Summary

Recent advances in anaesthetic and surgical techniques along with increasing health costs have resulted in an ever increasing number of surgical procedures being performed on a day-case basis. It can offer a number of advantages for patients, health providers, and even hospitals.

Outpatient surgery may be performed very safely with a low incidence of both minor and major morbidity. Studies have shown that unanticipated admission to the hospital occurs in only 3% of patients following ambulatory surgical procedures.

There are many benefits for day Case Surgery as:

- lack of dependence on availability of hospital beds
- greater flexibility in scheduling operations
- low morbidity and mortality
- lower incidence of infection and lower overall procedural costs.

One of the most significant changes in surgical practice during the last two decades has been the growth of ambulatory surgery. Adequate postoperative analgesia is a prerequisite for successful ambulatory surgery. Recent studies have shown that large numbers of patients suffer from moderate to severe pain during the first 24–48 hr. The success of fast-tracking depends to a considerable, extent on effective postoperative pain management routines and the cost saving of outpatient surgery may be negated by unanticipated hospital admission for poorly treated pain. Depending on the intensity of postoperative pain current management includes the use of analgesics such as paracetamol, NSAIDs including coxibs and tramadol as single drugs or in combination as part of balanced

(multimodal) analgesia. However, in the ambulatory setting many patients suffer from pain at home in spite of multimodal analgesic regimens. Sending patients home with perineural, incisional, and intra-articular catheters is a new and evolving area of postoperative pain management. Current evidence suggests that these techniques are effective, feasible and safe in the home environment if appropriate patient selection routines and organization for follow-up are in place.

The concept of purpose-designed day surgery units has come a long way since it was proposed nearly a hundred years ago by James Nicoll.

The choices of anaesthetic techniques and perioperative analgesia as:

- **General anaesthesia for day surgery**

The essential characteristics of good day case anaesthesia are that it should be safe, with a pleasant induction and high quality surgical conditions, rapid recovery and few postoperative problems. It also needs to be cost-effective and to promote efficient patient flow**.**

There are no standard tests for assessing recovery from anaesthesia. In day surgical practice there are three times that are of particular interest; the time of emergence from anaesthesia identified by eye opening or obeying commands; the time the patient is fit to leave the postanaesthetic care unit (PACU) and the time they are fit to be discharged home. A recent meta-analysis compared the recovery profiles of propofol, isoflurane, sevoflurane and desflurane. Emergence times were similar after isoflurane and propofol, a little faster after sevoflurane and fastest of all after desflurane

It is important to also consider the effect of the anaesthetic technique on problems encountered during the first 24 h after surgery

when PONV, pain, drowsiness, somnolence, dizziness, headache and sore throat may all be unpleasant for day case patients. Patients receiving propofol for the maintenance of anaesthesia had a lower incidence of PONV compared to those managed with techniques including inhalational agents**.**

- **Regional anaesthesia**

1. Spinal anaesthesia for day case surgery

Spinal anaesthesia is commonly used for inpatients in the United Kingdom (UK), but it remains relatively rare in the day case setting, the reasons for which may be predominantly historical. The rapid development of day surgery in the late 1980s and early 1990s was largely concerned with high volume, comparatively minor procedures on carefully selected and relatively fit patients. There were new hypnotic agents available, including propofol, sevoflurane and desflurane, which were well suited to day case general anaesthesia. The growing popularity of the laryngeal mask airway also helped to ensure that day surgery patients enjoyed rapid recovery with minimal side effects.

2.Peripheral nerve blocks
3. intra-articular analgesia
4.intra-articular local anaesthetics
5. intra-articular opioids
6. central neural blockade :(epidural, spinal or combined spinal epidural).

Ambulatory surgery has evolved considerably over the past two decades, with more complex procedures being performed, and more ASA class III patients being eligible. This progress, while driven partly by

health care economics, has evolved through expanded scientific research in all areas of ambulatory anesthesia.

Evolution of anesthetic pharmacology, including new drugs and better understanding of their complex interactions, as well as more targeted regional anesthetic techniques, have had an enormous impact. Another key area of development is facilitation of patient recovery and discharge from the postanesthesia care unit (PACU) and step-down unit, or ambulatory surgical unit (ASU).

Scoring system which determine whether outpatients can be transferred directly from the operating room to the step-down assess the following:

- Level of consciousness
- physical activity
- Hemodynamic stability
- Respiratory stability
- Oxygen saturation status
- Postoperative pain assessment
- Postoperative emetic symptoms.

The development of newer anesthetic techniques and drugs, which help to facilitate earlier discharge from hospital, may represent cost shifting to patients and their caregivers. Future studies should explore the extent to which perioperative interventions can minimize postdischarge complications and facilitate early return to daily activities. The potential to modify indirect costs, such as time lost from work for both the patient and caregiver, may not provide an incentive for hospitals, but there are important implications for patient and society as a whole.

unanticipated hospital admission following ambulatory surgery is a measure of quality of care. With continual pressure for cost containment, more surgical procedures will be performed on an ambulatory basis. Long duration of surgery, postoperative bleeding, pain, nausea and vomiting are the most common factors associated with unanticipated admission.. Proper selection of patients, minimally invasive surgical techniques, and implementation of multiple clinical pathways to deal with postoperative complications in the PACU and ASU can reduce the likelihood of unanticipated hospital admission.

Return hospital admission is an outcome related mainly to surgical complications such as extensive surgery, pain and urinary retention. Quality assurance audits are important to identify factors leading to hospital readmission, and should be conducted periodically with an evalution of patient selection criteria, especially for the specialties of ENT and urology.

The NHS plan proposed that 75% of all surgery in the UK should be day surgery by 2010. Advances in anaesthetic and surgical techniques have made this a reasonable aspiration. However, there are some postoperative complications that should be manged as:

- management of pain and postoperative nausea and vomiting (PONV) after surgery and particularly in the following days of recovery at home remains a challenge.

As pain after day surgery procedures remains a common problem with many patients reporting the most severe pain the day following surgery. Postoperative pain has been shown to be a significant problem for patients after day surgery . There are four areas where attention should be focused to improve the quality of pain management:

1. Preoperative preparation
2. Peri-operative pain management
3. Pain assessment in hospital and after discharge
4. Patient information and use of analgesia after discharge

PONV is one of the commonest causes of unplanned admissions and prolonged length of stay after day surgery worldwide**.** Prevention and treatment of PONV**:** Antihistamines, Antihistamines, Dopamine receptor antagonists, Steroids and Other antiemetics(Cannabinoids like tetrahydrocannabinol and nabilone). Combination therapy(5HT3 antagonists with either dexamethasone or cyclizine)

- Other post operative complications as:

    1. Fatigue and convalescence
    2. Postoperative ileus
    3. surgical stress
    4. postoperative organ dysfunction
    5. Fluid management should be kept in mind.

Replacement of appropriate amounts of fluid is obviously important when normal intake is prohibited**.**

Patient satisfaction following day surgery should be evaluated not just at discharge, but also some time later improving outcome, controlling postoperative pain, increasing the information provided to patients and relatives, and reducing the waiting time for surgery, may increase patient satisfaction following day surgery. These may be predictive factors of patient satisfaction**.**