

TRAINING COURSE IN OPHTHALMIC NURSING FUNDAMENTALS

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As a note:

All materials presented in this course are from a collaboration of ophthalmic professionals, 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 to form the content for the three courses made the creation of this module possible, and we are grateful for their continued efforts to train nurses around the world.

Contributors

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Video Contributors

“Administration of Eye Drops” Orbis International

“Three Minute Aravind Cataract Surgery (SICS)”

“Surgery: Phacoemulsification” Orbis International

“Penetrating Keratoplasty” Dr. Sanghmitra Burman, LV Prasad Eye Institute

“Tan EndoGlide DSAEK Surgery” Dr. Donald Tan, Singapore National Eye Centre

“Pterygium Excision with a Conjunctival Auto Graft using Fibrin Glue” Dr. Christopher J Rapuano, Corenea Service Wills Eye Institute

“Surgery: Trabeculectomy: Dr John Brookes” Orbis International.

“Trabeculectomy with MMC- Dr. Thomas Samuelson” Orbis International

“Surgery: Ahmed Valve Implant: Dr. James Brandt” Orbis International

“Baerveldt Glaucoma Implant- Dr. Wallace Alward” Orbis International

“Bilateral Medial Rectus Recession: Dr. Rudolph Wagner” Orbis International

“Ptosis Repair- Levator Muscle Resection” Dr. Patrick R Bolous

‘Endoscopic DCR”

“Chalazion Operation- Common Eye Surgeries” Dr Basak

“Orbis scrubbing video” Orbis International

“Orbis video on sterilizing instruments” Orbis International

“How to load a single piece Alcon IOL” Dr. Chris Rudnisky

“Orbis Patient Counseling Video” Orbis International

Introduction

Orbis International is a non-profit organization dedicated to eye care for all, 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 program 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 16 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 and open enrollment to online courses available to ophthalmic professionals worldwide.

Course Objective:

On completion of the course, the learner will have the following competencies:

1. Describe the anatomy and physiology of the eye and how it relates to ophthalmic pathology.
2. Describe basic surgical procedures
3. Identify infection control standards
4. List actions to prevent the contamination to the surgical wound and prevent infection
5. Describe appropriate handling of surgical instruments
6. Describe the use of the Orbis surgical safety checklist (adapted from the WHO safe site surgery checklist)
7. Identify actions necessary for preoperative nursing care of the ophthalmic patient
8. Describe post-operative nursing care of the ophthalmic patient

Course Duration:

Three weeks onsite (plus continual tele-education via Cybersight starting at two months prior to first onsite module and on-going post-course mentorship).

Target Audience:

This course has been designed for nurses either assigned permanently, or who rotate through the ophthalmic theater service.

Course Application:

Can be effectively delivered through two HBPs or one 3-week FEH or combined FEH/HBP 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®.

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

1. Build the eye care team to provide high quality eye care services.
2. Building the capacity of nurses to provide patient care and perform eye care services in a surgical setting.

Training Ratios:

For trainees completing the entire course, the ideal training ratio is one VF/Orbis staff nurse mentor to four nurses. Therefore, hospital-based trainings, should limit the participants to four nurses. However, additional nurses and other relevant allied health staff can participate in some components of the training, including: structured classes and lectures.

