

Course Syllabus

Traumatic Brain Injury: From Coma to Independence

February 3 - March 31, 2022
On-Demand Online Course

Shirley Ryan AbilityLab
355 East Erie Street
Chicago, IL 60611

Shirley Ryan
Abilitylab



CONTINUING EDUCATION CREDITS

Course: 14.5 Contact Hours (1.5 hours live/on-demand webinars; 13.0 hours self study)

LOCATION

Academy Learning Portal

FACILITATOR

Julie Lenkiewicz, MS, CCC-SLP

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CONTINUING EDUCATION CREDITS

This course is taught online using both an virtual meeting platform, Zoom, and the Academy Learning Portal where participants will utilize discussion boards, and other learning materials.

COURSE DESCRIPTION

This interdisciplinary online course, will follow along the path of recovery for a patient with a severe Traumatic Brain Injury (TBI). Esteemed faculty will lead participants from disorders of consciousness (DOC) (Rancho Los Amigos I-III), and then into the challenging Rancho IV population where behavior and agitation/aggression is often seen. Physician, clinicians, and nurses will provide a foundation of understanding related to this level of recovery, as well as practical suggestions and applications when working with individuals currently at this level of recovery. Progressing through recovery periods of confusion, Post Traumatic Amnesia (PTA), and increasing awareness and independence will be explored. The concept of self-regulation, return to meaningful activity and facilitation are integral therapeutic processes that will be discussed. Finally, the idea of ethics and decision making will conclude the course.

Participants will engage in the review of evidence based practice, application of skills through tests and case-based application, and discussion with peers on the course discussion board. Content will be both informational, and applicable to taking back to daily clinical practice. **This program has been designed to allow the learner to progress at their own pace. It is recommended that each session be completed within 1 week.**

Successful completion.

Participants will attend 1 live session (total of 1.5 hours) in addition to 13.0 hours of other asynchronous activities including video lectures and discussions, readings, questions, scoring video clips, and a case study. There will also be interactions with faculty and classmates via a discussion board.

COURSE OBJECTIVES:

Upon completion of this course, participants will be able to:

- Define coma, the vegetative state, and the minimally conscious state
- Utilize the Agitated Behavior Scale (ABS) to rate a patient's level of agitation and use it as a communication tool
- Describe an interdisciplinary team approach to behavior management to facilitate participation of the patient with agitated-like behaviors in a rehabilitation setting

- Develop an interdisciplinary plan of care for patients in the Rancho V, VI, VII stages of TBI recovery
- Identify common cognitive problems associated with Ranchos Level VIII to X following TBI
- Describe how the use of Goal Attainment Scaling promotes goal achievement and the development of self-regulation after brain injury
- Apply knowledge of differences in client with TBI and family caregiver perspectives, clinical biases, and ethical dilemmas when discussing real world, safety risk case studies

TECHNOLOGY REQUIREMENTS

To participate, you will need access to a device with an Internet connection.

Computers, laptops, iOS and Android devices are supported.

High-speed broadband Internet access (LAN, Cable or DSL) is highly recommended.

Additional requirements include:

- Web browsers (Latest Version): Google Chrome, Firefox, or Safari
- JavaScript and Cookies enabled
- Speaker or headset to listen to recorded audio files
- Speaker or headset or phone to listen to webinar facilitators
- Zoom (Latest Version)

It is expected that students enrolled in the course can use an internet browser, email, create online written documents, and attach documents to email.

INTRODUCTION: ONLINE INTRODUCTION TO THE COURSE – AVAILABLE FEBRUARY 3, 2022

1. Describe Course Logistics
 2. Review Submission of Assignments
 3. Locate the Discussion Board in order to participate in an online forum
 4. Discuss course expectations for interacting in a collegial learning environment
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COURSE PRE-WORK

“INTRODUCTION TO TRAUMATIC BRAIN INJURY”

PRESENTED BY: DR. DEENA HASSABALLA & LINDSAY HONG, MS, RN, CRRN

Description:

The pre-work module for this course will discuss the anatomy and physiology of the brain. It will detail the different types of injuries and how the location of those injuries play a role in the patient presentation. The module will discuss ways to describe the severity of injury and explain levels of recovery. Tools used to qualify and quantify injury and recovery, such as the Ranchos Los Amigos Recovery Scale will be reviewed as well.

