

Preliminary Program

Global Neuro Online

Certificate Course—Fundamentals of Neurotrauma Care for Nurses

May 9 – September 12, 2024



Course Description

This online certificate course program will be a combination of lectures, tutorials, case studies and skills videos to increase participants' basic understanding of evidence-based practice in neurotrauma. The self-paced video lectures will be available in a repository for remote access during the 18-week program duration. Web-based discussions will be set up in specific time slots to allow students from different time zones to participate in live discussion sessions. Discussions will be available in the repository to be accessed after the real-time sessions.

Recommended reading material is provided in advance to enhance the interactive learning experience.

Course program

The program is organized in twelve modules, sixty-four lectures, and ten skills videos. These will be evaluated with a multiple-choice test with a minimum required score of 70%. At the end of the twelve modules, a final exam evaluating the whole program's content will be performed online.

The final grade will be the sum of the module's exams (50%) and the final exam (50%). The minimum required score to obtain the certification will be 7.0 / 10 (70%).

Target audience

This Global Neuro course was developed for nurses dedicated to the integral management of Neurotrauma and complex and interdisciplinary patient care.

Learning Outcomes

By completing this course, participants will be better able to:

- Describe neurotrauma epidemiology worldwide and how different types of injuries can affect patients in different age groups.
- Develop an improved knowledge of anatomy and physiology and pathophysiology following injury of the brain and spine.
- Discuss the evidence base that supports nursing care for patients with External Ventricular Drains (EVDs).
- Develop appropriate assessment and management skills for the neurotrauma patient within different resource availability, utilizing protocols, guidelines, consensus, and evidence-based interventions in delivering patient care and improving outcomes.
- Develop the appropriate nursing skills to apply to the prehospital, emergency care, surgical, critical care, post-acute and rehabilitative care of neurotrauma patients.
- Demonstrate an understanding of care required in complex cases and in neurotrauma care related complications.

Course Chair

Karen March

Neurocritical Care Educational Consultant

Invited faculty

- Amaya Alvarez Aquino
- Andres Rubiano
- Anita Fetzick
- Ava Puccio
- Cathy Cartwright
- Debra Hemmerle
- Ernest Barthelemy
- Franly Arismendi Vasquez
- Gail Rosseau
- Jeffrey Rosenfeld
- Joacir Graciolli
- Karol Martínez
- Kee Park
- Kimberly Meyer
- Kristen Ghossaini
- Lawrence Chyall
- Maria Velasco
- Mary Guanci
- Mary Kay Bader
- Megan Bailey
- Michael C. Dewan
- Pat Blissitt
- Rachel Malloy
- Rebecca Silvers
- Rennan Ribeiro
- Rita de Cássia Almeida Viera
- Scout Hebinck
- Sebastián Vásquez
- Theresa Green
- Tracey Berlin
- Twyila Lay

PRELIMINARY AGENDA

AGENDA	RESPONSIBLE ASSIGNED
Module 1 Neurotrauma Care Systems and the Impact of the Disease	
L1: Epidemiology of TBI in High Income Settings	Michael C. Dewan
L2: Epidemiology of TBI in Low- and Middle-Income Settings	Ernest Barthelemy
L3: Trauma Systems and Organized Neurotrauma Care	Andres Rubiano
L4: Neurotrauma Care Systems in Disasters and in Rural Settings	Jeffrey Rosenfeld
L5: Neurotrauma in the Context of Global Neurosurgery	Kee Park
L6: Prevention strategies in Neurotrauma	Gail Rosseau
Exam module one	
Module 2 Neurotrauma Anatomy and Physiology and Fundamental Concepts	
L1: Cranial Anatomy Part I	Karen March
L2: Cranial Anatomy Part II	Karen March
L3: Patterns of Primary Brain Injury in Neurotrauma	Ava Puccio
L4: Secondary Injuries in Cranial Neurotrauma / Biomarkers	Ava Puccio & Anita Fetzick
L5: Concepts Brain Edema	Andres Rubiano
Exam module two	
Module 3 Concepts and Assessments in Neurotrauma	
L1: Concepts of Intracranial Pressure and Herniation Syndromes	Rebecca Silvers
L2: Concepts of Cerebral Perfusion & Autoregulation	Karen March
L3: Initial Assessment and Management of the Neurotrauma Patient	Rennan Ribeiro & Rita de Cassia Almeida Vieira
Skill Video 1: Initial assessment	
L4: Neuro Assessment	Rennan Ribeiro & Rita de Cassia Almeida Vieira
Skill Video 2: Neuro assessment	
Exam module three	

