



Ambulatory Surgery Handbook

2nd Edition

2014



Co-funded by
the Health Programme
of the European Union

Consumers,
Health and Food
Executive Agency

Chafea

Contents

- Foreword 6
- Introduction..... 7
- Design of ambulatory surgery facilities 10
 - Self contained - Free-standing 10
 - Office based surgery..... 10
 - Integrated..... 11
 - Day ward-dedicated theatre(s) in main theatre complex..... 11
 - Ambulatory ward-no dedicated theatres..... 11
- Organisational aspects 13
 - Clinical Lead..... 13
 - Nursing Lead..... 13
 - Operational Group 13
- Pre-operative assessment 14
 - Social 15
 - Medical..... 15
 - Age..... 15
 - Blood Pressure..... 15
 - Body Mass Index (BMI)..... 16
 - Sleep Apnoea..... 16
 - Diabetes Mellitus..... 16
- Patient information 18
- Procedures suitable for ambulatory surgery..... 19
- Day of admission 20
 - Perioperative Management 20
 - Pain control 20
 - Infiltration anaesthesia 20
 - NSAIDS..... 20
 - Paracetamol 21
 - Regional Anaesthesia 21
- Recovery Process..... 22
 - First Stage Recovery 22
 - Second Stage Recovery 22
 - Environment..... 22
 - Hints and tips..... 23
- Patient discharge and support 24
- Discharge analgesia 25
 - Objective..... 25

Drugs.....	25
Paracetamol	25
NSAIDs	25
Opioids.....	25
Local Anaesthesia	26
Topical anaesthesia	26
Supply of analgesic drugs	26
Information.....	26
Monitoring Quality – use of audit and standards	27
Monitoring.....	27
Telephone follow up service	28
Appendix A	29
The double Role of the anaesthesiologist in Day Surgery Units (DSU): a possible organization model for running an Day Surgery Department.....	29
Appendix B	35
Patient Information Provision: Guidelines and a practical application toolkit	35
Introduction.....	35
Criteria for Patient Information Provision.....	35
Categories of Information	38
Phases of Information	38
Paediatric Day Surgery	41
Guidelines for Construction of Information Packets.....	41
Questionnaire.....	44
Examples of information leaflets	45
General information leaflet for day surgery patients	46
Information leaflet for Caregivers.....	51
Procedure Specific Information leaflet	54
DAY SURGERY Questionnaire	57
Links to examples of Patient Information for Day Surgery and Guidelines for Written Material Construction	61
Appendix C	62
INFORMED CONSENT	62
Appendix D	65
Day Surgery Procedures	65
E.N.T	65
GENERAL SURGERY.....	65
BREAST SURGERY:	66
GYNAECOLOGY	67

OPHTHALMIC SURGERY	67
ORAL AND MAXILLOFACIAL SURGERY	67
ORTHOPAEDIC SURGERY	67
PAEDIATRIC SURGERY.....	68
PLASTIC SURGERY	69
UROLOGY.....	69
VASCULAR SURGERY.....	69
Appendix E.....	70
Preventive pain and PONV strategies to optimize quality of care for the day case patient.....	70
Pain Management	70
Prevention of Post Operative Nausea and Vomiting	71
Appendix F.....	73
Chapter – Quality / Clinical Indicators.....	73
Introduction.....	73
Clinical Indicators	73
Rationale for using different dimensions’ Indicators of performance in day surgery	78
Input Indicators	78
Access Indicators	78
Process Indicators.....	79
Output Indicators	79
Outcome indicators.....	79
Patients’ Safety Indicators.....	80
Cost / Productivity Indicators.....	80
Patients’ Satisfaction Indicators	81
Conclusion	81
Appendix G	83
Establishing a formal Association:.....	83
Health care system in India:	83
Need for an Association:	83
How to go about it:.....	84
Challenges faced:.....	85
International exposure:	86
Future Plans:.....	86
Appendix H	87
PRE-OPERATIVE ASSESSMENT AND EDUCATION	87
Social assessment.....	87
Medical Assessment.....	87
Recovery.....	89

Day Surgery Handbook

Discharge 90
Post Discharge Follow Up..... 90
Competencies..... 90

Foreword

This handbook was prepared to support the IAAS Train the Trainers programme. Many people have contributed to this publication and I thank them for their support with this project. In particular it is important to recognise the work of Carlo Castoro, Doug McWhinnie, Paulo Lemos, Jan Eshuis and Gamal Mohamed in the development and delivery of the Train the Trainer courses.

My hope is that this is just a beginning and that as the course develops then so will the materials available to support this important work.

Please note the Handbook is available online at www.iaas-med.com/handbook where we have also provided a forum where you can ask questions about any issues you are facing in day surgery.

Ian Jackson
President

This handbook arises from the IAAS 2014 WORK PLAN CLOSING THE GAP, which has received funding, in the form of an operating grant, from the European Union, in the framework of the Health Programme.

Contributors

Ian Jackson	President
Jan Eshuis	Honorary Secretary
Luc Van Outryve	Honorary Treasurer
Gamal Mohamed	President Elect
Carlo Castoro	Immediate Past President
Paulo Lemos	Past President
Arnaldo Valedon	
Douglas McWhinnie	
Gamal Mohamed	
Jan Jakobsson	
Sven Felsby	
Naresh Row	

Introduction

Day surgery or Ambulatory Surgery has many definitions across the world, the IAAS recommend the descriptor **Ambulatory Surgery** defined as ‘an operation/procedure, excluding an office or outpatient operation/procedure, where the patient is discharged on the same working day’.

Another important group are those patients who can be managed with an overnight stay which we suggest should be known as ‘**Ambulatory Surgery – Extended Recovery Patient**’ defined as ‘a patient treated in ambulatory surgery / procedure centre/unit, free standing or hospital based, who requires extended recovery including overnight stay, before discharge the following day’.

Table 1. IAAS Definitions

DEFINITIONS - AMBULATORY SURGERY	
Ambulatory Surgery / Procedure	An operation/procedure, excluding an office/surgery or outpatient operation/procedure, where the patient is discharged on the same working day.
Ambulatory Surgery / Procedure Patient	A patient having an operation, procedure excluding an office / surgery or outpatient operation/procedure, who is admitted and discharged on the same working day.
Ambulatory Surgery Center (Facility)	A centre (facility) designed for the optimum management of an ambulatory surgery/procedure patient.
Ambulatory Surgery / Procedure - Extended Recovery Patient	A patient treated in ambulatory surgery / procedure centre/unit, free standing or hospital based, who requires extended recovery including overnight stay, before discharge the following day.
Ambulatory Surgery / Procedure - Extended Recovery Centre / Unit	Purpose constructed / modified patient accommodation, free standing or within an ambulatory surgery centre or hospital, specifically designed for the extended recovery of ambulatory surgery / procedure patients.
Limited care accomodation	Hotel / hostel accomodation for ambulatory surgery / procedure patients where professional health care is available on an on-call basis.
Hotel / Hostel Accomodation	Accomodation without professionnal health care for ambulatory surgery / procedures: required by patients for domestic, social or travel reasons.

When comparing international ambulatory surgery rates for a particular operation it is important to realise that despite our recommendations definitions can still be different around the world. Some countries consider a stay of less than 24 hours as Ambulatory Surgery. Given the international contributions to this handbook the terms day surgery and ambulatory surgery will be used interchangeably throughout this handbook.

Day surgery is not new and indeed in 1909 James Nicoll reported his work on nearly 9,000 children who underwent day surgery for such conditions as harelip, hernia, talipes and mastoid disease at the Royal Hospital for Sick Children in Glasgow. This was the work of a gifted enthusiast who was quite simply years ahead of his time, even in those early days he stressed the importance of suitable home conditions and co-operation with General Practitioners.

Three main factors are driving the increase in day surgery

1. Changes in clinical practice – length of stay following surgery have been steadily reducing over the past decade and this has been accelerated with enhanced recovery programmes that encourage early mobilisation.
2. Advances in both anaesthesia and surgical techniques have made an expanding number of procedures suitable for day surgery. These advances have also allowed us to offer day surgery to patients who were previously deemed unsuitable due to various co-morbidities. Many hospitals are now moving towards a default option for day surgery for many operations. Instead of the surgeon asking 'Is this patient suitable for day surgery?' they are now assumed to be suitable and the question is 'Is there any justification for admitting this case as an inpatient?'
3. Countries are struggling to control costs in their health services and the escalation in emergency admissions linked to their aging populations. The ability to treat more surgical patients through less beds means the cost effectiveness of day case surgery has put this mode of care at the top of political agenda.

However it has taken considerable time in many countries to increase day surgery rates. The reasons for this are complex but it is important that these are considered as those wishing to introduce day surgery will experience these issues.

Lack of day surgery facilities

Day surgery is possible without the provision of dedicated day surgery facilities but hospitals that achieve high performance in day surgery have dedicated units – this will be discussed further later in the handbook.

Clinical preference

It is important to acknowledge that many surgeons, anaesthetists and nursing staff have a strong preference for inpatient surgery. Many see day surgery as 'minor' and less of a challenge or in some countries surgeons fear the loss of control over hospital beds or 'their ward'.

Patient preference

Staff often say that the patients don't want day surgery and it is true that in cultures where day surgery is new that it is important to educate patients on the advantages. When day surgery is explained to patients then it does not matter which country you are working in the universal finding is that most would prefer to recover in their home surroundings.

The expansion of day surgery entails a change in mind-set in clinicians, nursing staff, managers and the patient. It might be that changes in national policies and regulations will be necessary, such as the removal of incentives that promote unnecessary hospital stays.

However day surgery can be successfully introduced by those who have the drive to achieve change for their patients. In the beginning most hospitals will have to start performing day surgery through their existing facilities. The crucial change in this situation is the patient pathway and that it is clear from the start of the pathway to the patient and all staff that the patient will be going home the same day as the procedure is performed.

Once a service has been started in a hospital you can start to look at how your facilities can be adapted to further support the day case pathway for more and more patients. This handbook will hopefully help through all stages of development of your day surgery service. At the end of the handbook we have included an Appendix of essays completed by colleagues on the Executive Committee of the IAAS. These are personal views on the management of various aspects of day surgery and contain a large number of useful ideas and information. Each deals with a different part of the patient pathway and we hope you find them useful – we include contact details for those involved so that you can contact them with any questions you may have.

Design of ambulatory surgery facilities

There are several ways of providing ambulatory surgery services.

- Self-contained ambulatory surgery unit - free-standing
- Office based surgery
- Self-contained ambulatory surgery unit - integrated with main hospital
- Self-contained ambulatory ward - using dedicated theatres in main theatre complex
- Self-contained ambulatory ward - patients incorporated on in-patient theatre lists

Publications promoting ambulatory surgery often concentrate on the efficiency of self-contained units and those with their own theatres in particular. Self-contained units integrated with the main hospital and self-contained day wards using dedicated theatres are the most common types of unit in Europe while in the USA there are a higher proportion of free-standing units. There are advantages and disadvantages with each type of service, however it is important to remember that all variations can be made to work if the patient pathway is clear and the local team are well organised.

Self-contained - Free-standing

This type of unit brings advantages of reduced overheads in the USA and this can also be seen with the Independent Treatment Centres in the UK. However there are fewer free-standing units in Europe that are not owned by a main hospital and therefore they have to take a share of all the Trusts overheads. Parking, a major problem for many European hospitals is usually not an issue. However free standing units bring problems that increase with the distance from their main supplier of medical and paramedical manpower. Support services from physiotherapy and laboratory services to Intensive Care and radiology are remote from the unit. Do outpatient clinics take place on site? If not, it means further trips for patients if pre-admission assessment is used. Travelling time of medical staff to and from the unit can be inefficient use of a valuable resource. Patient selection has to be more rigorous and the range of procedures that can be performed is more limited. This can be mitigated if the unit has an overnight stay facility that has medical cover – this will reduce the need to transfer failed day cases to a major facility and so allow more challenging cases to be managed.

Office based surgery

The provision of surgery in a suitable area within the 'surgeons' office' is popular in some countries. For the surgeon it offers maximal return on investment for their facilities. However the procedures that can be performed and the types of patient that can be selected are

limiting factors. There are real concerns about regulation of these facilities and for patient safety.

Integrated

This type of unit is seen by many as being ideal. Full support services are available and it is easy for patients to visit the unit on the same day as their outpatient clinic visit for preoperative assessment. There is no loss of medical time due to travelling and if the unexpected happens e.g. the patient requiring a laparotomy following uncontrolled haemorrhage during a laparoscopic procedure, then it is easy to perform the procedure and admit the patient to an appropriate facility as needed e.g. ward, HDU or even ITU.

Day ward-dedicated theatre(s) in main theatre complex

The distance between the ward area and the main theatre complex is important in this situation. The efficiency of ambulatory surgery depends on the rapid changeover of patients in theatre so that valuable theatre time is not lost. Therefore efficient transfer of patients is important and becomes increasingly difficult with separation of the theatre and ward areas. However the use of patient holding areas close to theatre can address this issue. One consideration often forgotten is the Recovery Room or Post-Operative Care Unit experience. The management of first stage recovery of patients is an important aspect of successful ambulatory surgery - staff using their inpatient surgical practice can delay or even prevent day case patient discharge.

Ambulatory ward-no dedicated theatres

Let us be clear this is a very unsatisfactory way of providing day surgery and is not recommended by the IAAS. This setup begins to not only reduce the efficiency of ambulatory surgery but can have serious effects on the quality of service for day patients. Patients admitted to the ambulatory surgery ward may have to wait a long period for their operation if they appear at the end of a list after the major cases. It is inappropriate to fill up the occasional half hour on the end of a list to perform ambulatory surgery as they should be done early on the list to ensure maximal time for recovery. The risk of cancellation is also high if they are following a large case. Putting them on the beginning of the list is more satisfactory but can also lead to the problem of lists over running their allotted time - a problem all too familiar to those with theatre experience. However they are managed the tendency is for the day cases not to receive the degree of attention they require and so the ambulatory surgery success rate is reduced.

We recognise that the above situation may well be unavoidable especially in the beginning. The issues raised can be helped by careful organisation. Having a clear patient pathway so

that the patient, the ward nursing staff and the theatre staff all understand that the patient is a day case can help. Having nurses in the Recovery Room in theatres who are educated in ambulatory surgery and form part of a team introducing the service can make a large difference.

Organisational aspects

Clinical Lead

Each DSU should have a Clinical Lead or Director who has a specific interest in daycase surgery and who will lead the development of local policies, guidelines and Clinical Governance in this area. A consultant anaesthetist or surgeon with management experience is ideally suited to such a post. This individual should have adequate time allocated in their contract for this responsibility. In the accompanying essays you will find a section exploring further the role of the Anaesthetist as the Clinical Lead but remember this can also apply to surgical colleagues with an interest in ambulatory surgery.

Nursing Lead

Each unit also requires adequate staffing led by a senior nurse who provides the day-to-day administration of the unit in liaison with the Director. The senior nurse in charge of the ambulatory surgery unit should be expected to spend the majority of his/her time within that unit. Hands on activity by senior staff members ensures a valid understanding of any problems that can emerge in day to day practice and will enable these to be more speedily rectified. The staffing levels will depend on the design of the facility and the work undertaken, as well as local preferences. The DSU should have reception staff of high quality as well as its own nursing personnel. We recommend that each DSU formulates its own staffing structure which takes into consideration their local needs.

Operational Group

Each unit should have an operational group which should oversee the day to day running operation of the unit. This may include representatives from anaesthesia, surgery, hospital nursing, community nursing, general practice, pharmacy, management, finance, audit, and ancillary care. This group should agree an operational policy, define a timetable, review any operational problems and organise audit strategies. They should meet on a regular basis and any concerns raised must be acted on by hospital management.

In Appendix A you will find an account of the potential advantages on an Anaesthesiologist managing a day surgery unit

Pre-operative assessment

Successful ambulatory surgery requires careful selection of patients and consideration of the experience of the team involved. Therefore, what may be appropriate for one specialty (and indeed one particular operation) in one setting may not be appropriate for another. For example, a cataract extraction performed under topical local anaesthesia can be performed on a much older and more frail population when compared to a shoulder arthroscopy. As an additional example, settings that are not prepared to handle young children as outpatients might not be appropriate for such patients in spite of a preoperative assessment showing clinical stability and low risk for surgery.

Proper pre-operative assessments are essential for smooth-running ambulatory surgery schedules. The goals of effective pre-operative assessments are to be organized, efficient, informative, and relatively simple (yet comprehensive). Having such adequate assessments will lead to no surprises on the day of surgery, and ideally no delays or cancellations.

Pre-operative assessments can be primarily performed in two different ways. Patients can be seen and evaluated in an assessment clinic or they can be contacted via telephone to gather their medical history. Each system has advantages and disadvantages, and a combination of the two has also been used successfully in several countries.

Seeing patients in an assessment clinic has the advantage of having personal interactions, being able to do a physical exam, and performing pre-operative testing if needed. A disadvantage is that it might not be convenient for patients to attend the session. The assessment clinic can be run by suitably trained nursing staff with all patients being seen in advance of their surgery – this is typically the model in the UK whereas other countries run these clinics with anaesthetists.

Pre-operative telephone interviews is the most common system used in the US. Such a system has proven to be easy and convenient, but it relies on patients having adequate knowledge of their medical histories. It also hinges on a physical exam and pre-operative testing being done at outside facilities and results being delivered in.

Whichever model is used leadership of this service is best provided by a clinical lead from the Anaesthetic Department. It is important that they develop guidelines for screening of patients that are accepted by their anaesthetic colleagues. It is also necessary to have a system for dealing with problems identified by the staff during this screening process. In general, pre-operative testing should be limited to circumstances in which the results affect the patient treatment and outcomes. Each country may well have their own guidelines but those produced by NICE (UK), the American Society of Anesthesiologists (US) and the Society for Ambulatory Anesthesia (US) have been used by many other countries.

