# Sri Lakshmi Narayana Institute of Medical Sciences

Date: 02.05.2018

From
Dr. Nithianandam
Professor and Head,
Department of Anaesthesia
Sri Lakshmi Narayana Institute of Medical Sciences
Bharath Institute of Higher Education and Research
Puducherry

To
The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Puducherry

**Sub: Request for Permission to conduct value-added course: Day Care Surgery**

Dear Sir,

With reference to the subject mentioned above, the department proposes to conduct a value-added course titled: Day Care Surgery for undergraduates from Jan -June 2019. We solicit your kind permission for the same.

Kind Regards

Dr. NITHIANANDAM. S

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**FOR THE USE OF DEANS OFFICE**

Names of Committee members for evaluating the course:

The Dean: Dr A.SUGUMARAN

The HOD: Dr. NITHIANANDAM. S

The Expert: Dr M KALASREE

The committee has discussed about the course and is approved.

Dean | Subject Expert | HOD

SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KOODAPAKKAM POST,
PUDUCHERRY - 605 502

OFFICE OF THE DEAN

# Sri Lakshmi Narayana Institute of Medical Sciences

OSUDU, AGARAM VILLAGE, VILLIANUR COMMUNE, KUDAPAKKAM POST,
PUDUCHERRY - 605 502.
[ Recognised by Medical Council of India, Ministry of Health letter No. U/12012/249/2005-ME ( P -II ) dt. 11/07/2011 ]
[ Affliated to Bharath University, Chennai - TN ]

## Circular

08.06.2018

**Sub: Organizing Value-added Courses: Day Care Surgery - reg**

With reference to the above mentioned subject, it is to bring to your notice that Sri Lakshmi Narayana Institute of Medical Sciences, **Bharath Institute of Higher Education and Research**, is organizing **"Day Care Surgery"** course in Jan -June 2019. The course content is enclosed below."

The application must reach the institution along with all the necessary documents as mentioned. The hard copy of the application should be sent to the institution by registered/ speed post only so as to reach on or before 15/06/2018. Applications received after the mentioned date shall not be entertained under any circumstances.

Dean

DEAN
SRI LAKSHMI NARAYANA INSTITUTE OF MEDICAL SCIENCES
OSUDU, AGARAM VILLAGE,
KUDAPAKKAM POST,
PUDUCHERRY - 605 502

Encl: Copy of Course content

# COURSE PROPOSAL

**Course Title**: **DAY CARE SURGERY**

**Course Objective:**

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1. To enable the students to learn about definition, indications and patient preparation for day care surgery

2. To acquaint themselves with newer surgical and anesthetic techniques for patients undergoing ambulatory day care surgery

**Course Outcome:**

On successful completion of the course the students will be able to identify the patients who can undergo day care procedures. They will also have knowledge of which procedures can be done in a day care set up.

**Course Audience: CRRI**

**Course Coordinator:** Dr.NITHIANANDAM. S

**Course Faculties with Qualification and Designation:**

1. Dr. M Kalasree- Associate Professor
2. Dr S. Yogeshwaran- Assistant Professor

**Course Curriculum/Topics with schedule (Min of 30 hours)**

| S.No | Date | Topic | Time | Hours | Faculty |
|---|---|---|---|---|---|
| 1 | 06.01.2019 | History and terminology | 2-3PM | 2 | Dr. Kalasree |
| 2 | 13.01.2019 | Definition and patient selection | 2-3PM | 2 | Dr S. Yogeshwaran |
| 3 | 20.01.2019 | indications | 2-3pm | 2 | Dr. Kalasree |
| 4 | 27.01.2019 | Group discussion | 2-3PM | 2 | Dr S. Yogeshwaran |
| 5 | 03.02.2019 | Algorithm and group discussion | 2-3PM | 2 | Dr. Kalasree |
| 6 | 10.02.2019 | Objectives and functions | 2-3PM | 2 | Dr S. Yogeshwaran |
| 7 | 17.02.2019 | Pre op assessment | 2-3PM | 2 | Dr. Kalasree |
| 8 | 24.02.2019 | Pre op fasting guidelines | 2-3PM | 2 | Dr S. Yogeshwaran |
| 9 | 03.03.2019 | Day care anaesthesia | 2-3PM | 2 | Dr. Kalasree |
| 10 | 10.03.2019 | Monitored anaesthesia care | 2-3PM | 2 | Dr S. Yogeshwaran |
| 11 | 17.03.2019 | Recovery and post op care | 2-3PM | 2 | Dr. Kalasree |
| 12 | 24.03.2019 | Discharge criteria | 2-3PM | 2 | Dr S. Yogeshwaran |
| 13 | 31.03.2019 | Fast tracking in DCS | 2-3PM | 2 | Dr. Kalasree |
| 14 | 07.04.2019 | advantages and disadvantages | 2-3PM | 2 | Dr S. Yogeshwaran |
| 15 | 14.04.2019 | final assessment | 2-3PM | 2 | Dr. Kalasree |