Objectives:

1. Summarize foundational material related to Traumatic Brain Injury (TBI)
2. Explain different types of brain injuries
3. Describe how location of injury may predict patient presentation

To Do:

- ☒ View 90 minute Video
 - ☒ Complete Feedback Survey
 - ☒ Post on Discussion Board: What is one evaluation/treatment/content piece of information you would like to learn in this course?
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SESSION ONE: DISORDERS OF CONSCIOUSNESS: THE FUTURE OF REHABILITATION CARE

JOHN WHYTE, MD, PHD

Description of Week:

Prolonged disorders of consciousness (DOC) have been viewed as hopeless, and patients with DOC receive restricted access to intensive rehabilitation services, potentially leading to a self-fulfilling prophecy. Recent research has demonstrated functional recovery over multi-year periods for a substantial minority of individuals with DOC, resulting in an updated evidence based guideline that supports greater access to expert care. In parallel, published guidance is now available regarding the structure and processes needed by rehabilitation facilities serving this population. This presentation will discuss common mechanisms of impaired consciousness, long-term outcome and prognosis, patient assessment, and clinical priorities of rehabilitation management. In addition, promising directions of research that have not yet reached clinical implementation will be previewed.

Objectives:

1. Define coma, the vegetative state, and the minimally conscious state
2. Identify 2 complementary methods of patient assessment
3. Describe one of the new practice guideline recommendations related to DOC
4. Identify one emerging technology that may enhance patient assessment or treatment

Article: Whyte J, Bergin MJG, Giacino JT: Disorders of Consciousness. In Silver JM, McAllister TW, Arciniegas DB (Eds.) Textbook of Traumatic Brain Injury (3rd Ed.; pp. 201-216). Washington, DC, American Psychiatric Association Publishing, 2019

To Do:

- ☒ **Read Article And Answer Corresponding Questions** (all found in Academy Learning Portal - Session 1 & Additional References)
 - ☒ **View 85 Minute Video (in 4 parts)**
 - ☒ **Complete Feedback Survey**
 - ☒ **Post on Discussion Board:** What practice guideline recommendation or technology component were you most interested to learn about?
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SESSION TWO: RANCHO I-III: A CLINICAL PERSPECTIVE – LIVE SESSION ON FEBRUARY 18, 2022

MARY KATE PHILBIN, MS, CCC-SLP & STEFANI CLEAVER, PT, DPT

Description of Week:

As a result of a Severe Traumatic Brain Injury (TBI), patients often are initially in a Disordered State of Consciousness. Comprised of three categorical and behavior-specific components, patients may present in a Coma, Vegetative State, or Minimally Conscious State during their acute hospital stay or early rehabilitation days. Emerging evidence-based practices are directing a clinician's ability to assess a patient and determine their level of disordered consciousness, and aide in setting appropriate treatment plans and family goals for those with these severe impairments.

Objectives:

1. Summarize evidence-based tools for assessing patients in a disordered state of consciousness
2. Classify patients level of disordered state of consciousness by demonstrated behaviors
3. Describe appropriate treatment plans for an individual at varying levels of disordered states of consciousness
4. Express important components of family education

To Do:

- ☒ **Attend Live Session on 18/02/2022 9:00 am AEDST (Sydney)**
- ☒ **Submit Attendance Verification Code in online course**
- ☒ **Complete Feedback Survey**
- ☒ **Post on Discussion Board:** What do you feel is an important piece of communication or education with a patient's family at this level of their care?

*** Note:** If you cannot attend the live session, a recording will be made available in the online course materials shortly after the live event.

SESSION THREE: RANCHO IV: AGITATION MANAGEMENT IN TBI

SHERYL KATTA-CHARLES, MD

Description of Week:

Post-traumatic agitation is a delirium-state occurring during post-traumatic amnesia, characterized by excessive behaviors, including some combination of aggression, akathisia, disinhibition, and emotional lability. A large percentage of individuals with moderate to severe acquired brain injury go through this state. Without proper management, the neurobehavioral sequelae can endanger the patient and caregivers, can be a source of disability, and can be associated with prolonged inpatient rehabilitation stay. During this presentation, we will review the neurobiology of agitated behavior, risk factors for agitated behavior, and pharmacological management of post-traumatic agitation.