Arrangements should be put in place for all appropriate tests to be carried out at the time of

assessment (or close to the time of assessment if telephone interviews are being performed) and there must also be a mechanism in place to review all investigations undertaken. It should be remembered that the preoperative assessment is also an important time to start educating the patient and their carers about the operation and postoperative care.

Assessment falls into two main categories.

- 1) Social
- 2) Medical

Social

The patient must be willing to undergo surgery in a day case setting and in most cases there should be a responsible adult able and willing to care for the patient for at least the first twenty four hours. Patients and/or their carers should have easy access to a telephone and the patients' home situation should be compatible with postoperative care. Travel time from where surgery is being performed is procedure dependent, but generally 1 hour is considered as a reasonable limit.

Medical

The patient and their carer should be able to understand the planned procedure and subsequent postoperative care. The patient should be either fully fit or chronic diseases such as asthma, diabetes, hypertension or epilepsy should be well controlled. Patients should be selected according to their physiological status as found at assessment. Routine laboratory testing has been shown in multiple studies to NOT reduce the incidence of perioperative events in ambulatory surgery patients. Such testing should be focused on items that would alter the perioperative management of patients. As previously mentioned it is important for the clinical lead to establish agreement with anaesthetic colleagues about the medical screening.

Age

Physiological status and fitness should be considered rather than arbitrary age limits. One exception to this would be infants who were born prematurely and are within 60 weeks post-gestational age. It is routinely accepted that such patient should be admitted post-operatively for observation due to risk of apnoea of prematurity.

Blood Pressure

Much has been written in the past about the importance of blood pressure control and anaesthesia. However more recent publications have separated out the need for long

term control of hypertension as part of general health of the patient from the risks associated with anaesthesia and surgery. There is no evidence to support the cancellation of patients with mild to moderate hypertension from having elective surgery. They must however be highlighted to their primary care physician so that assessment of their hypertension can be undertaken.

Body Mass Index (BMI)

BMI is used as part of selection criteria by most ambulatory surgery units. It is one measure of obesity and is calculated by dividing the patient's weight (measured in kilograms) by the square of their height (measured in metres).

This is an area that has seen major change – a few years ago patients with a BMI of more than 30 were deemed unsuitable for ambulatory surgery. Advances in surgical and anaesthetic techniques have meant that patients with a much higher BMI, who are otherwise fit, are now accepted. Though some units now accept a BMI of 40 or more it is prudent to start with a lower limit and increase this as you gain experience and confidence in management of these patients.

Sleep Apnoea

Patients with sleep apnoea undergoing ambulatory surgery has been a major topic of debate in many countries, particularly since many of these patients do not have a formal diagnosis of such at the time of surgery. Interestingly, several studies have shown that there is no difference in complications between OSA and non-OSA patients undergoing ambulatory surgery. However there are several categories of sleep apnoea patient for which ambulatory surgery is not recommended:

- Patients with central sleep apnoea
- Patients with severe OSA without optimized comorbid conditions
- Patients' inability to follow post-discharge instructions including compliance with Continuous Positive Airway Pressure (CPAP)
- Patients who adamantly refuse to use night time CPAP after discharge
- Patients where long acting opioids are required

Management of such patients can be complicated and there needs to be proper coordination of availability of equipment (such as CPAP machines) to patients post-operatively.

Diabetes Mellitus

Diabetes affects 2-3% of the population and should not be a contraindication to ambulatory surgery. However when considering diabetic patients for ambulatory

surgery it is important to assess the stability of the disease and the patients understanding of their diabetic control. The British Association of Day Surgery has produced a useful handbook on the management of these patients.

Finally it is important to re-emphasise that this section has been about the assessment of the patient. Patient selection in your ambulatory surgery unit will also be influenced by

- The experience of the team involved
- the type of unit – free standing, with or without availability of overnight beds etc and
- the type of surgery to be undertaken

Experience has shown that it is easier to start with restrictive criteria which selects those patients you are most likely to succeed with and to gradual extend these as your unit gains experience. Preoperative assessment is an excellent opportunity to educate the patient about their surgery, about what will happen during their visit to the day unit and what they should expect postoperatively. This can be reinforced by the use of written information which we will cover in the next section.

Patient information

Compared to those undergoing traditional surgery, patients undergoing ambulatory surgery have an increased responsibility for their preoperative preparation and their recovery from surgery at home. The time spent preparing a patient for ambulatory surgery in a surgical facility is less than that for inpatient surgery.

Therefore, provision of appropriate information about all phases of the surgical process is important, not only to ensure the success of the procedure, but also for patient safety. An effective policy for information provision aims to:

- prepare a patient psychologically for surgery;
- educate the patient about the particular procedure and pre- and postoperative care;
- minimize risks in the postoperative period;
- improve patient satisfaction with the overall day-surgery experience and aid anxiety reduction;
- obtain informed consent for surgery.

An informed patient is able to better adjust to surgery and is less likely to cause cancellations or delays or return for emergency room visits or hospital re-admission.

Information about medical and organizational aspects should be provided to the patient in a structured manner. The use of both oral and written information is essential; one informs, while the other reinforces and vice versa. Other media forms, such as video clips or the internet, may also be considered. The information must be consistent across the entire process of care, from the referring physician to the staff of the facility and those involved in aftercare. It should empower patients to take charge of their own care as far as possible. Finally, the role of each staff member in information provision should be identified and the timing of information provision coordinated since patients will come in contact with and receive information, at different stages, from administrative, nursing and surgical staff.

An extensive essay is provided in Appendix B on the importance and design of good patient and carer information. This includes examples of leaflets and useful links to internet sites with good examples that you can access.

Procedures suitable for ambulatory surgery

Procedures can be performed as a daycase provided there is satisfactory control of symptoms postoperatively and patients regain the ability to drink and eat within a reasonable time after the completion of surgery. Pain, nausea and vomiting must be controlled and preferably the patient should be able to mobilise to some extent. Enthusiasts are pushing the boundaries of what is possible around the world – radical prostatectomy, laparoscopic nephrectomy and even hip replacement have been managed as day cases. New operative techniques such as endoscopic surgery and other types of minimal access surgery have been developed and surgeons have become increasingly aware of important issues such as patient selection and proper perioperative care in ambulatory surgery. The fundamental principle however should be that surgery undertaken as a day case must be based on proven patient safety and quality of care, units should therefore be careful when introducing new procedures.

Ambulatory surgery was originally limited to procedures lasting less than 60 minutes. However with appropriate patient selection, the use of modern anaesthetic agents and careful postoperative care longer surgical procedures are now regularly performed. Many units have no specified maximum duration of operation. Some hospitals have developed 23-hour stay facilities to support the introduction of more major procedures and tackle postoperative complications without re-admission to another hospital. These may assist the transfer of an operation from the inpatient to the ambulatory surgery arena and extend the use of total capacity of ambulatory surgery operating theatres into the early evening.

You can find an extensive review of procedures that can potentially be performed as day cases in Appendix D.

Day of admission

The patient should be admitted to the unit and a check made to ensure there have been no changes in their health and home circumstances. Patients should be reviewed by both the surgeon and the anaesthetist who will be looking after them.

Perioperative Management

Pain control

Success of ambulatory surgery is dependent on the management of postoperative pain. Pain should be assessed throughout the patients stay. This is usually performed in adults by using a Visual Analogue Scale (VAS) which consists of a 10cm line with words 'no pain' at the start and 'worst imaginable pain' at the end. The patient is asked to put a cross in a position on the line which represents how much pain they are experiencing at the moment. The distance along the line is measured and recorded. A measurement of less than 3 cm is often accepted as indicating acceptable analgesia. Pain control requires a multimodal or balanced approach using local anaesthesia, Non-Steroidal Ant-inflammatory Drugs (NSAIDs), paracetamol, short acting opioids (alfentanil, fentanyl) and the avoidance of long acting opioids (morphine) where possible.

Pain management requires a team approach involving the surgeon, anaesthetist and the nursing staff. For example pain at the end of laparoscopic surgery can be minimised by

- infiltration of local anaesthesia into the port sites **before** they are inserted
- letting out as much carbon dioxide as possible from the abdomen
- using normal saline peritoneal lavage at the end of the procedure

Infiltration anaesthesia

Infiltration of the operative site with local anaesthetic is simple, safe and provides satisfactory analgesia after most operations. There is evidence that the infiltration of local anaesthesia prior to skin incision provides better postoperative analgesia and may reduce the intra-operative analgesic requirements. Topical local anaesthetic as eye drops or local anaesthetic creams e.g. EMLA cream also provide effective postoperative analgesia for procedures such as squint surgery and circumcision.

NSAIDS

NSAIDS should be given whenever there are no contra-indications. The use of the intravenous or PR routes of administration is not necessary and there is evidence that giving the first dose orally about 1-hour preoperatively produces better and longer lasting pain relief.

Paracetamol

Paracetamol has well established safety and analgesia profile and it reduces the need for more potent opioids with their unwanted side effects. Intravenous paracetamol is available in many countries but is expensive – appropriate oral dosage given preoperatively should form part of the multimodal approach to pain relief.

Regional Anaesthesia

Peripheral nerve blocks can provide excellent conditions for ambulatory surgery. Patients may be discharged home with residual sensory or motor blockade, provided the limb is protected and assistance is available for the patient at the home.

The introduction of low dose spinal anaesthesia has increased the suitability of central neural blockade for ambulatory surgery. This can be useful for lower limb, perineal and lower abdominal procedures and may allow more problematic patients to be done as a day case.

The use of small gauge pencil point needles has reduced the incidence of post dural puncture headache to less than 1%.

A review of the management of pain and prevention of Post-Operative Nausea and Vomiting can be found in Appendix E

Recovery Process

First Stage Recovery

This constitutes the initial recovery period following anaesthesia, it starts from handover of the patient to the care of the recovery nurse until the patient is discharged to the ward. In ambulatory surgery the aim should be to ensure that the patient awakes pain free, without nausea and is quickly orientated. This will minimize the amount of time the patient needs to stay in the Recovery Room.

Even in the best hands patients will develop problems in the Recovery Room and it is important that the nursing staff have protocols agreed by the anaesthetic department that they can follow for the management of post-operative nausea, vomiting and pain. The aim should be to control these as quickly as possible so as to ensure the smooth transition back to the ward area for second stage recovery. It is important to note that the facilities required for the Recovery Room will be similar to those for inpatient surgery. Discharge criteria will also be similar.

Second Stage Recovery

This is an important phase of the ambulatory surgery process and the management and education of both the patient and their carer during second stage recovery is crucial to our success. It is this stage more than any other that can mean the difference between providing a quality service or what is merely seen as being part of a 'production line' or 'conveyer belt'. Furthermore, success at this stage can make a large difference to the admission rate from your day unit. With this in mind, it is essential that patients are given time to recover and do not feel pressurised into leaving too early. However, it is also important that the staff have a routine for the mobilisation of patients. This routine will not only need to be different for the various specialties and operations, but also sometimes between surgeons in the same specialty and for different patients.

Environment

The use of beds is not recommended in ambulatory surgery, as they reinforce the 'patient role' in the minds of our patients, their carers and even the medical and nursing staff.

The use of trolleys immediately introduces to everyone the concept that this is a short visit to hospital. Suitable trolleys help by:

- reducing manual moving of patients (reducing dangers to both patient and staff in an area of fast throughput) and
- assisting the postoperative mobilisation of the patient

Every day unit needs to evaluate the trolleys available on the market and find those that suit their patient population and the type of surgery performed. Ideally the trolley should:

- have a reasonably thick comfortable mattress (as the patient may spend several hours on it)
- have a good range of height adjustment (a trolley that obviates the need for steps to get on and off will be inherently safer)
- meet all surgical requirements (width, height adjustment, attachments)
- meet all anaesthetic requirements (ease of tipping head down, easy to push!)
- meet safety requirements (suitable sides to prevent patient falling, able to deal with the maximum weight of patient allowed on the day unit, adaptable for paediatric use)

It is therefore obvious that anaesthetic considerations form only one part of the design of a successful ambulatory surgery trolley. Careful selection can yield benefits to all users but, unfortunately, there may also be a need for some degree of compromise.

The day unit should also have sufficient numbers of reclining chairs to allow graduation of patients into the semi-recumbent position, as this can help as part of this continual process of getting patients ready for discharge. The ward area used should also have:

- sufficient staffing to allow patient monitoring and education
- a quiet restful atmosphere
- privacy
- ample bathroom/toilet facilities
- facilities to provide fluids and food

Hints and tips

The choice of suitable food and fluids in the recovery process can make a large difference to your success rate and the quality of service perceived by your patients. Many of you who have worked on delivery wards in maternity units will be aware of the effect of the smell of toast on your taste buds. It does appear to work in ambulatory surgery patients, and is worth considering. Patients often have a dry mouth after anaesthesia and sandwiches can be difficult to eat – it does appear that buttered toast is much easier for patients to swallow. A further tip that can be useful is the use of distraction therapy in children following their surgery. The provision of a video/television and a supply of a suitable choice of children's films and cartoons returns many screaming children (who may feel confused, sick or be in pain) into quiet docile human beings.

Patient discharge and support

Every patient should be seen following their operation by the anaesthetist and surgeon involved in their care. However in many countries the final assessment of when the patient is 'street fit' or ready for discharge is performed by nursing staff. Each day unit needs to identify clear discharge criteria as part of a written policy for staff to follow. These need to consider social factors as well as a medical assessment of sufficient recovery for discharge. The following table gives the areas to be covered

- Vital signs should be stable for at least one hour
- Oriented to time, place and person
- Adequate pain control and has a supply of oral analgesics
- Understand how to use oral analgesia supplied and has been given written information about these
- Ability to dress and walk where appropriate
- Minimal nausea, vomiting or dizziness
- Has at least taken oral fluids
- Minimal bleeding or wound drainage
- Has passed urine (only if appropriate to surgery)
- Has a responsible adult to take them home
- Has agreed to have a carer at home for next 24 hours
- Written and oral instructions given about postoperative care
- Knows when to come back for follow up (if appropriate)
- Emergency contact number supplied.

All patients should receive verbal and written instructions on discharge which should include details about any symptoms that they might experience during the first 24 hours after surgery. Guidance should be given about not driving for at least 24 hours though this will vary according to the operation performed. Further information about the use of machinery, signing legal documents, returning to work and when sutures should be removed should also be provided. All patients should also be supplied with information about what to do in an emergency and be provided with a contact number for use when they need urgent advice. Attention to these details helps ensure that the patient feels supported and the provision of a contact number helps reduce the number of patients visiting their Primary Care Doctor (General Practitioner).

Scoring systems can be used as part of the discharge process and some of these are considered in Appendix A

Discharge analgesia

Objective

To maintain an acceptable level of analgesia with minimal side effects after discharge from the day surgical facility.

Drugs

Analgesia after discharge from ambulatory surgery is based upon

- Paracetamol
- NSAIDs
- Opioids
- Local analgesia
- Topical analgesia

Paracetamol

Paracetamol is a mainstay due to safety profile and few side effects. The effect is limited, and frequently needs support by stronger acting drugs. Oral dosage is preferable when possible, as rectal doses are absorbed unpredictably.

NSAIDs

NSAIDs constitute the next step. Ibuprofen and naproxen have the most favourable cardiac risk profile. NSAIDs may be given as required or at fixed intervals according to needs. The rapid onset of ibuprofen is useful in as required use. Cox-2 selective drugs offer little or no platelet inhibition, but the risk of cardiac complications is larger.

In the frail or elderly patient renal function must be considered especially if the patient is on an ACE inhibitor, the NSAID dose and duration must be reduced accordingly and proton pump inhibitors prescribed liberally.

Opioids

When other measures fail to achieve adequate analgesia, the patient may need opioids after discharge. Oral morphine preparations and oxycodone are widely employed. Although codeine is still in regular use, 5% of Caucasians lack the necessary enzyme converting codeine to morphine, while others are ultrafast metabolisers and risk increased side effects.

For these reasons, many units do not use codeine in ambulatory surgery.

At discharge, patients may be given a limited dose of opioids and laxative for as required use at home.

Local Anaesthesia

Duration of local analgesia may be extended by connecting a disposable mechanical pump to an indwelling catheter, inserted along peripheral nerves or as a wound catheter. After instruction, the patient may remove the catheter at a set time.

Topical anaesthesia

Lidocaine formulations may be useful after ophthalmic surgery, circumcision and other operations with localized mucosal pain.

Supply of analgesic drugs

This will depend on the custom and practice of the local health service. If no drugs are to be supplied then the patient must receive information preoperatively about the need for analgesics, so he or she can stock the drugs before surgery. Where drugs are to be provided then the expected amount of analgesics and adjuvant drugs may be given to the patient at discharge. The amount handed out must be documented.

Information

Information at discharge must include recommended maximal daily doses of paracetamol and NSAIDs, the need for laxatives when taking opioids and possible need for proton pump inhibitors.

Further consideration of this topic is covered by the authors of Appendix A and Appendix E.

Monitoring Quality – use of audit and standards

Audit and subsequent action is of fundamental importance to the successful practice of ambulatory surgery. Furthermore, failure to establish standards and implement satisfactory monitoring, audit and quality measures will lead to problems for patients, their General Practitioners and ultimately the day unit concerned. As we move clinical activity from the inpatient setting to ambulatory surgery it is important that this clinical activity is monitored and audited to ensure that problems experienced by patients or primary health care colleagues are quickly identified and rectified. The move to ambulatory surgery is probably the biggest change in practice in any health service and requires effective management. If quality is compromised in any way then patients are affected and it is important that we pick this up and deal with it quickly.

