



DEDER GENERAL HOSPITAL

ELECTIVE SURGERY PROTOCOL

BY: HSQU

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Deder, Oromia, Ethiopia

SMT APPROVAL SHEET

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TABLE OF CONTENTS

1. INTRODUCTION	1
2. PURPOSE.....	2
3. SCOPE.....	2
4. Definitions and Abbreviations	3
6. PROCEDURE.....	3
6.1 Daily Briefing (Beginning of OR Day).....	3
6.2 Daily Debriefing (End of OR Day)	5
5.1 Preoperative Phase	6
5.1.1 Patient Evaluation.....	6
5.1.2 Laboratory and Imaging Investigations	7
5.2 Intraoperative Phase	8
5.4 Emergency Case Management During Elective Surgery Day	11
5.4.1 Identification and Triage of Emergency Cases.....	11
5.4.2 Decision-Making Process for Interrupting Elective Surgery	11
5.4.3 Communication Protocol.....	12
5.4.4 Resource Allocation and Reconfiguration.....	13
5.4.5 Documentation of Emergency Interruption.....	13
5.4.6 Resumption of Elective Schedule.....	14
5.4.7 Post-Event Review.....	14
5.4.8 Mitigation Strategies for Frequent Emergency Disruptions.....	15
6. Standards and Monitoring	15
6.1 Turnaround Time.....	15
6.2 First Case Start Time	16
6.3 Operating Room (OR) Schedule.....	16
6.4 Number of Available Elective OR Tables.....	16
6.5 Shift Implementation	17
6.6 Notification System.....	17
6.7 Infection Prevention.....	18
7. ROLES AND RESPONSIBILITIES	18

8. ETHICAL CONSIDERATIONS.....	19
9. DOCUMENTATION AND REPORTING.....	19
10. MONITORING AND EVALUATION.....	19
11. CHALLENGES AND MITIGATION STRATEGIES.....	19
13. REFERENCES.....	20
14. APPENDICES.....	21
Appendix 1: OR Daily Schedule format	21
Appendix 2: Customized Elective Surgery Schedule Notification Format	22
Appendix 3: Turnaround Time Monitoring Tool	23
Appendix 4: Staff Duty Roster format (2-Shift System)	24

1. INTRODUCTION

Elective surgery plays a critical role in reducing the burden of disease and improving quality of life in the population served by Deder General Hospital. Unlike emergency procedures, elective surgeries are planned in advance, allowing sufficient time for proper preparation, patient optimization, and resource allocation. However, despite being “planned,” elective procedures are not risk-free. They require a structured framework to ensure patient safety, effective utilization of hospital resources, and consistent delivery of high-quality care.

Deder General Hospital, as a district-level general hospital, serves a large population from urban and rural areas. The demand for elective surgery is steadily increasing, especially for procedures in general surgery, obstetrics and gynecology, orthopedics, and ear, nose, and throat (ENT). The hospital faces challenges such as limited staff, high patient load, interruptions from emergencies, and supply shortages. These challenges make it essential to adopt a clear and practical elective surgery protocol.

This protocol is designed to standardize surgical practices, strengthen communication and coordination, reduce unnecessary delays, and ensure efficient use of operating theatres. It is also aligned with Ethiopia’s National Surgical Guidelines and the World Health Organization’s Safe Surgery Framework.

2. PURPOSE

The purpose of this elective surgery protocol is to:

1. Ensure patient safety through standardized processes and consistent adherence to evidence-based practices.
2. Improve surgical efficiency by minimizing turnaround times between cases and maintaining reliable scheduling systems.
3. Provide clear roles and responsibilities for all surgical team members, promoting accountability and teamwork.
4. Strengthen documentation, monitoring, and reporting mechanisms to support audits and continuous quality improvement.
5. Align the hospital's surgical practice with national and international standards in patient safety and universal health coverage.

3. SCOPE

This protocol applies to:

- ☞ **All elective surgical procedures** performed at Deder General Hospital.
- ☞ Both departments: Surgery Department and Obstetrics and Gynecology
- ☞ All surgical team members:
 - + surgeons,
 - + Obstetrics and Gynecology Specialist
 - + Anesthetists,
 - + Scrub nurses,
 - + Circulating nurses,
 - + Operating theatre coordinators, and
 - + support staff.
- ☞ Hospital administrators and quality assurance officers overseeing adherence and evaluation.