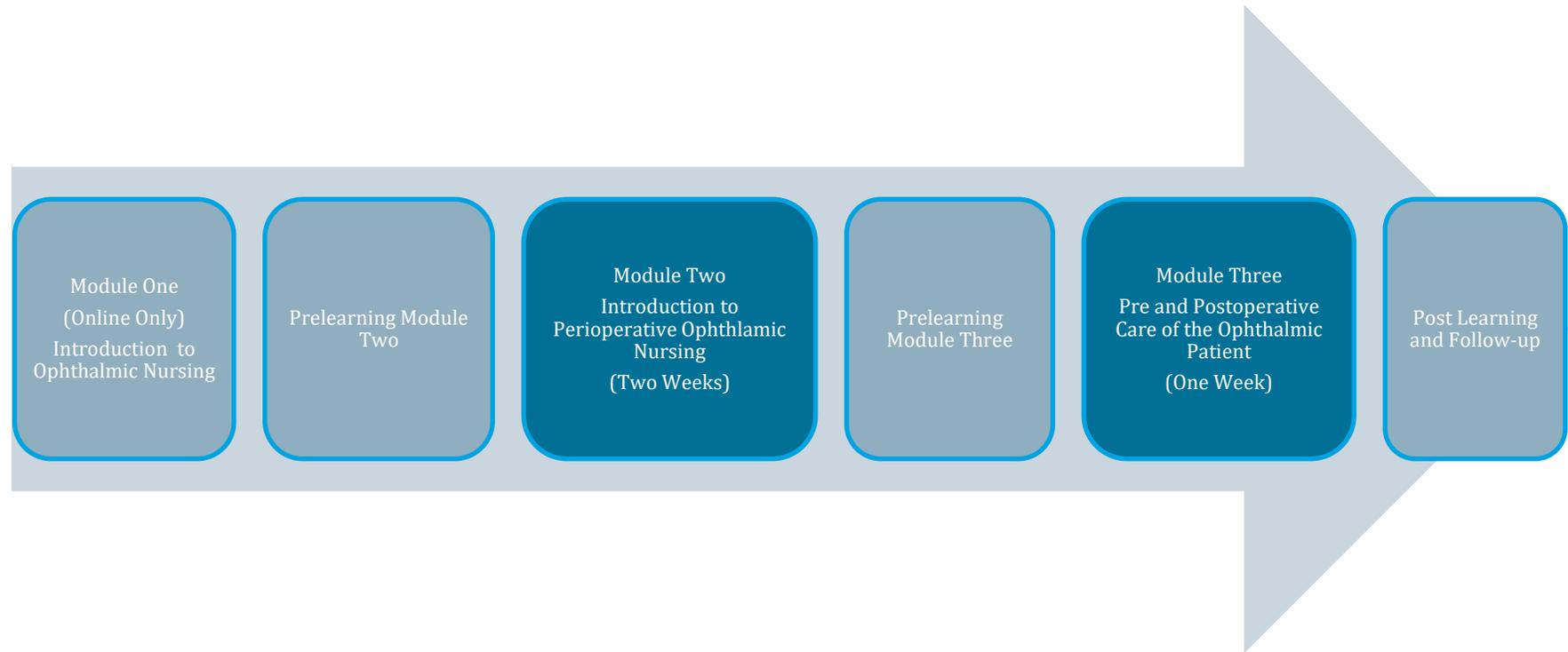
The FEH can deliver training in two locations, both the FEH theater suite and at the partner institution. They also have a larger pool of trainers per week. Therefore, the FEH can accommodate a larger number of nurses completing the full course (up to 12 nurses, with six being trained at the FEH and six in the partner hospital OR suite).

Adaptability:

This course is designed as a series of modules, each focusing on specific competencies and progressing in complexity. As such, it can be adapted to match the needs and skills of participant nurses from partner institutions. For example, if participant nurses have more training needs related to the recovery area, or pre and post-op care, training can focus on module three. If the focus is to improve the infection control standards and theater practices, the training can focus on module two.

Course Outline & Schedule:

Sequence of Training: Integrated Tele-Education and On Site Practical Training



Module One: Introduction to Ophthalmic Nursing

Competencies covered in Module One:

1. Describe the anatomy and physiology of the eye and how it relates to ophthalmic surgery.
2. Describe basic surgical procedures

Pre Learning Module One

Registered participants will access educational content and training materials through Cybersight®.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning module 1
- ✓ Didactic learning: See topics in text box below
- ✓ Demonstrate videos on:
 - Anatomy of the eye
 - Eye disease and pathology
 - Basic ophthalmic equipment
- ✓ Surgical videos on common ophthalmic procedures
- ✓ Orbis Ophthalmic nursing: Getting Started Volume 1
- ✓ The Ophthalmic Study Guide by Dorothy Field
- ✓ Ophthalmic operating theatre practice: A manual for lower resource settings
- ✓ Orbis primary eye care manual
- ✓ Post-examination for pre-learning module 1

