

Professional Education Outline: Global Surgery and Mission Safety Curriculum

Daily Schedule:

Presentation 5:00 – 5:45 pm

Discussion 5:45 – 6:00 pm

All Events in Meeting Room at Porta Hotel, Antigua, Guatemala

Day 1: Global Surgery and Mission Safety

Session: Delivering Safe Surgery in Low-Resource Environments

Learning Objectives:

Participants will be able to:

- Identify major causes of perioperative mortality in low-resource settings.
- Implement the WHO Surgical Safety Checklist.
- Adapt perioperative protocols when equipment is limited.

Key Topics:

- Global surgical disease burden.
- Mission ethics and sustainability.
- Safety frameworks.
- Preoperative patient selection.

Evidence Base:

- World Health Organization Surgical Safety Checklist.
- Global surgery outcome data.

Day 2: Airway Management Without Full Resources

Session: Difficult Airway Management in Resource-Limited Settings

Learning Objectives:

Participants will be able to:

- Construct a difficult airway plan when video laryngoscopy is unavailable.
- Implement a failed airway algorithm.

- Recognize aspiration risk in limited-monitoring environments.

Key Topics:

- Minimal airway cart configuration.
- Ketamine sedation strategies.
- Awake airway techniques.
- Emergency surgical airway.

Case Discussion: Obese patient with obstructive sleep apnea and limited airway tools.

Day 3: Anesthesia Safety With Limited Monitoring

Session: Safe General and Regional Anesthesia When Technology Is Limited

Learning Objectives:

Participants will be able to:

- Safely administer inhalational or TIVA anesthesia with limited monitoring.
- Identify early physiologic warning signs of deterioration.
- Use regional anesthesia to reduce perioperative risk.

Key Topics:

- Essential monitors, including pulse oximetry and blood pressure.
- Ketamine anesthesia protocols.
- Spinal anesthesia troubleshooting.
- Fluid management without invasive monitoring.

Day 4: Hemorrhage and Resuscitation

Session: Managing Surgical Bleeding Without a Full Blood Bank

Learning Objectives:

Participants will be able to:

- Recognize early hemorrhagic shock.
- Implement low-resource transfusion strategies.
- Manage coagulopathy when laboratory testing is unavailable.

Key Topics:

- Clinical indicators of hypovolemia.
- Tranexamic acid protocols.
- Crystalloid versus colloid strategy.

- Surgical hemostasis coordination.

Case Discussion: Intraoperative bleeding during thyroidectomy.

Day 5: Postoperative Complications

Session: Early Detection of Postoperative Complications in Limited Recovery Areas

Learning Objectives:

Participants will be able to:

- Identify early warning signs of postoperative deterioration.
- Manage airway obstruction and hypoventilation.
- Implement discharge criteria when PACU capacity is limited.

Key Topics:

- Respiratory depression.
- Postoperative nausea and vomiting.
- Delirium.
- Wound complications.

Day 6: Crisis Resource Management

Session: Team-Based Management of Perioperative Emergencies

Learning Objectives:

Participants will be able to:

- Apply crisis resource management principles.
- Improve communication among anesthesia, surgery, and nursing teams.
- Implement structured debriefing after critical events.

Key Topics:

- Intraoperative cardiac arrest.
- Malignant hyperthermia recognition.
- Anaphylaxis.
- Teamwork principles.