

TRAINING COURSE IN PHACOEMULSIFICATION CATARACT SURGERY

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As a note:

All materials presented in this course are from a collaboration of doctors, researchers, reviewers, as well as text books, journals, and videos. Our contributors are the authors of their original works, listed below, and hold the rights to them. Their willingness to contribute their original works made the creation of this course possible, and we are grateful for their continued efforts to train doctors around the world.

Contributors:

A Guide to Phacoemulsification

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Achieving Excellence in Cataract Surgery, A Step-by-Step Approach

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Biometry from *DOS Times* 19(2), 43-47

Authored by:

- Dr. Wangchuk Doma, MS
- Dr. Suryakant Jha, MS

Care of the Adult Patient with Cataract

Authored by The American Optometric Association

Cataract Part 1 – Aetiology, morphology and classification from *Optician* 2010, CET Cataracts, 22-26

Authored by:

- Louise Stainer, BScHons MCOptom
- Michelle Hanratty, BScHons MCOptom

Cataract Surgery for Greenhorns

Authored by Thomas Oetting, MS, MD

Cataract Surgery Guidelines, 2010

Authored by The Royal College of Ophthalmologists

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Classification of Cataract

Authored by Simon Barnard, PhD FCOptom FAAO FEA00 DipCLP DipClinOptom DipTh (IP)

Communicating with Patients: A Quick Reference Guide for Clinicians

Authored by The Association of Reproductive Health Professionals (ARHP)

Complications of Cataract Surgery from *Clinical and Experimental Optometry*, 2010, 93(6), 379-389

Authored by:

- Elsie Chan Franzco
- Omar A R Mahroo MB BChir PhD
- David J Spalton FRCS FRCP FRCOphth

General Surgical Pearls for the Beginner and Incision Creation for Phacoemulsification

Authored by Rob Feder, MD, MBA

IAPB Essential Equipment List for Cataract Surgery

Authored by the International Agency for the Prevention of Blindness (IAPB)

Monitoring Cataract Surgical Outcome (MCSO) for Windows (pp. 2-6)

Authored by:

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- Walter Meester Ing, Tax Software

Adapted by Dr. Javed Farooqui

Phacodynamics: Mastering the Tools and Techniques of Phacoemulsification Surgery

Authored by Barry Seibel, MD

The Practice Guide: Medical Professionalism and College Policies

Authored by The College of Physicians and Surgeons of Ontario

Training Module for Microsurgery with IOL Implantation.

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Video Contributors:

American Society of Cataract and Refractive Surgery (ASCRS), Phaco Fundamentals Classroom.

- “Incisions by David Truong, MD”
- “Side Port Incision and Main Incision by Kenneth Cohen, MD”
- “Capsulorhexis by Kenneth Cohen, MD”
- “Hydrodissection by John Barlett, MD”
- “Removal of the Nucleus by Kenneth Cohen, MD”
- “Divide and Conquer Phacoemulsification by Michael Colvard, MD”
- “Removal of Cortex by Kenneth Cohen, MD”
- “Inserting the IOL by Kenneth Cohen, MD”
- “Phacoemulsification in Mature and Rock-Hard Cataracts: Simple and Effective by S.R. Mamatha, MD”
- “Common Mistakes while Learning Phaco and How to Avoid Them by G S Brar, MD”
- “Postoperative Instructions by Alpa S. Patel, MD”
- “Postoperative Examinations and Medication by Doug Blackmon, MD”
- “Lens Power, Latest in IOL Power Accuracy by Kenneth Hoffer, MD”
- “Post Cataract Extraction Endophthalmitis by Vik Chopra, MD”

Cybersight, Orbis International.

- “Surgical Eye Prep”
- “Phaco Fundamentals 2 by Lisa Park, MD”
- “Phacoemulsification + IOL implant in a Pseudoexfoliation Syndrome by Stephen Lane, MD”
- “Phacoemulsification of a White Cataract Probably due to Trauma by Larry Benjamin, MD”
- “Phacoemulsification in a Mature Liquefied Cataract by James Lehmann, MD”

Eyemovies, with kind permission of Brian Little, MB BChir FRCS, Medical Director.