4. Definitions and Abbreviations

- ❖ **Elective Surgery** – Planned surgical intervention not requiring immediate life-saving action.
- ❖ **Briefing:** A structured meeting conducted at the beginning of the OR day to review the schedule, assign responsibilities, and confirm readiness.
- ❖ **Debriefing:** A structured meeting at the end of the OR day to review surgical activities, discuss problems, and plan corrective actions.
- ❖ **Turnaround Time** – Interval between the completion of one surgery and the start of the next.
- ❖ **Scrub Nurse** – Nurse responsible for sterile preparation and assistance during surgery.
- ❖ **Circulating Nurse** – Nurse responsible for supporting the surgical team and maintaining records.
- ❖ **ASA Classification** – American Society of Anesthesiologists Physical Status Classification.
- ❖ **NPO** – Nil per Os (nothing by mouth).
- ❖ **WHO Checklist** – World Health Organization Surgical Safety Checklist.

6. PROCEDURE

6.1 Daily Briefing (Beginning of OR Day)

- ❖ **Time:** Conducted **5-10 minutes** before the first scheduled case.
- ❖ **Location:** Operating Theatre briefing area.
- ❖ **Facilitator:** OR Coordinator or **OR Director**.
- ❖ **Participants:** All surgical team members scheduled for the day.

Agenda:

1. Welcome and attendance check.
2. Review OR schedule and planned procedures.

3. Confirm patient readiness:

- Preoperative checklist completed.
- Lab/imaging results available.
- Consent signed.

4. Equipment and supply verification:

- Surgical instruments and sutures available.
- Sterile packs and drapes ready.
- Anesthesia machine checked.
- Blood products available if needed.

5. Role allocation:

- Surgeon, anesthetist, scrub nurse, circulating nurse.

6. Anticipated risks:

- High-risk patients.
- Complicated or prolonged procedures.
- Emergency case overlap.

7. Safety reminders:

- WHO Surgical Safety Checklist.
- Infection prevention measures.
- Emergency protocols.

Documentation:

- ☛ Completed **Daily OR Briefing Form**.
- ☛ Signatures of all participants.

6.2 Daily Debriefing (End of OR Day)

- ☞ **Time:** Immediately after the last case.
- ☞ **Location:** Operating Theatre debriefing area.
- ☞ **Facilitator:** OR Coordinator or Lead Surgeon.
- ☞ **Participants:** All team members present at end of day.

Agenda:

1. Review of surgeries performed, postponed, or cancelled.
2. Outcomes of each case (successes, complications, intraoperative events).
3. Equipment or supply challenges.
4. Workflow issues: turnaround time delays, patient readiness gaps.
5. Team communication and coordination.
6. Infection prevention compliance.
7. Documentation of complications, near misses, or adverse events.
8. Development of action points:
 - Corrective measures.
 - Assigned responsibilities.
 - Timeline for implementation.

Documentation:

- ☞ **Daily OR Debriefing Minutes** Form containing:
 - Key issues discussed.
 - Action plans.
 - Assigned staff.
 - Deadlines.
- ☞ Signed by facilitator and submitted to the **OR Director**.

The elective surgery procedure at Deder General Hospital is designed to provide a safe, efficient, and standardized approach to patient care throughout the entire perioperative pathway. It is divided into three main phases: **Preoperative, Intraoperative, and Postoperative**. Each phase is critical, interconnected, and requires careful planning, multidisciplinary collaboration, and adherence to evidence-based practices.

5.1 Preoperative Phase

The preoperative phase begins from the moment a patient is scheduled for surgery until the transfer to the operating theatre. Proper preoperative preparation reduces complications, improves surgical outcomes, and ensures efficient use of hospital resources.

5.1.1 Patient Evaluation

- ❖ **Medical history:** Comprehensive history-taking is mandatory. This includes current illness, past medical history, surgical history, medications, allergies, social history, and family history. Special attention should be given to comorbidities such as hypertension, diabetes, HIV/AIDS, tuberculosis, cardiac disease, renal disease, or respiratory disorders.
- ❖ **Physical examination:** A complete physical examination must be conducted with focus on airway assessment, cardiovascular status, respiratory system, and overall functional status.
- ❖ **Optimization of comorbidities:** Patients with poorly controlled conditions (e.g., uncontrolled diabetes, hypertension, or anemia) must be optimized before surgery through appropriate medical interventions. Where optimization is not possible, risks should be clearly documented, and the case may be postponed.