**REFERENCES**

1) Daniel J Quemby, Mary E Stocker, Day Surgery Development and practice: key factors for a successful pathway, continuing Education in Anaesthesia Critical Care & Pain, Volume 14, Issue 6, December 2014, Pages 256-261, https://doi.org/10.1093/bjaceaccp/mkt066

2) Normal S. Williams, P. Ronan O'Connell, Andrew W. McCaskie (2018) Bailey & Love Short Practice of Surgery 27th ed.

3) MANOJ VAIDYA, Ambulatory surgery

## VALUE ADDED COURSE

**1. Name of the program & Code**

DAY CARE SURGERY, ANAES 09

**2. Duration & Period**

30 hrs: Jan 2019- June 2019

**3. Information Brochure and Course Content of Value Added Courses**

*Enclosed as Annexure- I*

**4. List of students enrolled:**

*Enclosed as Annexure- II*

**5. Assessment procedures:**

Multiple choice questions- *Enclosed as Annexure- III*

**6. Certificate of Participation:**

*Enclosed as Annexure- IV*

**7. No. of times offered during the same year:**

1 Time JAN 2019-JUNE 2019

**8. Year of discontinuation: 2019**

**9. Summary report of each program year-wise**

| Value Added Course- January 2019- June 2019 | | | | | |
|---|---|---|---|---|---|
| **Sl. No** | **Course Code** | **Course Name** | **Resource Persons** | **Target Students** | **Strength & Year** |
| 1 | ANAES 09 | DAY CARE SURGERY | DR. M KALASREE | CRRI | 20 |

**10. Course Feed Back**

*Enclosed as Annexure- V*

**RESOURCE PERSON**

**DR. M KALASREE**

**COORDINATOR**

**Dr S NITHIANANDAM**

**ANNEXURE I**

# DAY CARE SURGERY

## TOPICS:

- Introduction
- Design of ambulatory surgery facilities
- Organizational aspects
- Pre-operative assessment
- Patient information Procedures suitable for ambulatory surgery
- Day of admission
- Recovery Process
- Patient discharge and support
- Discharge analgesia
- Monitoring Quality

**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 center/unit, free standing or hospital based, who requires extended recovery including overnight stay, before discharge the following day'.

When comparing international ambulatory surgery rates for a particular operation it is important to realize 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 programmers that encourage early mobilization. 2. Advances in both anesthesia 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, anesthetists 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 mindset 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 organized.

*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 Centers in the UK. However there are fewer freestanding 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 majorfacility and so allow more challenging cases to be managed.

*Office based surgery*

The provision of surgery in a suitable area within the 'surgeon's 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 arelimiting 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 hemorrhage during a laparoscopic procedure, then it is easy 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 recognize that the above situation may well be unavoidable especially in the beginning. The issues raised canbe helped by careful organization. Having a clear patient pathway sothat 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 daycare surgery and who will lead the development of local policies, guidelines and Clinical Governance in this area. A consultant anesthetist 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 Anesthetist 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 anesthesia, 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 organize audit strategies. They should meet on a regular basis and any concerns raised must be acted on by hospital management.

**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 anesthesia 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 anesthetists. 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 Anesthetic Department. It is important that they develop guidelines for screening of patients that are accepted by their anesthetic 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 ofassessment (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 care givers 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 care givers 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 care 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 anesthetic 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 apnea of prematurity.

*Blood Pressure*

Much has been written in the past about the importance of blood pressure control and anesthesia. 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 anesthesia 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 meters). 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 anesthetic 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 Apnea*

Patients with sleep apnea 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 apnea patient for which ambulatory surgery is not recommended:  Patients with central sleep apnea 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 postoperatively.

*Diabetes Mellitus*

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

**Procedures suitable for ambulatory surgery**

Procedures can be performed as a daycare 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 mobilize 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 anesthetic 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 23hour 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.

