DEDER GENERAL HOSPITAL

Standard Operating Procedure (SOP) for Sustaining improvement in Use of the WHO Safe Surgery Checklist (SSC) Adherence

BY: HSQU

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Deder, Eastern Ethiopia

SMT SOP APPROVAL

TITLE	**SOP for Sustaining improvement in Use of the WHO Safe Surgery Checklist (SSC)** **Version: DGH-SOP-OR-004**			
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REVIEW	**Review date: June 2026**			

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1.0 PURPOSE

To ensure the consistent and correct use of the WHO Safe Surgery Checklist (SSC) for every surgical procedure performed at Deder General Hospital. This protocol is designed to enhance team communication, verify critical safety steps, prevent avoidable errors, and sustain an adherence rate of ≥95%, thereby improving patient safety and surgical outcomes. This SOP utilizes the Plan-Do-Study-Act (PDSA) cycle for implementation and continuous improvement.

2.0 SCOPE

This SOP applies to every member of the surgical team involved in any operative procedure conducted in the main Operating Theaters, including: surgeons, surgical assistants, anesthetists, anesthesia assistants, operating room nurses, scrub nurses, and circulating nurses.

3.0 DEFINITIONS

- **WHO Safe Surgery Checklist (SSC):** A simple tool designed to improve the safety of surgical procedures by ensuring a common understanding among team members about the patient, procedure, and potential risks at three critical phases: before anesthesia induction (SIGN IN), before skin incision (TIME OUT), and before the patient leaves the operating room (SIGN OUT).
- **SSC Adherence:** The completion of all three sections (SIGN IN, TIME OUT, SIGN OUT) for a single surgical procedure, with active participation from all relevant team members.
- **SSC Ambassador:** A designated OR staff member (e.g., circulating nurse) championing the process, facilitating its completion, and coaching staff.
- **Hard Stop:** A mandatory pause in the procedure where progression is not allowed until the specific SSC phase is completed.

- **PDSA Cycle (Plan-Do-Study-Act):** A iterative four-stage method for testing and implementing changes on a small scale to ensure effectiveness before full deployment.

4.0 RESPONSIBILITIES

- **OR Director / Surgical Lead:** Ultimate accountability for SSC compliance, fostering a culture of safety, chairing monthly review meetings, and sponsoring PDSA initiatives.
- **Anesthetist:** Leads the **SIGN IN** section before anesthesia induction. Confirms patient identity, site, consent, allergies, and airway plan.
- **Surgeon:** Leads the **TIME OUT** section before skin incision. Initiates a complete pause and confirms procedure, site, antibiotics, and critical events.
- **Circulating Nurse / SSC Ambassador:** Leads the **SIGN OUT** section before the patient leaves the OR. Documents completion in the patient record or EMR. Acts as the process champion, conducts regular audits, and participates in PDSA cycles.
- **All Team Members:** Are obligated to actively participate, speak up if a step is missed, ensure all checklist items are verbally verified, and contribute ideas for improvement.

5.0 PROCEDURE

5.1 Implementation via PDSA Cycles

Prior to full-scale execution of any changes to the SSC process (e.g., a new documentation method, a new team member role), the modifications shall be tested and refined using Plan-Do-Study-Act (PDSA) cycles. The QI Unit, in collaboration with the OR Director, will manage this process.

1. **Plan:** Design a small-scale test. Define the objective, questions, predictions, and plan (who, what, when, where). (See Appendix D).
2. **Do:** Execute the test on a small number of cases (e.g., one theater for one day). Collect data and document observations.
3. **Study:** Analyze the data. Compare results to predictions. Identify what was learned.
4. **Act:** Decide to Adopt the change, Adapt it, or Abandon it. A new PDSA cycle may be initiated to refine the process.

5.2 Pre-Procedure: SIGN IN (Before Anesthesia Induction)

1. The **Anesthetist** initiates the SIGN IN by confirming the following with the team:
    - Patient identity (name, medical record number) using two identifiers.
    - The correct surgical site is marked and visible.
    - The consent form is signed and matches the planned procedure.
    - The patient's allergy status is confirmed.
    - Airway and aspiration risk have been assessed.
    - Adequate IV access is established and fluids are planned.

