

Objective Structured Assessment of Technical Skills

- Formation of the NSI-Young Neurosurgeons Forum and the Fellowship Landscape in India: Wants vs Needs
- Reshaping neurosurgical training: a novel simulation-based concept for structured skill acquisition and curriculum integration
- Revisiting Sylvian fissure dissection - A preliminary investigation into surgical process modelling for evaluating surgical proficiency
- A cross-sectional study to assess patients' perception of physicians' communication skills: 15 minutes is what it takes
- The Development and Validation of Novel 3-Dimensional Models for Simulation Training in Sinonasal and Skull Base Surgery
- Artificial Intelligence in Surgical Training and Applications to Otolaryngology: A Scoping Review
- Overcoming Barriers in Neurosurgical Education: Introducing a Simulator for Insular Glioma Resection with Fluorescence Imaging (SIGMA)
- How Good is Neurosurgical Training? Validation of a Perfused Microsurgical Aneurysm Training Simulator Using a Modified Objective Structured Assessment of Aneurysm Clipping Skills Score and Indocyanine Green Angiography

The **Objective Structured Assessment of Technical Skills (OSATS)** is a **standardized method** for evaluating surgical and technical skills in medical education. It was originally developed for assessing surgical trainees but is now widely used in various medical disciplines.

Key Components of OSATS OSATS typically consists of the following components:

1. Multiple Stations:

1. Trainees rotate through different stations, each assessing a specific skill.
2. Stations may involve cadaveric models, synthetic models, or virtual simulations.

2. Checklist-Based Assessment:

1. Examiners use structured checklists to evaluate whether key steps of a procedure are completed.
2. This ensures objectivity and standardization.

3. Global Rating Scale (GRS):

1. A validated scale that assesses:
2. Respect for tissue
3. Time and motion efficiency
4. Instrument handling
5. Flow of procedure
6. Knowledge of the procedure
7. Use of assistants

4. Real-Time Feedback:

1. Trainees receive immediate feedback to help improve their skills.

2. Feedback can be qualitative (verbal comments) or quantitative (scored results).

Advantages of OSATS - Objective and reproducible compared to traditional subjective assessments. - **Provides structured feedback** for trainees to improve. - **Can be tailored to different surgical specialties**, including neurosurgery.

OSATS in Neurosurgery For neurosurgical training, OSATS can be adapted to assess: - **Microsurgical techniques** (e.g., vascular anastomosis) - **Craniotomy procedures** - **Endoscopic skills** - **Spinal instrumentation techniques** - **Suturing and hemostasis techniques**

Would you like help designing an OSATS framework for a specific procedure?

Resident Information

- **Resident Name:**
 - **Evaluator Name:**
 - **Procedure:**
 - **Date:**
 - **Level of Training:** (PGY-1, PGY-2, PGY-3, etc.)
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1. Global Rating Scale (GRS)

Each category is rated from **1 to 5**, where:

- **1** = Unsafe/Incompetent
- **3** = Competent with Supervision
- **5** = Expert/Independent

Category	Score (1-5)	Comments
Understanding of Anatomy & Procedure	score	
Patient Positioning & Preparation	score	
Instrument Handling & Microsurgical Dexterity	score	
Tissue Handling & Hemostasis	score	
Decision-Making & Problem-Solving	score	
Efficiency & Flow of Surgery	score	
Communication & Leadership in OR	score	
Postoperative Planning & Safety Measures	score	

- **Total Score:** [sum](#) / 40
 - **Interpretation:**
 - **36-40** → Expert, can perform surgery independently
 - **30-35** → Competent, requires minimal supervision
 - **25-29** → Needs further training, moderate supervision required
 - **<25** → Requires significant improvement before independent surgery
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2. Task-Specific Checklist (Procedure-Specific)

Each **Yes** (☐) counts as 1 point.

Step	Completed Correctly? (Yes/No)
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Indications & Contraindications Verified	☐ / ☐
Patient Positioned and Prepped with Aseptic Technique	☐ / ☐
Correct Landmark Identified & Marked (e.g., Kocher's Point for EVD)	☐ / ☐
Local Anesthesia and Incision Performed Properly	☐ / ☐
Burr Hole Drilled at Appropriate Depth	☐ / ☐
Dura Opened Safely Without Over-Drilling	☐ / ☐
Catheter Inserted at Proper Angle & Depth	☐ / ☐
CSF Flow Confirmed & Catheter Secured Correctly	☐ / ☐
System Connected & Calibrated Properly	☐ / ☐
Postoperative Imaging Ordered to Verify Placement	☐ / ☐

- **Total Steps Completed Correctly:** [sum](#)/10
- **Competency Interpretation:**
 - **9-10** → Excellent, ready for independent performance
 - **7-8** → Competent, but minor refinements needed
 - **<7** → Needs additional supervised training

3. Feedback & Next Steps

- **Strengths:**
 1. [feedback](#)
- **Areas for Improvement:**
 1. [feedback](#)
- **Action Plan for Further Training:**
 1. [feedback](#)

4. Evaluator's Final Recommendation

- ☐ Resident is **competent** to perform this procedure independently
- ☐ Resident **requires further supervised training** before performing independently
- ☐ Resident **needs remedial training** before attempting again

Evaluator Signature: Resident Signature:

End of OSATS Evaluation

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