### SNS COLLEGE OF ALLIED HEALTH SCIENCE, COIMBATORE

(Affiliated to the Tamil Nadu Dr. M.G.R Medical University, Chennai)

#### B.SC., RADIOGRAPHY AND IMAGING TECHNOLOGY

**Subject code / subject :** 1852 / Modern Imaging Modalities and Recent Trends in Imaging

Year: Third Year

# **Topic: ULTRASONOGRAPHY/DOPPLER STUDIES**

### **Logistic Puzzle**

#### **Case Scenario**

In a busy clinic, schedule TAS for 10 patients, TVS for 5, TRUS for 3, neck USG for 4, and extremities Doppler for 6. Logistics: TAS needs 30-min slots with full bladder prep (1-hour wait); TVS/TRUS require private rooms with lithotomy setups; neck/extremities need linear probes and quick positioning. Factor in maintenance (15-min disinfection post-invasive) and peak hours (9 AM-12 PM). Optimize flow for reproducible quality without delays.

## **Objectives**

- Logistically plan preparations, room assignments, and positioning logistics.
- Allocate time for patient instructions and care (e.g., consent for invasive).
- Integrate clinical apps (e.g., vascular for extremities) and trends (portable units).
- Ensure quality through sequenced assurance protocols.

#### **Instructions**

Map a half-day schedule. Assign rooms, times, and logistics steps. Use the image to visualize multi-room flow.

### Questions

- 1. Logistically, how to sequence TAS before TVS for same patient to minimize wait?
- 2. What room logistics for TRUS (e.g., enema station) and positioning aids?
- 3. For extremities Doppler, why supine/prone logistics differ from neck, and time impact?
- 4. How to logistically assure quality: Insert maintenance breaks without disrupting reproducibility?

#### Clues

- Clue 1: Hydration prep for TAS; overlap with non-invasive neck.
- Clue 2: Private for endocavitary; knee-chest aids for TRUS.
- Clue 3: Elevate legs for venous; 20-min slots vs. 45 for abdominal.
- Clue 4: Disinfect post-shift; checklists for probe calibration.

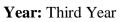


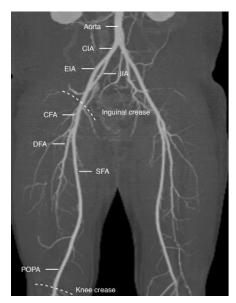
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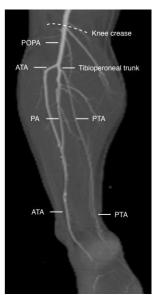
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(Image illustrates lower extremity positioning steps; logistically adapt for clinic flow.)

Rubrics	Marks Alloted (out of 10 marks)
Accuracy of Preparations & Instructions	3
Positioning & Patient Care	3
Clinical Applications & Techniques	2
Quality Assurance &	2
Reproducibility	
TOTAL MARKS	10 marks

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