- “Topical Anesthesia - Topical Local Anesthesia Phaco Basic Techniques”
- “Retrobulbar vs Peribulbar Anesthesia - Peribulbar and Intracameral Phaco Basic Techniques”
- “Positioning on the Table Phaco Basic Techniques”
- “General Principles Capsulorhexis Phaco Basic Techniques”
- “General Principles Incision Phaco Basic Techniques”
- “Incision Complications Introduction Phaco Complication”
- “Side Ports Phaco Basic Techniques”
- “Corneal Phaco Basic Techniques”
- “Needle Alone Phaco Basic Techniques”
- “Forceps Alone Phaco Basic Techniques”
- “General Introduction Hydro Manoeuvres Phaco Basic Complications”
- “Cortical Cleaving Hydrodissection Phaco Basic Techniques”
- “Hydrodelineation Phaco Basic Techniques”
- “General Introduction Nucleus Disassembly Phaco Basic Techniques”
- “Complications of Infiltrative LA”
- “Incision Complications”
- “Descemets Peel Phaco Complications”
- “Capsulorhexis Complications”
- “The Small Rhexis Phaco Complications”
- “Primary Rhexis Tear-Out Phaco Complications”
- “Secondary Anterior Capsular Tear Phaco Complications”
- “Rhexis Tear-Out Retrieval Technique Phaco Complications”
- “Forceful Chamber Shallowing Phaco Complications”
- “Intraoperative Zonular Dehiscence Phaco Complications”
- “Early PC Tears Phaco Complications”
- “Late PC Tears Phaco Complications”
- “Hydrodissection Complications”
- “Common Problems Phaco Basic Techniques”
- “Small Pupil Management Phaco Complications”
- “Malyugin Ring Phaco Complications”
- “Capsular Tension Rings: Indications Phaco Complications”
- “Capsular Tension Rings: Implantation Techniques Phaco Complications”
- “Intraoperative Floppy Iris Syndrome (IFIS) Introduction”
- “IFIS for IFIS: Intracameral Phenylephrine”
- “Intraoperative Floppy Iris Syndrome (IFIS) Strategies”
- “Incision Complications: Endophthalmitis”

International Centre for Eye Health (ICEH), London School of Hygiene and Tropical Medicine. “Global Blindness Course: Managing Cataract Outcome by Daksha Patel, MD”

LV Prasad Eye Institute. “Capsulorhexis with Visualization of the Tearing Edge of the Rhexis Margin by Aravind Roy, MD”

Orbis International FEH Nursing Staff. "Gowning, Gloving, and Scrubbing"

Orbis International FEH Staff. "Centurion System Setup"

Healio.com, Slack Incorporated.

- "Converting to ECCE – Technique: Case 1 by David Chang, MD"
- "Converting to ECCE – Technique: Case 2 by David Chang, MD"
- "Severe Uveitis with Malyugin by David Chang, MD"
- "Brunescent lens with small pupil and lax zonules, by David Chang, MD"
- "Capsule retractors (iris hooks) with delayed CTR use by David Chang, MD"
- "Traumatic Zonular Dialysis: Zonular-iridodialysis; vitreous prolapse, Cionni ring by David Chang, MD"

Introduction

Orbis International is a non-profit organization dedicated to transforming lives through strengthening healthcare systems and building institutional capacity to prevent and treat preventable blindness. Since 1982, Orbis has provided practical hands-on surgical and clinical training for eye care professionals worldwide. Orbis training and education is delivered through:

1. The Orbis Flying Eye Hospital (FEH), a state of the art surgical and training facility accredited through the American Association for Accreditation as an Ambulatory Surgery Facilities International (AAAASFI).
2. Hospital Based Trainings (HBT): Training is conducted for eye care professionals within their own practice setting by global ophthalmic experts.
3. Cybersight®, a patient care consultation and online education platform that extends the presence of Volunteer Faculty (VF).

At the core of all Orbis training programs is our comprehensive and diverse global cadre of over 400 Volunteer Faculty, providing ophthalmic education and instruction to increase our partners' skill, service and the quality of patient care. Our global cadre is comprised of experts from all ophthalmic subspecialties and disciplines.