**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 anesthetist 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, anesthetist and the nursing staff. For example pain at the end of laparoscopic surgery can be minimized by  infiltration of local anesthesia 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 anesthesia**

Infiltration of the operative site with local an aesthetic is simple, safe and provides satisfactory analgesia after most operations. There is evidence that the infiltration of local an aesthesia prior to skin incision provides better postoperative analgesia and may reduce the intraoperative analgesic requirements. Topical local anesthetic as eye drops or local anesthetic 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 Anesthesia**

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%.

**Recovery Process**

**First Stage Recovery**

This constitutes the initial recovery period following anesthesia, 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 an aesthetic 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 care giver 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 pressurized into leaving too early. However, it is also important that the staff have a routine for the mobilization 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 care givers 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 mobilization 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 differenceto 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 being

**Patient discharge and support**

Every patient should be seen following their operation by the anesthetist 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 care giver 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).

**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.

**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  utilization 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 areinappropriate 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.

## VALUE ADDED COURSE

## DAY CARE SURGERY

### Annexure II

STUDENT ENROLLMENT LIST ( JAN-JUNE 2019)

| S.No. | University no | Name of the student | Year / CRRI | Signature |
|---|---|---|---|---|
| 1. | U14MB281 | NILA.R | CRRI | |
| 2. | U14MB282 | NIMINESH.B.S | CRRI | |
| 3. | U14MB283 | NIVETHA. B | CRRI | |
| 4. | U14MB284 | NONG LEGO | CRRI | |
| 5. | U14MB285 | OBED NEWMAI | CRRI | |
| 6. | U14MB286 | PAVITHRA. S | CRRI | |
| 7. | U14MB287 | PRADEEPA. A | CRRI | |
| 8. | U14MB288 | PRASANNA.S | CRRI | |
| 9. | U14MB289 | PRAVEENKUMAR.V | CRRI | |
| 10. | U14MB290 | PREMKUMAR. P | CRRI | |
| 11. | U14MB291 | PRIATHAM SWAMINATHAN.S | CRRI | |
| 12. | U14MB292 | PRITHVIRAJAN. R | CRRI | |
| 13. | U14MB293 | PRIYADHARSHINI.K | CRRI | |
| 14. | U14MB294 | PRIYADHARSHINI.P | CRRI | |
| 15. | U14MB295 | RAJALINGAM. N | CRRI | |
| 16. | U14MB296 | RAJESWARI. J | CRRI | |
| 17. | U14MB297 | RAMKATHIR | CRRI | |
| 18. | U14MB298 | RANGARAJAN. R | CRRI | |
| 19. | U14MB299 | RAVEENDHAREN.V | CRRI | |
| 20. | U14MB300 | RENIL KUMAR. A | CRRI | |

**RESOURCE PERSON**

**DR. M KALASREE**

**COORDINATOR**

**Dr S NITHIANANDAM**

**Annexure III**

# MCQs DAY CARE SURGERY

1. Following surgeries can be done as day care procedure
   a. Fibroadenoma breast
   b. Gastrojejunostomy
   c. Craniotomy
   d. CABG

2. Lab investigations for day care surgery are
   a. EEG
   b. Hb
   c. ECHO
   d. None of the above

3. Following anesthesia can be given for day care surgry
   a. TIVA
   b. Caudal anaesthesia
   c. Filed block
   d. All of the above

4. The best anaesthesia for day care surgery is
   a. Peripheral nerve blocks
   b. General anaesthesia
   c. Epidural anesthesia
   d. All of the above

5. Best analgesia for day care surgery
   a. Morphine
   b. IV Paracetamol
   c. IV Propofol
   d. IV Diclofenac Sodium

6. Advantages of day care surgery
   a. High morbidity
   b. Early discharge
   c. Expensive
   d. Higher respiratory complications

7. Exclusion criteria for day care surgery
    a. ASA I
    b. ASAII
    c. ASAIII
    d. ASA V

8. All the following are designs of ambulatory surgery facilities except
    a. Office based surgery
    b. Self contained ambulatory surgery unit
    c. Self contained ambulatory ward
    d. Post anaesthesia care unit

9. Pain assessed by
    a. VAS
    b. ALDRED SCORE
    c. GCS
    d. None

10. The recovery ward should contain

    a. Privacy
    b. Rest rooms
    c. To provide food/fluids
    d. All of the above

R. NILA

8/10

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OBED NEWMAI

6/10

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**Annexure V**
**Student Feedback Form**

