SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai

DEPARTMENT OF CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

COURSE NAME: Introduction to Surgery & CSSD

TOPIC : Pre-Operative Preparation

PREOPERATIVE PREPARATION

- **Definition:**

Preoperative preparation is the preparation of a patient requiring surgery to optimize postoperative outcomes.

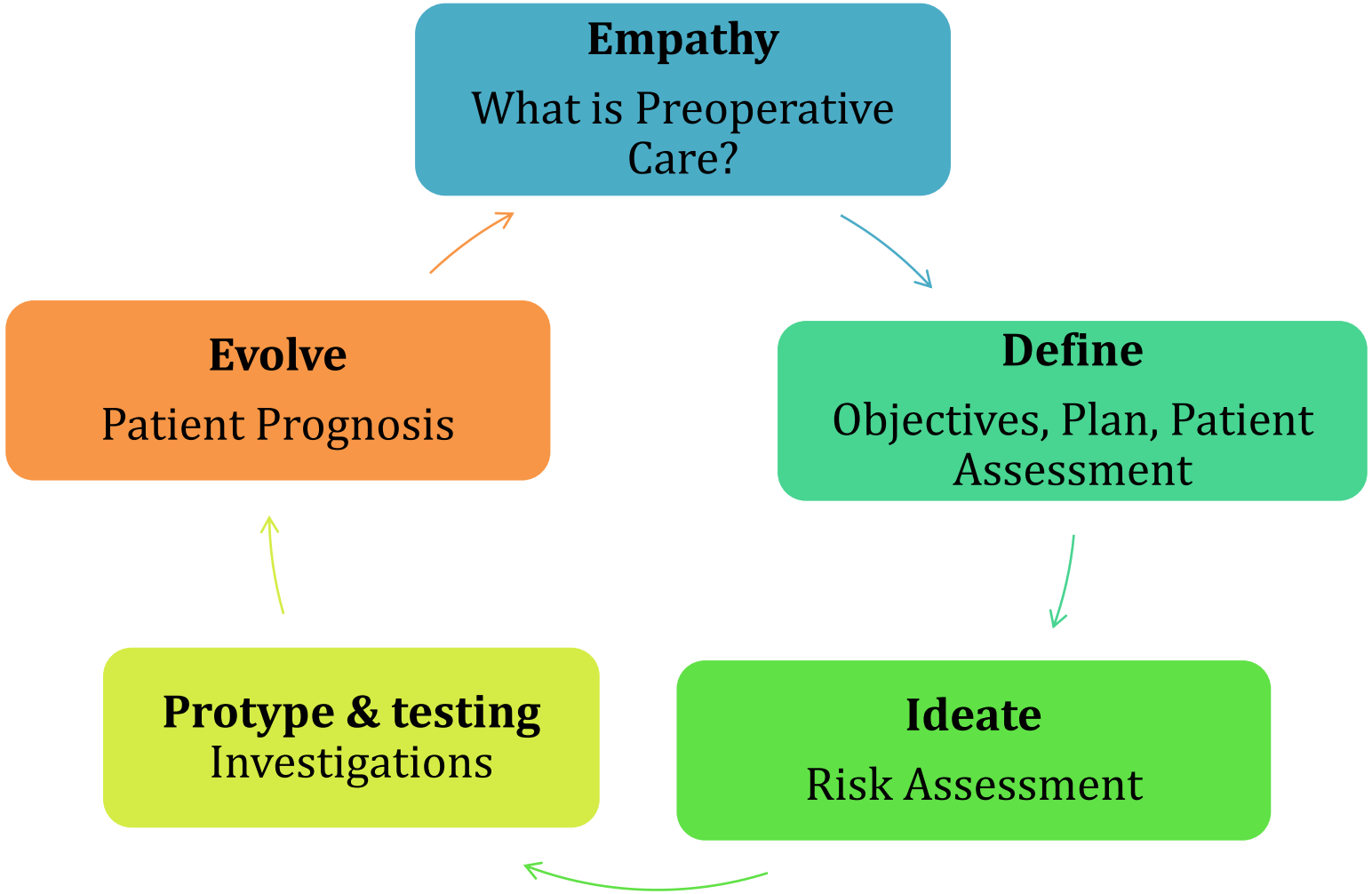
- **From Which phase it is considered as Preop Preparation?**

The preparation begins from the time of contact of the patient with the surgeon and ends on the day of surgery in the preoperative room.

- **Who involves in this preparation?**

The approach is multidisciplinary. It involves participation of anesthetic and surgical teams, radiologists, pathologists, specialist nursing staff and Operating Room staffs.