5.1.2 Laboratory and Imaging Investigations

- ☞ **Basic investigations:** Complete blood count, blood grouping and crossmatching, renal function tests, and blood glucose.
- ☞ **Additional investigations:** ECG, chest X-ray, ultrasound, or CT scan depending on the surgery and patient condition.
- ☞ **Pregnancy test:** Mandatory for women of reproductive age unless otherwise confirmed.

All investigations must be reviewed by the attending surgeon and anesthetist before proceeding.

5.1.3 Anesthesia Assessment and Risk Stratification

- ☞ The anesthesia team should conduct a **formal assessment** using the ASA (American Society of Anesthesiologists) classification system.
- ☞ Special considerations: difficult airway, risk of malignant hyperthermia, or allergies to anesthetic agents.
- ☞ Patients at higher risk must have tailored anesthesia plans with contingency strategies for complications.

5.1.4 Informed Consent

- ☞ Consent must be obtained in the **local language**.
- ☞ It should include the **procedure name, purpose, risks, benefits, alternatives, possible complications, and expected recovery course**.
- ☞ The patient or their legal guardian must sign the consent form in the presence of a witness.
- ☞ Consent is both an **ethical requirement** and a **legal protection** for the patient and the hospital.

5.1.5 Site Marking and Surgical Checklist

- ☞ The surgeon must mark the operative site using a **permanent marker** in the presence of the patient, preferably while the patient is awake.
- ☞ Verification should be done during the “Sign In” step of the WHO checklist.
- ☞ Wrong-site surgery is a “**never event**” and must be completely avoided.

5.1.6 Patient Preparation

- ☞ **Fasting (NPO):** Patients must fast for at least 6 hours for solids and 2 hours for clear fluids before anesthesia.
- ☞ **Skin preparation:** Hair removal should be avoided unless necessary. If required, it should be done using clippers immediately before surgery. The surgical site should be cleaned with antiseptic solution (chlorhexidine or povidone-iodine).
- ☞ **Prophylactic antibiotics:** Administered within **60 minutes prior to incision** to minimize surgical site infections.

5.2 Intraoperative Phase

The intraoperative phase is critical and requires a highly coordinated team effort. The goals are to ensure sterile conditions, provide safe anesthesia, perform the surgical procedure effectively, and minimize intraoperative complications.

5.2.2 Sterile Setup and Verification

- ☞ The scrub nurse must confirm availability of all required **drapes, sutures, instruments, and implants** before incision.
- ☞ Sterile technique must be strictly observed, including gowning, gloving, and draping.
- ☞ Any breaks in sterility must be immediately reported and corrected.

5.2.3 WHO Surgical Safety Checklist

- ☞ The WHO checklist is mandatory for all cases.
- ☞ The three stages of the checklist are:
 - ✚ **Sign In (before induction)** – patient identity, site, allergies, airway risks.
 - ✚ **Time Out (before incision)** – procedure, site, equipment readiness.
 - ✚ **Sign Out (before leaving OR)** – procedure performed, instrument count, specimen labeling, postoperative concerns.

5.2.4 Continuous Monitoring

- ☞ The anesthetist monitors **oxygenation, ventilation, circulation, and temperature** throughout the surgery.
- ☞ Scrub and circulating nurses monitor surgical field, blood loss, and provide instruments.
- ☞ Unexpected events (e.g., hemorrhage, arrhythmia, cardiac arrest) must be promptly managed according to hospital emergency protocols.

5.2.5 Documentation of Intraoperative Events

- ☞ Intraoperative record must include:
 - ✚ Start and end time
 - ✚ Type of anesthesia
 - ✚ Blood loss estimate
 - ✚ Fluids and drugs administered
 - ✚ Complications, if any
 - ✚ Names of surgical team members

5.3 Postoperative Phase

The postoperative phase begins immediately after surgery and continues until patient recovery and discharge. It ensures patient safety, pain management, early detection of complications, and continuity of care.

