

SNS COLLEGE OF ALLIED HEALTH SCIENCE

Affiliated to The Tamil Nadu Dr MGR Medical University, Chennai

**DEPARTMENT OF CARDIOPULMONARY PERFUSION CARE
TECHNOLOGY**

COURSE NAME: Introduction to Surgery

UNIT III - PREOP & POST-OP CARE & EMERGENCY PROCEDURE

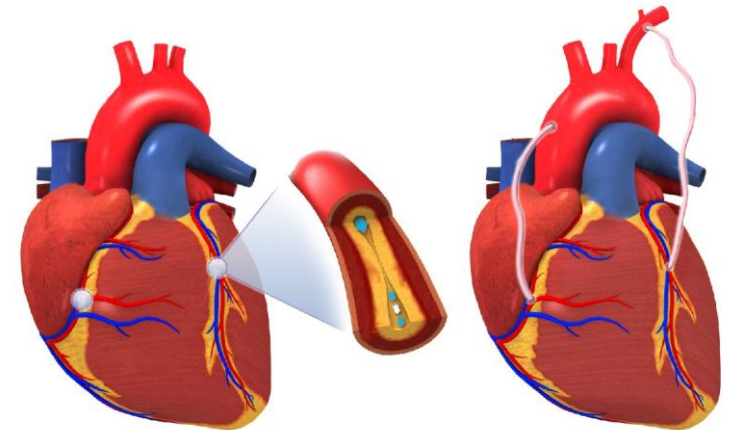
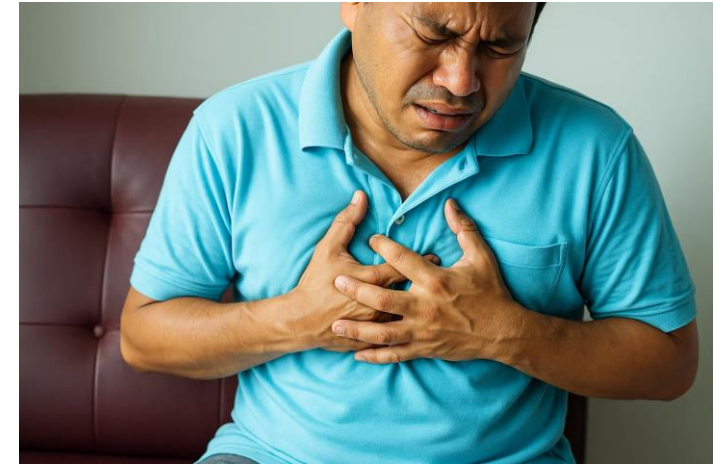
TOPIC : Pre-operative Preparation