AGENDA	RESPONSIBLE ASSIGNED
Module 4 Neurotrauma Imaging and Surgical Management	
L1: Neuro Imaging of head – CT and MRI	Rachel Malloy
L2: Surgical Management – Hematoma removal, Craniectomy, Skull fractures	Kristen Ghousaini
L3: Infections management of wounds for skull	Andres Rubiano
Exam module four	
Module 5 Neuro Monitoring	
L1: Extraventricular drains (EVDs) insertion & setup	Megan Bailey
L2: Intracranial Pressure Monitoring ICP	Lawrence Chyall
Skill Video 3: EVD setup & management	
L3: O2 monitoring & CBF	Lawrence Chyall
L4: Brain Temperature Monitoring in TBI	Mary Guanci
L5: Cerebral Microdialysis (CMD)	Tracey Berlin
L6: Electrophysiologic Monitoring: Electroencephalogram (EEG) & Evoked Potential (EP) Monitoring in Trauma	Tracey Berlin
Exam module five	
Module 6 Traumatic Brain Injury Guidelines	
L1: Overview of TBI Guidelines	Maria Velasco
L2: Triage management of ICU beds and criteria of transfer to ICU	Karen March
L3: TBI Guidelines without ICP (BOOTSTRAPS) The Bootstrap Protocols for TBI (Basic PHC-ER and OR)	Karol Martinez
L4: TBI Guidelines without ICP (CREVICE)	Karol Martinez/Karen March
L5: TBI Guidelines without ICP WSES	Amaya Alvarez
L6: Task Shifting/Task Sharing	Franly Arismendi
Exam module six	
Module 7 Best Practices of Basic Nursing Care	
L1: Designing a Protocol using Evidence Base or Best Practice	Karen March
L2: Airway & breathing	Karen March

AGENDA	RESPONSIBLE ASSIGNED
L3: Circulation – hemodynamics, monitoring urine output, DVT prophylaxis	Karen March
L4: Positioning – HOB, turning, contracture prevention, Prevention of decubitus	Rachel Malloy
Video 4: Positioning HOB, Contracture Prevention, Turning	
L5: Temperature management in the Neuroscience Patient	Mary Guanci
Video 5: Shivering assessment	
L6: Time in seizure is Brain: Seizure assessment and interventions	MaryKay Bader
L7: Evidence based or Best Practices of Basic Nursing care: Nutrition, Glucose and Gastrointestinal Prophylaxis	Rachel Malloy
Exam module seven	
Module 8 Critical Care Management of the Neurotrauma Patient	
L1: Management of Intracranial Hypertension	Twyila Lay
L2: Critical Care Management of Brain Hypoxia	MaryKay Bader
L3: Critical Care Management of Cerebral Perfusion Pressure	MaryKay Bader
L4: Advances in Care: The Future (Neuromodulation, neuro stimulation, stem cell, pharmacology)	Joacir Graciolli
Exam module eight	
Module 9 Spinal Care Management of the Neurotrauma Patient	
L1: Review of Spinal Anatomy	Karen March
L2: Spinal Neurotrauma: Current Concepts in Pathophysiology	Pat Blissitt
L3: Spinal Cord Assessment	Rennan Ribeiro & Rita de Cassia Almeida Vieira
Video 6: Spinal assessment	
L4: Neuro Imaging of the Spine – CT and MRI	Rachel Malloy
L5: Surgical Management – Spine stabilization	Scout Hebinck
L6: Critical Care Management of Spinal Cord Injuries	Debra Hemmerle
Video 7: Cervical collar fitting	
Video 8: Ace wraps of legs, Abdominal binder, Pressure relief	
Exam module nine	

AGENDA	RESPONSIBLE ASSIGNED
Module 10 Management of Special Neurotrauma Populations	
L1: Management of Neurotrauma Patients with Coagulopathy	Mary Kay Bader
L2: Management of Elderly Patients with TBI	Amaya Alvarez
L3: Management of Pediatric Patients with TBI	Rebecca Silvers
L4: Management of Patients with Posttraumatic Hydrocephalus	Cathy Cartwright
L5: Management Sodium Disorders in Acutely and Critically Ill Neuroscience Patients	Pat Blissitt
L6: Management of Complex Post Traumatic Epilepsy	Sebastian Vasquez
Exam module ten	
Module 11 Post-Acute Care of the Neurotrauma Patients	
L1: Paroxysmal Sympathetic Hyperactivity after Traumatic Brain Injury	Kimberly Meyer
L2: Post-Acute Spasticity Care	Theresa Green
L3: Heterotrophic Ossification (HO)	Theresa Green
L4: Post-acute care of mobility	Theresa Green
Video 9: Mobilizing Neurotrauma patients	
L5: Neuro-endocrine dysfunction & treatment – anterior pituitary dysfunction	Rennan Ribeiro
Exam module eleven	
Module 12 Principles of Rehabilitation and Family Interventions	
L1: Defining COMA: persistent vegetative state, minimally conscious state	Andres Rubiano
L2: Principles of Rehabilitation of Traumatic Brain Injury Patients	Theresa Green
Video 10: Cognitive aid and adaptive devices for activities of daily living	
L3: Management of Persistent Post Concussive Symptoms	Sebastian Vasquez
L4: Principles of Rehabilitation of Traumatic Spinal Cord Injury Patients	Theresa Green

AGENDA	RESPONSIBLE ASSIGNED
L5: Family Intervention	Twyila Lay
L6: Neuroprognostication, Brain Death, and the Neuroscience Nurse Role	Mary Guanci
Exam module twelve	
Final Exam	

Event information

Event fee

USD \$180.00

Discount for Upper Middle Income (50%); Fee: USD \$90.00

Discount for Lower Middle Income (58%); Fee: USD \$75.00

Discount for Low Income (72%); Fee: USD \$50.00

Registration

Please click on the registration link below to register for this course:

<https://globalneuro.org/EN/education/event-detail/63.html>

Course certificate

The course certificates can only be provided if the participant attends the entire event (100%) and will be available at the end of the event.