5.3 Intra-Procedure: TIME OUT (Before Skin Incision)

1. The **Surgeon** initiates a complete pause. All activity stops, and the entire team (surgeons, anesthetists, nurses) listens.
2. The team verbally confirms:
    - Patient identity and procedure again.
    - Correct site and side.
    - Antibiotic prophylaxis was administered within the last 60 minutes.
    - Anticipated critical events (surgeon reviews key steps).
    - Anticipated critical events (anesthetist reviews patient-specific concerns).
    - Anticipated blood loss (>500ml?).
    - Sterility of instrumentation and implants is confirmed.
    - Any equipment issues or concerns are raised.

5.4 Post-Procedure: SIGN OUT (Before Patient Leaves OR)

1. The **Circulating Nurse or SSC Ambassador** leads this step.
2. The team verbally confirms:
    - The name of the procedure as recorded.
    - Instrument, sponge, and needle counts are correct and complete.
    - Specimens are labeled correctly (patient name, tissue type).
    - Any equipment problems to be addressed for the next case.
    - Key concerns for the patient's recovery and management.

6.0 SUSTAINABILITY & CONTINUOUS IMPROVEMENT

Goal: To ensure SSC adherence remains at ≥95% and that the safety culture is continuously reinforced through iterative learning.

6.1 Key Performance Indicators (KPIs) for Monitoring:

Category	Indicator	Formula/Target	Frequency	Responsible Body
Outcome	SSC Adherence Rate	(# with full SSC / Total cases) x 100	**Monthly**	SSC Ambassador / QI
Process	SIGN IN Completion	(% of cases where SIGN IN is done)	**Monthly**	SSC Ambassador
Process	TIME OUT Completion	(% of cases where TIME OUT is done)	**Monthly**	SSC Ambassador
Process	SIGN OUT Completion	(% of cases where SIGN OUT is done)	**Monthly**	SSC Ambassador
Balancing	On-Time Surgery Start	(% of cases starting within 15 min of scheduled time)	**Monthly**	OR Head

6.2 Monitoring Activities:

- **Daily:** SSC used for every procedure.
- **Weekly:** SSC Ambassador audits a sample of cases (min. 10) for full adherence and reviews weekly adherence rate.
- **Monthly:** The OR Director leads a performance meeting to review all KPIs, discuss audit findings, address barriers using PDSA thinking, and plan new improvement cycles.

6.3 Accountability Structure:

- **OR Director:** Ultimately responsible for sustaining high SSC adherence. Chairs monthly reviews.
- **SSC Ambassadors:** Responsible for weekly audits, real-time coaching, data collection, and leading small PDSA tests.
- **HSQU/QI Unit:** Provides oversight, facilitates data analysis, and mentors staff on PDSA methodology.

6.4 Plan for Maintaining Gains:

- **Standardization & Documentation:** This SOP is the foundational document. All successful PDSA cycle changes will be incorporated into updated versions.
- **Orientation & Training:** Integrate SSC training into mandatory orientation for all new OT staff. **PDSA Objective:** Test and refine the orientation for new staff.
- **Visual Management:** Display a run chart of the weekly SSC adherence rate in the OT staff room.
- **Leadership Engagement:** SSC adherence metrics are a standing item on the Hospital Quality Committee agenda.
- **SSC Ambassador Program:** Maintain and support the ambassador role with quarterly meetings for sharing best practices and PDSA learnings.
- **Continuous PDSA:** The team will dedicate time in monthly meetings to brainstorming and initiating PDSA cycles for new improvements (e.g., improving TIME OUT efficiency).

6.5 Triggers for Action:

If the weekly SSC Adherence Rate falls below **90%** for two consecutive weeks, it will trigger an immediate **PDSA cycle** to conduct a root cause analysis and develop, test, and implement corrective actions.

7.0 DOCUMENTATION

- Completion of all three sections (**SIGN IN, TIME OUT, SIGN OUT**) is **mandatory** for every procedure.
- The SSC completion must be documented in the **patient's paper record or Electronic Medical Record (EMR)**.
- The circulating nurse or SSC ambassador is responsible for ensuring documentation is completed.
- PDSA Cycle Worksheets and Audit Tools must be filed and reviewed monthly.

