

# Advantages and disadvantages of day surgery in a department of general surgery



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## Advantages and disadvantages of day surgery in a department of general surgery

**INTRODUCTION:** *We make our study of day surgery to awaken health worker that is possible to reduce the mean hospitalization time for each type of procedure: it needs improvement in communication, organizational and medical skills with a specific training both for medical and nursing staff.*

**MATERIAL OF STUDY:** *A retrospective study on all patients who underwent day surgery procedures from 1st January 2008 to 31st December 2011. Out of 486 hospitalizations for programmed surgery, 177 (36.41%) were made in Day Surgery (DS) for a total of 450 operations. Of those patients, 105 (59.3%) stayed Overnight.*

**RESULTS:** *Re-conversion rate of day surgery hospitalization reached 1% and referred to haemorrhagy post-hemorrhoidectomy.*

**DISCUSSION:** *Nowadays in Italy many surgical procedures that could be performed in day surgery, are made in routine hospitalization with an higher cost for NHS. In our department DS is made for small surgery but even other procedures (hernioplasty, hemorrhoidectomy, stripping of vein safena, etc.). Our day surgery activity has had some negative aspects both for the availability of operating rooms and for the possibility of improvement of specific skills in our health staff.*

**CONCLUSIONS:** *Day surgery permits a better use of resources and also a cut of costs. The dates of our series demonstrate the necessity of improving DS, considering trends of the most part of European Countries. The Authors highlight the importance of creating specific Units for Day-Surgery activity to permit a training for all health staff.*

**KEY WORDS:** Day surgery, Hospitalization, One day surgery, Patient care.

## Introduction

Our NHS is going through a period of important transformations due to innovations introduced by the rules 502/92 and its following changes and supplements. It's a great work of reorganization of services of NHS and, mostly in hospitals, of the surgical ones. In NHS there were further changes due to the rules 517/93 and 229/99 referable to the introduction of two important innovations: the regionalization of the system and the conversion to enterprises of local health units <sup>1</sup>.

In 2007 the DPEF have focused the following critical states in the NHS: 1) improper use of hospitalization and emergency admission; 2) the length of waiting list and the high expense on drugs for inhabitant in some region; 3) the inadequate quality of services in a few regions that induces inhabitants to go to extra regional health units. Total costs of the NHS in the three-year period 2007-2009 is such as it needs to reduce tendencial expense in comparison with PIL.

This trend is considered consistent with maintenance of ELA (essential level of assistance) that are "services which NHS must pledge to everybody, free or in jointly, thanks to resources collected by taxation" <sup>2</sup>.

Nowadays, improvement in anesthesiology and surgery let us make diagnostic and therapeutic procedures and operations in a system of assistance different from routine hospitalization: day surgery permits a better use of resources and also a cut of costs. In USA, in Canada, in the UK and in Australia over 50% of surgical pro-

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cedures are made in day hospital or in day surgery. The case of UK is different from the rest of Europe where Day Surgery (DS) doesn't improve, in Germany DS is made nearly only in private structures (15% of surgical hospitalizations), in France in clinics operating within the NHS DS represent only 7%<sup>3-7</sup>. The shortage of coordination in data collection between public and private structures makes difficult to quantize DS in Italy, that is about 15%<sup>8</sup>. There are many reasons, mainly economic and logistical as an increase of domiciliary assistance, rehabilitative and outpatient services, which press the improvement of day surgery. This is helped by progressive aging of population in Western Countries. Also in General and Abdominal Surgery the improvement of DS is still ignored even if diseases that can be treated in DS are over 50%. The aim of our study is to awaken health worker about necessity, which is more and more important of rationalizing the use of economic resources through following strategies: 1) Re-rationalizing of expenses; 2) A better resource allocation; 3) Recovery of humanization of health services.

## Our series

In our Unit 177 hospitalizations were made in day hospital or in day surgery from 1<sup>st</sup> January 2008 to 31<sup>st</sup> December 2011.

