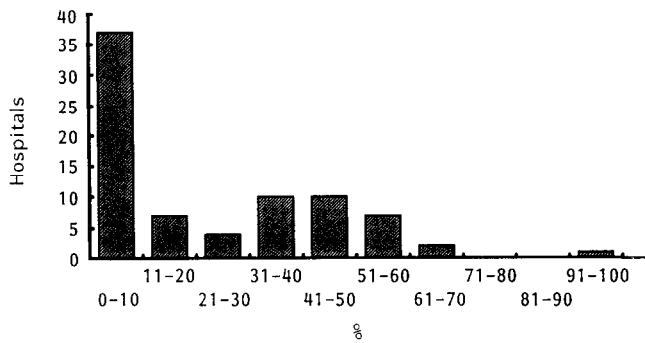


Figure 4. Distribution of day surgery frequency (%) among the departments of general surgery for inguinal hernia operations in 1991. No. of hospitals = 78.

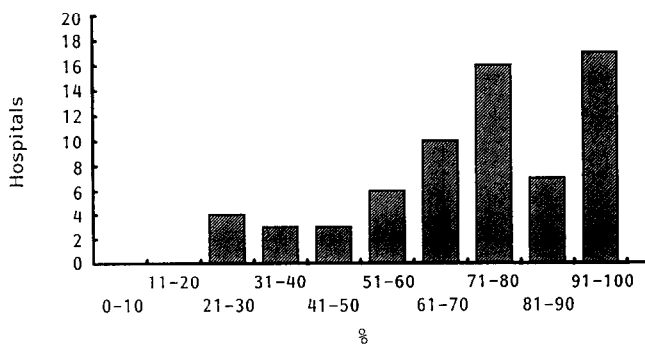


Figure 5. Distribution of day surgery frequency (%) among the departments of gynaecology for abrasio during 1991. No. of hospitals = 66.

more frequent at regional hospitals and county hospitals than at district county hospitals. A few district county hospitals were exceptions to this rule and had a very high rate of day surgery. It is obvious that the degree of specialization does not necessarily make a difference. The competence and attitude of the individual doctor towards day surgery is probably a more important factor. The variation in day surgery proportions between the different departments was extensive for all of the procedures. As an example, Figure 4 shows the frequency distribution of day surgery for inguinal hernia. A total of 78 out of 90 departments in the country answered the questionnaire. One department performed almost all of their hernias in day surgery. In contrast, more than 50% of the units were not doing any hernias at all as day surgery. In the case of abrasio, all of the 66 units performing this operation have answered the questionnaire and all of them do some day surgery (Figure 5). An interesting question is why all the departments cannot do, say, 70% as day surgery, when more than half of the units manage to achieve that figure.

Another example is cataract surgery, where 32 out of 37 eye departments in the country have answered the questionnaire (Figure 6). Cataract operations have, for a long time, been performed as day surgery in the vast majority of cases at Sweden's largest eye department,

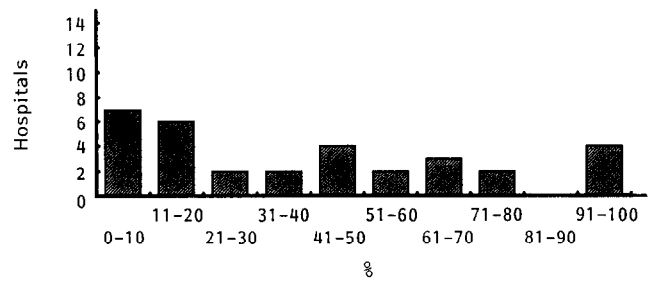


Figure 6. Distribution of day surgery frequency (%) among the departments of ophthalmology for cataract surgery during 1991. No. of hospitals = 32.

the Stockholm Eye Clinic. It is therefore surprising that, as is shown in Figure 6, only 12 of the 33 departments did more than 50% as day surgery. There are still some clinics that have a zero frequency of day operations. The conclusion of the study is that there is a significant potential for the expansion of day surgery in Sweden.

Obstacles to the further development of day surgery

In the questionnaire we also asked the clinicians their opinions about the potential obstacles to the increase of the use of day surgery. As previously mentioned, Sweden is a sparsely populated country and the most common answer to this question was to refer to the long distances that patients have to travel, especially if they are old. Old age as such was also mentioned as an obstacle to day surgery. Others mentioned tradition and conservatism among doctors as the most important obstacle. Many departments did mention the economic circumstances and stated that they had asked for resources to develop day surgery without any success. No one, however, seemed to have discussed the possibility of reallocating resources from inpatient care or other activities to the expansion of day surgery. Practical obstacles were also frequent.

Some of the answers were very explicit and honest. The following quotations serve as examples:

"Up to now we have had plenty of beds and it is then only natural to use them. If there are fewer beds in the future, we will certainly do more day surgery."

"An important obstacle comes from the way that people defend their own territory. They are used to having resources with a low degree of utilization but with high quality. This makes it more difficult to accomplish change."

"The technique used by our anaesthesiologists makes it impossible to change to day surgery. The patients are normally in such a sedated condition that it is impossible to send them back home until at least a day after the operation."