Monitoring

This can be defined as maintaining regular surveillance and can even include the concept of regulation. The combination of surveillance and regulation is useful for our discussion. Monitoring allows a Day Unit to judge its performance against explicit standards. Standards in this context can be defined as agreed measures by which performance or achievement can be judged. They can be set locally (by a unit), nationally (by the government) or internationally (IAAS Standards) and provide a yardstick against which to measure performance.

Examples of factors suitable for monitoring include

- number of cancellations as a result of the patient being found to be unsuitable on the day of surgery
- proportion of patients admitted overnight
- proportion of patients readmitted within one week
- did not attend rate
- utilisation of theatre time by each surgeon
- proportion of ambulatory surgery to elective inpatient surgery
- number of patients contacting the unit post discharge with problems
- number of patients requiring intervention of GP post discharge
- number of patients cancelled on day of operation

The number of cancellations on the day of surgery provides a clear indication of the effectiveness of the preoperative assessment service. The proportion of patients admitted overnight provides early warning of problem areas that need attention. The reasons for all admissions should be carefully examined, are patients being assessed appropriately or are

inappropriate operations being performed on the unit. Similarly the number of patients readmitted due to complications of their surgery is important - is the surgeon operating on inappropriate patients? Every time a patient does not attend the opportunity is lost to use a valuable resource i.e. the nursing and clinical time that has been set aside for the management of that patient. The number of patients contacting the unit with problems or requiring intervention of their general practitioner post discharge provides an indication of problems with patient selection, anaesthetic technique, surgical technique or discharge arrangements.

These are some of the reasons that you may consider monitoring some of these areas, you may well have thought of others that are more important for your unit.

Telephone follow up service

Telephone follow up after day case surgery has been found to be very useful when developing ambulatory surgery. The purposes of such a service are twofold;

1. to provide post-discharge support for patients,
2. to gather specific data for audit purposes in this early post-operative period

This sounds really supportive and it seems difficult to perceive how an individual would not wish to be contacted to discuss how they are feeling. However, like any other aspect of treatment or care, patients have the right to refuse and so permission to contact them at home must be sought prior to discharge. Although an unstructured phone call may seem the best approach to maintain informality, the use of a structured questionnaire will provide much better feedback for the ambulatory surgery unit. Areas to be covered should be to ask about the severity of post-operative side effects such as drowsiness, sore throat, headache, muscular aches, nausea and vomiting. This should be supplemented with questions to assess the degree of pain experienced and how well it has been controlled.

A comprehensive review of Standards, Clinical Indicators and Quality is provided in Appendix F.

The double Role of the anaesthesiologist in Day Surgery Units (DSU): a possible organization model for running an Day Surgery Department

Jan H Eshuis, MD, anaesthesiologist, director

Day Care Centre, Academic Medical Centre at the University of Amsterdam j.h.eshuis@amc.nl

Traditionally, we know the anaesthesiologist as the guy dealing in the operating room with diverse grades of consciousness, preventing patients feeling pain during surgery, handing out sophisticated injections around nerve bundles, reassuring patients or surgeons and being capable of managing the most complicated and difficult of medical and surgical situations with lifesaving skills and capable to make acute decisions. It is this most original task of anaesthesiologists which is responsible for their image.

All this however is only basic, fundamental; in Day Surgery there is more.

From the early 1980's the scope of the anaesthesiologist has gradually widened. This is probably not by accident parallel with the beginning and gradual rise of Day Surgery. In this same era the concept showed up of the anaesthesiologist as a perioperative physician. His or her tasks were extended out of the Operating Room (OR), to outpatient preoperative assessment, sedating on remote locations, for pain consultations, intensive care, emergency care within as well as out of the hospital, ambulatory units and so on. Especially the last few years Day Care is increasing rapidly in many countries.

In the same period the rate of ambulatory Surgery in the Netherlands increased to at least 50% of all surgical procedures. Because not all figures of private clinics are known this percentage might be as high as 55% or even more. In other countries the rise in Day Surgery was even more: in the USA it is estimated to be between 75 and 80% of all surgery. At these levels of activity many anaesthesiologists have to deal with Day Surgery as part of their routine workload.

In my view, you can consider two types of role for the anaesthesiologist: one in an organizing, managing function in the DSU, as the Medical Director, and the second the role as a medical professional. A consequence of the above mentioned broadening of the scope of the anaesthesiologist and the traditional existing role of organizing an individual OR-program, both medical and managing activities of the anaesthesiologists are more and more interconnected.

With regard to Leadership: Each DSU should have a Clinical Lead or Director who has a specific interest in daycase surgery and who will lead the development of local policies,

guidelines, contacts in the hospital, reports with other specialists, human resources and Clinical Governance in this area.

An Anaesthesiologist with management experience and an interest in day surgery is ideally suited to such a post. No other single medical specialist has a similar constant attendance in the logistic chain of Day Surgery; this will be explained more in detail below. No other medical specialist is interacting with so many other doctors, support personnel across the patient pathway from preoperative assessment, through the OR and then in the Recovery Ward. The Anaesthesiologist is also used to managing lists in the OR. This post can (and often is) filled by a surgeon but they have to overcome the lack of the day to day contact with other doctors especially those outside their own specialty and have less insight into their specific problems. The Medical Director should organise the DSU, give direction to patient selection, should create their own dedicated staff and set of equipment on the OR. Each unit also requires adequate staffing led by a senior nurse who provides the day-to-day administration of the unit in liaison with the Medical Director. Together they form the central managing team and they should organise a regular report with all surgical specialists who operate in the DSU, preferably represented by one spokesperson. They may also run the Human Resources of the Unit, organise education and take control on the Master schedule of Surgical Planning on a weekly basis. Depending on local circumstances the unit might need a third person in the managing team, a financial and administrative manager. This will largely be dependent on the structure of your facility: in a big hospital an embedded DSU usually is covered by a financial officer further in the hierarchy of the hospital. In a Freestanding Day Surgery Unit it is probably very wise to have a financial administrative colleague in the board.

What is it that makes the role of the anaesthesiologist so special? Looking at the involvement of the anaesthesiologist in all phases from referral by the General Practitioner (GP) to the hospital to the final discharge home of the patient the central role played by the anaesthesiologist is striking. He is involved in almost every part of the logistic chain which is ambulatory surgery.

Referred by a GP to any surgical specialist the patient is thought to be fit for day surgery by the surgeon. The patient is sent to the preoperative assessment clinic where their fitness for day surgery is weighed by the anaesthesiologist, with help of nurses and if indicated laboratory evaluation (which should never be routine). Those patients who are suitable for day surgery will then be scheduled. In some units the Medical Director is in control on the master schedule of slots for surgical specialists in order to optimize efficiency in the DSU. In many practices an anaesthesiologist is regularly involved with scheduling programs and patients.

Then eventually the procedure is performed, again with close involvement of the anaesthesiologist; his / her professional skill will greatly determine the success of Day Surgery. After the procedure is performed, the patient is either fast-tracked to the ward or admitted to the PACU (post-anaesthesia care unit or recovery room); again this is usually managed by the Department of Anesthesiology. The patient is discharged by the PACU nurse to the next and final station, according to delegated care and protocols for discharge by using criteria or a scoring system. Also in the step down unit (the ward in the DSU) the patient is discharged by the nurse according to discharge criteria or with the help of the PADS - score of Francis Chung. The use of discharge scoring lists from PACU to step down according to White / Aldrete and later home from the ward according to Chung is a reliable and easy specialist-led and nurse-run way of practicing Day Care. It is the anaesthesiologist who has the responsibility. Simply by scoring 2, 1, or 0 the nurse takes control on vital signs as level of consciousness, hemodynamic parameters, pain, PONV etc. Information and education is provided. Finally the patient is going home, always together with a responsible adult escort for the first 24 hours. So trained nurse personnel can safely arrange the transition from the recovery room.

If the patient meets these criteria already on the OR at the end of surgery he can safely be fast tracked to the ward bypassing the PACU. A similar system is followed by the ward nurse in case of transition from the unit back home

Some words about the professional content:

Running an individual Day Surgery list or program means being a very pro-active perioperative physician. It is essential that you plan ahead, organise your Peripheral Nerve Blocks 2 hours before scheduled time, and gain your time later on the day! Use short acting agents, give good analgesia and try to minimise the incidence of post-operative nausea and vomiting (PONV). The individual anaesthesiologist has to develop the techniques that permit the patients to undergo the day procedure with minimum stress, maximum comfort and yet optimal chance for early discharge by designing a technique that maximizes speed and quality of first and second stage of recovery.

It is beyond this abstract to cover the whole medical professional content of ambulatory anaesthesia; some striking and perhaps thought provoking issues will be discussed. Let's focus on Patient Selection for DS.

Every planned day surgery patient should be considered on the classical main issues: procedure, patient factors, social factors and facility possibilities. Each of these should be compatible with Day Surgery. From the early 80's when Day Surgery started, we have seen a constant shift to more liberal boundaries. Ever more complicated surgery on patients with ever more co morbidities was gradually performed as day cases and times changed the

boundaries of every issue. A good example is duration of procedure - duration used to be confined to 90 minutes, but nowadays 3 to 4 hours is not unusual in day surgery. Currently in my own unit we have abandoned an upper age limit, whereas with expanding obesity the BMI-limits as only selection criterion have been upgraded to 40-45.

Many doctors still think only ASA 1 or 2 are allowed. Let me take this as an example of evidence based vanishing of limits to selection of day surgery patients. In many textbooks there are quotes of allowing ASA 3 in Day Care and already in the 90's these texts were in the books but many doctors rejected the idea.

Some of the studies that helped included

1. In a classical Mayo study of Warner (JAMA 1993; 270:1437) major morbidity and mortality 30 days after Day Surgery was followed. A total of 38,598 patients aged 18 years and older undergoing 45,090 consecutive ambulatory procedures and anaesthetics. A quarter of them were ASA 3. No patient died of a medical complication within 1 week of surgery. Major morbidity was very low: 31 patients developed major morbidity (1:1455) Myocardial infarction, central nervous deficit, pulmonary embolism were all in low figures and often after 48 hours or longer present. Conclusion: In this big ambulatory surgical population overall morbidity and mortality rates were very low, equally distributed among the ASA 1, 2 and 3 groups.
2. Chung and Mazei from Toronto (BJA 1999;83:262-70) estimated the risk of perioperative adverse events in patients with pre-existing conditions undergoing daycase surgery. They studied 17,638 consecutive daycase surgical patients in a prospective study. Preoperative, intraoperative and postoperative data were collected. Eighteen pre-existing conditions were considered. After adjusting for age, sex, and duration and type of surgery, seven associations between pre-existing medical conditions and perioperative adverse events were proven statistically significant. Hypertension predicted the occurrence of any intraoperative event and intraoperative cardiovascular events. Obesity predicted intraoperative and postoperative respiratory events, and smoking and asthma predicted postoperative respiratory events. Gastro-oesophageal reflux predicted intubation-related events.
3. Ansell and Montgomery (BJA 2004;92:71-4) carried out a retrospective case controlled review of 896 ASA III patients who had undergone day case procedures between January 1998 and June 2002 using the existing computerized patient information system. The system records admission rates, unplanned contact with healthcare services and post-operative complications in the first 24 h after discharge. No significant (differences in unplanned admission rates, unplanned contact with health care services, or post-operative complications in the first 24 h after discharge

between ASA III and ASA I or II patients. Conclusion: With good pre-assessment and adequate preparation ASA III patients can be treated safely in day surgery unit.

We all use the ASA qualification, probably without realizing ourselves that this deserves a critical approach!

1. Another example of having too many views (subjectively). The ASA Physical Status Classification was tested for consistency of use by 100 anaesthesiologists. They were asked to determine ASA grades to 10 hypothetical patients. In no case was there complete agreement on ASA grade, and in only one case were responses restricted to two of the five possible grades. So much variation was observed between individual anaesthesiologists. Assessments when describing common clinical problems that the ASA grade alone cannot be considered to satisfactorily describe the physical status of a patient. (Anaesthesia 1995;50: 195)

In cases of doubt you might ask yourself, e.g. an ASA 4 (cardiac) patient with a painful anal fissure,: What would make the difference between in-and out-patient treatment? Would anything be done differently?? It is unlikely that a low dose spinal technique would deteriorate the situation. Excellent pain relief during operation, little hemodynamic disturbance, little impact from the surgery, but good pain relief.

So we can say stable ASA 3 is not a contraindication for day surgery, and ASA 4 has to be carefully evaluated on an individual basis with respect to the procedure.

Crucial it is to avoid mixed lists with the clinical part of the OR. Mixed lists threaten the smooth course of a DS-list by interfering with emergency or heavy clinical cases.

What about procedures? Minimally invasive techniques have dramatically reduced tissue injury and blood loss, and with growing understanding of nature and timing of surgical complications together with the ever improved anaesthetic drugs and techniques the scope of potential Day Cases has widened very much. Individual front running teams often set an example, and gradually others follow these examples gradually.

Summary

Where day Surgery was once considered as specialized care suitable for only the simplest of procedures and carefully selected patients, it is now seen as the treatment of choice for many operations with patients only excluded if there are convincing reasons.

So the medical risks have to be plotted against the degree of invasiveness of the surgical procedure: low, medium or high intensity procedures, and together with the individual fitness of the patient AND the possibilities of the facility the decision day surgery is taken very well considered. With a wide variety of adequate anaesthetic techniques and the before mentioned widening of selection criteria and organizational prerequisites we probably can

meet the double goal set by the NHS in the UK: In the UK the NHS and the Government are very actively promoting the practice of day surgery and they launched the next two goals:

- 1) Day Surgery is the default for Surgery.
- 2) 75% of procedures should be performed as Day Surgery cases

References

Anesth Analg 2007;104:1380–96 White, PF, Kehlet H et al The Role of the Anesthesiologist in Fast-Track Surgery: From Multimodal Analgesia to Perioperative Medical Care

Can J Anest 2006;53:9, 858-72 Imad Awad, T, Chung F Factors affecting recovery and discharge following ambulatory surgery

Anaesthesia 2006, 61, pages 1191–1199, Smith I, Cooke T, Jackson I and Fitzpatrick R
Rising to the challenges of achieving day surgery targets

Patient Information Provision: Guidelines and a practical application toolkit

Christina Ann Drace, Gamal Eldin Mohamed and Carlo Castoro

Carlo Castoro, MD, Surgical Oncology, Veneto Institute of Oncology IRCCS, Via Gattamelata 64, 35100 Padova (Italy). E-mail: carlo.castoro@unipd.it

Introduction

In a day surgery environment, contact with patients is brief and intense. It does not compare with the time once taken to prepare a patient for the same procedure in in-patient surgery. Also, patients are now in charge of their pre-operative preparation and recovery takes place at home. This makes information provision a challenge for day surgery. It is generally accepted that providing the patient with information about day surgery and individual procedures is an important aspect of day surgery management [1-2]. An effective information provision policy aims to improve patient satisfaction with the overall day surgery experience and aid anxiety reduction. In fact, an informed patient is likely to experience less anxiety and is thus able to better adjust to surgery. This, in turn, will increase the overall staff satisfaction, avoid delays and contribute to the smooth running of the Day Surgery Unit (DSU).

Information must be provided within a formalized framework of healthcare and delivered in a structured manner; it must be consistent throughout the entire DS pathway. Moreover, the amount of information to be provided is another important aspect, as some patients require more information than others. Too little information can cause confusion and delays. The patient may not know what is expected of them or their caregiver. On the other hand, too much information may cause unnecessary anxiety for the patient. Finally, the role of each staff member in information provision should be identified and the timing of information provision co-ordinated since patients will come in contact with and receive information, at different stages, from administrative, nursing and surgical staff [1,3-5].

Ideally, people in general retain only 20% of information given verbally. So, the simplest way to make sure patients receive and remember essential information is to provide them with clearly written leaflets, which can be referred to at any time. Good verbal communication skills are still essential because information is introduced and reinforced verbally ensuring compliance with procedures. Written information should support and be supported by verbal information.

Criteria for Patient Information Provision

Organization and management of patient information provision for any DSU will vary depending on the individual characteristics of that unit, such as location, hospital policies, etc. However, general criteria for policy development can be identified. Day surgery patient contact can be divided into stages, the number of which will depend on individual characteristics. In Figure 1, 8 stages have been identified, from patient referral to post-

operative examination. For each stage, the location, type of contact, contact person and information content are described. Within these 8 stages, there are two categories of information to be provided to the patient, general and procedure specific. The timing of information provision can be divided into 3 phases - before admission, on admission and on discharge.

Figure 1: STAGES IN PROVIDING INFORMATION TO PATIENTS in DAY SURGERY

	Location	Face to Face	Telephone contact	What content
Stage 1 Decision for Day Surgery	Primary Care Physician's office Out-patient clinic Day Surgery Unit	Primary Care Physician Specialist consultant Day Surgery Staff		Day Surgery introduction leaflet Verbal information Procedure specific information Preparation procedures
Stage 2 Making an appointment			Administrative staff Day Hospital Unit	Appointment for pre-assessment examination Directions , What to expect More information: via fax, e-mail, web site
Stage 3 Pre-assessment visit	Hospital – out patient Dept; Day Surgery Unit Private medical facilities	Specialist – Surgeon Nurse		Day Surgery Unit Instructions and Procedure leaflet Procedure specific general info leaflet Book surgery, Pre-operative check, Informed consent
Stage 3b Pre-operative examination Two weeks before surgery (if surgery is booked more than 1 month in advance)	Day surgery unit	Anaesthetist Nurse		Verbal information Procedure specific informed consent leaflet Advice/instruction from previous leaflets Question-answers, introduce questionnaire
Stage 4 2-3 days before surgery			Nurse administration?	Surgery confirmation and verbal information
Stage 5 On the day	Day Surgery Unit	Nurse Surgeon Anaesthetist		Verbal information Advice/instruction from previous leaflets Care Giver leaflet
Stage 6 Discharge	Day Surgery Unit	Nurse Surgeon Anaesthetist		Verbal information about discharge and recovery procedures, hand out questionnaire Question-answers
Stage 7 Follow up: same day and within the week			Surgeon Nurse	Verbal information - instruction
Stage 8 Post-operative examination (Predetermined date, depending on type of procedure)	Day Surgery Unit Primary Care physician's office	Surgeon Primary care physician		Verbal information - instruction Collect completed questionnaire

Categories of Information

There are two categories of information to be provided to the patient: general and procedure specific.