The intervention procedures performed in day surgery and their respective DRG are outlined in Table I<sup>9</sup>.

Day surgery hospitalization was activated according to the following guidelines: patient's name is placed on the waiting list, following ENT evaluation. The procedure and level of priority is assessed and recorded together with any examinations requested; pre-Hospitalisation (in outpatient area of our Unit): the clinical records are filled out, patient's general state is evaluated, any allergies or pharmaceutical prescriptions are recorded. All routine and requested examinations are carried out. Choice between total and local anaesthesia is made according to the surgical procedure and the patient's preference.

In the case of general anaesthesia, the patient is seen by the Anaesthetist and is assigned an ASA risk class. Patients will not be eligible for Day-Surgery if they pre-

sent ASA III risk class. In this case, routine Hospitalisation is chosen as an alternative. Patient signs consensus documents<sup>10</sup>; hospitalization: procedure is carried out; dismissal with complete prescriptions and documents. Patients are dismissed with aspiration drainages, when needed; nurse calls to see the patient on the evening of dismissal and following morning.

The nurse records any pain, blood loss, bloating in the wound area. If complications are detected, the nurse invites the patient to seek immediate attention at the Unit and informs the doctor available. Patients are checked 48 hours after the procedure for drainage. The process is carried out entirely within the Unit.

Day surgery patients can refer to the Nurse-in-Charge or to Unit's Doctors for explanations or communications.

Out of 486 hospitalizations for programmed surgery, 177(36.41%) were made in day surgery for a total of 450 operations. Of those patients, 105 (59.3%) stayed overnight. The intervention procedures performed in day surgery and the type of anaesthesia used are outlined in Table II. Re-conversion rate of day surgery hospitalization reached 1 % and referred to haemorrhage post-hemorrhoidectomy.

## Discussion

The DS, with the endoscopic surgery, is the latest innovative proposal for surgical services. DS is a system of attendance that permits to diversify the flow of surgical patients and, in more of 50% patients, it allows to discharge on the same day of the operation or on the next day.

The reasons of the improvement of DS in the world and with less force in Italy are the possibility of: 1) putting into practice through a selection of patients and a specific organization a system of attendance that is as efficient as traditional one for surgical pathologies that are considered "less complex"; 2) giving patients affected by demanding diseases a better attendance because there is a greater availability of beds and health workers; 3) reducing the waiting list; 4) greater facilitating patients and their families; 5) rationalizing the costs of hospitalization.

Nowadays in Italy many surgical procedures, that could be performed in day surgery, are made in routine hospitalization<sup>11-15</sup>.

TABLE I - Surgical procedures and their respective DRG

Surgical procedure	DRG
Conventional varicose vein surgery	119
Operations on ano and stoma, with and without c.c.	157,158
Hernioplasty apart from femoral and inguinal hernia, age> 17, with and without c.c.	159,160
Inguinal and femoral hernioplasty, age> 17, with and without c.c.	161,162
Biopsy and local excision ( for benign breast lesions)	262
Perianal and piloni dal operations	267
Other procedures on male genital system, except for malignant lesions	345

TABLE II - Day surgery procedures and type of anesthesia from January 2008 to December 2011.

	Total	General anesthesia	%	Local anesthesia	%
Breast benign lesions					
Local excision	63	0	0%	63	100%
Quadrantectomy	2	2	100%	0	0%
Inguinal and femoral hernia					
Hernioplasty "Held in mesh"	45	3	7%	42	93%
Varicocele					
Varicocelectomy	19	0	0%	19	100%
Hydrocele					
Hydrocelectomy	4	0	0%	4	100%
Hemorrhoids					
Hemorrhoidectomy according to Milligan e Morgan	9	0	0%	9	100%
Hemorrhoidectomy according to Longo	4	0	0%	4	100%
Perianal fistula					
Insertion of a seton	5	0	0%	5	100%
Sinus Pilonidalis					
Excision and primary closure	7	0	0%	7	100%
Anal rhagades					
Internal lateral sphincterotomy	1	0	0%	1	100%
Other primary hernias of abdominal wall					
Hernioplasty	8	0	0%	8	100%
Varicose vein					
Stripping of vein safena	6	0	0%	6	100%
Phlebectomy	4	0	0%	4	100%

In the definition of day surgery, proposed by Documents written by ministerial commissions, in 2000 it is introduced the day surgery with overnight-stay as the possibility to continue the attendance of patients operated in Day Surgery during the night.