5.3.1 Transfer to Recovery Unit

- ☞ A **verbal and written handover** must be provided by the anesthetist and circulating nurse to the recovery team.
- ☞ The handover must include: procedure performed, anesthesia used, intraoperative events, medications given, and anticipated risks.

5.3.2 Postoperative Monitoring

- ☞ Patients must be monitored for:
 - + Vital signs (every 15 minutes initially, then hourly)
 - + Oxygen saturation
 - + Pain level
 - + Wound status and drainage
 - + Urine output if catheterized
- ☞ The recovery room must be staffed by trained nurses with resuscitation equipment available.

5.3.3 Documentation

- ☞ Postoperative chart must be completed, including recovery status and any complications.
- ☞ The theatre logbook must be updated with key surgical details.

5.3.4 Discharge Planning

- ☞ Patients should only be discharged when stable, pain is controlled, and there are no major complications.
- ☞ Clear instructions must be provided regarding wound care, medications, activity restrictions, and follow-up appointments.

5.4 Emergency Case Management During Elective Surgery Day

The hospital recognizes that emergency surgical cases may arise during scheduled elective surgery days. These emergencies require immediate attention and may necessitate interruption of the elective schedule. This section outlines the standardized process for managing emergency cases while minimizing disruption to the elective surgery schedule and ensuring patient safety for both emergency and elective patients.

5.4.1 Identification and Triage of Emergency Cases

- ☞ Emergency cases must be identified and triaged using the hospital's established emergency classification system:
 - ✚ **Category 1** (Immediate life-threatening): Requires surgery within 30 minutes (e.g., major trauma, ruptured aortic aneurysm, active hemorrhage)
 - ✚ **Category 2** (Urgent): Requires surgery within 6 hours (e.g., acute appendicitis, bowel obstruction)
 - ✚ **Category 3** (Semi-urgent): Requires surgery within 24 hours (e.g., non-complicated hernias, some orthopedic fractures)
- ☞ **The on-call surgical team** (surgeon, anesthetist, nurses) is responsible for initial assessment and triage
- ☞ Triage decisions should be documented with rationale in the patient's medical record

5.4.2 Decision-Making Process for Interrupting Elective Surgery

- ☞ When an emergency case is identified, the following personnel must convene immediately (**in person or via phone**):
 - ✚ OR coordinator
 - ✚ Surgical team leader
 - ✚ Anesthetist on duty
 - ✚ Medical director (or designated representative)

❖ This team must determine:

- Whether the emergency requires immediate use of the OR
- Which elective case(s) will be postponed (prioritizing based on surgery complexity, patient condition, and time already invested in preparation)
- Whether parallel scheduling in alternative spaces is possible

❖ **Criteria for interrupting elective surgery:**

- **Category 1** emergencies take absolute priority and require immediate OR access
- **Category 2** emergencies may be accommodated if they can be completed before the next elective case or during natural breaks
- **Category 3** emergencies should generally be scheduled for the next available emergency slot or next day, unless OR capacity allows

5.4.3 Communication Protocol

❖ Once the decision is made to accommodate an emergency case:

- OR coordinator immediately notifies all affected staff (surgeons, anesthetists, nurses) using the hospital's emergency notification system
- Affected elective patients are notified by their surgical team with explanation and rescheduling information
- The emergency surgical team is assembled within 15 minutes of notification
- Relevant departments (lab, blood bank, pharmacy) are alerted to prepare for emergency case
- The hospital administration is informed of significant schedule disruptions

❖ All communications should be documented in the OR logbook with timestamps

5.4.4 Resource Allocation and Reconfiguration

- ☞ The OR team will quickly reconfigure the operating room for the emergency case:
 - ✚ If an elective case is already in progress, it will be completed if safe to do so before transitioning to the emergency case
 - ✚ If no case is in progress, the OR is immediately prepared for the emergency procedure
 - ✚ Priority is given to ensuring necessary equipment, instruments, and supplies are available
 - ✚ Blood products, if needed, are prioritized for emergency cases following hospital transfusion protocol
 - ✚ The hospital maintains an "Emergency Case Kit" with essential instruments for common emergency procedures