Learning Topics:

1. Anatomy and physiology of the eye
 - Orbit
 - Eye lids
 - Lacrimal system
 - Muscles
 - Structures of the Eye
 - Layers of the eye
 - Optic pathways
2. Basic refraction
 - What is refraction?
 - Focusing the eye for near vision
 - Emmetropia
 - Ammetropia
 - Myopia
 - Hypermetropia
 - Astigmatism
 - Anisometropia
 - Presbyopia
3. Basic Ophthalmic equipment used for diagnosis, assessment and monitoring
 - Pachymeter, Direct ophthalmoscope, Retinoscope, Indirect ophthalmoscope, Gonioscope, Fundus photography, Retinal imaging, Ophthalmic lasers, Slit lamp, Tonopen, IOL master, Keratometer, Diagnostic Ultrasound and Operating microscope
4. Basic eye care procedures
 - Cleaning of eyelids
 - Eye drop and ointment insertion
 - Application of eye pad
 - Insertion of bandage contact lens
5. Ocular conditions requiring surgical treatment
 - Cataract
 - Corneal
 - Glaucoma
 - Strabismus
 - Oculoplastics
 - Orbital
 - Refractive
 - Retinal
 - Endophthalmitis
 - Conjunctivitis
 - Chalazion

Module Two: Peri-operative Ophthalmic Nursing

This module combines online learning and two weeks in person training, delivered as a hospital-based training program or integrated into a FEH project.

Competencies covered in Module Two:

1. Define infection control standards
2. List actions to prevent the contamination to the surgical wound and prevent infection
3. Describe appropriate handling of surgical instruments

Pre Learning Module Two

Prior to the start of the second onsite training module, registered participants will access educational content and training materials through Cybersight®.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning module 2
- ✓ Didactic learning: see topics in text box below
- ✓ Demonstration videos on:
 - Sterile techniques and OR safety
 - Gowning, gloving, scrubbing
- ✓ Orbis Manual: Caring for the patient and ourselves
- ✓ Ophthalmic operating theatre practice: A manual for lower-resource settings
- ✓ Orbis Ophthalmic nursing: Getting started volume 1
- ✓ Quality Assurance lectures presented by Orbis nurse
- ✓ Post examination for pre learning module 2

Learning Topics:

1. Infection control standards in the OR
 - Standard Precautions
 - Waste management
 - Handling of sharps
 - Linen management
 - Hand hygiene
 - OR cleaning
 - Airflow management
 - Health and safety
 - PPE
 - Disposal of fluids
2. Surgical Hand wash
 - Scrubbing
3. Gowning and gloving
 - Gowning
 - Gowing another person
 - Closed gloving
 - Open gloving
 - Gloving the surgeon
 - Removing gloves
 - Removing contaminated gowns during procedure
 - Removing gloves and gown at the end of the case
4. Preparing the patient
 - Prepping
5. Creating and maintaining the sterile field
 - Drapes
 - Preparing the OT trolley
6. Cleaning, disinfecting, sterilization and storage of instruments
 - Cleaning area
 - Cleaning materials and solutions
 - Ultrasonic cleaners
 - Air dryers
 - Air guns
 - Wrapping and labeling sterile indicators
 - Sterilizers and types of sterilization
 - Care of specific ophthalmic instruments
 - Storage and shelf life
7. Ophthalmic instruments
 - Sharps
 - Blunts
 - Others
8. Techniques in passing of instruments, folding IOLs, sutures management and care
 - Passing of instruments
 - Intraocular lenses
 - Suture management and care
9. Standard ophthalmic sets
 - Anterior/Cataract
 - Posterior/Retina
 - Muscle set
 - DCR/Orbit
 - Plastic set
 - Other

Onsite Training Module Two

Two Week Course Outline:

- ✓ Structured classes on knowledge, theory and skills for perioperative theater nursing, which includes:
 - Reinforcement of educational content from Pre-Learning Module Two.
- ✓ Clinical hands on training in OR on:
 - Scrubbing
 - Gowning and gloving
 - Prepping
 - Creating and maintaining a sterile field
 - Sterilization room (Cleaning of instruments, ophthalmic sets, sterilization process)
 - Passing of instruments
 - Setting up the OR for different ophthalmic procedures
 - Floor nurse (supplies, consumables)
 - Infection control measures

Course allocation:

- | | |
|-----------------------|--------------------|
| ✓ Structured Classes: | 25% of course time |
| ✓ OR Training: | 75% of course time |

Module Three: Pre and Postoperative Care of the Ophthalmic Patient

This module combines online training and one week in person training, delivered as a hospital-based training program or integrated into a FEH project.

Competencies covered in Module Three:

1. Describe the use of the Orbis surgical safety checklist (adapted from the WHO safe site surgery checklist)
2. Identify actions necessary for preoperative nursing care of the ophthalmic patient
3. Describe post-operative nursing care of the ophthalmic patient

Pre Learning Module Three

Prior to the start of the third onsite training module, registered participants will access educational content and training materials through Cybersight®.

Pre-learning materials include:

- ✓ Pre-examination for pre-learning module 3
- ✓ Didactic learning: See topic in text box below
- ✓ Orbis: Caring for the patient and ourselves
- ✓ PowerPoint presentation: Ocular pharmacology Dr. Parul Ichhpujani
- ✓ PowerPoint presentation: Ocular Pharmacology Dr. Sonya Bennett
- ✓ Orbis surgical safety check list
- ✓ Post-examination for pre-learning module 3

Learning Topics:

1. Orbis and WHO surgical safety check list
2. Patient rights and responsibilities
 - Patient dignity, their rights and respect
 - Patient privacy and security
3. Informed consent
4. Introduction to the Eye care team
 - Ophthalmologist
 - Ophthalmic technician
 - Ophthalmic nurse
 - Operating room technician
 - Anesthesiologist
 - Ophthalmic medical assistant
 - Ophthalmic photographer
 - Optician
 - Biomedical engineer or technician
 - Optometrist
 - Orthoptist
5. Ophthalmic pharmacology
 - Pharmacokinetics
 - Pharmacodynamics
 - Route of administration
 - Common ocular drugs
 - Education for patients
6. Pre-operative patient education
 - Patient counseling/education prior to surgery/procedure
 - Day of surgery: preoperative care
 - Pre-op medication
7. Positioning of patient – intraoperative
8. Anesthetics
 - Pre-op unaesthetic care
 - Topical
 - Local
 - General anesthesia
 - Sedation
9. Nursing documentation
10. Post-operative Patient Care
 - Recovery room
 - Postoperative patient education and counseling
 - Discharge information

Onsite Training Module Three

One Week Course Outline:

- ✓ Structured classes on knowledge, theory and skills, which includes:
 - Reinforcement of educational content from Pre-Learning Module Three
- ✓ Use of the Orbis surgical safety checklist
- ✓ Clinical hands on training on:
 - Pre- operative (consent and preparation for different procedures)
 - Intra-operative (positioning of patient for different procedures)
 - Anesthetic (assisting the anesthetist with topical, local, general and sedation techniques)
 - Documentation
 - Post-op (information and discharge)

Course allocation:

- ✓ Structured Classes: 25% of course time
- ✓ Operating Suite Training: 75% of course time

Post Learning & Follow Up

Following the course completion, registered participants will continue to receive mentorship from Orbis Volunteer Faculty through Cybersight®.

Continued mentorship includes:

- ✓ Cybersight® Consult: Connects participants to nursing mentors who conducted the onsite training, as well as other global experts.
- ✓ Cybersight® Learn: All the course material will remain available to participants, so they can continue to reference them as they develop their practice.

Post-course follow-up includes:

- ✓ Participants will be assessed against a nurse competency framework.
- ✓ Certificate of completion distributed to all participants that complete the full course, including:
 - Completion of all three pre-learning modules
 - Passing all three pre-learning course examinations
 - Completion of both onsite modules and competency sign off by Orbis VF Mentor