Today, Orbis regularly delivers training in 18 countries where we have established multi-year projects, as well as short training courses through the Flying Eye Hospital and hospital-based trainings in Asia, Africa and Latin America.

Course Objective:

This course is designed to train ophthalmologists in phacoemulsification (Phaco) surgery for the treatment of adult cataracts.

Phacoemulsification for cataract surgery is recognized as the gold-standard in cataract surgery globally.

This course aims to provide ophthalmologists with the following competencies:

1. Ability to perform a complete history and examination of the cataract patient.
2. Formulate a differential diagnosis for cataract etiology including:
 - Ability to identify high risk factors and/or co-morbidities and described surgical risks

3. Describe and apply the principles, indications for, mechanics of, and performance of A-scan biometry, laser interferometry and calculation of intraocular lens (IOL) power.
4. Understand the steps and common techniques utilized for phacoemulsification surgery.
5. Perform a detailed and literacy appropriate informed consent.
6. Independently perform routine phacoemulsification surgery with IOL implantation.
7. Ability to manage intra-operative and post-operative complications of phacoemulsification cataract and IOL surgery.
8. Post-operative management of adult cataract patients including: post-operative examinations, refraction, YAG-laser capsulotomy and long-term secondary issues related to cataract surgery.
9. Use of effective patient communication techniques and appropriate explanation of issues related to pre-operative consent, surgical risk-factors and realistic post-operative visual prognosis regarding cataract surgery.

Course Duration:

Six-weeks direct mentorship on-site plus continual remote tele-education and consultation via Cybersight, starting at one month prior to first Orbis faculty supervised on-site training module and continuing for three months post-course completion.

Target Audience:

This course has been developed for ophthalmology residents-in-training, junior ophthalmologists in practice as well as more senior physicians converting from manual small incision cataract surgery (MSICS) to the phacoemulsification technique.

Course Application:

Can be effectively delivered by Orbis International through a series of three, 2-week HBTs or one 6-week combined FEH and HBT project (please refer to course outline and schedule below). Prior to the start of each on-site training module, pre-learning educational materials will be available through Cybersight. For two months following the last on-site training, tele-mentorship and monitoring of surgical cases will be available through Cybersight.

This course was designed for Orbis multi-year projects with any of the following objectives:

1. Strengthening residency training.
2. Supporting ophthalmologists who currently practice phacoemulsification surgery or who would like to convert from MSICS to Phaco-technique.
3. Reducing cataract blindness.
4. Improving the quality, safety and outcomes of cataract surgery.

Training Ratios and Surgical Volume:

For trainees completing the entire course, the ideal training ratio is one VF mentor to every two partner ophthalmologists. Therefore, hospital-based trainings, should limit the participants to two ophthalmologists. However, additional ophthalmologists can participate in the non-surgical components of the training, including: wet lab, structured classes, surgical demonstrations, and investigative ophthalmology workshops. For the non-surgical training, it's recommended to have one VF for every 6-10 partner ophthalmologists.

The FEH has the ability to deliver surgical training in two locations, both the FEH operating room (OR) and the OR(s) located at the local partner institution. The FEH is also able to support 3-4 VF mentors per project week. Therefore, the FEH can accommodate a larger number of ophthalmologists completing the full course (8-10). The FEH can also accommodate additional ophthalmologists who wish to participate in the non-surgical training. The exact number of ophthalmologists should be determined based on space available for training, number of VFs and expected surgical volume.

The target for surgical volume is at least 20 cases per trainee. With four weeks of surgical training, trainees should be able to complete at least 20 cases before the end of the course. If integrated into longer training plans, consider continued mentorship in Phaco for up to 50 surgical cases.

It is important that the trainees complete these initial 20 cases in a timely manner, to ingrain the surgical steps of Phaco and reach a reasonable comfort level with each step, so that they are able to continue performing Phaco surgery independently without the VF mentor on site. Ideally, within two months, trainees will have completed the required 20 cases, which means modules two and three of the Phaco course should be schedule within a two-month period if possible. Overall, the course would be most effective if the on-site training was completed in a time-span of just a few months.