Objectives:

1. Describe the relationship between post-traumatic agitation and cognitive dysfunction
2. Discuss the quantity and quality of post-traumatic agitation
3. Explain risk factors for post-traumatic Agitation
4. Summarize the role of various drug classes in the treatment of post-traumatic agitation

To Do:

- ☒ View 83 Minute Video (in 4 parts)
 - ☒ Take Quiz - Found in Session 3
 - ☒ Complete Feedback Survey
 - ☒ Post on Discussion Board: How do you manage patients during periods of agitation?
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SESSION FOUR: IT TAKES A VILLAGE: AN INTERDISCIPLINARY APPROACH FOR CLINICAL MANAGEMENT OF BEHAVIORS

AMANDA MURRAY, BS, RN, CRRN & KAITLIN REILLY, PT, DPT

Description of Week:

After sustaining a Traumatic Brain Injury (TBI), numerous behaviors may be demonstrated and experienced. Among this sequela include agitation and other negatively associated behaviors such as restlessness, physical aggression, and constant verbal outbursts. Specifically, those negative behaviors pose challenges that directly impact the necessary treatment and care required to optimize recovery. Negative behaviors can be potentially dangerous to manage and impact the safety and wellbeing of staff, and support systems often lead to increased feelings of stress and fear. This module outlines how to recognize, define, and quantify these negative behaviors in those diagnosed with a brain injury. It will provide a variety of strategies, such as environmental modifications, adherence to schedule, and behavioral approaches to allow for optimal participation in the rehabilitation setting. Lastly, it highlights the importance of an interdisciplinary approach in the communication, carryover, and education to others for optimal engagement in order to progress interventions and maintain safety. Case studies and examples will allow course participants to apply principles learned.

Objectives:

1. Explain and differentiate the characteristics of patients classified as Rancho IV and Rancho V, as it relates to the word “agitation”
2. Recognize agitation and other negatively harmful behaviors, and identify patterns and triggers in those diagnosed with a TBI
3. Utilize the Agitated Behavior Scale (ABS) to rate level of agitation and apply it as a communication tool
4. Discuss ways to reduce unnecessary escalation and maximize safety
5. Describe an INTERDISCIPLINARY TEAM approach to behavior management to facilitate participation of the patient with agitated-like behaviors in a rehabilitation setting

To Do:

- ☒ **View 96 Minutes of Video (in 5 parts)**
- ☒ **View Video Clips of agitated patients and Score utilizing the Agitated Behavior Scale (ABS)**
- ☒ **Upload your ABS Scores** (Full instructions about where to view videos and how to upload your scores can be found in the online materials for the course)
- ☒ **Complete Feedback Survey**
- ☒ **Post on Discussion Board:** What communication, strategies or intervention have you found helpful with your interdisciplinary team members to manage a patient’s behavior?

SESSION FIVE: RANCHO V, VI, VII – EMERGENCE FROM CONFUSION AND AGITATED STATES OF TRAUMATIC BRAIN INJURY

KYLE FAULKNER, OTR/L & ANTONETTE MARIE A. SANCHEZ, MSN, RN, CRRN CNE

Description of Week:

This module outlines the characteristics of Rancho Stages V, VI, and VII as well as suggests evidence-based intervention strategies. After the confused and agitated state of Traumatic Brain Injury recovery, individuals can progress through phases characterized by varying levels of confusion, inappropriate behavior, and eventual emergence from Posttraumatic Amnesia. More automatic, appropriate, and overlearned behaviors develop, such as participating in aspects of self-care without help. yet, cognitive-behavioral impairments are not outwardly recognizable due to underlying deficits in memory, attention, emotional regulation, and problem solving. Frequently, in these phases of recovery, patient’s lack insight on the functional impact of impairments, resulting in risk for secondary injury and further disability.

Objectives:

1. Explain the distinct characteristics of Rancho V, VI, and VII
2. Identify evidence-based strategies to assess for emergence from Post-Traumatic Amnesia (PTA)
3. Propose interventions that maximize the safety and independence for confused, non-agitated and newly emerged patients with TBI
4. Develop an interdisciplinary plan of care for patients in the Rancho V, VI, and VII stages of TBI recovery

To Do:

- ☒ **View 73 Minute Video (in 5 parts)**
- ☒ **Complete Case Study** – all materials and full instructions can be found in the online materials
- ☒ **Upload your Case Study Question Write-up**
- ☒ **Complete Feedback Survey**
- ☒ **Post on Discussion Board:** What functional tasks or interventions have you found helpful to target with patients at this stage of their recovery?