"Politicians and administrators are not aware of the potential savings and possibilities of rationalization that comes with day surgery in the long run. At first

there will be a need for some investments, but in the end it will be profitable.”

Many gave lack of knowledge of advantages and disadvantages of day surgery as important reasons. There is also a lack of incentive. These opinions were shared by the experts of the DAGMAR 50 project. Their conclusion in the final report was a recommendation to the authorities to expand the use of day surgery in Swedish hospitals.

Future development of day surgery

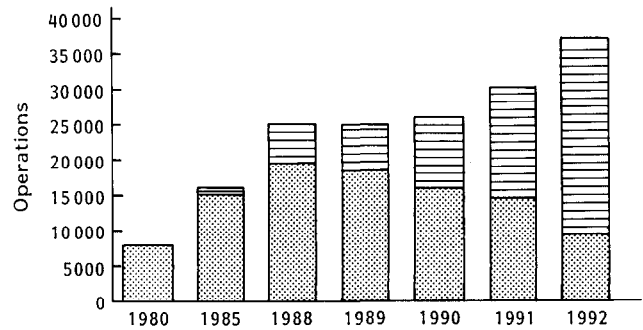
Swedish health care is at present undergoing major changes. The recession is only one reason for this. A new government with new aspirations came into power in 1991. There was also widespread opinion, both within the health care sector and among citizens, that the health care system was inefficient in many aspects. It is impossible to foresee what the final solution to the future financing and organization of Swedish health care will be. Economic realities can, however, not be neglected and this has forced the county councils to try new incentives in managing the health service. Those incentives have also promoted the development of day surgery.

In a recent (still unpublished) survey of the day surgery ratio of cataract operations the frequency in 1992 was estimated to be 75% – compared with 47% in 1990. Now, as compared to 1990 all eye departments practice day surgery and many of them do so in almost all cases (Figure 7). A similar survey has recently been done for inguinal hernias, which shows that the frequency of day surgery has also risen since 1990. As shown in Figure 8 most of the departments now do a much greater share of their hernias in day care as compared to 1990.

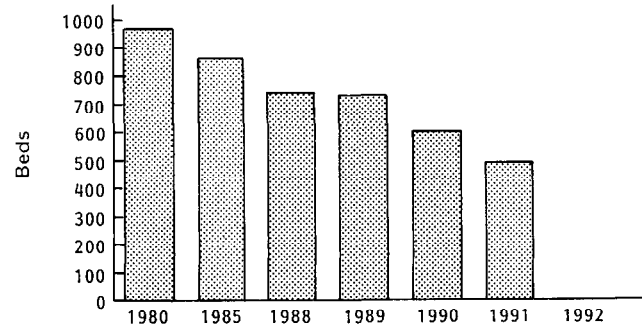
To promote the development of day surgery further, it has been decided to prolong the DAGMAR 50 project in this area. The aims of this work are to produce guidelines and a state-of-the-art document on day surgery for the different surgical specialties. A new questionnaire has also just been sent out in order to follow up the developments in the frequency and organization of day surgery in hospitals. The DAGMAR 50 survey on new techniques and new ways of organizing health care has so far had major effects on productivity – and, we hope, on quality and effectiveness as well. An urgent question now is to estimate the total need for surgery in Sweden, as the increased use of day surgery in combination with estimates of total need may facilitate the phasing out of redundant hospitals.

References

1 The Reform of Health Care in Sweden. SPRI report 339. Stockholm, 1992



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b

Figure 7. a, Cataract operations in Sweden 1980–1992. ▨ = Day surgery; ▩ = inpatient. b, Hospital beds in ophthalmology 1980–1991.

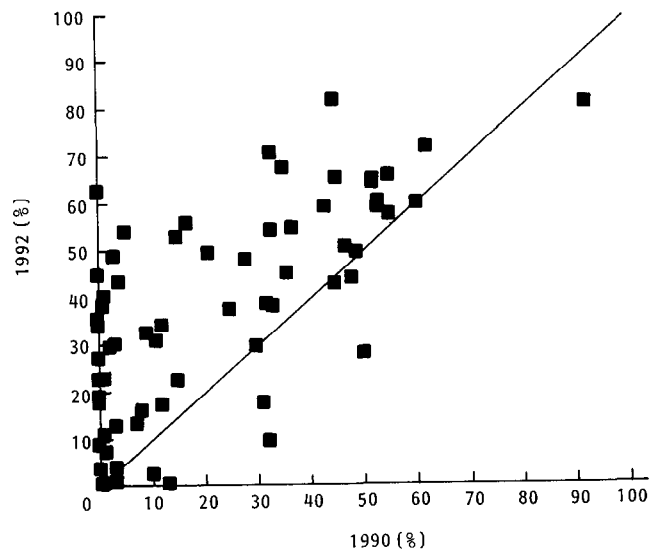


Figure 8. Comparison of day surgery frequency (%) at departments of general surgery in 1990 and 1992 for inguinal hernia operations. Median = 11% in 1990 and 35% in 1992. n = 73 units.

2 DAGMAR 50 – More value for money in health care (in Swedish). SPRI report 329. Stockholm, 1992

3 DAGMAR 50 – Day surgery (in Swedish). SPRI report 336. Stockholm, 1992