General information refers to organizational aspects of the DSU and its procedures and practices. It identifies the location and gives other useful information e.g. address and telephone numbers, public transport information, parking, etc. It also includes basic procedural information general to all procedures performed in day surgery, e.g. admission times, etc. From this information the patient should understand what to generally expect and what is expected of them.

Procedure specific refers to the clinical information regarding the patient's condition and surgical procedure.

Moreover, recent studies suggest that not all patients require the same amount of information [4], depending on their ability to cope. Anxiety can be reduced by matching the amount of information provided to the patients' needs and preferences. Two levels of information disclosure, minimal and full, can be distinguished.

Phases of Information

The information to be provided to patients can be organized into 3 phases: before admission, on admission and on discharge. Some information will overlap thus helping the patient understand and retain the more important issues.

Phase I – before admission

The main emphasis at this phase should be on informing the patient about procedures and likely sensations as well as skill teaching (post-operative exercises, pain management).

During the pre-assessment interview the patient along with the nurse can choose the correct amount of information to be provided. Also, patients may appreciate a tour of the facilities.

Phase II – on admission

The strategy to be followed in this phase is “supporting”. The patient should be, at this point, well informed as to what is going to happen. The main emphasis at this point should involve the repetition and reinforcement of key information for support and anxiety reduction. Prior to discharge, the caregiver should be present during the giving of information.

Phase III – on discharge

The first two weeks following discharge are seen as the most important since patients are striving to return to normal. The information packet should contain the information patients need to return to normal as quickly and safely as possible. Information includes post-operative pain management, pain relief, nausea, common wound care, sleep disturbance,

hygiene, stretching and heavy exercise, returning to work, driving, advice on sexual matters and the contact details of who to contact in case of complications.

Caregivers should be provided with the same information.

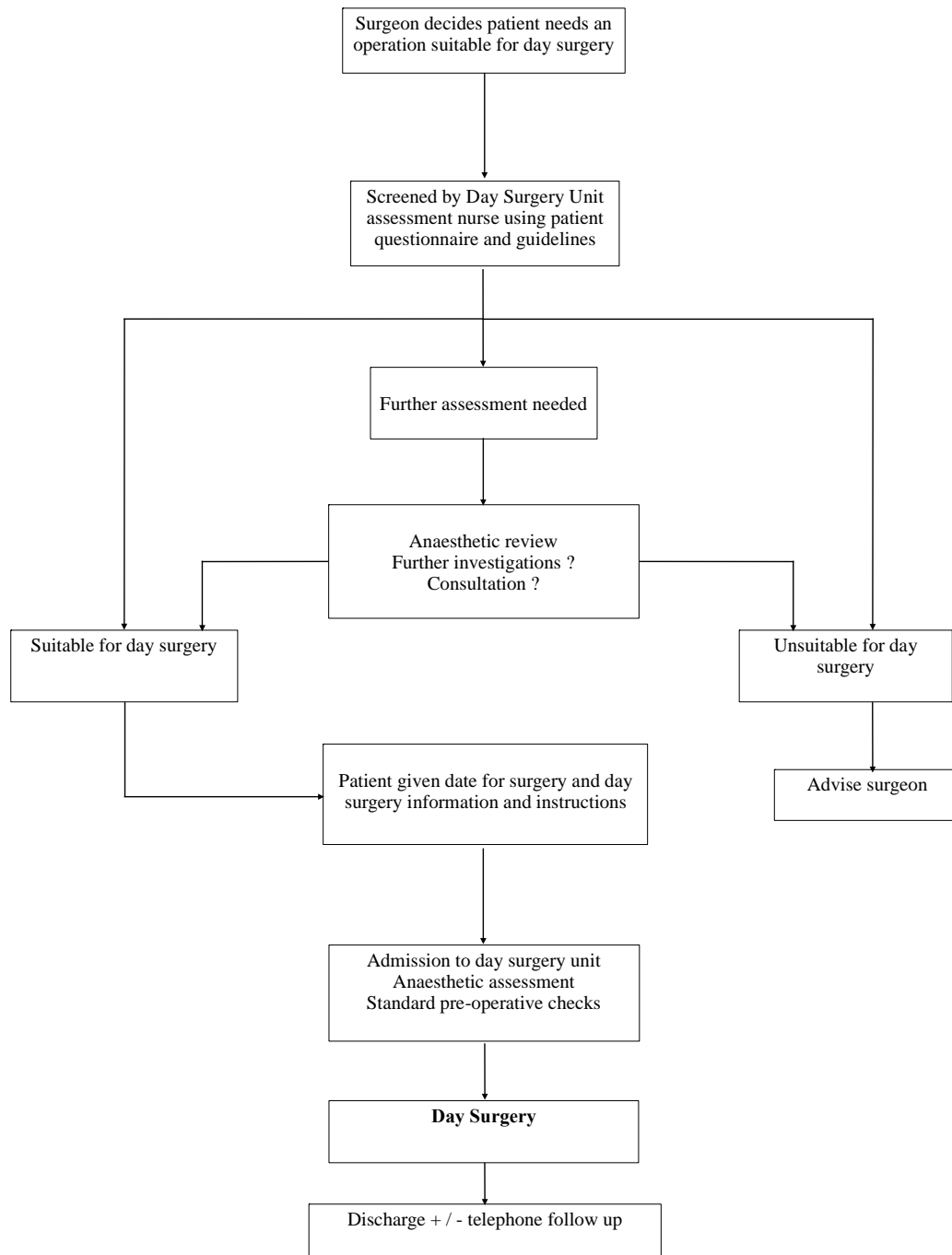
Formalized framework

In a formalized framework of patient information provision policies within each DSU, care must be taken to assign communication roles to all staff members and an information provision schedule identified. It is important for the patient to receive the appropriate amount of information at the appropriate time from the appropriate person. Without this, a patient may receive contradictory or conflicting information, which increases confusion and lessens patient satisfaction. Roles for the day surgery staff are identified and described in Table 1. The information provision schedule can be drawn from the typical assessment process depicted in Figure 2.

Table 1: Day Surgery Staff and their roles in information provision

<i>Primary Care Physician</i>	<ul style="list-style-type: none"> - introduces patient to day surgery - provides introductory general and procedure specific information
<i>Surgeon</i>	<ul style="list-style-type: none"> - assesses patient for day surgery - advises patient - provides specific information about disease and surgical procedure, what is expected of the patient clinically - obtains informed consent - may perform post-op telephone follow-up
<i>Anaesthetist</i>	<ul style="list-style-type: none"> - pre-operative assessment - provides information about what will happen on day of surgery
<i>Nurse</i>	<ul style="list-style-type: none"> - greets and cares for patient at pre-assessment and on day of surgery - builds day surgery rapport with patient - provides information and ensures that relevant information has been transmitted - listens to patient and answers questions
<i>Administrative Staff</i>	<ul style="list-style-type: none"> - telephone contact, booking and liaison to medical personnel - reference to information - administrative procedures: admission and discharge

Figure 2
Typical Assessment process



Paediatric Day Surgery

Patient information in paediatric day surgery will vary slightly. For many children hospital admission can be very stressful and this is always minimised by involving parents wherever possible in their care. Anxiety must also be alleviated in the parents because relaxed, informed and happy parents help produce happy relaxed children. Parents will require all the same day surgery information, which would be provided for patients, but written with them in mind. A certificate of bravery could be awarded to the paediatric patient at discharge. When referring to overnight fasting, an example of re-wording for parents might be: “Eating and Drinking Restrictions - The most important thing you can do for your child is to follow these feeding instructions. Your child’s surgery may be delayed or cancelled if these instructions are not followed.”

Guidelines for Construction of Information Packets

Introduction

The content and design of any written information is crucial. A part of the DSU budget should be allotted to the preparation and updating of printed information packets. Legal aspects need to be taken into consideration, as some laws may dictate what information a patient must receive [5]. Moreover, recent research has shown that a link exists between the health literacy of patients and health outcomes [6]. Therefore, care needs to be taken to ensure that information will match the competencies of persons who come to the Day Surgery Unit. Four different information leaflets are recommended and suggestions for their content can be found in the corresponding tables.

1. An illustrated leaflet briefly describing the DSU and its mission. This serves as an introduction to the unit. (Table 2).

Table 2: Booklet construction Day Surgery General Information Leaflet

<i>Day Surgery</i>	What is day surgery? Why should I have day surgery? Is it safe? Can I have day surgery? What happens after surgery? What would I need at home?
<i>Day Surgery Unit</i>	Where is the Unit? Describe facilities and services Address, telephone numbers and operating hours Describe quality of service Referral to Day Surgery Map of location, directions for public and private transport, parking and brief hospital details

2. A more detailed general information leaflet about the DSU, procedures and instructions (Table 3).

Table 3: Booklet construction Day Surgery Unit Instructions and Procedures

Welcome to the DSU
<p>Describe Day Surgery Unit Introduce staff, facilities and services Contact information Brief descriptions of each step of the Day Surgery Itinerary.</p> <ol style="list-style-type: none"> 1. Pre-assessment examination 2. Pre-op examination 3. The day of surgery 4. Discharge 5. Recovery <p style="padding-left: 40px;">Information should answer the questions: What should the patient expect? What is expected of the patient?</p> <p>Other</p> <ul style="list-style-type: none"> What to wear What to bring in, including an activity while waiting <p>Pre-assessment instructions and procedure checklist</p>

3. An information leaflet describing each individual surgical procedure, instructions and post-operative information, procedures and instructions (Table 4).

Table 4: Booklet construction: Procedure Specific Information

Medical Information
<p>Describe medical condition – what is it?, why operate? Describe surgical procedure Describe surgical itinerary</p> <ol style="list-style-type: none"> 1. Pre- op, fasting, medications ... 2. anaesthesia 3. complications 4. discharge 5. recovery <ul style="list-style-type: none"> • Normal/abnormal condition • Pain relief and medications • Wound management • Role of Care Giver • Mental state • Personal hygiene • Return to normal activity (work, driving, operating machinery, physical and sexual activity) • Diet 6. Post-op procedures and examination <p>Informed Consent Space for handwritten patient-specific instructions Space for handwritten appointment dates and times Contact information</p>

4. An information leaflet for the caregiver and relatives describing the facilities, what is expected of them and other general helpful information (e.g. where to find food and drink) (Table 5).

Table 5: Booklet construction: Information for Care Givers

Key points to include
Role of care giver in Day Surgery What is expected of care giver before, during and after surgery Parking arrangements – map and costs Availability of refreshments Details about facilities, such as shops The routine in the unit including the usual timing of admission and discharge Contact information
<i>Also provide any specific information the care giver needs to know regarding a specific procedure</i>
Indicate approximate length of time care giver is likely to be needed Information regarding prescribed medications

Style

Presentation and language are important. Written information should be provided on as few pieces of paper as possible. A leaflet should be handy and easy to manipulate. Language should be simple, straightforward and easy to read, with short sentences and clear expressions. Do not use jargon and avoid passive voice. Depending on the location of the DSU, it may be worthwhile to translate and stock information packets in different languages for ethnic minorities (consideration should also be taken for deaf and blind patients). Also, make sure information is accurate and up-to-date. It is also useful to include the date of publication or revision on each leaflet. Patients, caregivers and staff will be able to assess the timeliness of the publication.

A general style should be chosen and used for all printed material. Design, layout and colour should be consistent throughout with a few illustrations or pictures of the unit. An appropriate layout for content includes a 12-point type or larger clear typefaces e.g. Times Roman, Trebuchet or Garamond. A serif font, a font that uses small lines to finish of the main strokes of the letters, should be used for regular text, as it is easier to read. A sans serif font, a font without the finishing lines, should be used for all headings and subheadings. Text should be justified to the left and bold-face type can be used to emphasize important points. Moreover, information needs to be organized logically; the use of headings, lists and summaries will help the patient recognize and remember the important points (Table 6).

Table 6: Style Guidelines for information packet construction

<i>Language</i>	12-year old reading level Easy to read and straightforward Short sentences and clear expressions, no jargon Only essential information included Translations in other languages available Alternative forms of information for deaf or blind patients
<i>House style</i>	One main design One main colour Hospital logo and/or pictures of the unit
<i>Type, Style and layout</i>	Use 12 point type at least, larger for eye patients and children Use consistent and clear typefaces such as Times Roman Use a serif font for regular text and sans serif for headings Use subheadings, lists and summaries Justify text to the left Use boldface type, bullets or different fonts to emphasize points

A useful approach to the design of information is to provide a “questions answered” format. The use of a website to make information more readily accessible should also be considered.

Questionnaire

The final step in information provision is obtaining feedback from the patients and caregivers themselves. This can be carried out by a questionnaire with space for free comment. It can be used to assess levels of overall satisfaction and to obtain information on all aspects of day surgery. Questionnaires can also be designed to concentrate on specific areas, e.g. pain or patient information provision (Table 7).

Table 7: Booklet construction: Patient and Caregiver satisfaction questionnaire

Introduction
Inform patient of questionnaire Explain why it is necessary
Format
yes- no questions rating scale 1-5 free comment
Avoid too many questions and ones that are too long
Key questions relating to Patient Information Provision to be included
Did you receive verbal and written information and instructions about day surgery? What information was most helpful? Were leaflets clear and did they contain an adequate amount of information? What could be added to improve information? What could be taken out? In what other ways could the leaflets be improved?

Patients should be informed from the very beginning that they may be asked their views by questionnaire and that their answers will help improve the quality of the day surgery service. The completed questionnaires should be audited periodically and the resulting recommendations should be implemented as soon as possible.

Examples of information leaflets

The materials presented are intended as guidelines for construction of information leaflets and many examples are given. Also, many examples from leading DSUs and guidelines for construction of written materials can be found on the Internet (Annex 5). When developing information protocols, it should be kept in mind that each day surgery unit is different. Materials presented in this section can be adapted to fit the needs of each individual DSU. Before full implementation in DSU, all material will need to be tested and piloted with patients. Material should also be periodically revised and updated according to patients' suggestions and complaints and changes in DSU policies and procedures.

Annex 1 : Day Surgery: general information.

Annex 2 : Day Surgery: information guide for care givers.

Annex 3 : Day Surgery: Inguinal Hernia Repair informative guide

Annex 4 : Day Surgery: Questionnaire

Annex 5 : Links to examples of Patient Information for Day Surgery and Written Material

Construction

References

1. Penn S, Davenport HT, Carrington S et al. Principles of Day Surgery Nursing, Blackwell Science, Oxford, 1996.
2. Gilmartin J. Day surgery: patients' perceptions of a nurse-led preadmission clinic. J Clin Nurs 2004; 13: 243-250.
3. Mitchell MJ. Patient's perceptions of day surgery: a literature review. Ambul Surg 1999; 7: 65-73.
4. Mitchell MJ. Psychological preparation for patients undergoing day surgery. Ambul Surg 2000; 8: 19-29.
5. Mitchell MJ. Constructing information booklets for daycase patients. Ambul Surg 2001; 9: 37-45.
6. Berkman ND, Sheridan SL, Donahue KE, et al. Low Health Literacy and Health Outcomes: An Updated Systematic Review. Ann Int Med 2011; 155:97-107.

General information leaflet for day surgery patients

Dear Patient,

Thank you for choosing our Day Centre for your treatment. Please read all the information in this leaflet carefully. It is very important that you follow these instructions. Failure to do so, may result in your surgery or treatment being cancelled.

Our Day Centre has been designed especially for patients who require surgical treatment but do not need an overnight stay in hospital. However, in case of any surgical or non-surgical complications we are ready to take care of you until you are able to go home. This booklet contains information to make your stay as comfortable and safe as possible and prepare you for your visit. Please take your time to read this booklet as it contains important information about:

- How to prepare yourself for your treatment/operation
- What to expect during your stay
- What to do when you are discharged home
- Advice for caregivers

Also, we have a contact person for Patient Advice at our Day Surgery Centre to give information and assistance. It is located at beside the unit.

Tel:.....

Fax:.....

E-mail:.....

Travelling to our Centre

The Day Centre is well serviced by public transportation. Bus, train or taxi seem to be faster than cars, especially in the morning. The main stop nearest our Centre is at The address is:

.....

If you travel by car, please keep in mind that you may be delayed due to the heavy traffic in the morning. Also, always remember that car parking spaces close to the hospital are very limited, so we cannot guarantee that you will find a space. Besides, parking fees should be paid. Parking can be easily reserved by phone, but if none is available, please remember to bring coins to pay. Marked spaces are available for registered disabled persons for the usual parking charge.

Before you come to the Day Surgery Centre

You have already seen a surgeon and staff in an outpatient clinic and they have decided that you require an operation or procedure as a day case. Please bring the referral issued by the surgeon with you in the outpatient clinic. You will be greeted at the reception and an appointment for pre-assessment will then be given to you.

At the outpatient surgical and anaesthesia clinic you may have been given a form to fill out with details about your general health and any medical problems you may have, as well as sign your consent for the operation. Please do not forget to bring this document with you.

Your pre-assessment is to ensure you are well enough to be treated as a day case. Once your pre-assessment has been completed and you are deemed fit for surgery, you will be informed by phone or e-mail about your appointments. You will be given the name of an Admissions

Officer who will discuss with you a date for pre-assessment and a potential date for your operation/procedure.