DESIGN THINKING FRAMEWORK



OBJECTIVES

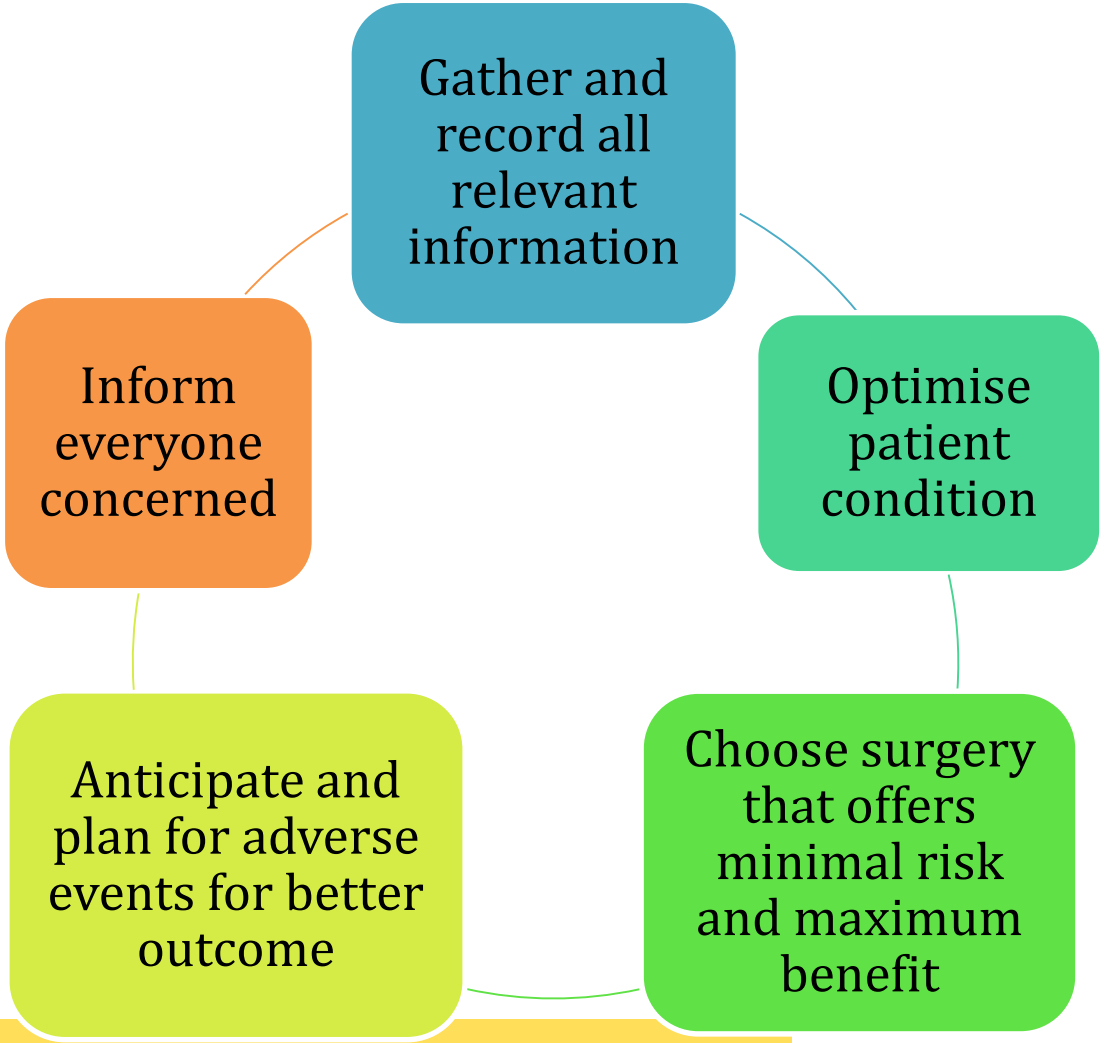
- Surgical, medical and anesthetic aspects of assessment
- How to optimise the patient's condition
- How to take consent
- How to organise an operating list

INTRODUCTION

- A 'preoperative assessment' is essential to gather all information
- To optimize co morbidities
- To organize anesthetic, surgical care
- To organize postoperative care before surgery
- Patients with severe co morbidities should be referred to the relevant specialist to quantify the risks and to take appropriate measures to minimize operative morbidity.
- Surgery cannot be made risk free, but risks must be known so that the patient can make an informed decision.
- Patients should be given advice on when they should be nil by mouth (NBM)
- what to do about regular medications and premedication.

A plan for the operating list should be drawn up and all those involved in making the list run smoothly should be informed.