FACULTY NAME: Mrs. Saranyaa Prasath

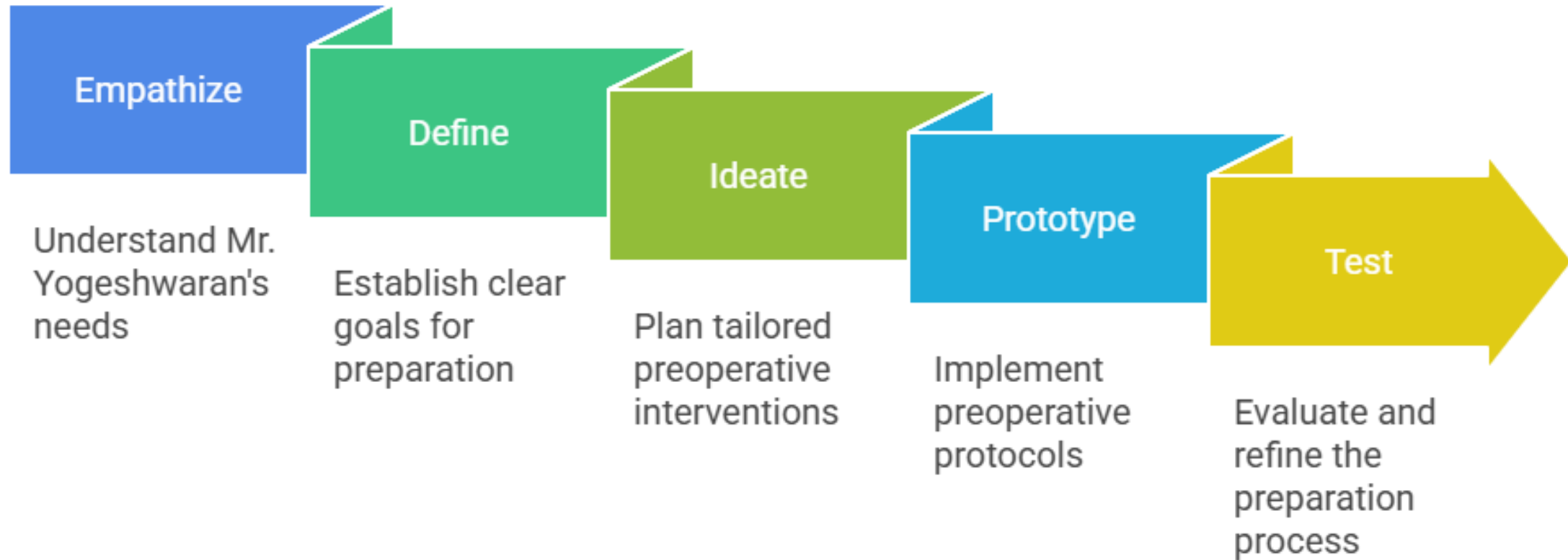
Case Overview

Patient Details:

- **Name:** Mr. Yogeshwaran, 43-year-old male
- **Presentation:** Chest pain, sweating, angina
- **Diagnosis:** Acute myocardial infarction with blockages in Left Main (LM) and Right Coronary Artery
- **Plan:** Coronary Artery Bypass Grafting (CABG)
- **Status:** Conscious, oriented, admitted to preoperative ward next day
- **Objective:** Optimize preoperative care to ensure safe surgery and recovery.

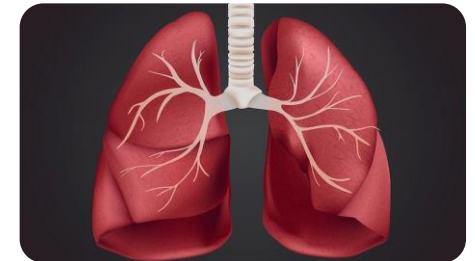


Design Thinking Framework for Preoperative Care



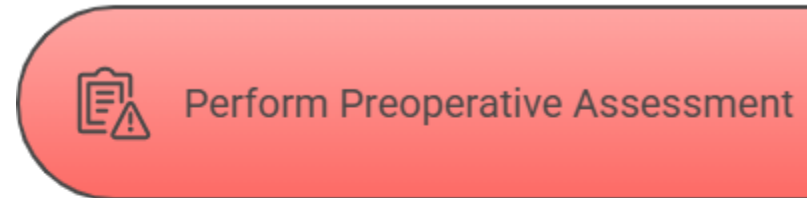
Empathize – Understand Patient Needs

- **Objective:** Gather comprehensive patient information to tailor care.
- **Actions:**
 - **Conduct detailed history taking:**
 - **Symptoms:** Chest pain, sweating, angina (onset, duration, exacerbating factors).
 - **Medical history:** Hypertension, smoking, past surgeries, medications.
 - **Psychological state:** Assess anxiety about CABG.
 - Engage with Mr. Yogeshwaran to understand fears and expectations.
- **Purpose:** Build empathy to address physical and emotional needs.
- **Team:** Surgeons, nurses, counselors.



Define – Set Preoperative Goals


- **Objective:** Define a clear plan to prepare Mr. Yogeshwaran for CABG.