Evaluation:

Formal evaluations will be applied throughout the module, in order to gauge knowledge and skill competency. All pre-learning modules will include a 10-question quiz, requiring a pass rate of 80% to get credit for the module. Learners completing in-person training in module 1 will be assessed using a modified ICO-OCEX and learners completing in-person training of module 2&3 will be assessed using the ICO-OSCAR for Phacoemulsification.

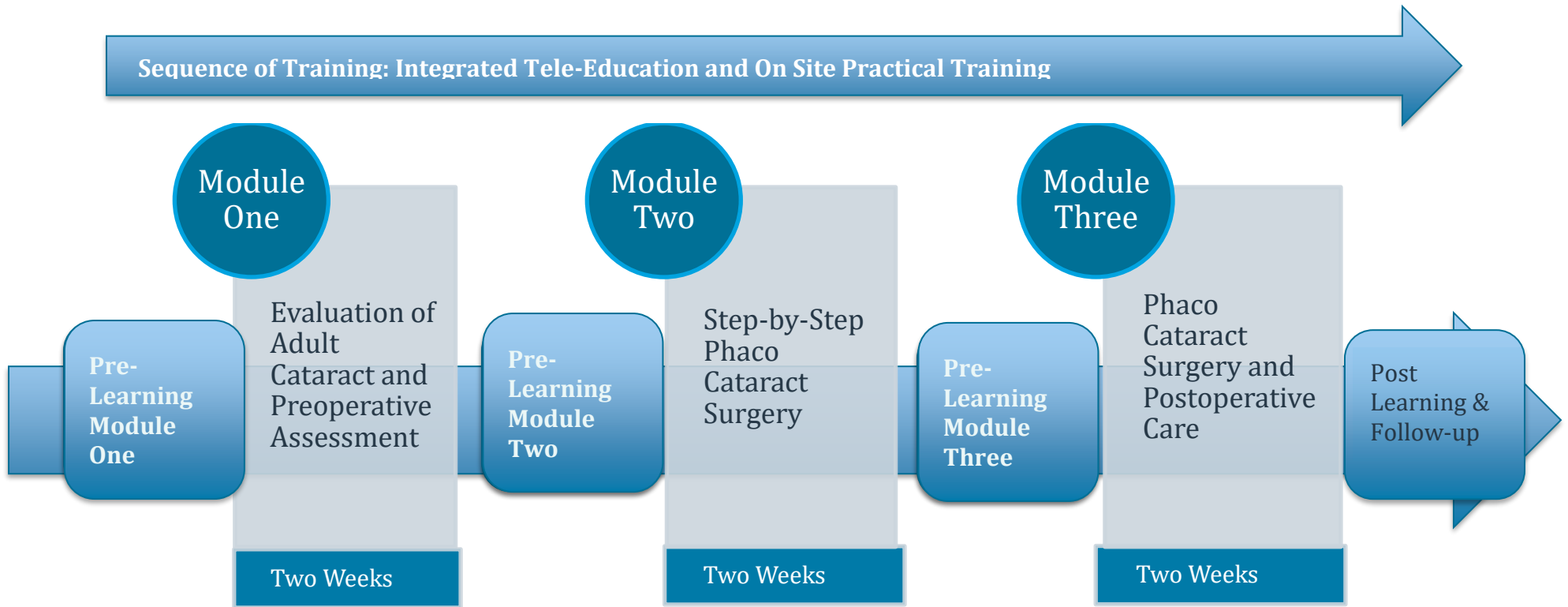
Adaptability and Implementation:

This course is designed as a series of two-week modules, each focusing on specific competencies and progressing in complexity. As such, it can be adapted to match the needs and skills of participant ophthalmologists from the partner institutions. For

example, if participant ophthalmologists are more advanced and have strong clinical knowledge and skills, the training can be designed to start at Module Two or even Module Three as appropriate. Alternatively, if participants are quite basic or beginners, each of the modules can be repeated until it's judged that the competencies have been met and that they are ready to progress to the next module level. Project managers have the flexibility to tailor this Phaco course to the skill level and needs of their partners.