PREOPERATIVE PLAN



PATIENT ASSESSMENT

History Taking

Physical Examination

Investigations

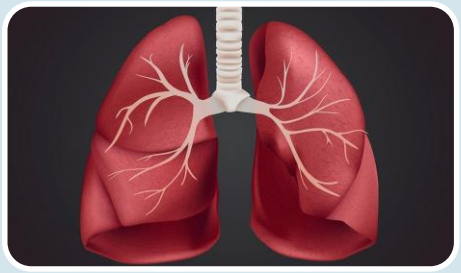
Risk Assessment & Consent

Intraoperative & Post-Op Medications

HISTORY TAKING

- A standard questions were taken for assessing the fitness for surgery
- Surgery specific symptoms (Onset, Duration, Exacerbating factors should be assessed)

High blood pressure, chest pains, palpitation, syncope, dyspnoea and poor exercise tolerance.



History of smoking, productive cough, wheeze, dyspnea, hoarseness of voice

Past surgery and anesthesia can reveal problems that may present during current hospitalization

The use of drugs and alcohol should be noted as they are known to be associated with adverse outcomes.

EXAMINATION

Anaemia, jaundice, cyanosis, nutritional status, sources of infection

Pulse, blood pressure, heart sounds, bruits, peripheral edema

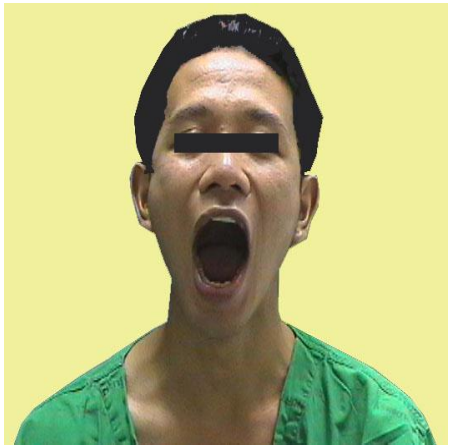
Respiratory rate and effort, chest expansion & percussion note, breath sounds, O2 saturation

Abdominal masses, ascites, bowel sounds, hernia, genitalia

Consciousness level, cognitive function, sensation, muscle power, tone and reflexes

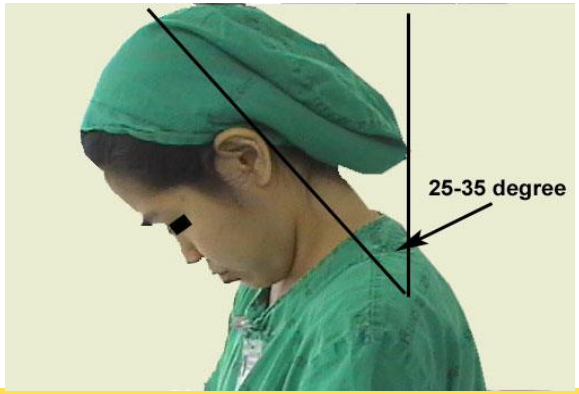
AIRWAY ASSESSMENT

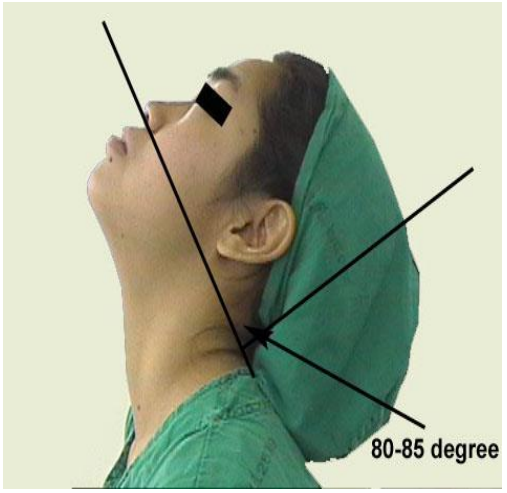
Interincisor gap : normal -> more than 3 cms



