

Ambulatory Surgery: Current Status and Future Trends

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According to international terminology, Day surgery or Ambulatory surgery is the admission of selected patients to hospital for a planned, non emergency, surgical procedure, returning home on the same day. Minor outpatient procedures and most day cases endoscopic procedures are not considered appropriate day surgery cases. "True day surgery" patients are day case patients who require full operating theatre facilities and/or a general anaesthetic; procedures previously performed as inpatient cases are now considered appropriate day surgery cases.

Accumulating evidence indicates that day surgery can offer significant advantages over inpatient surgery. Patients report faster recovery and less psychological stress. Moreover, during the last ten years the great shift from inpatient surgery toward day surgery has been accompanied by an impressive technological revolution, which has led to the development of surgical and anaesthesiologic approaches that require less postoperative care and quicker recovery. Appropriate surgical and anaesthesiologic techniques, careful selection and preparation of patients are mandatory for the provision of high quality and safe day surgery care. Moreover a proper organizational and management model is a key factor for the successful running of a day unit. There are three main organizational models suitable for day surgery

- Dedicated day surgery beds in the inpatients ward, sharing operating theatres, recovery facilities and medical and nursing personnel with inpatient department;
- Day surgery ward, closing at night and independent from inpatient ward. Operating theatres are the same for inpatient and day surgery; surgical sessions dedicated to day surgery are planned;
- Completely independent day unit: operating theatres and ward are dedicated to day case surgery. Nurses and administrative personnel are dedicated to the day unit. Many surgical specialties working in the same unit sharing facilities and non medical personnel. This is the most efficient and effective organizational model in large hospitals performing thousands day surgery cases a year.

Day surgery provides benefits to all involved.

- Patients receive high quality treatment which allows them to recover safely and quickly in their own home. Another benefit for the patients is the possibility to book a procedure in a dedicated day surgery unit without experiencing cancellation of surgery due to emergencies and bed shortage in inpatient facilities. The risk of hospital acquired infection is reduced.
- Clinicians' satisfaction is high: they can provide high quality care for appropriate patients, plan surgical sessions according to their needs and release inpatient beds for more major cases.
- Hospitals improve their throughput of patients, facilitate booking, and reduce waiting lists. Significant reduction of cost of surgical procedures and higher revenue for the hospital will be the result of proper organization and management of the day unit.

In most developed countries day surgery is now considered the best option for over 50% of elective surgical operations providing a safe and cost-effective approach. Day surgery covers a large number of surgical procedures and almost all surgical specialties. The International Association for Ambulatory Surgery (IAAS), founded in Brussels in 1994, has recently conducted an international survey comparing day surgery rates in many countries (Claus Toftgaard and Gerard Parmentier, 2005).

For the purpose of this study a basket of 37 procedures commonly performed as day cases in all surgical specialties has been developed in order to compare results obtained in the various countries.

Some examples of the procedures of the basket are the following:

- Hernia repair,
- Varicose vein surgery,
- Mastectomy,
- Cataract surgery,
- Tonsillectomy,
- Knee arthroscopy and meniscus, cruciate ligament repair,
- Endoscopic prostate surgery,
- Haemorrhoidectomy,
- Laparoscopic cholecystectomy,
- Laparoscopic antireflux,
- Laparoscopic hysterectomy.

Results of the survey conducted in 19 countries showed an extremely wide variation in the percentage of day cases among countries. The range varies between less than 10% (Poland) to over 80% (USA, Canada).

If we look in more detail to these results it is evident an enormous variations between procedures in the various countries, ranging from 0% to over 90%. Moreover a great variation exists in the same country between different regions, between hospitals in the same region and between departments and consultants in the same hospitals. What accounts for these differences? Certainly not

only one reason can explain the differences in day surgery rates. There are probably many different reasons explaining these differences: individual consultant preference for inpatient surgery and resistance to change, hospital organization and facilities, country regulations and incentives, health economic, incentives to hospitals and health care professionals, and other possible reasons. Nevertheless each country is experiencing a significant increase of day surgery rates over the last ten years.

Among current priorities there is the need of precise data collection on day surgery rates and results; these data are necessary to evaluate the impact of regulations and incentives and to monitor quality of care. Extended recovery facilities are being developed in some countries. Office based surgery is being developed in many countries thus moving some procedures as cataract surgery for example, from day surgery units to office based surgery. In most developed countries, we are experiencing a great increase of healthcare costs in public hospitals: this fact is contributing to the development of day surgery in public and private sector.

Continuing medical education initiatives in day surgery are needed for all the professional figures involved in order to improve significantly quality standards of care and the number of day surgery procedures.