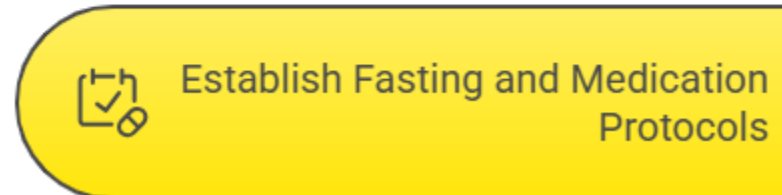
Identify risks such as cardiac instability and bleeding risk.

- **Purpose:** Ensure patient safety and optimize surgical outcomes.

Plan anesthetic and surgical care, including airway assessment.

Plan Anesthetic and Surgical Care 

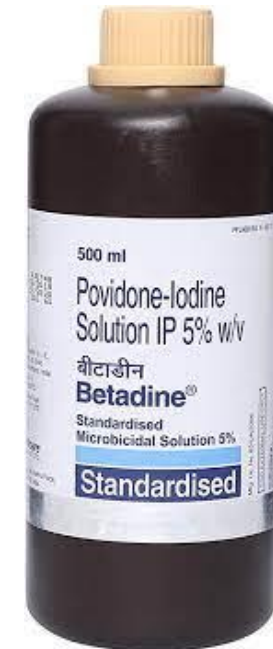
- **Reference:** Multidisciplinary approach (surgeons, anesthesiologists, OR staff).



Establish fasting and medication protocols for the patient.

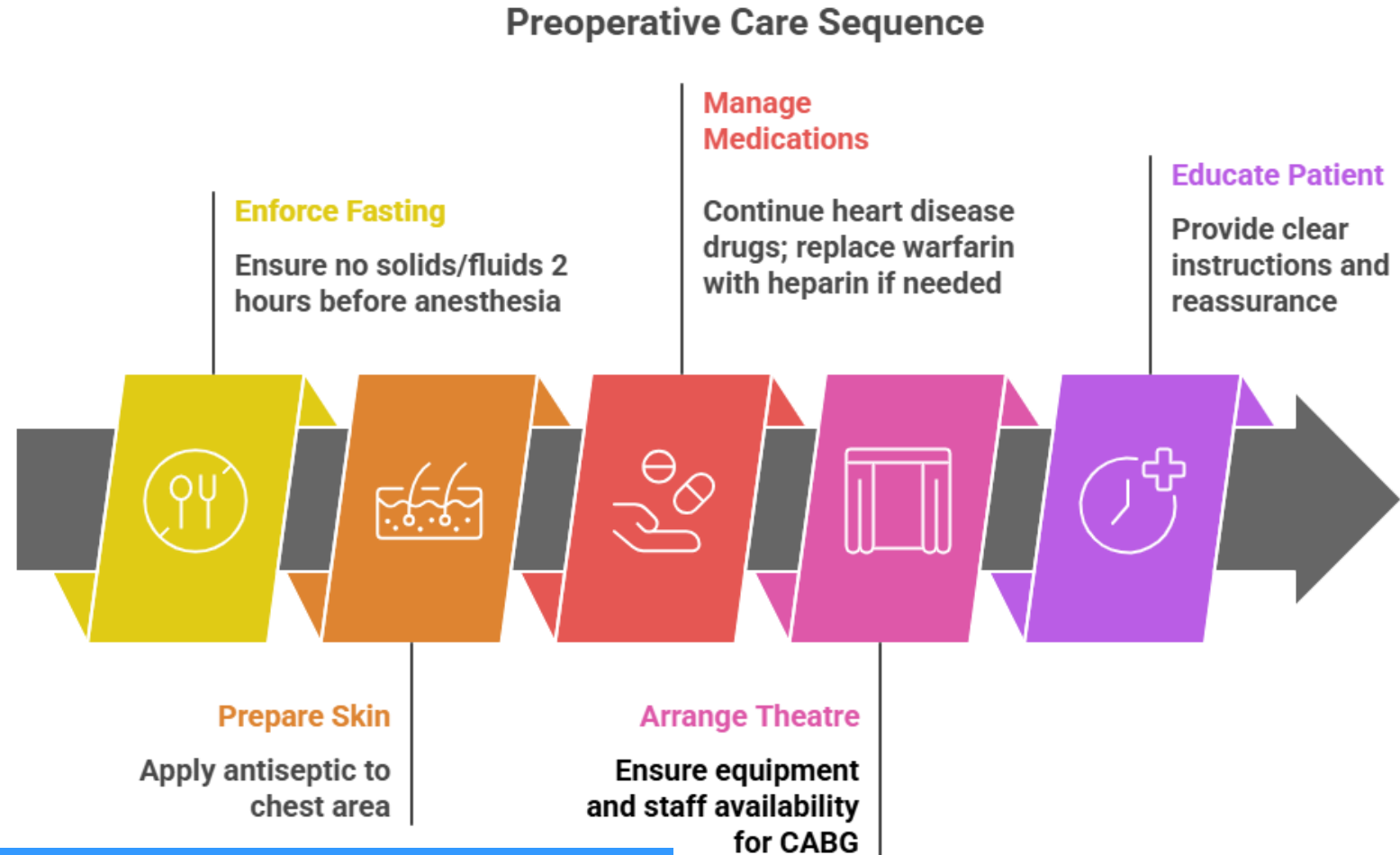
Ideate – Plan Preoperative Interventions