Thyromental distance : more than 6 cms

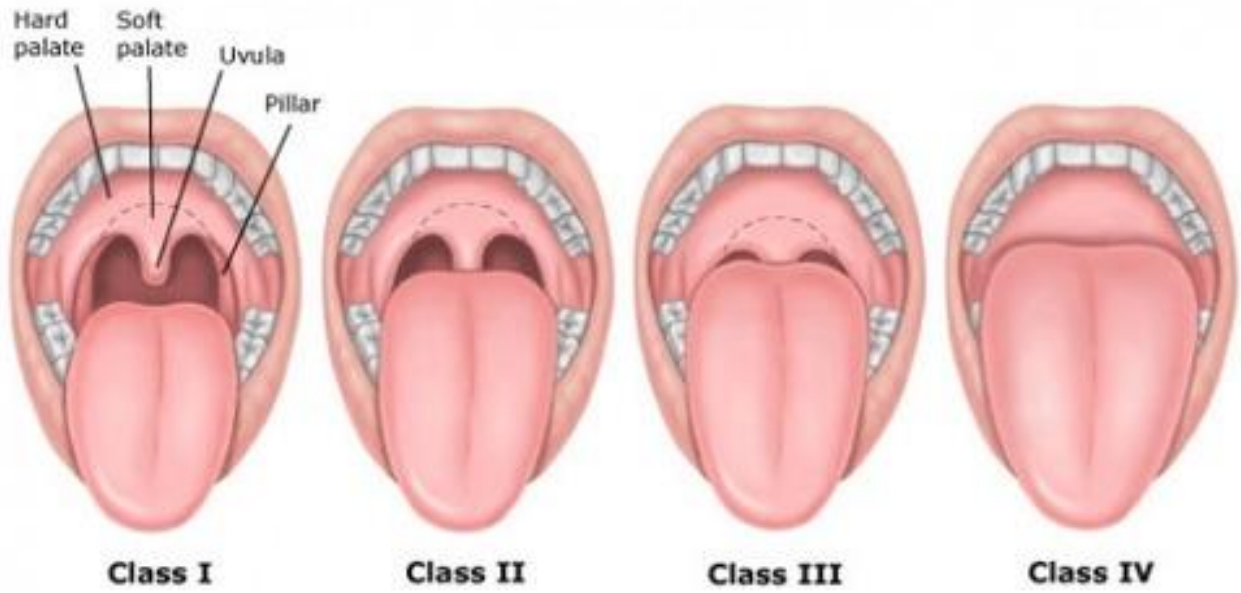
Flexion and extension of neck





MALLAMPATI SCALE

- **Class I** is present when the soft palate, uvula, and pillars are visible
- **Class II** when the soft palate and the uvula are visible
- **Class III** when only the soft palate and base of the uvula are visible
- **Class IV** when only the hard palate is visible.



SURGICAL POINT OF EXAMINATION

General	Positive findings not related to surgery
Surgery related	Type and site of Surgery and Complications occurs due to its pathology
Systemic	Co-morbidities and their severity
Specific	Specific Examination for positioning of patient for surgery