Critical to the success of this course, is the involvement of the volunteer faculty. They must be thoroughly orientated to the objectives of the module, the curriculum, the evaluation tools and the course delivery. It is also important that they follow the recommended technique and approach outlined in this curriculum, as opposed to innovating on their personal approach or technique, to ensure a strong fundamental knowledge among learners.

Course Outline & Schedule:



Pre-Learning Module One

One month prior to the start of the first on-site training module, registered participants will access educational content and training materials through Cybersight.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning Module One
- ✓ Introduction to Cybersight Consult
- ✓ Lectures: See topics in text box
- ✓ Demonstration videos on:
 - Sterile techniques and OR safety (gloving, gowning and scrubbing)
 - Patient prepping & draping
 - Immersion and contact A-scan biometry and IOL calculations
 - B-scan for white/mature cataracts
 - Using Cybersight Consult
- ✓ Phaco surgical videos: routine cases
- ✓ IAPB essential equipment list for cataract surgery
- ✓ IAPB essential list for simulation-based learning (cataract surgery)
- ✓ Post-examination for pre-learning Module One

Lecture Topics

- Cataract basics: mechanism of cataract formation, morphology, grading and classification of cataract
- Epidemiology and significance of cataract as a cause of avoidable blindness
- Evaluation of adult cataract: basic history taking and evaluation
- Screening for high-risk patients; patients with co-morbidities
- IOL power calculation and selection
- Preoperative assessment and patient preparation: anesthetic preparation and delivery
- Assistant duties and surgical patient preparation, positioning the patient and the surgeon
- Introduction to Phaco: overview
- Phacodynamics

Module One: Pre-Operative Assessment of the Adult Cataract Patient

This module is two weeks in length and can be delivered as a hospital-based training program or integrated into a FEH project.

Competencies Covered in Module One:

1. Ability to perform a complete history and examination of the cataract patient.
2. Formulate a differential diagnosis for cataract etiology.
3. Ability to submit a clinical case to an Orbis VF mentor using Cybersight Consult.

4. Describe and apply the principles, indications for, mechanics of, and performance of A-scan biometry, laser interferometry and calculation of intraocular lens (IOL) power.

Two-Week Module Outline:

- ✓ Structured classes on knowledge, theory and skills for Phaco, which includes:
 - Case discussions
 - Surgical video review
 - Reinforcement of educational content from pre-learning Module One
- ✓ Clinical training with Orbis VF on pre-operative assessment of cataract patients:
 - History taking and documentation
 - Full examination of the eye:
 - Examining and screening for co-morbidities (cornea, glaucoma, retina, infectious risk, etc.)
 - How to select patients and prevent possible complications; emphasis on selecting appropriate cases for novice Phaco surgeons
 - Formulate diagnosis and treatment plans
- ✓ Workshops in performance of key pre-operative exam assessments:
 - Contact and non-contact ultrasonography (where equipment is available)
 - Keratometry: related to IOL calculations and assessing pre-operative astigmatism. How to reduce astigmatism using different incisional locations, techniques and IOLs
 - B-scan biometry assessment of the posterior segment
- ✓ Video and hands-on training on how to use Cybersight Consult
 - Successful submission of 4 patient cases
- ✓ Observation of live Phaco surgical demonstrations performed by Orbis VF

✓ Wet lab training on Phaco steps and technique

Wet Lab: Learning Phaco Step-by-Step*

- Preparation of equipment
 - Use of microscope
 - Preparation of the Phaco machine
 - Phaco settings (what and why)
 - Use of the pedal
- Preparation of the eye
 - Sub-Tenon blocks
 - Proper betadine concentration and application
 - Lid speculum selection
- Paracentesis and viscoelastic
- Wound construction and location**
- Anterior chamber maintainer (ACM) – useful in selective cases.
- Continuous curvilinear capsulorhexis; optional capsule staining (as needed)***
- Hydro-dissection & hydro-delineation
- Nucleus disassembly
 - Divide and conquer
 - Stop and chop
- Cortical cleanup
- IOL insertion and positioning
- Removal of viscoelastic
- Wound inspection & closure
 - Sutured versus sutureless
 - Conjunctival closure as needed
- Anterior Vitrectomy: Management of Vitreous Loss