- **Objective:** Develop solutions to prepare Mr. Yogeshwaran for surgery.
- **Solutions:**
 - **Fasting:** Nil by mouth (solids/clear fluids 2 hours prior).
 - **Skin Preparation:** Use Betadine/Chlorhexidine for chest area.
 - **Medication Management:** Continue heart medications, adjust anticoagulants (e.g., stop warfarin 3-4 days prior).
 - **Theatre Planning:** Prioritize CABG on operating list.
 - **Patient Education:** Explain procedure and recovery expectations.
- **Purpose:** Address all aspects of preoperative care to reduce risks.



Prototype – Implement Protocols

- **Objective:** Apply preoperative interventions for Mr. Yogeshwaran.
- **Purpose:** Create a tangible preparation process.



Test – Evaluate and Refine

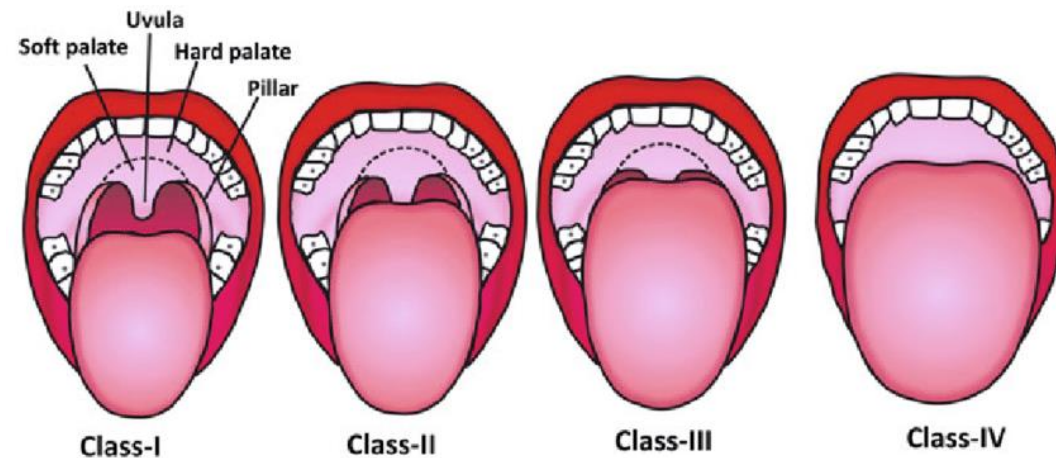
- **Objective:** Ensure Mr. Yogeshwaran is fully prepared for CABG.
- **Actions:**
 - **Verify compliance:** Confirm fasting, skin prep, and medication adjustments.
 - **Check patient readiness:** Ensure psychological comfort and informed consent.
 - **Monitor risks:** Assess prothrombin time; administer fresh frozen plasma if needed.
 - **Finalize theatre list:** Confirm CABG prioritization and resource availability.
- **Purpose:** Minimize complications and promote quick recovery.
- **Outcome:** A physically and psychologically prepared patient.