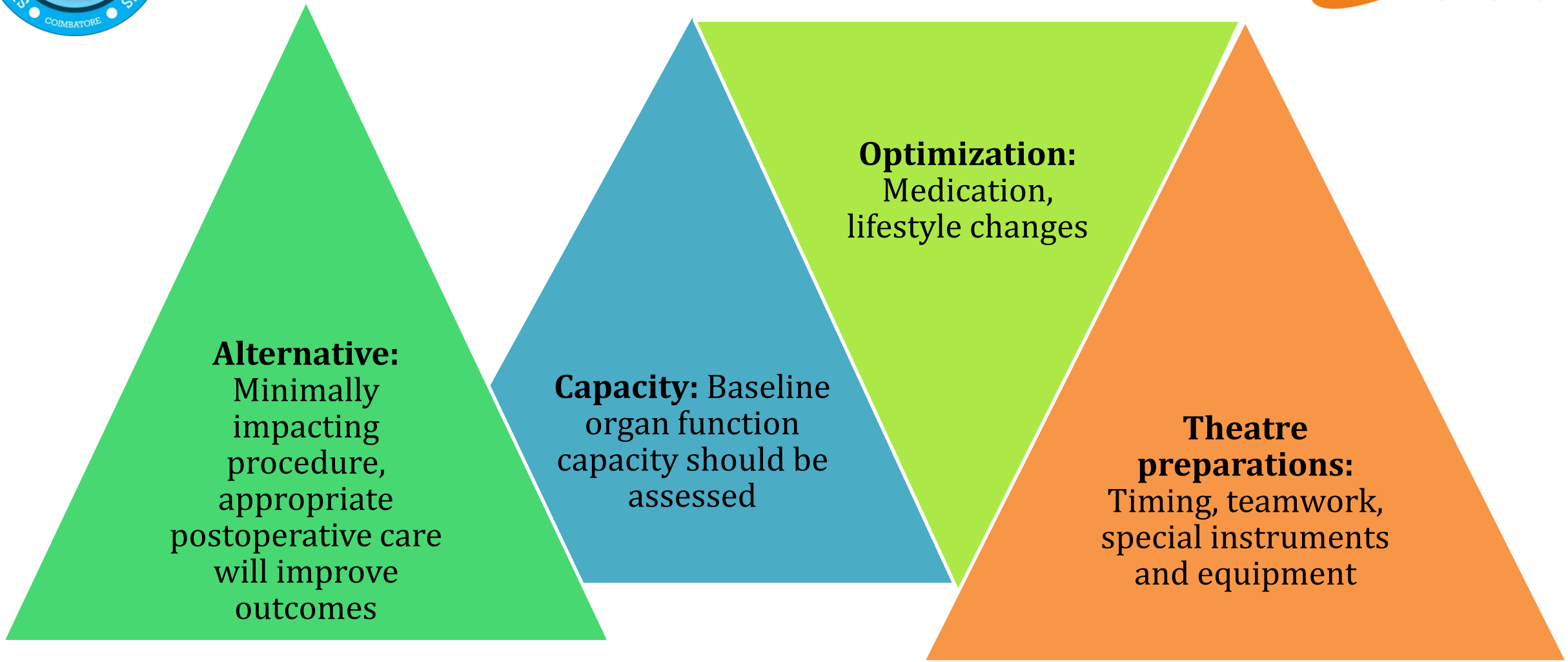
ASSESSMENT – I

- Purpose of Preoperative Preparation?
- What are the different airway management?
- What are the patient assessment modalities?

INVESTIGATIONS

- Full blood count
- Serum creatinine
- Electrocardiography
- Chest radiography
- Urinalysis
- Blood glucose and HbA1C
- Others (Clotting screening, B-Human chorionic gonadotrophin, Arterial blood gases, Liver function tests, Relevant investigations to assess capacity of specific organ system and risk associated)

MANAGING SYSTEMIC DISEASE



RISK ASSESSMENT & CONSENTS

- **Risks –** Related to co-morbidities, anesthesia and surgery
- **Explain –** Advantages, Side Effects and Prognosis
- **Language –** Simple , Use daily life comparisons to explain risk
- **Consents –** Valid consent is necessary except in life saving circumstances

DUTIES OF NURSE

- To provide information and emotional support for patients and their family members.
- To ensure that all preoperative data have been accumulated
- To maintain patients' baseline hemodynamic status.
- Instructing and demonstrating exercises that will benefit the patient postoperatively.

ARRANGING THE THEATRE LIST

- The date, place and time of operation should be matched with availability of personnel.
- Appropriate equipment and instruments should be made available.
- The operating list should be distributed as early as possible to all staff who are involved in making the list run smoothly.
- Prioritize patients, e.g. children and diabetic patients should be placed at the beginning of the list; life- and limb-threatening surgery should take priority; cancer patients need to be treated early.

NIL PER MOUTH

- Patients are advised not to take solids within 6 hours and clear fluids (isotonic drinks and water) within 2 hours before anesthetic to avoid the risk of acid aspiration syndrome.

- Infants are allowed a clear drink up to 2 hours, mother's milk up to 3 hours and cow or formula milk up to 6 hours before anesthetic.

- Patients can continue to take their specified routine medications with sips of water in the nil by mouth period.

MEDICATIONS

- Continue medication over the perioperative period, especially drugs for hypertension, ischemic heart disease and bronchodilators.
- Give patients on oral steroid therapy intravenous hydrocortisone.
- Stop oral warfarin anticoagulation 3-4 days preoperatively
- check the prothrombin time prior to surgery.
- If the prothrombin time remains unacceptably high, the patient may require an infusion of fresh frozen plasma.
- Those on warfarin who have had a life-threatening thrombotic episode (e.g. pulmonary embolus) within the previous 3 months should be switched to heparin intravenously until 6h before surgery: the heparin can usually be recommenced 4h after surgery.

CONCLUSION

- The anticipated outcome of preoperative preparation is a patient who is informed about the surgical course, and copes with it successfully.

- ***The goal is to decrease complications and promote recovery.***

- When patients are adequately prepared psychologically and physically, and policies and guidelines have been followed, the risk of postoperative complications should be low, leading to a quick recovery.

ASSESSMENT – II

- What is consent?
- What is Nil Per Mouth?
- What are the certain Blood Investigations?

THANK YOU

References:

https://www.osmosis.org/learn/Preoperative_care:_Nursing

https://www.wikilectures.eu/w/Preoperative_preparation#:~:text=The%20goal%20of%20preoperative%20preparation,diagnosis%20and%20type%20of%20operation.

https://stanfordhealthcare.org/medical-treatments/g/general-surgery/procedures/surgery-preparation.html

https://basicmedicalkey.com/preoperative-preparation-of-the-patient/