Course Name: **DAY CARE SURGERY**

Subject Code: **ANAES 09**

Name of Student: _____ Roll No.: _____

We are constantly looking to improve our classes and deliver the best training to you. Your evaluations, comments and suggestions will help us to improve our performance

| Sl. NO | Particulars | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Objective of the course is clear | | | | | |
| 2 | Course contents met with your expectations | | | | | |
| 3 | Lecturer sequence was well planned | | | | | |
| 4 | Lectures were clear and easy to understand | | | | | |
| 5 | Teaching aids were effective | | | | | |
| 6 | Instructors encourage interaction and were helpful | | | | | |
| 7 | The level of the course | | | | | |
| 8 | Overall rating of the course | 1 | 2 | 3 | 4 | 5 |

*** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory**

Suggestions if any:

**Annexure V**
**Student Feedback Form**

Course Name: **DAY CARE SURGERY**

Subject Code: **ANAES 09**

Name of Student: Rajeswari - J Roll No.: U14MB296

We are constantly looking to improve our classes and deliver the best training to you.

Your evaluations, comments and suggestions will help us to improve our performance

| Sl. NO | Particulars | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Objective of the course is clear | | | | | ✓ |
| 2 | Course contents met with your expectations | | | ✓ | | |
| 3 | Lecturer sequence was well planned | | | | ✓ | |
| 4 | Lectures were clear and easy to understand | | | | | ✓ |
| 5 | Teaching aids were effective | | | ✓ | | |
| 6 | Instructors encourage interaction and were helpful | | | | ✓ | |
| 7 | The level of the course | | | | | ✓ |
| 8 | Overall rating of the course | 1 | 2 | 3 | 4 | 5 |

*** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory**

Suggestions if any:

Keep it up

**Annexure V**
**Student Feedback Form**

Course Name: **DAY CARE SURGERY**

Subject Code: **ANAES 09**

Name of Student: Premkumar. P Roll No.: 0114MB290

We are constantly looking to improve our classes and deliver the best training to you.

Your evaluations, comments and suggestions will help us to improve our performance

| Sl. NO | Particulars | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Objective of the course is clear | | | ✓ | | |
| 2 | Course contents met with your expectations | | | | ✓ | |
| 3 | Lecturer sequence was well planned | | | | | ✓ |
| 4 | Lectures were clear and easy to understand | | | | ✓ | |
| 5 | Teaching aids were effective | | | | | ✓ |
| 6 | Instructors encourage interaction and were helpful | | | | | ✓ |
| 7 | The level of the course | | | | ✓ | |
| 8 | Overall rating of the course | 1 | 2 | 3 | 4 | 5 |

*** Rating: 5 – Outstanding; 4 - Excellent; 3 – Good; 2– Satisfactory; 1 - Not-Satisfactory**

Suggestions if any:

Very Good.

From
Dr M Kalasree
Head Of Department Incharge
Department of Anaesthesia
Sri Lakshmi Narayana Institute of Medical Sciences
Puducherry

Date: 06.05.2019

To
The Dean,
Sri Lakshmi Narayana Institute of Medical Sciences
Puducherry

**Sub: Completion of value-added course: DAY CARE SURGERY**

Dear Sir,

With reference to the subject mentioned above, the department has conducted the value-added course titled: Day Care Surgery in Jan-June 2019 for 20 students. We solicit your kind action to send certificates for all the participants, whose name list is attached with this letter. Also, I am attaching the photographs captured during the conduct of the course.

Kind Regards,
Dr. M Kalasree

**Encl: Certificates**

**Photographs**

# Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)

## CERTIFICATE OF MERIT

This is to certify that _RAJESHWARI J_____ has actively participated in the Value Added Course on Day Care Surgery held during January - June 2019 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr.KALASREE M
RESOURCE PERSON

Dr. KALASREE M
COORDINATOR

# Sri Lakshmi Narayana Institute of Medical Sciences

Affiliated to Bharath Institute of Higher Education & Research

(Deemed to be University under section 3 of the UGC Act 1956)

## CERTIFICATE OF MERIT

This is to certify that _RANGARAJAN R_____ has actively participated in the Value Added Course on Day Care Surgery held during January - June 2019 Organized by Sri Lakshmi Narayana Institute of Medical Sciences, Pondicherry- 605 502, India.

Dr.KALASREE M
RESOURCE PERSON

Dr. KALSREE M
COORDINATOR


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