All the relevant paperwork you require will be given to you at this stage. It is very important that you follow all instructions given to you. If you fail to attend or do not telephone us in advance, you are at risk of being removed from our waiting list.

Please make arrangements to leave young children at home with someone. You should not be left on your own with children for the 24 hours following general anaesthesia.

The day surgery unit has no facilities for children except those having an operation.

If you are having a general anaesthetic, you must arrange for a responsible adult to take you home and stay with you for at least 24 hours. If you are taking a taxi home, you must have a responsible adult to travel with you.

Even if you are having a local anaesthetic, it is recommended to have someone to take you home. You must not drive if your mobility is restricted by the surgery.

If you are unwell before your surgery (for example: with a cold or 'flu), please ring us for advice before you come in.

We recommend that you do not smoke for the 2 days before your operation.

Please give a contact number for your relative or friend.

Before you come in you must have a shower or a bath.

Please remove all make-up and nail varnish.

Please do not bring valuables, jewellery, large sums of money, credit cards or mobile phones. If this is unavoidable, please ask your relative/friend to look after them for you.

Please bring with you:

- Any tablets, medicines or inhalers that you are currently taking
- Something to help you pass the time (book, magazines etc.)
- Spectacles/contact lenses and case
- Dental pots
- For your own comfort you may prefer to bring a dressing gown and slippers with you. You are also welcome to bring a towel and toiletries as a shower is available.

Fasting before the appointment:

If your operation is in the morning, do not eat or drink anything, including chewing gum, from midnight the night before. Water is the only exception. You may drink water until 5.30 am on the day of your operation.

If your operation is in the afternoon, have a light breakfast (tea and toast) before 7.30 am. You may drink water until 10.30 am.

If you have diabetes or have worries about not eating, please ring the Centre for advice.

On arrival to the Day Centre:

- Please check – in at the reception desk. You must present your personal documents (identity card, insurance card, referrals, and any previous medical reports) to the nurse, who will identify you and help you fill out the nursing forms.
- You will be given a hospital identity bracelet with your name and details on it.
- You will then be taken to the ward to occupy your bed.
- The preparation process for the operation begins at this moment.

- Please continue to take all of your normal medications unless told otherwise by the anaesthesiologist during your pre-assessment.
- Please remember you are at a Day Surgery Centre and not an outpatient clinic. The order of the operating list is not confirmed until the day of admission so you will have to wait some time before your procedure. On the day of your procedure you must also allow time for the procedure and your recovery. Therefore, you should expect to spend most of the day with us.
- Once you have booked into the unit by the receptionist, any relatives, friends or escorts will not be allowed to remain with you during your stay. We have very limited space in the treatment areas. Escorts are only allowed to stay with you, if they are directly involved with your daily care, for example if you have learning difficulties and/or a disability. Relatives, friends or escorts are welcome to use the waiting areas.
- Exception will be for children under 18 who are having treatment. One parent or guardian can remain with the child throughout their stay. Siblings should not be brought to the unit.
- Following your treatment and a period of recovery, you will be discharged home. Please ask your escort to contact the Day Surgery Unit to check the time you will be ready to be picked up. For morning appointments, they should phone after 11.30 am, or after 3.30 pm if you have had an afternoon appointment. At times, the nursing staff may ring your escorts earlier if you are able to go home before those times.

When will I have my treatment?

You may have to wait up to 4 hours for your treatment. We need time to prepare you for your procedure. We try to use the operating theatre efficiently. The nursing staff will get you ready for your operation and answer any questions you may have. The anaesthetist and surgeon will usually see you before your operation and explain what type of anaesthetic you may require. Your surgeon and anaesthetist will then examine you and explain your proposed operation/procedure. **If you are having an operation on a particular part of your body this may be marked with an arrow by the staff.** Every patient is important to us and the staff will always make time for you. Feel free to ask questions at any time and tell us if anything is troubling you. The nurses will double check your personal details before escorting you to the operating theatre. They do this at the start of the operating list. Please bring something to occupy you while you are waiting.

Immediately after your operation

After your operation, if you had a general anaesthetic you will be taken to the recovery area where we will treat any pain or sickness that you may experience.

Here your pulse and your blood pressure will be measured regularly and someone will watch over you. At first you will feel drowsy. You may also feel sick and, depending on the type of procedure, you may feel a bit sore around the site of your operation. Your throat may feel a little dry and you may have a mild sore throat (as a tube will be put into your throat to help you breathe while you are asleep).

Once you are awake and alert you will be taken back to the ward area where you will be able to relax and have some refreshment before making the journey home. This recovery period varies from individual to individual and could take anywhere from one to six hours. The nursing staff will advise you when it is safe for you to leave. If you had a local anaesthetic you will be taken back to the ward area straight after your procedure has finished. You will be offered some refreshments (a drink and biscuits) before making your

journey home. Please note the amount of time you will have to spend recovering varies according to the individual and type of surgery. The nursing staff will advise you when it is safe to leave.

Anaesthetic drugs remain in your body for several hours and during this time you will react more slowly, and thus more likely to have an accident. Please do not drive, as you may react too slowly to sudden stops. You may need some days off work and help at home.

Immediately after discharge

If you have had a general anaesthetic, the surgeon and anaesthetist may visit you later in the day to let you know how things went and give you advice as what to do over the next few days. You may be given some pain relief medication to take home with you, or other medication depending on your type of surgery. A responsible adult must then accompany you home by car or taxi – public transport is not suitable. Please refer to the patient information leaflet given to you at pre-assessment for information on aftercare and what to expect over the next few days while you are at home. If you no longer have this leaflet, please ask a member of the nursing staff for another copy. A copy of the operation sheet/discharge letter will be sent to your family doctor. You will also receive a copy of this letter. If you or your relative have any questions before you leave for home, please make sure you speak to a member of the nursing staff. We will prescribe all the medicines you need to take during your recovery at home. The medicines will be prescribed according to your procedure (e.g. painkillers, antibiotics etc).

At home

You may feel tired; so only do as much as you feel able.

- Do not operate machinery or drive a car for 48 hours after a general anaesthetic.
- If you have had a local anaesthetic the nursing staff will advise when it is safe to drive a car or operate machinery.
- Drink plenty of fluids and eat light meals but do not drink any alcohol for at least 24 hours.
- If you have had a local anaesthetic the nursing staff will advise you when it is safe to start drinking alcohol.
- Please follow specific advice of the nursing and medical staff when taking prescribed medication – including painkillers.
- Try to arrange help with bathing or showering as you may feel light-headed when getting out of the bath or unsteady on your feet in the shower.
- Do not make any important decisions or sign any contracts for at least 24 hours after having had a general anaesthetic.

Instructions for carers

Please ensure that your carer understands their responsibilities:

- Escort you home by car or taxi (not public transport)
- Stay with you for 24 hours in your or their home
- Help you with household activities, such as cooking and cleaning
- Offer plenty of fluids to drink (no alcohol)
- Help you with washing/bathing and getting dressed
- Ensure you take regular painkillers as prescribed/advised

- Run necessary errands for you
- Be aware of common complications following surgery, such as bleeding, oozing, signs of infection and know what to do,

After 24 – 48 hours you should be feeling considerably better and will need less support and help. Your carer might not need to stay overnight, but perhaps could still offer some daytime support, such as shopping, cooking, vacuuming and hair washing.

Queries and concerns

If you have any problems you wish to discuss following your operation/procedure, please phone the Day Surgery Centre:

Tel:.....

Nurse on duty:

Tel:.....

Your surgeon:

Tel:.....

Annex 2

Information leaflet for Caregivers

Dear Caregiver,

Someone dear to you is about to undergo a surgical procedure at the Multidisciplinary Day Surgery Center. Day Surgery can be very beneficial for the patient. A few hours after the procedure, the patient returns home to recover in familiar surroundings. There is no overnight stay in the hospital.

As his/her caregiver you may need to take a couple of days off work to look after our patient. The length of time that you may be needed will depend on the type of surgery. The nursing and surgical staff are always available if the need should arise.

Dr. U. Feelbetter

Head, Multidisciplinary Day Surgery Center

General Indications:

Visiting with patient: Each patient is allowed 2 visitors, family members or friends.

Visitors should be over the age of 14. Please attend smaller children in the waiting room. However, their presence is discouraged. Visitors will be able to accompany patient in pre-op and recovery when the patient is settled. Most patients are discharged within 4 hours of surgery

For your convenience vending machines for refreshments and snacks are located near the waiting room. A coffee shop is just outside the hospital gates.

No smoking is allowed inside the hospital.

Cellphones are allowed only in the waiting rooms and outside the hospital.

Specific post-operative care instructions will be given by that doctor at discharge.

On the evening and day following surgery, a member of the Center's surgical staff will call to check on the patient. However, if the need should arise don't hesitate to use the Post-Operative On call Service (see below).

Preparation checklist for Day Surgery

Patient:

- Be on time
- Do **not** eat or drink anything after midnight before procedure
- Take medications the morning of procedure with small sips of water
- Wear comfortable loose-fitting clothing
- Do not consume alcohol or smoke several days prior to surgery
- Come to Day Surgery with all pre-operative exams, National Health Care card and ID
- Arrange for someone to drive to and from the hospital and someone to stay at home with you for the first 24 hours after surgery
- Inform the Center of any illness (e.g. cold) contracted within a week of scheduled surgery

Before coming to the Center on the day of surgery:

- Take a bath or shower
- Remove all make-up, nail polish and jewellery

What to bring:

- Something to read or do while waiting
- A case for contact lenses and/or dentures

What NOT to bring:

- Valuables, such as jewellery, or too much money

After Surgery:

- Check that all necessary information and medications have been given, if not ask the doctor or day surgery staff
- Follow their instructions for taking medications and suggestions for diet and rest
- Do not let the patient drive
- Do not allow the patient to drink any alcohol
- Do not allow the patient to operate machinery
- Do not allow the patient to conduct business or sign important documents
- Make sure the patient takes home all x-rays and exams brought in from the outside

Multidisciplinary Day Surgery Center

Where is the Center?

The Day Surgery Unit is located at:

.....
.....

From the main entrance on the ground floor, at the end of the central corridor to the right are:

- Examination rooms (rooms 5,6,7,8,9)
- Secretarial office (room n. 2)
- Doctor's office (room n. 3)
- Rest rooms (room n. 11)

Paid parking can be found at the parking structure next to the University Hospital. From the train station, take bus n. 24 or 19 for Hospital (bus stop in front to main entrance), continue on foot to stop light, proceed left. Hospital is about 100m ahead on the left.

Once at home

Post-Operative On Call service

Physician on Call

0419 8311323

"I have a problem..."

To help the Health Service meet the needs of its patients, this service was created for your organizational needs. If you have any problems or questions please contact:

Mrs. C.White (Head Nurse)

0419 8773455

Monday through Friday 9 am – 12 pm

If you wish to speak with our medical personnel, please contact:

Mrs. Smith (Head secretary)

0419 8311324

Monday through Friday 9 am – 11 pm and 2 pm – 6 pm

Day Surgery Unit

University Hospital

(Address).....

The Center is open:

Monday through Friday

7:30 am - 1 pm and 2 pm - 7:30 pm

Tel. 0419 8632399

Annex 3

Procedure Specific Information leaflet

**Inguinal Hernia Repair
University Hospital
Day Surgery Unit**

Dear Patient,

Welcome to the Day Surgery Unit.

To ensure the success of your operation, I would like to invite you to follow the instructions given to you by our medical team carefully. Also, I would encourage you to read over the materials presented and ask any questions you may have.

As your doctor has explained to you, inguinal hernia repair can be carried out in Day Surgery. You will come to the Center in the morning and your operation will last about 1 hour. You will be able to go home in the afternoon, after a complete post-op examination.

Dott. U. Feelbetter

Head, Multidisciplinary Day Surgery Center

What is an Inguinal Hernia?

A hernia occurs when inner layers of abdominal muscle become weakened. The lining of the abdomen then bulges out into a small sac, and part of the intestine or abdominal tissue may enter the sac.

Some people with hernias remain relatively free from symptoms, while others experience swelling and, sometimes, severe pain. A hernia can cause other potentially serious problems (e.g., infection, bowel obstruction). Surgery is the only way to repair them, because they do not resolve on their own.

What happens during surgery?

A hernia repair operation lasts about an hour. It is usually carried out under local anaesthesia or epidural anaesthesia, which is also called a spinal anaesthetic that numbs a larger area or region of the body containing the hernia. An incision is made over the site of the hernia. The protruding tissue is returned to the abdominal cavity, and the sac that has formed is removed. The surgeon repairs the hole or weakness in the abdominal wall by sewing strong surrounding muscle over the defect. At times, it may be necessary to strengthen the abdominal wall with a piece of synthetic material called “mesh”, usually well tolerated by the human body.

Are there any complications?

Complications from inguinal hernia repair surgery are very few. You may experience:

- Swelling and soreness at the incision site
- Headache and nausea after anaesthesia
- Post-operative infection of the incision site, treatable with antibiotics
- Loss of sensitivity around the incision site
- Allergic reaction to anaesthesia

Although unlikely, a hernia may reoccur in about 5% of cases, even many years after repair surgery.

What happens after surgery?

After surgery, you will be taken back to your room to recover. You will normally be discharged in the afternoon, after your doctor ascertains you are able to stand and walk. The surgeon will give you post-operative indications to follow at home and will advise you regarding heavy lifting, jogging, or doing strenuous exercise. Generally, you will have some difficulty walking the first few hours after the operation, and climbing stairs the first couple of days. Bathing will require care so as not to wet the incision site. Sexual activity is usually too uncomfortable to enjoy the first week or two. You should be able to drive your car within a few days. Depending upon your occupation, you can expect a recovery period lasting from one to six weeks..

On day of surgery

- Be on time and fasted from midnight
- Take regular medications and prescribed antibiotic with small sips of water
- Inform you doctor of any family history of thrombophlebitis
- Have groin area shaved as instructed
- Come to Day Surgery with all preoperative exams, National Health Care card and ID
- Arrange for someone to drive to and from the hospital and someone to stay at home with you for the first 24 hours after surgery

At home

- Get as much rest as possible. Drink plenty of fluids, eat light meals and avoid alcohol.
- Some pain in the groin area is normal. Take pain reliever as directed by your doctor.
- Some swelling and soreness of the surgical wound is normal
- Stitches will be removed after about 1 week. If pain increases, pulsates or you notice changes in your wound, please contact the Center.
- A slight fever is also normal. If your temperature exceeds 38°C, contact the Center.
- Post-operative check-up after 1 week to remove stitches. Periodic checkups after 3 weeks, 6 months and 1, 2 and 3 years.
- If you have any problems or cause for concern, contact your doctor or the on-call service right away.

Post-Operative On Call service

Physician on Call

049 8313361

Dates to Remember

Anaesthetic examination

Date: _____ time: _____

Surgery:

Date: _____ time: _____

Medications:

Other Instructions:

If you need help please call:

Mrs C. White, Head nurse

049 8773455

Monday through Friday 9 am – 12 pm

If you wish to speak with our medical personnel, please contact:

Mrs. P. Wilson

049 8311324

Monday through Friday 9 am – 11 pm and 2 pm – 6 pm

Day Surgery Unit

University Hospital

(Address).....

The Center is open:

Monday through Friday

7:30 am - 1 pm and 2 pm - 7:30 pm

Tel. 049 8632399

Annex 4

DAY SURGERY Questionnaire

Dear Sir/Madam,

Would you please take some time to answer the questions in this booklet. It is important for us to know what you think about our Day Hospital as a patient or caregiver. Your comments will help us better our service, to make the day hospital experience a positive and above all tailored to fit the patient. Your views and comments will be strictly confidential.

Thanking you in advance for your kind cooperation,

*Dott. U. Feelbetter
Head, Day Surgery Unit*

1. Age:

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> 18 years or younger | <input type="checkbox"/> 51-60 years |
| <input type="checkbox"/> 19-30 years old | <input type="checkbox"/> 61-70 years |
| <input type="checkbox"/> 31-50 years | <input type="checkbox"/> over 71 |

2. Gender.

- | | |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> male | <input type="checkbox"/> female |
|-------------------------------|---------------------------------|

3. Education

- No diploma
- Elementary school
- Junior high school
- High School diploma or equivalent
- College Degree or higher

4. Profession

- | | | |
|-----------------------------------|-------------------------------------|----------------------------------|
| <input type="checkbox"/> employed | <input type="checkbox"/> unemployed | <input type="checkbox"/> student |
| <input type="checkbox"/> retired | <input type="checkbox"/> housewife | <input type="checkbox"/> other |

5. Who referred you the Day Surgery Center?

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> A friend | <input type="checkbox"/> Your primary physician |
| <input type="checkbox"/> A specialist | <input type="checkbox"/> Other |

Please specify _____

6. Is this the first time at the Day Surgery Center?

- Yes
- No, it is my second time
- No, it is my third time
- No it is my fourth or more

7. How did you make your first appointment?

- By telephone In person at the Center

8. Did you have any difficulty with the telephone service?

- No
 Yes, I had to call back many times
 Other _____

9. If you came in person, how would you judge our direction signs? (circle one)

Very confusing				Very clear
1	2	3	4	5

10. How long did you have to wait before your first appointment?

- Less than 2 weeks 1 to 2 months
 2 weeks to 1 month over 2 months

11. How would you rate the waiting time? (circle one)

too long		just right		too short
1	2	3	4	5

12. Were you adequately informed about the possible waiting time for your first visit?

- Yes No

13. Was the information received regarding day surgery, preparation for day surgery, instructions and procedures clear and adequate? (circle one)

Unclear				very clear
1	2	3	4	5

Inadequate				adequate
1	2	3	4	5

14. How would you rate the written information given to you? (circle one)

Useless				very useful
1	2	3	4	5

14a. If information was inadequate, what information needs to be added or changed to make it more useful?