**Recommend referencing the Iowa Ophthalmology Wet Lab Curriculum*

<https://webeye.ophth.uiowa.edu/eyeforum/tutorials/iowa-OWL/index.htm>

***This step is critical to successful Phaco and requires particular emphasis with demonstration, explanation and training from the Orbis VF*

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Module Allocation:

- ✓ Structured Classes: 25% of module time
- ✓ Clinical Training: 25% of module time
- ✓ Wet Lab Training: 50% of module time

Following the completion of Module One, registered participants can access pre-learning Module Two educational content and training materials through Cybersight.

Pre-Learning Module Two

Following to the completion of Module One, registered participants can access Module Two educational content and training materials through Cybersight.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning Module Two
- ✓ Manuals and guidelines on Phaco and intra-operative complications for Phaco
- ✓ Lectures: See topics in text box
- ✓ Phaco surgical videos: intra-operative complications
- ✓ Phaco surgical videos: complex cases
- ✓ Post-examination for pre-learning Module Two

Lecture Topics:

- Phacoemulsification: Step-by-Step
- Management of intra-operative complications: complications during anesthesia & phaco, other complications
- Conversion to ECCE
- Cataract surgery in difficult situations
- Tips for avoiding surgical complications in Phaco

Module Two: Step-by-Step Phaco

This module is two weeks in length and can be delivered as a hospital-based training program or integrated into a FEH project.

Competencies Covered in Module Two:

1. Understand the principle steps and common techniques utilized for phacoemulsification surgery.
2. Perform a detailed and literacy appropriate informed consent.
3. Independently perform routine Phaco surgery with IOL Implantation.
4. Describe the management of intraoperative complications of cataract and intraocular lens (IOL) surgery.

Two-Week Module Outline:

- ✓ Structured classes on managing intra-operative and post-operative complications, which includes:
 - Case discussions
 - Surgical video review
 - Reinforcement of educational content from pre-learning Module Two
- ✓ Continued usage of Cybersight Consult: minimum of 4 cases per month.
- ✓ Continuation of wet lab focusing on the management of intra-operative complications related to Phaco cataract surgery, including anterior vitrectomy.

- ✓ Performing detailed and literacy appropriate informed consent.
- ✓ Perform step-by-step Phaco surgery under the supervision of Orbis VF.
- ✓ Observation of anterior vitrectomy surgery in response to cataract complications, performed by Orbis VF.

Step-by-Step Phacoemulsification Surgery

- Entering (and understanding) your Phaco machine settings
- Preparation of the eye
 - Sub-Tenon blocks
 - Proper betadine concentration and application
 - Lid speculum selection and insertion
 - Draping
- Paracentesis and viscoelastic
- Wound construction and location*
- Continuous curvilinear capsulorhexis and optional capsular staining (as needed)**
- Hydro-dissection & hydro-delineation
- Nucleus disassembly: Divide and conquer technique
- Cortical cleanup & capsular polishing
- IOL insertion & positioning
- Removal of viscoelastic
- Wound inspection & closure
 - Sutured, sutureless, stromal hydration
 - Conjunctival closure as needed

** This step is critical to successful Phaco and requires particular emphasis with demonstration, explanation and training from the Orbis VF*

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Module Allocation:

- ✓ Structured Classes: 25% of module time
- ✓ Clinical Training: 25% of module time
- ✓ Surgical Training: 50% of module time

Following the completion of Module Two, registered participants can access pre-learning Module Three educational content and training materials through Cybersight.