5.4.5 Documentation of Emergency Interruption

- ☞ The OR coordinator documents in the Turnaround Time Monitoring Tool (Appendix 3) and daily OR log:
 - ✚ Time of emergency notification
 - ✚ Nature of emergency and triage category
 - ✚ Decision-making process and personnel involved
 - ✚ Cases postponed and reason for postponement
 - ✚ Estimated delay for affected elective cases
 - ✚ Resources utilized for the emergency case
 - ✚ Time taken to resume elective schedule

5.4.6 Resumption of Elective Schedule

After the emergency case is completed:

- + OR team assesses whether remaining elective cases can proceed based on:
 - Remaining OR time
 - Patient condition (some may need to be rescheduled for another day)
 - Staff availability and fatigue levels
 - Equipment and supply status
- + Priority is given to cases where significant preparation has already occurred (e.g., patients already NPO, prepped, or in the holding area)
- + The OR coordinator communicates the revised schedule to all stakeholders within 30 minutes of the emergency case completion
- + Patients whose cases were postponed receive priority scheduling for the next available elective slot

5.4.7 Post-Event Review

- After the emergency interruptions of elective surgery are reviewed weekly by the surgical quality team:
 - Appropriateness of the decision to interrupt
 - Efficiency of the response (time from notification to OR access)
 - Impact on elective surgery schedule and patient outcomes
 - Resource utilization and potential improvements
- Significant events (those causing >2 hours of delay or affecting >3 elective cases) trigger a more detailed root cause analysis
- Findings from these reviews inform quarterly updates to this protocol

5.4.8 Mitigation Strategies for Frequent Emergency Disruptions

- ☞ The hospital maintains a designated emergency OR table separate from the elective OR when resources allow
- ☞ Elective surgery schedules include buffer time (as shown in Appendix 1) to accommodate minor emergencies
- ☞ A weekly emergency surgery capacity planning meeting is held to anticipate potential high-risk periods
- ☞ Staffing levels are adjusted based on historical emergency case volumes by day of week

6. Standards and Monitoring

Standards and monitoring mechanisms are essential to ensure the safety, efficiency, and quality of elective surgical services.

6.1 Turnaround Time

- ☞ **Definition:** The interval between the completion of one surgery and the start of the next.
- ☞ **Standard:** The hospital maintains a maximum of **20 minutes**.
- ☞ **Rationale:** Prolonged turnaround time reduces efficiency, delays patient care, and leads to overcrowding.
- ☞ **Monitoring Mechanism:**
 - Scrub nurse records start and end times.
 - OR coordinator reviews daily reports.
 - Weekly review is conducted by the surgical team leader and quality officer.
 - Delays must be documented with reasons (e.g., instrument shortage, patient not ready, anesthesia delay).

6.2 First Case Start Time

- ☞ The hospital standard is that the **first case incision must start before 8:00 am** for all elective surgeries.
- ☞ Compliance is ensured through:
 - ⊕ **Document review** of OR register.
 - ⊕ **Observation** of OR schedule to confirm initiation time.
- ☞ This practice reduces unnecessary delays, improves theatre utilization, and ensures patients benefit from early scheduling.

6.3 Operating Room (OR) Schedule

- ☞ Deder General Hospital maintains a structured **OR schedule** to ensure efficient use of the **1 functional elective OR table**.
- ☞ **The schedule is designed to:**
 - ♣ Start the **first case before 8:00 am**.
 - ♣ Optimize case flow and minimize delays.
 - ♣ Balance workload between surgeons, anesthetists, and nursing staff.
 - ♣ Ensure fair access for elective patients, including private wing cases
- ☞ **Monitoring:**
 - ♣ OR Coordinator oversees daily adherence.
 - ♣ Deviations are documented and reviewed weekly.

6.4 Number of Available Elective OR Tables

- ☞ The hospital currently has **one functional elective operating room (OR)** tables.
- ☞ Only functional table are considered for elective scheduling.

- ❖ Scheduling is distributed based on:
 - Case urgency and complexity
 - Available staff and anesthetist coverage
 - Efficient use of the One OR tables to reduce waiting time

6.5 Shift Implementation

- ❖ Elective surgeries are conducted in **two shifts**:
 1. **Morning shift:** At least before **8:00 AM** until **11:30 AM**)
 2. **Afternoon shift:** From **1:30 PM – 10:30 PM**)

❖ Benefits:

- Reduces congestion in operating theatres.
- Provides flexibility for staff.
- Increases patient access to surgery.