14b. If there was too much information, what should be eliminated?

15. What information was most helpful to you?

- Oral written both

16. In what other ways could our brochures be improved to better fit our patients' needs?

17. How would you rate your greeting by the Day Surgery Center personnel on the day of your surgery?

cold					very warm
1	2	3	4	5	

18. How would you judge the comfort of our waiting room?

Uncomfortable					comfortable
1	2	3	4	5	

18a. In what ways was it uncomfortable/comfortable?

19. If you underwent an operation, who was the most reassuring before the operation?

- The surgeon
 The nursing staff
 The anaesthetist
 No one
 Other _____

20. How would you rate the information received regarding post-operative instructions and check-ups?

incomprehensible					very understandable
1	2	3	4	5	

21. When you were discharged from day surgery, were the personnel helpful?

Not at all					very helpful
1	2	3	4		

22. What aspects of the Day Surgery Center did you find favourable? (check all that apply)

- Organization
- Medical assistance
- Nursing assistance
- Equipment
- Administrative aspects
- Comfort and cleanliness of the environment

23. What aspect of the Day Surgery Center did you find unfavourable? (check all that apply)

- Organization
- Medical assistance
- Nursing assistance
- Equipment
- Administrative aspects
- Comfort and cleanliness of the environment

24. How would you overall rate our Day Surgery Center?

Negative Positive
 1 2 3 4 5 6 7 8 9 10

26. What suggestions could you make to help us improve the quality of our service?

Day Surgery Unit
 University Hospital
 (Address).....

The Center is open:
 Monday through Friday
 7:30 am - 1 pm and 2 pm - 7:30 pm
 Tel. 049 8632399

Annex 5

Links to examples of Patient Information for Day Surgery and Guidelines for Written Material Construction

Examples of Patient Information for Day Surgery

King's College Hospital, London UK

<http://www.kch.nhs.uk/patientsvisitors/patients/day-surgery-patients>

TriHealth, Cincinnati OH, USA

<http://www.trihealth.com/institutes-and-services/trihealth-surgical-institute/patient-information/outpatient-surgery/>

WOMEN AND NEWBORN HEALTH SERVICE, King Edward Memorial Hospital, Western Australia

<http://www.kemh.health.wa.gov.au/brochures/consumers/wnhs0474.pdf>

North Bristol NHS Trust, UK

<http://www.nbt.nhs.uk/our-services/a-z-services/day-surgery-unit/day-surgery-unit-patient-information-leaflets>

Brigham and Women's Hospital, Boston MA, USA

http://www.brighamandwomens.org/patients_visitors/yourvisit/daysurg.aspx

Guidelines for Written Material Construction

Centers for Medicare & Medicaid Services. U.S. Department of health and Human Services. 2012. Toolkit for Making Written Material Clear and Effective - Centers for Medicare & Medicaid Services». CMS.gov.

<http://www.cms.gov/Outreach-and-Education/Outreach/WrittenMaterialsToolkit/index.html?redirect=/WrittenMaterialsToolkit/>

INFORMED CONSENT

Dr Ian Jackson, President IAAS, contact ian.jackson@york.nhs.uk.

It is perhaps worth exploring the issue of consent, especially as in day surgery some considerable time can elapse between obtaining consent and the surgery actually taking place. It has been suggested that health professionals' knowledge and understanding of consent is at best incomplete and that this situation suggests not only that lip service is being paid to central concepts of autonomy and partnership, but that nurses and clinicians may be exposing themselves to civil and criminal actions.

From a moral position, informed consent has two fundamental components-

- information giving and
- consent to treatment;

the first requiring communication skills and the latter, understanding.

The 3 basic criteria for consent

- **capacity** - this the capability of the individual to understand the proposed treatment
- **disclosure of information** –
 - the individual must understand the nature of the proposed treatment in broad terms, and why it has been prescribed
 - disclosure or non-disclosure of potential side effects- the individual must understand the principal benefits and risks and the consequences of not having the treatment
- **voluntariness** - consent is to be voluntary; this cannot be guaranteed if the individual is under the influence of sedation

It is worth remembering that consent can be given verbally, in writing or by implication and all are legally valid, but only when these 3 components are present.

A useful view of consent that recognises that it is far more than getting a patient to sign a form and emphasises the relationship between nurse or doctor and patient – the General Medical Council (GMC) in the UK describes this as a 'partnership'.

Informed consent therefore relates not just to participation in research or consent to treatment, but to any relationship between the health care professional and a patient. This understanding of consent raises certain responsibilities for nurses and doctors and the process must therefore:

1. respect individual autonomy
2. protect the patient
3. avoid untruths, duress or anxiety
4. promote rational decision making

Informed consent for a procedure is specific to that procedure and that individual patient. The written consent form is simply an indication that at the time of signing, the individual gave their consent; it is not a guarantee that the individual still feels that way. In the same way, when patients present themselves on the day surgery unit, it is not safe to assume they are in effect implying consent. Ideally, the surgeon should check and once more explain the nature of the surgery with its benefits and limitations when they visit patients prior to surgery. The information provided must be sufficient to allow an informed decision to be made, in the past some clinicians have thought that they know what is best for their patients and that giving too much information may not be in their best interests. It is now clear that it is wrong to make this assumption. In many countries there is no requirement in law that all possible side effects must be discussed with the patient – however it is becoming clear from cases brought in many countries that neglecting to inform patients of a potential side effect or risk can lead to cases being brought successfully against the doctor.

In the UK the GMC guidance requires medical staff to

1. *Provide clear, accurate information about the risks of any proposed investigation or treatment, presented in a way patients can understand, can help them make informed decisions. The amount of information about risk that you should share with patients will depend on the individual patient and what they want or need to know. Your discussions with patients should focus on their individual situation and the risk to them.*
2. *In order to have effective discussions with patients about risk, you must identify the adverse outcomes that may result from the proposed options. This includes the potential outcome of taking no action. Risks can take a number of forms, but will usually be:*
 - a. *side effects*
 - b. *complications*
 - c. *failure of an intervention to achieve the desired aim.*
3. *You must tell patients if an investigation or treatment might result in a serious adverse outcome, even if the likelihood is very small. You should also tell patients about less serious side effects or complications if they occur frequently, and explain what the patient should do if they experience any of them.*

Procedure specific patient information leaflets can help the consent process in patients who are motivated to use the material. However the doctor should not assume these have been read. They can also be used during the consent discussion with the patient. Previously

prepared consent forms that contain the information about the risks discussed can also be useful during the consent process.

Patient declines to know about risks and side effects

Where a patient declines to know about the risks and complications then it is important to attempt to

- Find out why this is the case
- Explain to them the consequences of not knowing the potential side effects

If they still refuse then it is important to explain to them they can change their mind and ask for information at any time and then document in full the discussion and preferably have this signed by both yourself and the patient.

Further Reading

A large amount of useful information on consent is available on the UK GMC Website

http://www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp.

Similarly the American College of Surgeons has useful information

http://www.facs.org/public_info/operation/consent.html.

Day Surgery Procedures

Mr Gamal Eldin Mohammed, President Elect IAAS. E-mail: gamal13@gmail.com

This list of day surgery procedures will not be comprehensive but will give the reader an indication of what is possible in day surgery. A useful guide is produced by the British Association of Day Surgery – the BADS Directory of Procedures. (

<http://www.daysurgeryuk.net/en/shop/publications/>) This lists over 190 procedures across 10 specialties and provides indicative rates that can be achieved as a day case and short stay in ideal circumstances.

E.N.T

Throat:

Surgery of adenoids and tonsillectomy - especially in children - is one of the most frequent procedures suitable for day surgery. In some countries inpatient tonsillectomy for adults is advised due to the possibility of haemorrhage, however it should be noted that many countries have been performing these as day cases for many years without problems. However, there is a great difference in patients' appraisal of day surgery and in social circumstances that may influence the local decision to provide this service.

Ear Surgery:

Procedures with a trans-meatal approach such as placement of grommets or myringoplasty are generally performed on a day basis. Even procedures linked previously to a need for post-operative bed rest such as procedures with a transmastoidal approach are being performed as a day case but once again this is dependent of local circumstances.

Nose:

Almost all nasal procedures (endoscopic sinus surgery and nose reconstruction) can be performed on an ambulatory basis.

GENERAL SURGERY

General important recommendations for the operative techniques are:

- no unnecessary tissue traction;
- no unnecessary tissue tension;
- minimally invasive procedures;
- minimal ischaemia;
- complete haemostasis;
- no unnecessary manipulation;

Hernia surgery:

The treatment of groin hernias in adults has moved from the classic approach (Bassini operation and its modifications) with overnight stay, sutured techniques and general or spinal anaesthesia to a contemporary approach where day case surgery, local anaesthesia with sedation and open mesh techniques (Lichtenstein operation) are common.

Proctological surgery:

Approximately 90% of all anal procedures can be performed on a day surgery basis: lateral internal sphincterotomy for anal fissures, fistulectomy.

The excision of one or two haemorrhoids, the application of HAL haemorrhoidal artery ligation for piles, haemorrhoidectomy using the Longo technique for the treatment of III and IV grade haemorrhoids,

Periproctal abscess incisions

Proctological procedures for overnight stay (pain relief and wound control):

high fistulas, surgical excision for grade IV haemorrhoids (Eisenhammer operation)

Attention: packing of the anal canal should be avoided as this can lead to urinary retention.

Laparoscopic cholecystectomy (LC)

Indication: symptomatic gallbladder stones

Contra-indications:

acute cholecystitis

choledocholithiasis (confirmed or suspected)

need for major surgical procedures (suspected conversion)

ASA III (except specified cases)

ASA IV

The patient can be discharged home on the same day if all the regular criteria for discharge are fulfilled. It is advisable to perform in centres where the 23 hour hospital stay is provided, to avoid re-admissions.

Thyroid surgery:

Hemi-thyroidectomy for nodules with a risk of carcinoma can be performed as a day surgery case. Haematoma formation is the only life threatening complication, thus at least 6 hours of post-operative recovery time is required.

BREAST SURGERY:

Benign lesions: removal of cysts, fibroadenomas, biopsies of palpable/non-palpable lesions, duct excision, correction of gynaecomastia

Malignant lesions: operations on day surgery basis for breast cancer are increasing due to the advent of sentinel lymph node biopsy replacing axillary lymph node dissection for primary breast cancer

GYNAECOLOGY

Common gynaecological procedures suitable for day care are:

Diagnostic hysteroscopy, operative hysteroscopy for lesions protruding into the uterine cavity (fibroids), endometrial ablation by hysteroscopy and resectoscope
uterine fibroid embolization using angiography, female sterilisation, diagnostic laparoscopy, Hydrolaparoscopy.

Operative laparoscopy:

Contra-indications:

extremely large uterine
adnexal pathology (ovarian cysts) and suspected malignancy

Indications:

ectopic pregnancy, removal of small and benign cysts of the ovary, hysterectomy, myomectomy and prolapse surgery

OPHTHALMIC SURGERY

Cataract surgery: the most frequently performed day surgery procedure. It is generally performed with topical or local anaesthesia.

oculoplastic surgery, squint surgery, glaucoma, dacryo-cysto-rhinostomia, refractive surgery

ORAL AND MAXILLOFACIAL SURGERY

Almost 90% of all oral and maxillofacial surgery is performed under local anaesthesia and as a day-case procedure:

extraction of carious teeth in children, removal of impacted teeth, surgical exposure of impacted canines

General anaesthesia can be undertaken in the following day-case procedures:

cyst enucleation of large dentigenous cysts, follicular cysts or keratocysts, marsupialisation of mucous retention cysts in the floor of mouth, excision of the sublingual salivary gland
auto-transplantation of premolars and molars, dental implantology

ORTHOPAEDIC SURGERY

Knee

knee arthroscopy (diagnostic)

arthroscopic treatment of minor lesions (meniscus lesions, extraction of free cartilage bodies, debridement of small cartilaginous lesions

arthroscopic removal of osteosynthesis material

arthroscopic anterior cruciate ligament reconstruction

Shoulder

arthroscopy and examination under general anaesthesia

arthroscopic and mini-open acromioplasty

resection of the lateral part of the clavicle

arthroscopic joint stabilization (e.g. Bankart repair)

Elbow

arthroscopy and examination under general anaesthesia

arthroscopic treatment of minor lesions

extensor tendon release for treatment of tennis elbow

ulnar nerve transposition

removal of screws and plates and/or cerclages

Wrist/hand (95% day-case surgery under local anaesthesia)

arthroscopic treatment of minor lesions (e.g. free cartilage bodies, synovial biopsy)

carpal tunnel release

arthroplasty of CMC I joint for osteoarthritis

finger joint surgery for rheumatoid arthritis

Dupuytren's contracture surgery

Foot:

hallux valgus surgery

resection arthroplasty or arthrodesis for hammer toe deformities

Ankle

arthroscopic treatment of minor lesions (e.g. free cartilage bodies, synovial biopsy)

ligament reconstruction (lateral or syndesmosis)

removal of osteosynthesis material

Spine

removal of osteosynthesis material

microdiscectomy for the treatment of a herniated intervertebral disc

Hip

removal of osteosynthesis material

PAEDIATRIC SURGERY

Children shall be admitted to hospital only if the care they require cannot be equally well provided at home or on a day basis. In day surgery the standards of medical, nursing and psychological care should be comparable to those for inpatients.

Common paediatric surgical procedures:

inguinal hernia and hydrocoele, umbilical hernia, orchidopexy, circumcision, skin lesions
dermoid cysts.

PLASTIC SURGERY

Wrist/Hand surgery:

the same procedures in orthopaedics are performed by plastic surgeons

Cosmetic surgery:

blepharoplasty, breast augmentation, face lift, abdominoplasty with and without liposuction
(with drains to be removed next morning), reconstruction operations (Z-plasty, V-Y plasty)

UROLOGY

General urological procedures:

Vasectomy, hydrocelectomy, varicocelectomy, vasectomy reversal, circumcision

Minimally invasive procedures

transurethral resection of bladder tumours, ureteroscopic interventions for ureteric stones

ESWL for stone treatment.

VASCULAR SURGERY

The most frequent procedure is the operations for varicose vein (surgical, endovenous
obliteration by radiofrequency, laser)

Minimally invasive procedures

subfacial endoscopic division (SEPS) for resection of incompetent perforating veins

thoracic sympathectomy (treatment of hyperhidrosis or Raynaud's disease)

endovascular procedures like carotid artery stenting

Preventive pain and PONV strategies to optimize quality of care for the day case patient.

Dr Jan Jakobsson. Adjunct Professor, Anaesthesia & Intensive Care, Institution for Physiology & Pharmacology, Karolinska Institutet, Stockholm. Sweden. Email: Jan.Jakobsson@ki.se

Pain Management

Preventive balanced multimodal opioid sparing pain management has become the Gold Standard in order to improve the perioperative management of postoperative pain. The strategy aims at reducing the need for opioid analgesic and so the opioid associated side-effects of sedation, nausea/vomiting and respiratory depression. All these are factors that can delay rapid and safe discharge.

The concept of combining drugs with different mode of actions aiming at an additive analgesic effect to a minimum of side effects has now been used almost for two decades. Combining local anaesthesia, paracetamol, NSAIDs and lowest effective dose of opioid is well-established practice.

The ultra-sound guided block techniques have become increasingly popular among young anaesthetist and a variety of major and peripheral blocks are today used in conjunction with surgery for intra as well as postoperative pain management. Surgical site infiltration is a simple and safe alternative.

There are good evidence for providing local anaesthesia prior to incision even in patients having general anaesthesia in order to reduce the need for intraoperative analgesic and also facilitate the postoperative pain course. The standard dose of a long acting local anaesthetic e.g. bupivacaine or chirocaine are recommended in order to extend the duration.

If surgical site infiltration is used, combining pre-incisional and then further infiltration at wound closure will provide intra as well as postoperative analgesia.

Paracetamol is a safe analgesic and worth providing as base pain medication. Starting dose in a paracetamol naive patient can be increased to 30 mg/kg. In healthy adult 2 grams orally some 60 – 90 minutes prior to start of anaesthesia provide therapeutic plasma concentration in time for surgery.

Paracetamol 1 gram four times daily for postoperative pain management is a safe base medication.

Non-steroidal analgesic drugs, NSAIDs have well known analgesic effects and their place as part of multi-modal/balanced analgesia is well documented. The oral route is cheap, safe and effective. Standard dose taken in combination with the paracetamol orally some 60 – 90 minutes prior to surgery provides preventive analgesia.

Ibuprofen 800 mg three times daily is an effective add on to paracetamol.

Coxibs are an attractive alternative. The Coxibs were developed in order to reduce the risk for GI-tract bleed and their effect on platelet function is minor. Coxibs minimise the risk for drug induced bleed. Oral Celecoxib 400 mg preoperative and 200 mg twice daily or Etoricoxib loading dose 120 mg followed by 90 mg once daily are 2 different alternatives to Ibuprofen.

Risk factors such as known NSAID/acetylsalicylicacide sensitivity, history of GI-bleed and or cardiovascular disease must of course be acknowledged. Coxib in combination with a proton pump inhibitor seems reasonable to minimise risk for GI-bleed. Naproxen has been shown to be associated to the lowest risk for cardiovascular/thromboembolic risk. As a general rule we should be prescribing these drugs for a short postoperative course and this should not cause major problems.

A single 4 mg intravenous dose of Dexamethasone has becoming increasingly used as part of PONV prevention and there is increasing support for additional analgesic properties if the dose is increased to 0.1 mg/kg. The steroid should be administered early but is best given once the patient is anaesthetised – if given to awake patients it can result in considerable perineal discomfort.

The risk associated to single iv. preoperative dose dexamethasone is low and recent guidelines suggest that steroids should not be withheld in patients with controlled diabetes and the short-lasting increase in blood glucose should be handled accordingly.