Pre-Learning Module Three

Following the completion of Module Two, registered participants can access Module Three educational content and training materials through Cybersight.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning Module Three
- ✓ Manuals and guidelines on post-operative complications with Phaco
- ✓ Lectures: See topics in text box
- ✓ Guidelines on refraction
- ✓ Demonstration videos/instruction on:
 - Keratometry
 - Refraction
 - Retinoscopy
- ✓ Tips for effective patient communication
- ✓ Surgical log documentation
- ✓ Post-examination for pre-learning Module Three

Lecture Topics:

- Patient education and counseling before and after cataract surgery
- Post-operative care and follow-up
- Managing post-operative complications: post-operative care of early complications, other post-operative complications and complications in patients with other ocular co-morbidities
- Clinical audit of cataract surgery outcome: how to improve and maintain good outcomes after cataract surgery

Module Three: Phaco & Post-Operative Care

This module is two-weeks in length and can be delivered as a standalone hospital-based training or integrated into a FEH project. However, in module three, it is important to perform the majority of surgical hands-on training in the partner hospital OR suite under typical local conditions. This ensures effective and sustainable skills transfer in the partner's practice setting.

Competencies covered in Module Three:

1. Independently perform routine Phaco surgery with IOL placement.
 - With appropriate use of sutures where wound integrity is in doubt.
2. Ability to manage intra-operative and post-operative complications of Phaco cataract and IOL surgery.
3. Post-operative management of adult cataract patients including: post-operative examinations, refraction, YAG-laser capsulotomy and long-term secondary issues related to cataract surgery.
4. Use of effective patient communication techniques and appropriate explanation of issues related to pre-operative consent, surgical risk-factors and realistic post-operative visual prognosis regarding cataract surgery.

Two-Week Module Outline:

- ✓ Structured classes continued:
 - Review of surgical video from course participants (sourced from Module Two)
 - Reinforcement of educational content from pre-learning Module One
- ✓ Workshops on:
 - Patient communication techniques
 - Explaining realistic prognosis for cataract surgery
 - Professionalism
- ✓ Clinics: training in post-operative examination and management of cataract patients with Orbis VF. Includes:
 - Medications
 - Astigmatism
 - Keratometer
 - Refraction (to include any of the following, depending on available equipment):
 - Autorefractor
 - Trial-lenses
 - Phoropter
 - Uveitis
 - Glaucoma
 - Endophthalmitis
- ✓ Continue to independently perform appropriately selected, uncomplicated Phaco cataract surgeries under the supervision of Orbis VF. Progressively working towards full competency in routine Phaco and beginning to manage increasingly more complex cases with co-morbidities.
- ✓ Assist Orbis VF on complicated Phaco cataract cases including those complicated by posterior capsule rupture and vitreous loss.
- ✓ Continued usage of Cybersight Consult: minimum of 4 cases per month.

Module Allocation:

- | | |
|-----------------------|--------------------|
| ✓ Structured Classes: | 25% of module time |
| ✓ Clinical Training: | 25% of module time |
| ✓ Surgical Training: | 50% of module time |

Following the completion of Module Three, registered participants can access post-learning and mentorship through Cybersight.

Post-Learning & Follow-Up

For three-months following the course completion, registered participants will continue to receive intensive mentorship from Orbis Volunteer Faculty through Cybersight.

Continued mentorship includes:

- ✓ **Cybersight Consult:** Connects participants to the Orbis VF mentors who conducted the on-site training. Participants upload cases and benefit from consultation and case discussion with the course mentors. This allows them to continue to receive guidance and skill development from the mentors for an additional three months as they increase their surgical skill and volume. Cybersight Consult is currently available in several international languages.
- ✓ **Cybersight Learn:** All of the course educational materials will remain available to participants, so they may continue to reference them as they develop their practice. Also, participants will have the option to upload surgical videos for mentorship review, grading and feedback.

Post-course follow-up includes:

- ✓ Participants will be obliged to upload 4 cases per-month to Cybersight Consult for each of the three months of post-program mentorship. The mentors will score all consult cases for quality. This data will be monitored to track the participant's progress.
- ✓ Participants will submit a surgical log (this log will be provided to participants) once they have completed 20 surgical cases post-training (This will be reviewed by the mentor and will also be tracked for monitoring purposes).
- ✓ A **Certificate of Completion** will be distributed to all participants completing the full requirements of the course, including:
 - Completion of all three pre-learning modules
 - Passing all three pre-learning post-module examinations
 - Completion of all three on-site modules and competency sign-off by an Orbis VF mentor
 - Meeting the post-course deliverables:
 - Monthly upload of requisite cases to Cybersight
 - Upload of completed surgical log