- ❖ **Monitoring:** Theatre utilization is reviewed monthly to assess workload distribution across shifts.

6.6 Notification System

- ❖ The hospital uses a **customized format** to notify the head nurse and scrub nurse.
- ❖ Notifications include:
 - Type of surgery
 - Expected duration
 - Instruments and sutures required
 - Number of drapes and sterile packs

- ❖ **Schedule Communication:** A copy of the schedule is posted in the OR and shared electronically with relevant staff.

Rationale:

-  Prevents **last-minute confusion**,
-  Ensures preparedness, and
-  Minimizes case delays.

6.7 Infection Prevention

-  **Sterile attire:** All staff must wear sterile gowns, gloves, masks, and caps.
-  **Theatre cleaning:** Operating room surfaces must be cleaned after each case with approved disinfectants.
-  **Instrument sterilization:** All instruments must undergo autoclaving or appropriate sterilization.
-  **Antibiotic prophylaxis:** Administered within 1 hour before incision, adjusted to patient's risk and surgery type.
-  **Hand hygiene:** All staff must comply with the WHO "5 Moments of Hand Hygiene."

7. ROLES AND RESPONSIBILITIES

-  **Surgeons** – Perform surgical procedures, obtain informed consent, and ensure postoperative follow-up.
-  **Anesthetists** – Conduct preoperative assessments, provide anesthesia, and monitor recovery.
-  **Scrub Nurses** – Prepare sterile field, manage surgical instruments, assist surgeons.
-  **Circulating Nurses** – Manage supplies, maintain records, and support team communication.
-  **Operating Room Coordinator** – Schedule cases, monitor turnaround time, oversee adherence.

8. ETHICAL CONSIDERATIONS

- ❖ **Equity** – Fair allocation of theatre time to all patients regardless of socioeconomic status.
- ❖ **Patient Autonomy** – Informed consent must be obtained for all procedures.
- ❖ **Confidentiality** – All patient information must remain secure.
- ❖ **Justice** – Elective cases should not be unjustly delayed due to favoritism or corruption.

9. DOCUMENTATION AND REPORTING

All surgical procedures must be documented using standard hospital formats:

- ♣ Preoperative checklist.
- ♣ Scrub nurse notification form.
- ♣ Turnaround time monitoring sheet.
- ♣ WHO Surgical Safety Checklist.
- ♣ Theatre logbook.

10. MONITORING AND EVALUATION

- ❖ **Monthly nursing audits** – compliance with preoperative checklists.
- ❖ **Quarterly clinical audits** – surgical outcomes, complications, readmissions.
- ❖ **Biannual KAP assessments** – staff knowledge, attitudes, and practices.

11. CHALLENGES AND MITIGATION STRATEGIES

- ❖ **Staff shortage** – addressed through shift distribution and task-sharing.
- ❖ **Supply interruptions** – mitigated by advanced procurement planning.
- ❖ **Emergency disruptions** – elective theatre time protected by parallel scheduling and clear prioritization.

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OR Daily Schedule format

| Date: _____ | Prepared by: _____ | OR Coordinator Sign: _____ Department _____

Appendix 2: Customized Elective Surgery Schedule Notification Format

Date: _____ Prepared by: _____ Head Nurse: _____ signature _____

Case no	Patient Name	AGE	SEX	MRN	Ward	Diagnosis	Procedure	Duration		Surgeon	Assistant Surgeon	Anesthetist	Scrub nurse	Required Instruments	Required Sutures	Drapes Needed	Remarks
								Starting time	Ending time								

Instructions for Use:

- ☞ Prepared by OR coordinator at least 1 day before surgery.
- ☞ Sent to Head Nurse and Scrub Nurses for advance preparation
- ☞ Must be signed by the Head Nurse to confirm readiness.

Covers:

- ☞ Instruments (e.g., laparotomy set, ortho set, vascular set).
- ☞ Sutures (e.g., Vicryl 2-0, Nylon 1, Chromic Catgut).
- ☞ Drapes (sterile, adequate in number & size).



Appendix 3: Turnaround Time Monitoring Tool

NB: TAT BETWEEN TWO CASES SHOULD NOT BE > 20 Minute



Deder General Hospital OR Staff Duty Roster format(2-shift System)