Rescue medication with opioids should be available. Oxycodone has in some countries become popular but choice of rescue opioid should be done on local traditions. Lowest effective dose should be suggested.

Prevention of Post-Operative Nausea and Vomiting

So all of the above techniques can help contribute to the prevention of postoperative nausea and vomiting (PONV). If you use the techniques described then the rate of PONV will be low. However for those who experience PONV it seriously reduces the perceived quality of care and can delay discharge. It has become standard practice to risk score for PONV and to administer prophylaxis/prevention in accordance to the risk. There is a free online PONV Risk calculator for day cases provided by the British Association of Day Surgery that can be found at <http://www.daysurgeryuk.net/en/resources/ponv-calculator/>

There is also a free presentation on the background to the development of this tool <http://videos.bads.101test1.co.uk/SWF/PONV/PONV.html>

The use of routine administration of prophylactic antiemetics is something that each unit should consider – many like the unit described in the above presentation only use prophylaxis in those with high risk of PONV.

Table 1. Suggested postoperative analgesia regimen

	Day of surgery	Post op/t day 1	Post op/t day 2	Post op/t day 3	Post op/t day 4	Post op/t day 5	Post op/t day 6
<i>Paracetamol Igr.</i>	Loading dose 2 g 1 g x 3	1 g x 4	1 g x 4	1 g x 4	1 g x 4	1 g x 4	1 g x 4
<i>Etoricoxib</i>	120 mg x 1	90 mg x 1	90 mg x 1	90 mg x 1	rescue	rescue	
<i>Oxycodone SR</i>	10 mg x 2	10 mg x 2	10 mg x 2				

References:

1. Apfel CC, Korttila K, Abdalla M et al (2004) A factorial trial of six interventions for the prevention of postoperative nausea and vomiting. *N Engl J Med* 350:2441–2451.
2. Apfel CC, Philip BK, Cakmakkaya OS, Shilling A, Shi YY, Leslie JB, Allard M, Turan A, Windle P, Odom-Forren J, Hooper VD, Radke OC, Ruiz J, Kovac A. Who is at risk for postdischarge nausea and vomiting after ambulatory surgery? *Anesthesiology*. 2012 Sep;117(3):475-86.
3. Warren-Stomberg M, Brattwall M, Jakobsson JG. Non-opioid analgesics for pain management following ambulatory surgery, a review. *Minerva Anestesiol*. 2013 Mar 19. [Epub ahead of print]
4. Jakobsson J. Preoperative single-dose intravenous dexamethasone during ambulatory surgery: update around the benefit versus risk. *Curr Opin Anaesthesiol*. 2010 Dec;23(6):682-6.
5. De Oliveira GS Jr, Castro-Alves LJ, Ahmad S, Kendall MC, McCarthy RJ. Dexamethasone to prevent postoperative nausea and vomiting: an updated meta-analysis of randomized controlled trials. *Anesth Analg*. 2013 Jan;116(1):58-74.
6. Franck M, Radtke FM, Baumeyer A, Kranke P, Wernecke KD, Spies CD. Adherence to treatment guidelines for postoperative nausea and vomiting. How well does knowledge transfer result in improved clinical care?. *Anaesthesist*. 2010 Jun;59(6):524-8.
7. Voigt M, Fröhlich CW, Waschke KF, Lenz C, Göbel U, Kerger H. Prophylaxis of postoperative nausea and vomiting in elective breast surgery. *J Clin Anesth*. 2011 Sep;23(6):461-8.

Chapter – Quality / Clinical Indicators

Paulo Lemos, MD, with collaboration of DSDP partners

Introduction

There is growing recognition that a capacity to evaluate and report on quality is a critical building block for system wide improvement of health care delivery and patient outcomes. Health care organisations are frequently being requested to provide data on many aspects of their activity. Clinical indicators results provide valuable information in assessing the performance of health services. This focus on performance management has emerged through increased competition, a more recent focus on quality improvement and safety and an increase demand for evidence of performance.

Except for the work developed by the Australian Council on Healthcare Standards (ACHS) since 1989, clinical indicators are not yet worldwide routine tools for the evaluation of quality performance. The popularity of day surgery is continuously increasing because of the associated clinical, economic and social advantages. The low rates of adverse events or complications during the perioperative or immediate post-operative period further justifies the rapid growth of day surgery.

Nevertheless, these surgical programmes should be continuously monitored in order to guarantee that high quality services are provided for the population. Clinical indicators, and especially outcome measures, should therefore be implemented to ensure a safe, effective and efficient environment in day surgery.

The identification of universally acceptable clinical indicators for quality assurance in day surgery is one of the most important goals of the International Association for Ambulatory Surgery (IAAS) and its materialization is one of the major achievements in ensuring those high standards of care that we persuade for day surgery.

Recently, IAAS developed a European project, named Day Surgery Data Project (DSDP), financed by the European Commission aimed to identify and validate a set of indicators and to develop the information systems on day surgery in Europe. This project proposes also to analyse day surgery data and health indicators both at international organization and member states level.

Clinical Indicators

Clinical indicators are norms, criteria, standards and other direct qualitative and quantitative measures used in determining the quality of healthcare. They attempt to describe the effects of care on the health status of patients and populations. They should be easy to define and

analyse, be valid and reliable, and the indicator measured should occur with some frequency and reflect an important aspect of quality.

To have an overall overview of quality issues, DSDP identified different dimensions of performance on day surgery, such as, Input, Patients Characteristics, Access, Process, Output, Outcome, Safety, Satisfaction / Responsiveness and Cost / Productivity. The related indicators trying to evaluate day surgery services in a unit level, where divided in a list of essential (Table 1) and ideal indicators (Table 2).

These indicators were based on the definitions proposed by IAAS for Ambulatory Surgery / Day Surgery, Office Based Surgery and Short Stay Surgery and the list of basket procedures that should be considered when reporting at international level (Table 3).

Table 1: Essential set of day surgery indicators at a Day Surgery Unit Level

Access	Median waiting time for overall list of basket procedures and for each basket procedure
Process	% of patients who have received a pre-anaesthesia assessment before day surgery
Output	Number (and % for non-freestanding units) of elective surgery performed as day surgery for the overall list of elective basket procedures and each elective basket procedure
Outcome	Case fatality ratio within 30 days for patients undergoing any of elective basket procedure % unplanned overnight admission % unplanned re-admission to hospital or acute care facility within 7 days
Safety	% of day surgery admissions who experienced wrong site, wrong side, wrong patient, wrong procedure, or wrong implant % of surgical wound infection
Patient' Satisfaction and Responsiveness	% of patients overall satisfied
Cost and Productivity	% cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend") % cancellations of the booked procedure after arrival at DSU

Table 2: Ideal set of day surgery indicators at a Day Surgery Unit Level

Input	Number and % of day surgery beds / total surgery beds (for non-freestanding units)
Access	Median waiting time for each basket procedure in DSU
Process	% of patients with standardized preoperative evaluation and tests % of patients who have received a pre-anaesthesia assessment before day surgery
Output	Number of interventions per each basket procedure and overall basket procedures per year % of elective surgery performed as day surgery by each basket procedure and overall basket procedures (for non-freestanding units)
Outcome	Case fatality ratio within 30 days for patients undergoing any of elective basket procedure % unplanned overnight admission by cause: surgical anaesthetic / medical social / administrative % unplanned returns to the operating room within 24 hours % unplanned re-admission to hospital or acute care facility: within 24 hours within 7 days
Safety	Surgical and anaesthesiological adverse events in percentages: postoperative bleeding requiring treatment within 2h and 24h unplanned transfusion cardiopulmonary arrest nausea not controlled within 2h and 24h pain not controlled within 2h and 24h % of DSU admissions who experienced wrong site, wrong side, wrong patient, wrong procedure, or wrong implant % of DSU admissions experiencing fall within the confines of the DSU % of surgical wound infection % of postoperative sepsis % of medication errors

Patient' Satisfaction and Responsiveness	% discharges with written complaints by cause: clinical providers' manners organisational
Cost and Productivity	% cancellations of surgical procedures without notification by the patient ("failed to arrive" or "did not attend") % cancellations of the booked procedure after arrival at DSU: pre-existing medical condition organisational reasons % utilized theatre sessions over weekly planned theatre sessions % procedures with late starts, i.e. with delays > 30 minutes from time appointed for surgical procedure up to the actual beginning Median operating time by each basket procedure for surgical procedure

Table 3: DSDP list of basket procedures based on the OECD Surgical Procedures

13.1 – 13.7	Cataract surgery
28.2 – 28.3	Tonsillectomy with or without adenoidectomy
38.5	Ligation / stripping of varicose veins
51.23	Laparoscopic cholecystectomy
53.0 – 53.1	Inguinal and femoral hernia
60.2	Prostatectomy (transurethral)
68.51	Hysterectomy (vaginal only)
85.21	Breast conserving surgery
85.4	Mastectomy
80.26	Knee arthroscopy

Finally, DSDP has developed Essential (Table 4) and Ideal (Table 5) sets of Indicators for National / Regional Level, as well, with the special purpose to allow comparisons of performance across countries.

Table 4: Essential set of day surgery indicators at National / Regional Level

Input	Number and % of DSU by public and private ownership by: <ul style="list-style-type: none"> • Integrated • Partially integrated • Freestanding
Access	Median waiting time for overall list of basket procedures and for each basket procedure
Output	% of elective surgery performed as day surgery for the overall list of elective basket procedures and each elective basket procedure
Outcome	Case fatality ratio within 30 days for patients undergoing any of elective basket procedure % unplanned overnight admission % of day surgery admissions returned to the operating room within 7 days
Safety	% of day surgery admissions who experienced wrong site, wrong side, wrong patient, wrong procedure, or wrong implant
Cost and Productivity	Expenditure on day surgery care as absolute value and % of total health expenditure

Table 5: Ideal set of day surgery indicators at National / Regional Level

Input	Number and ratio of theatres fully dedicated to day surgery / total available theatres
Access	Median waiting time for overall list of basket procedures and for each basket procedure
Process	% of patients who have received a pre-anaesthesia assessment before day surgery
Output	% of elective surgery performed as day surgery by overall list of basket procedures and each basket procedure
Outcome	Case fatality ratio within 30 days for patients undergoing any of elective basket procedure % unplanned overnight admission by cause: surgical anaesthetic / medical

	social / administrative
	% unplanned returns to the operating room within 24 hours
	% unplanned re-admission to a hospital within 7 days
Safety	% of DSU admissions who experienced wrong site, wrong side, wrong patient, wrong procedure, or wrong implant
	% of day surgery admissions with surgical wound infection
	% of day surgery admissions with postoperative sepsis
Patient' Satisfaction and Responsiveness	% patients overall satisfied with day surgery
Cost and Productivity	Expenditure on day surgery care as absolute value and % of total health expenditure

Rationale for using different dimensions' Indicators of performance in day surgery

Input Indicators

Availability of resources is a precondition of services provision. For the national level, simple measures of resources allocation to day surgery are figures concerning the number and proportion of DSUs, differentiating between integrated and freestanding, and number of theatres fully dedicated to day surgery. Such measures clearly indicate if an effective policy of day surgery promotion was successfully designed and implemented or, on the contrary, surgery remains business as usual ignoring day surgery's substantial advantages in terms of safety, patients' satisfaction and efficiency.

Access Indicators

Access concerns the availability of DSUs in a specific geographical area and population; more significantly, access involves the waiting time between a diagnosis and the relevant procedure. The access indicator "Median waiting time for overall and each basket procedure" measures how long, on average, it takes between a request for a procedure and its actual provision. In a context of expanding needs for surgical services due to a growing elderly population and shrinking public finances, waiting times is an inescapable issue. Its relevance derives also from its politically sensitiveness; some national health services grant the right to access services within maximum waiting times. Degree of respect for such right must be monitored.

Process Indicators

Processes are health care activities carried out by providers to patients and for patients, e.g. a diagnostic tests or a surgical procedure. Measures of clinical processes are recorded and analysed where services are provided and information about them have limited relevance to top managerial levels. “Percentage of patients who have received a pre-anaesthesia assessment before day surgery” is an indicator which signals if services are well organised and aware of the ever present potential of harming patients. Pre-anaesthesia assessment prevents both cancellations and complications in patients whose medical contraindications are discovered only just before or even during or after a procedure. Percentage of patients with standardised preoperative evaluation and tests has similar meaning.

Output Indicators

Output indicators reveal the absolute volume of activities performed by a system or a unit. They also measure the proportion of procedures carried out in a day surgery setting out of those which should be complete through this approach. Thus “Percentage of elective surgery performed as day surgery for the overall list of elective basket procedures and each basket procedure” is also an indicator of appropriateness of care. This means that it determines the extent to which day surgery performance achieves the goal to provide services for about 80% of surgical needs.

Outcome indicators

Outcomes have to do with the degree of improvement or, on the opposite, deterioration of patients’ health status as a consequence of encounters with healthcare. In other words, an outcome is a result in terms of positive or negative, short or long term changes in health status of patients, e.g. death within one week of procedure or health problem, e.g. inguinal hernia, still cured five years after the procedure.

Both national and individual units should collate the indicator “Case fatality ratio within 30 days for patients undergoing any of elective basket procedure”. It should be stratified by specialty and also by procedure because the risk of death for cataract removal is very different from that inherent in knee replacement procedures.

The other outcome measures in the lists are proxy indicators. This means they use indirect measures, which are easier to collect and interpret, for example proportion of unplanned admissions or proportion of patients returned to the operating room (OR) within one week, but still reflect the dimension of outcome (and safety). Unplanned hospitalizations, admissions to a hospital or a return to an OR within 24 hours or a week after a day surgery procedure are clear signs that clinical or administrative processes are problematic. Proxy indicators’ usefulness derives also from the fact that the events measured by them are much more common than patients’ deaths. Unplanned admissions or returns to hospital should be thought and managed as warning sign of dysfunctional processes not to be ignored. Similar

episodes should prompt managers and providers to study day surgery services delivery in depth and consider the necessity to redesign structures, processes and procedures and possibly retrain staff.

Patients' Safety Indicators

Safety involves the delivery of services in absence of preventable adverse events; it has been recognised a key element of healthcare since the Hippocratic oath. Starting with the publication in 1999 of the Institute of Medicine study "To err is human", patients' safety has become a topic that cannot be ignored by modern systems of healthcare. Numerous studies have brought to light the reality that medical errors and adverse events in healthcare delivery are much more common than previously thought and many of them, around half, are avoidable. Beyond the damage to patients, these potentially avoidable outcomes frequently increase the length and cost of stay adding significantly to the economic difficulties of health organizations and whole systems including day surgery. Errors also compromise credibility of individual professionals as well as teams, units and whole institutions. A vicious cycle of errors, re-work and financial restraint, followed by further financial difficulty due to the costs of dealing with errors and their consequences, such as repeated procedures and prolonged hospitalizations, become the norm in hospitals and ambulatories which are unable or unwilling to systematically confront patients' safety. This is not so especially within organizations able to design reliable services where preoccupation with possible failures represents a constant presence. In summary, medical errors and adverse events must be monitored.

Falls and wrong sites/side/patients are well documented and dangerous safety problems in hospital care; the tight schedule with high volume of procedures that characterize day surgery, presumably make these adverse events potential threats to be monitored. Hence "Percentage of day surgery admissions who experienced a wrong site, a wrong side, wrong patient, wrong procedure or wrong implant" should be included in each of the four lists and "Percentage of DSU admissions experiencing a fall within confines of the DSU" in the ideal set for DSUs. With the exception of the essential list for the national level, indicators measuring frequency of wound infections should be computed.

Cost / Productivity Indicators

Cost indicators concern actual expenditure for day surgery, as absolute amount or relative to total healthcare outlay. A productive and efficient service does not suffer from chronic and substantial waste. Examples of measures of waste are "Percentage of cancellations of surgical procedures without notification by the patient ("fail to arrive" or "did not attend") and "Percentage of cancellations of the booked procedure after arrival at DSU". "Recurring delays of surgical procedures" and "Percentage of utilised theatre sessions over weekly

planned theatre sessions” are other cases in point. A key goal for managers is to use resources in such a way to maximize their yield. This is the economists’ perspective, i.e. always trying to do better given specified available resources.

Patients’ Satisfaction Indicators

Healthcare systems and the individual organization delivering services exist to solve citizens’ health problems. The core of Continuous Quality Improvement is orientation of the organization to satisfying its customers’ needs and expectations. Some citizens and professionals do not like the use of the word “customers”, but the use of a name is less significant than the tenet about users the central focus of services delivery.

Essential to the creation and maintenance of quality care is the thorough understanding of customers and their needs. Establishing a customer-oriented organization entails a genuine ongoing commitment to measuring, understanding and meeting customer expectation. As with any re-orientation of an organization, adapting to a customer-oriented focus implies changes to its culture, the shared understanding of its reason of being and the processes used to carry out the work. A paternalistic and bureaucratic organization remains insensitive to customers and still might adopt instruments to measure patients’ satisfaction in order to pay lip service to a politically correct issue.

DSDP set of essential indicators at national level does not include any patient’s satisfaction indicator and this makes sense because variability among units and areas is wide and an average measure would hide this discrepancy. The essential list for a DSU includes a generic measure of overall satisfaction with services. The same indicator is recommended for the ideal set at national level, whereas relative frequency of discharges with written complaints by clinical, providers’ manners and organizational cause is deemed useful for the units.

Obviously a survey of patients’ satisfaction should be standardised across systems and units and also include more specific measures to be analysed within a particular situation. For example, another useful indicator might be the percentage of patients who would recommend the same services to friends.