APPENDIX A: Sustainability Checklist

Domain	Checklist Item	Status (Yes/No/Partial)
Leadership & Commitment	SSC adherence is a standing item in OT meetings	
Leadership & Commitment	OR Director oversees monthly review meetings	
Process Adherence	SSC is used for 100% of surgical cases	
Process Adherence	All three phases (Sign In, Time Out, Sign Out) completed	
Training & Awareness	100% of new staff trained on SSC during orientation	
Training & Awareness	Annual refresher training conducted for all staff	

Monitoring & Evaluation	Weekly adherence audits are conducted and documented	
Monitoring & Evaluation	Monthly KPI review meetings are held	
Accountability	SSC Ambassador role is active and supported	
Accountability	PDSA cycles are initiated for problems and new ideas	
Patient Safety	SSC Adherence Rate is maintained at ≥95%	

APPENDIX B: SSC Adherence Audit Tool

Date: _____ Auditor: _____

Procedure Type: _____ Case ID: _____

SSC Phase	Items to Verify	Completed (Y/N)	Notes
SIGN IN	Patient ID confirmed (2 identifiers)		
	Site marked & confirmed		
	Consent confirmed		
	Allergies confirmed		
	Airway risk assessed		
TIME OUT	Full team pause achieved		
	Patient/Procedure/Site reconfirmed		
	Antibiotics administered (<60min)		
	Critical events discussed (Surgeon)		
	Critical events discussed (Anesthetist)		
	Equipment issues addressed		
SIGN OUT	Procedure name confirmed		
	needle/sponge/instrument counts confirmed		
	Specimen labeling confirmed		
	Recovery concerns discussed		
OVERALL	**All three phases completed and documented**	**(Y/N)**	

APPENDIX C: QI Team Monitoring Tool

Department: Operating Theater (OT)

Project: Sustaining SSC Adherence

Reporting Month: _____

Prepared by: _____ **Reviewed by:** _____

1. Key Performance Indicators (KPIs)

Indicator	Definition	Target	Current Month	Status
SSC Adherence Rate	(% of cases with full SSC completion)	≥95%	_____ %	
SIGN IN Completion	(% of cases where SIGN IN is done)	100%	_____ %	
TIME OUT Completion	(% of cases where TIME OUT is done)	100%	_____ %	
SIGN OUT Completion	(% of cases where SIGN OUT is done)	100%	_____ %	
On-Time Start Rate	(% of cases starting on time)	>80%	_____ %	

2. Process Monitoring

Activity	Planned Frequency	Actual Conducted	% Achieved	Remarks
Bi-Weekly SSC Audits	2 per month	_____	_____ %	
Monthly Review Meetings	1 per month	_____	_____ %	

3. Challenges Identified

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4. Corrective Actions & Recommendations (To be tested via PDSA)

Issue Identified	Corrective Action	Responsible Person	Timeline	Status

5. Summary & Way Forward

Overall SSC Status This Month: _____

Next Steps / Priority Actions (Next PDSA Cycles):

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APPENDIX D: PDSA Cycle Worksheet

Objective of this PDSA Cycle: *[e.g., Test a new visual cue to improve Time Out initiation.]*

Cycle Number: _____ Date: //____

PLAN
Objective: What are we trying to learn or accomplish?
Questions: 1. 2. 3.
Predictions: What do we think will happen?
Plan for Cycle: **Who:** **What:** **When:** **Where:** **Data to collect:**
DO
What happened? Execute the plan. Document observations, problems, and unexpected events.

STUDY
What did we learn? Analyze the data. Compare results to predictions. Summarize key learnings.
ACT
What will we do next? **Adopt ❑ Adapt ❑ Abandon ❑** Describe the next action or next cycle.

APPENDIX E: Implementation Checklist

(To be completed for any major change to the SSC process)

Description of change: _____

Implementation dates: From //____ to //____

Predicted impact of change on key measures:

	Measure	Current Level of Performance	Predicted Level After Change
1	SSC Adherence Rate		
2	On-Time Start Rate		
3	Staff Satisfaction		

Processes or products affected by the change:

	Processes or Products Affected	Process/Product Owner	Number of People Affected	Change in Standard? (Yes/No)	Predicted Acceptance (High/Med/Low)
1					
2					

Documentation of change:

- **Materials/forms defined.** Comments:

- **Procedure defined.** Comments: *This SOP (DGH-SOP-OR-002).*
- **Equipment defined.** Comments:
- **Change request procedure.** Comments: *Changes managed through PDSA cycles and SOP version control.*
- **Changes in job descriptions or role statements.** Comments:

Impact on training:

- **Training procedure defined for implementation.** Comments:
- **Training resources allocated.** Comments:
- **Training schedule complete.** Comments:
- **New employee training procedure complete.** Comments:

Measurements required:

- **New measurements defined.** Comments:
- **Measurement procedures defined.** Comments:
- **Measurement responsibilities defined.** Comments:
- **Measurement review scheduled with responsibilities.** Comments:
- **Analysis of data responsibility assigned.** Comments: *QI Unit facilitates analysis; OR Director is responsible for acting on it.*