Additional Considerations

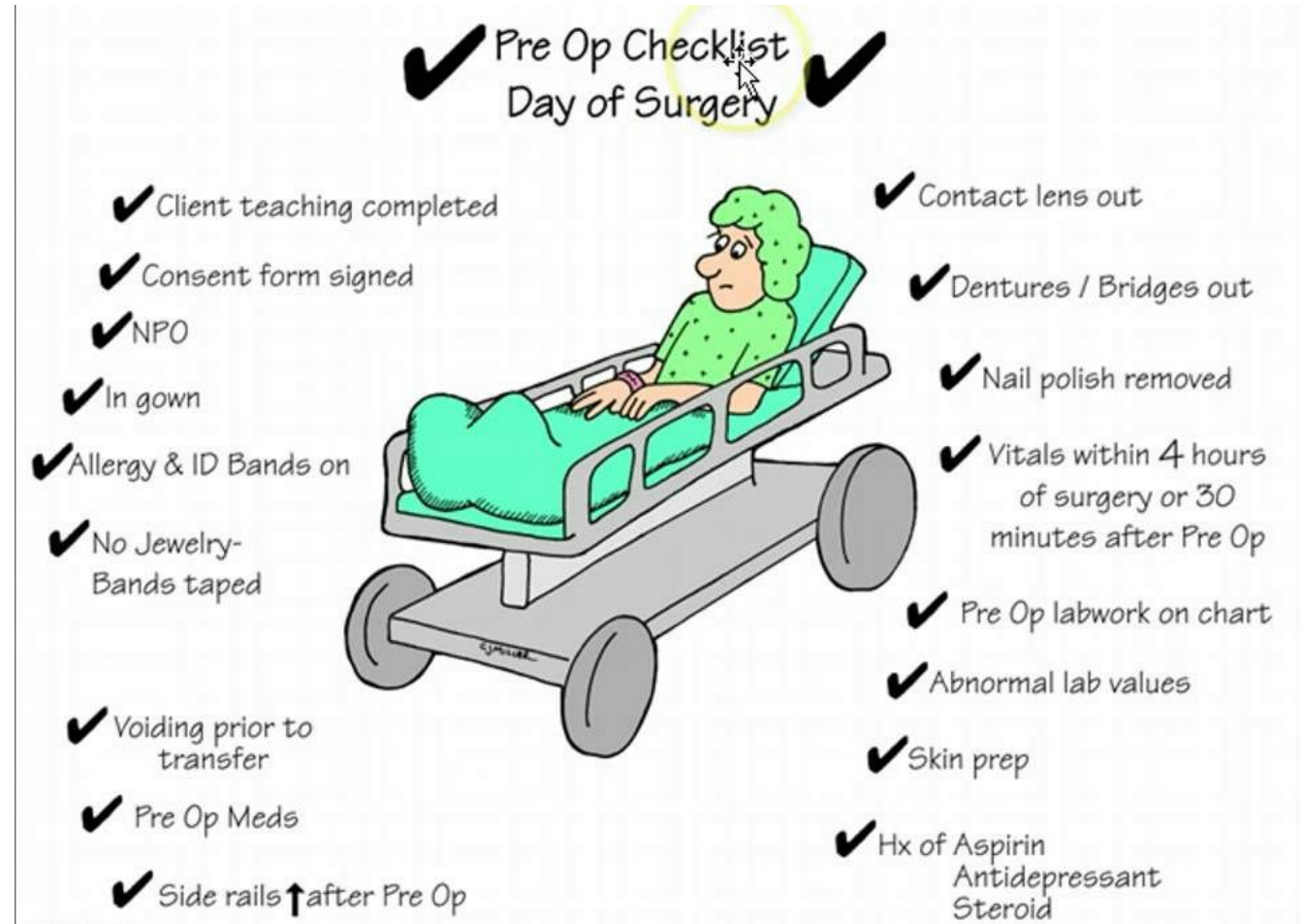
Special Protocols:

- **Mallampati Scale:** Assess airway (Class I-IV) for anesthesia planning.
- **Anticoagulation:** If recent thrombosis (e.g., pulmonary embolus), use heparin until 6 hours pre-surgery.
- **Patient Prioritization:** Place urgent cases like Mr. Yogeshwaran early on the operating list.
- **Infection Control:** Ensure sterile surgical site with antiseptics.



In – class Assessment

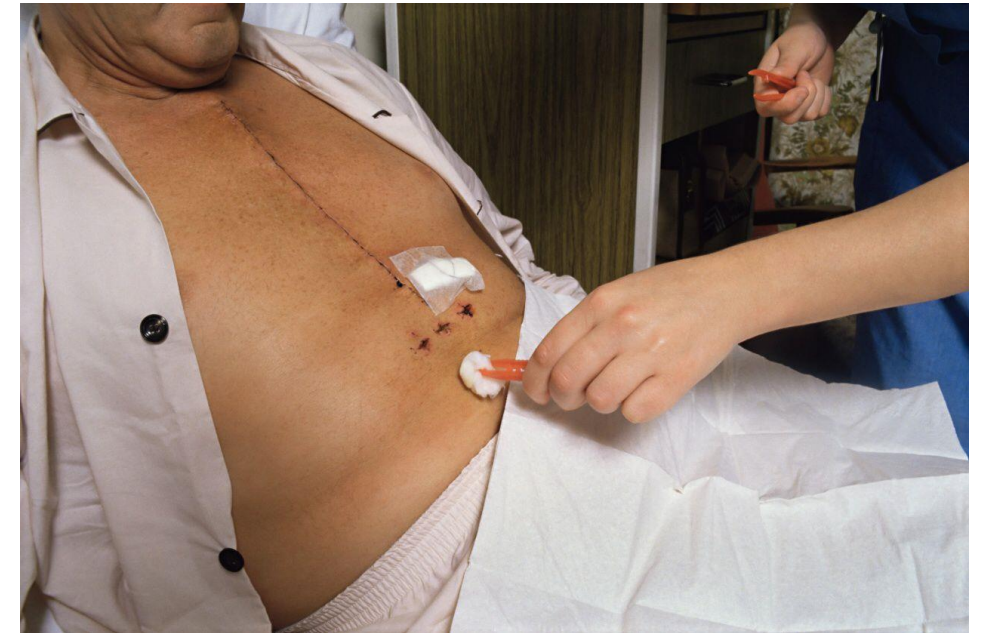
- What are the airway assessment?
- Which class of score is difficult to intubate in Mallampatti Score?
- **Design one pre-operative checklist for patient preparation for surgery (5 minutes time duration)**



Conclusion

Summary:

- Using Design Thinking, Mr. Yogeshwaran's preoperative care is patient-centered, systematic, and multidisciplinary.
- The process ensures physical preparation (fasting, skin prep, medications) and psychological readiness.
- **Expected Outcome:** Reduced complications, faster recovery post-CABG.



Summary



References

- [https://www.osmosis.org/learn/Preoperative care: Nursing](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://www.wikilectures.eu/w/Preoperative_preparation#:~:text=The%20goal%20of%20preoperative%20preparation,diagnosis%20and%20type%20of%20operation.)
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THANK YOU