It is useful for procedures which have a higher risk of complications (haemorrhage, for example) or for patients who live far away from the hospital. In our Unit DS is made for small surgery (skin biopsy, positioning of porta-cath, transrectal extirpation of little polyps) but even other procedures (hernioplasty, hemorrhoidectomy, stripping of vein safena, etc.). Our Day Surgery activity has had some negative aspects both for the availability of operating rooms and for the possibility of improvement of specific skills in our health staff. Until now this activity is made by health workers of our ward that make double work: it creates limits to the organization of routine hospitalization and day surgery.

We have considered important to show the activity in our Unit between 2004 and 2007, on basis of analysis of SDO

about surgical DRG included in the rules of 29/11/01. We have also made a review of day surgery activity in the other Countries of the world. In the Western Countries there is nowadays an increasing trend in day surgery procedures, that permits more and more persons to be operated for diseases which were in the past made only in routine hospitalization. It could reduce waiting list.

There is also an improvement of efficacy and safety that should be the priority of NHS<sup>16-24</sup>.

## Conclusions

The dates of our series demonstrate the necessity of improving DS, considering trends of the most part of European Countries. Day Surgery is one of those rare socioeconomic - political movements in which all participants have benefitted as demonstrated by public interest and demand, surgeon satisfaction, patient participation, and, most importantly, payer encouragement and

mandate. Organizational and professional skills are indispensable qualities, with communication involving around the human factor. The Authors highlight the importance of creating specific Units for Day - Surgery activity to permit a training for all health staff and regular meetings with case-analyses.

### Riassunto

**INTRODUZIONE:** L'obiettivo del nostro studio è di rendere gli operatori sanitari consapevoli che è possibile ridurre il tempo medio di degenza per ogni tipo di procedura: ciò necessita di un miglioramento nella comunicazione e nelle competenze organizzative oltre che mediche attraverso un training specifico sia per lo staff medico che infermieristico.

**MATERIALE E METODO:** Abbiamo effettuato uno studio retrospettivo su tutti i pazienti sottoposti a procedure in regime di day surgery tra il 1° gennaio 2008 e il 31 dicembre 2011. Delle 486 ospedalizzazioni per chirurgia programmata, 177 (36,41%) sono state effettuate in day surgery per un totale di 450 interventi. Di questi pazienti, 105 (59,3%) sono stati ricoverati in one day surgery. **RISULTATI:** Il tasso di conversione da ricovero in day surgery a ricovero ordinario ha interessato l' 1% dei casi per emorragia post-emorroidectomia.

**DISCUSSIONE:** Oggigiorno in Italia molte procedure chirurgiche che potrebbero essere realizzate in day surgery, vengono effettuate in ricovero ordinario determinando una spesa maggiore per il Sistema Sanitario Nazionale. Nella nostra Unità la day surgery viene realizzata per la piccola chirurgia ma anche per altre procedure (ernioplastica, emorroidectomia, stripping della vena safena, ecc.). La nostra attività di Day Surgery ha avuto alcuni aspetti negativi per la carente disponibilità sia di camere operatorie sia di fondi finalizzati al miglioramento delle competenze specifiche del nostro staff.

**CONCLUSIONI:** La Day Surgery permette un miglior uso delle risorse e anche un taglio dei costi. I dati della nostra casistica dimostrano la necessità di aumentare la DS considerando i trends della maggior parte dei Paesi Europei. Gli Autori sottolineano l'importanza di creare specifiche Unità per la DS in cui permettere un training per tutto lo staff sanitario.

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