Conclusion

With the continuous growth of day surgery, evaluation of the different dimensions of the day surgery programme as a whole becomes more and more important in order to achieve a safe, effective and efficient high quality patient-centred day surgery programmes, for a very satisfied population. The introduction of clinical indicators in day surgery practice can have a determinant role in reaching these goals. Outcomes research into new developments in day surgery must continue in the future with the aim of ever improving the quality of patient care.

Further Reading

Day Surgery Data Project. Final Report, 2012. (<http://www.dsdp.eu>)

Lemos P, Barros F (2011). Outcome measures. In: Day Case Surgery, Smith I, McWhinnie D, Jackson I (eds), Oxford University Press (OUP), United Kingdom. Chap 16.

Lemos P, Regalado AM (2006). Patient Outcomes and clinical indicators for ambulatory surgery. In: Lemos P, Jarrett P, Philip B, eds. Day Surgery, Development and Practice, International Association for Ambulatory Surgery, Porto. Chap 12.

Australian Council on Healthcare Standards (2008). Australasian Clinical Indicator Report 2001-2007: determining the potential to improve quality of care, 9th edn.

(http://www.achs.org.au/pdf/AustralasianClinicalIndicatorReport_9thEdition_FullReport.pdf)

British Association of Day Surgery (2009). BADS Directory of Procedures, 3rd edn.

Healthcare Commission (2005). Acute hospital portfolio review, Day Surgery.

(<http://www.healthcarecommission.org.uk>)

Ministerio de Sanidad Y Consumo. España (2008). Manual de Unidad de Cirugía Mayor Ambulatoria. Estándares y recomendaciones. Informes, Estudios e Investigación.

Shnaider I, Chung F. Outcomes in day surgery. *Curr Opin Anaesthesiol* 2006 ; 19 : 622-9.

Wu CL, Berenholtz SM. Systematic review and analysis of postdischarge symptoms after outpatient surgery. *Anesthesiology* 2002; 96: 994-1003.

Deutsch N, Wu CL. Patient outcomes following ambulatory anesthesia. *Anesthesiology Clin N Am* 2003; 21: 403-15.

Smith I, Cooke T, Jackson I, Fitzpatrick R. Rising to the challenges of achieving day surgery targets. *Anaesthesia* 2006; 61: 1191-9.

Establishing a formal Association:

T. Naresh Row, MS, PhD (General Surgery) Consultant Surgeon & Day Surgery Specialist, One Day Surgery Center, Mumbai, India. President, The Indian Association of Day Surgery.
E-mail: nareshrow@hotmail.com

It is important to consider the local politics of medicine and health delivery when considering how to establish a formal association and then link this to the IAAS. I will therefore cover the following aspects of our journey.

1. Health care system in India.
2. Need for an Association.
3. How to go about it.
4. Challenges faced.
5. International exposure.
6. Future plans.

Health care system in India:

At the onset, clarity is to be established in the healthcare system followed in India. Broadly, we differentiate them into Public, that is, government funded; it may be local/state/central funding. At present, this is about 1.9% of the GDP. These facilities are utilized by approximately 40% of our population.

Private health care caters to 60% of the patients, which amounts to almost 4% of the GDP. Medical insurance is still in its initial stages, covering just 5% of the country's population. About 10% have other means of reimbursement. This means, that, 85% of the patients pay out of their pocket for healthcare, thus, making India one of the most privatized healthcare systems in the world.

The rising cost of living has not spared anyone. With inflation reaching record high, even healthcare is not spared. Therefore, most of the patients are in search of affordable treatment. Situation in India is such that we see a constant rise in numbers of population living below poverty line, being pushed due to health care expenses. Government schemes for the poor have been initiated with some success, but are not without failures, however it is a beginning. Therefore, it is logical to adapt to Day Surgery as a means of providing high quality, affordable, planned surgeries.

Need for an Association:

Day surgery, per say, is not new to us. From time immemorial, day surgery in some form or another has always been used across the specialities. However, if an overall view is taken,

then we are still utilizing this concept up to somewhere in the range of about 10 % of all elective surgeries.

The main reason for this dismal numbers was lack of awareness. Patients do not know that there is an entity like Day Surgery. Surgeons also, have a perception about Day Surgery that it is limited to minor procedures. Though, there were many individual surgeons, who, by their experience and exposure, are practicing Day Surgery, but, do not have the means to influence patients about the concept. Most surgeons try and give up, the feeling is that if the patient is comfortable in a hospital bed, then so be it, why do you need to push it? However, the number of patients asking to be sent home earlier, for different reasons, is gradually increasing in number. This is a major support for the surgeons, but they are looking for endorsement, they want to establish that what they are doing is correct. They are looking for a platform where they can exchange and share their experiences. Something better, than just a faceless blog or a Facebook page. And that is where the importance of an Association is seen.

The purpose of an Association is to gather like-minded people under one banner. It becomes a scientific club for interaction of ideas. You are comfortable in the knowledge that there are several like you who practice Day Surgery and you are not alone, you form a support system. It is your own idea which has gained a form. A legal endorsement in the form of an official body of surgeons practicing Day Surgery, like you. You become a member and have a feeling of belonging, you are different, you can put your ideas into action, and you can use the Association to spread the good word. For something which you have taken tremendous individual effort, can now be converted to collective effort. There can be now awareness. Awareness among the surgeons, awareness among the patients.

How to go about it:

When the idea of creating an organization takes form, several questions come to our mind as to how to go about it? What would be our aims? Will we be successful in achieving our aims? The most important decision was to form an Association, having done that, these questions were expected.

So we took one step at a time.

The first step was in the decision to form an Association. Several phone calls and meetings later, we had enthusiastic consensus among 30 surgeons of different specialties, who thought it was a good idea and were eager to for an Association, so a logo was designed and a name given, we had an executive committee of 30 doctors! The second step was to raise funds. We created a membership form, collected membership fees. In India, the fees

are one-time payment, not yearly. So, everyone collectively started looking for donors / sponsors. This was tougher than we thought.

The third step was to create a constitution, with the basic aims in place, we decided to look into constitutions of different existing organizations, and adopt one, with modification. This was then circulated among the executive members and appropriate corrections made.

The fourth step was to register The Association. Incorporation of the organization with the relevant authority was easier said than done. Difficult, but not impossible. It was time consuming, a few meeting with the officials, and we were officially incorporated into existence. Now, every member was a trusty. A shareholder in a not for profit company.

The fifth step was to create more members. Lists and addresses of members from existing organizations of specialties were acquired and mailers sent to them. Word of mouth method of making members were found to work faster, every executive member was given the responsibility of making at least 5 members.

The sixth step was to create an academic activity. So the first national conference was mooted. Date and venue decided, organizing committee set up and we were ready. At the time of the first conference, we had 100 life members. The inaugural function saw the installation of our mammoth executive committee, along with release of 'The Day Surgery Journal of India' and 'Protocols of a Day Care Surgery Center' (a hand book on protocols). During the General Body Meeting, we adopted the constitution and passed resolutions giving power to the executive committee for 5 years. This was deemed necessary at that time as there was a lot of work to do and before the committee changed, most of the idea's and aims were to be put in place, which would be achieved faster with the current team.

During the conference, along with exchange of scientific data, ways and means of increasing awareness among doctors and patients were discussed.

Challenges faced:

Long ingrained ideas of the magnitude of 'surgery', is so deeply ingrained in the patients and their relatives, that, any change from the norm of 3 to 5 days of hospitalization or even up to the removal of stitches, was severely frowned upon. How do we change the mind-set? Was the question.

Establishing the safety and feasibility of Day Surgery was the challenge.

Making more members interested in the concept of Day Surgery, was difficult, as the question of 'yet another organisation' was raised time and again. Even, the sceptical, 'so what's the big deal? How does it matter if you go home on the same day or the next?' was very difficult to answer. Awareness of the concept and its utilization to its full extent was the challenge. It was then decided, that, to face these challenging issues, more and more conferences, workshops and awareness programs were to be organized.

Executive members were encouraged to participate in as many conferences as possible and introduce the concept of Day Surgery to their colleagues. Members were coaxed to organize lectures and make more members.

The Day Surgery Journal of India was published every year and released during the conference. Initially, it was challenging to find articles for publication as there was not much work being done as Day surgery. International authors were invited to send in their articles. We got to read about Day Surgery in different parts of the world. This was encouraging. Slowly and surely, articles with enough data on Day Surgery started being sent. We succeeded!

International exposure:

It was an article published in BADS journal that exposed us to world of Day Surgery. International invitation to participate in the IAAS conference and subsequent invited lectures given by members of IAAS, was of tremendous help. The IAAS, through its senior members was very supportive in giving endorsement to the initiative of our national meets.

Joining the IAAS, initially as a corresponding member and then as full member was a challenge in itself. The questions of raising funds to pay the annual fees (which was new to us) and to select two representatives who will participate and bring back material to be shared by our members, was another task.

All in all, the legitimacy of being an organization following the right tract was very important, this was fully afforded by being a member of the IAAS.

Future Plans:

Interaction with local and national government bodies in introducing various schemes for establishing Day Surgery as a norm for a few select surgeries is an ongoing process and a challenge.

Regional cooperation with our neighbouring countries in Day Surgery, would create a positive impact on the methodology of delivering surgical management in select patients across the countries.

Medical tourism, a very upcoming and challenging industry, would be benefited by catering uniform surgical deliverance of international standard. It is found that several routine surgeries are made to wait in the many countries as the emergency care takes precedence. Accreditation body to create uniformity and set standards in patient care as well as optimize the Day Surgery Centres across the nation is essential at this stage. Efforts are now on in creating a board which will comprise of members from the Association and Quality management organization in forming norms for all who are interested in establishing Day Surgery Centres.

PRE-OPERATIVE ASSESSMENT AND EDUCATION

Wendy Adams, Secretary, Australian Day Surgery Council

Nurses can play a very important role in assisting and supporting the Surgeon and/or Anaesthetist in preadmission assessment and education. Nursing staff provide reliable gathering and recording of patient history which assists the medical team. Just as important they also assist the patient and their carer (when present) by providing education on the procedure and what will happen during and after their operation - this assists a smooth and successful discharge after the surgery/procedure. It also reduces the time required by the medical team.

Ideally, this occurs well in advance of the admission date to assist with planning. Some units organise this to occur directly following the consultation with the Surgeon but it can be organised for a later date, either face to face in a preadmission clinic or by telephone. The nurse may conduct preadmission assessment before or after the Anaesthetist conducts his/her assessment.

As discussed earlier in the handbook, there are a number of aspects that need to be taken into consideration.

Social assessment

Who will be at home to help? Many women who have undergone gynaecological procedures are discharged home to young children. With the advent of minimal invasive procedures, there are no obvious wounds or dressings and family members may not comprehend the severity of their mother's condition because there is limited or no visual evidence of surgery. In the case of older patients (eg. cataract surgery), is the carer older with even less vision? A nurse can often gain information and encourage them to seek alternative arrangements to assist the patient once they have been discharge home. Admission time can also be confirmed and it is not uncommon for the order of the theatre list (where there are staggered admission times) to be changed to accommodate the patient's transport needs. Other specific information that nurses can obtain during the preadmission assessment includes any special needs such as needle phobia.

Medical Assessment

The nurse can confirm that patient has provided all necessary information. eg. Patients may not indicate they have hypertension and yet they are currently taking antihypertensive drugs. They can also obtain more information about past experiences with surgery and anaesthetics, allergies, infectious status of both patient and family members as well as confirm the importance of why they need to disclose all medications (including

complimentary, recreational and over the counter drugs).

Education

Patients require information in a number of formats with this reinforced throughout the episode of care including the preadmission stage.

The most important information at this stage regarding the facility includes location and parking. Ideally, patients have already received a brochure with a map, so this should only be confirming that they understand the information. It is also important to explain whether the carer and/or family can wait with the patient before they go into theatre and how many family members are appropriate to come in with the patient.

It is at this stage that it is easiest to organise discharge planning. Information required before commencing the plan includes distance to travel at home, transport, estimated time of discharge (e.g. will it be dark, seasonal challenges). There is much discussion as to how far is too far to travel home. As discussed earlier in the handbook, protocols exist in some facilities that the patient must not be discharged to home unless the required distance to travel is only one hour or less.

Other Information that should be given at this stage include confirming the carer, pain management, level of activity post discharge (including driving) and clothing for discharge. Confirming that a carer will be available at this early stage is vital as it may take some organisation (or rescheduling) to ensure one is available. Pain management and the use of alternative methods such as of icepacks, slings and rest can be discussed at this stage, these are often found useful by patients but can be overlooked as coping mechanisms by surgical and anaesthetic colleagues. It is important the patient (and family) is aware that although they are being discharged home, they will still require rest and convalescence. Nurses can often discuss (and assess) expectations and time frames for the resumption of normal activity. Elderly patients can be advised to leave their suit, braces, tie, girdle and petticoat behind and wear a leisure suit or tracksuit instead. Patients who have an arm block or surgery to one of their hands will find it much easier to wear pull on trousers or skirt. Face and head surgery patients find it easier to wear button up tops rather than pullover type tops. Slip on shoes rather than laces are also easier although this may not be such a good idea if they require crutches. Other procedure-specific information such as dressings, drains, and post discharge appointments can also be mentioned at this stage.

Fasting times and other pre-op preparation can be provided and/or reinforced. If the patient understands the importance and rationale of fasting, they are more likely to be compliant.

Documentation of all of this is vital. Date, time and personnel involved must be documented for future reference. A pre-admission checklist is an efficient way of ensuring all areas have been covered with an area for further comment. There should be an indication of whether further follow up is required and by whom. This paper work is an important part of the medical record and should

be referred to during admission and the patient care by both medical and nursing staff.

Admission

This should be a very simple process where the admission nurse confirms a number of things including whether there have been any changes since the preadmission consultation, fasting times, medications taken and discharge planning. A set of baseline observations are also taken and documented. Patients are then changed into the appropriate theatre attire and appropriate pre-op preparation occurs. At this stage, reassurance and reinforcement of any education is given.

Once again, documentation is vital and simple checklists are useful to assist with compliance.

Operating Room

There are only a few differences for nursing staff working in the operating room where day surgery occurs. These include reassurance if patients are having their procedure with local anaesthetic or light sedation and the choice of dressings used. Nurses are often involved with the dressings and drain tubes and they need to be aware that these patients will be discharged within a short time and the patients will need to manage these at home. Water proof dressings will enable the patients to be able to shower/bathe when they return home.

Recovery

1st stage recovery is similar to patients who will be staying overnight. As discussed earlier in the handbook, pain control requires a multimodal or balanced approach and the use of local anaesthetics, NSAIDs and short acting opioids will have ideally been used. However, should analgesia be required, it is important that nurses consider that the patients will be discharged within a short timeframe and working together with the anaesthetist is very important. Management of any PONV is also vital at this stage.

A formalised discharge criteria from 1st stage recovery to the 2nd stage recovery (recliners or day ward) will assist the nurses to make the decision so that they do not need to be reviewed by the anaesthetist. Score based rather than time based ensures that those patients that require more attention can receive it while those who are recovering well can be moved to the next stage. Once again, documentation is very important.

2nd Stage recovery can occur in the same location as 1st stage or in a different location, either within the unit or in another area of the hospital, depending on the facility. They may be in a recliner or on a bed; both have their advantages and disadvantages.

The nurse's role is vital to continue to manage post-operative pain and PONV. During this time, the patient's carer may join the patient in the unit and it is at this time that the further education is given to the patient and/or carer. Once again, score based rather than time based criteria ensures that those patients that require more attention can receive it while those who are recovering well

can be prepared for discharge. It also assists with a 'nurse led' discharge rather than waiting for the medical team to review the patient at the end of his/her operating list. This assists with the availability of beds/recliners as well as increasing patient satisfaction and allowing them to return home to their own environment as soon as possible.

As discussed earlier, refreshments may be served at this point and the nursing staff can assess if patients are adequately hydrated and have sufficient understanding to be discharged without tolerating food and fluids.

It must be noted that although the patient may be ready for discharge following their anaesthetic, the type of surgery may require them to remain in hospital for longer and the nursing team will need clear directions regarding this.

Once again, documentation is vital.

Discharge

Once the patient is deemed ready for discharge, the nurse will ensure that the patient and/or carer have all the necessary information to be able to continue their recovery at home. The requirements for patient discharge and support has been outlined earlier in the handbook. It is important to be aware that the patient may not remember the conversation and the carer may be overwhelmed in the environment. The type of pre admission assessment and education provided will dictate whether only reinforcing information is given at this stage (which is the ideal scenario) or comprehensive education session is required.

At any stage, the nurse should be able to contact the medical team if he/she has any concerns with the patient's recovery or readiness for discharge and once again, documentation is very important.

Post Discharge Follow Up

Nurses can play a very important role with post discharge follow up via the telephone or in post-operative clinics. This not only assists with monitoring quality as discussed earlier in the handbook, but it gives an opportunity for the nurse to assess if further education or support is needed. They can ensure that the patient is tolerating food and fluids, pain is adequately managed, discuss any issues with dressings and that the patient is coping back in his/her environment.

Competencies

Finally, who makes a good day surgery nurse? Theatre and 1st stage recovery nurses can easily transition into looking after day surgery patients with some education about the differences as discussed and reassurance from the medical team that the type of procedure and anaesthetic is appropriate for day surgery.

Nurses experienced in surgical nursing will transition to admitting day surgery patients with a little

reassurance that they do not have to complete the number of admission tasks traditionally required for overnight patients and that their colleagues (both nursing and medical) have adequately assessed the patient for their suitability.

Nurses involved in preadmission, discharge and post discharge follow up are usually the most experienced surgical nurses who have excellent communication skills and a passion for education. They are required to assess a number of areas in a short time frame, often using telephone where they cannot use body language to assist with assessment.

I believe that a good day surgery nurse is one of the best nurses you can find, an excellent day surgery nurse is worth their weight in gold.