SESSION SIX: TRAINING METACOGNITIVE PRACTICES: THE ROLE OF SELF-REGULATION IN RETURN TO PRODUCTIVITY AFTER BRAIN INJURY

KATY H. O'BRIEN, PhD CCC-SLP

Description of Week:

Return to productivity following traumatic brain injury (TBI) remains challenging despite advances in medical and rehabilitative care. As a person moves through higher levels of the Rancho Scale, training in self-management of injury effects is critical. Rehabilitative approaches are discussed to support return to school, work, and community following TBI, including training in self-regulation and measurement of self-regulation outcomes.

Objectives:

1. Identify common cognitive problems associated with Rancho levels VIII to X following Brain Injury.
2. Contrast assessment approaches between lower and higher Rancho levels.
3. Summarize therapeutic processes that support development of self-regulation for people recovering from Brain injury.
4. Describe how the use of Goal Attainment Scaling promotes goal achievement and the development of self-regulation after Brain Injury.

Article: O'Brien, K. H., Schellinger, S. K., & Kennedy, M. R. T. (2018). Self-regulation strategies used by students with brain injury while transitioning to college. *NeuroRehabilitation*, 42(3), 365–375. <http://doi.org/10.3233/NRE-172413>

To Do:

- ☒ **Read Article and Answer questions on Article** (all found in online materials for the course)
- ☒ **View 89 Minute Video** (in 4 parts)
- ☒ **Complete Feedback Survey**
- ☒ **Post on Discussion Board:** What goals do you feel are the most important to establish and target with our patients at these stages of their recovery?

SESSION SEVEN: CLINICAL AND ETHICAL DECISION-MAKING: SAFETY RISK ASSESSMENT FOLLOWING TRAUMATIC BRAIN INJURY

RONALD T. SEEL, PhD, FACRM

Description of Week:

Self-managing safety risk following TBI is challenging. Client difficulties with cognition, mobility, self-awareness, and/or self-regulation, as well as environmental risks, can affect individuals' ability to perform activities and learn safety strategies. Clients are at increased risk of death, re-hospitalization and loss of independence, which often leads to anxiety, frustration, loss of confidence, depression, and diminished life quality. Maximizing independence while reducing safety risk is the holy grail of rehabilitation, home, and community-based TBI services. Balancing clients' with TBI supervisory needs, independent return to activities, and safety is complicated. Families often rely on rehabilitation providers determinations of supervision needs. Short stays may not allow providers to adequately assess safety on all instrumental activities of daily living (IADLs) and they often opt for recommending high levels of supervision and activity

restrictions, which may unnecessarily limit clients' autonomy. Families sometimes follow providers supervision recommendations to the letter and may not know how or when to help survivors independently and safely engage in IADLs. Conversely, in some cases, families have limited support or need to return to work, and allow TBI survivors to be on their own despite being at safety risk. This interactive seminar will provide an overview of safety risk assessment following severe TBI. Elements of safety risk assessment will be reviewed including biopsychosocial context; client with TBI capacity, values, and preferences; potential risks and harm to self and others; family caregiver and clinician values, preferences, and biases; assessment strategies and approaches; competing ethical principles, e.g., autonomy versus beneficence; practical considerations; and validating assessments. Interactive discussion of case studies will allow participants to apply educational content in real world situations with clinical and ethical dilemmas.

Objectives:

1. Articulate similarities and differences in client with TBI and family caregiver concerns, values, preferences, and biases
2. Identify potential clinician biases when assessing safety risk
3. Define ethical constructs of autonomy, nonmaleficence, beneficence, respect, justice, and confidentiality
4. Apply knowledge of differences in client with TBI and family caregiver perspectives, clinical biases, and ethical dilemmas when discussing real world, safety risk case studies.

To Do:

- ☒ **View 84 Minute Video** (in 4 parts)
 - ☒ **Complete Feedback Survey**
 - ☒ **Post on Discussion Board:** What do you feel is the most important piece of education to provide to our patients and their families as they ready for discharge and the transition to home?
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COURSE WRAP-UP:

After the last session, a post-course evaluation will be made available in the learning portal. Completion of the evaluation is a requirement of successful course completion. This evaluation and all course related modules and pre/post work by Thursday, March 31, 2022.

GRADING & CONDUCT OVERVIEW

The learning in this course is built on the ongoing exchange of ideas and information through recorded and live seminars and discussion board posts on the Academy Learning Portal. The required assignments will be available during the 8 weeks that the course content is available. Students will be required to complete the course satisfactorily by Thursday, March 31, 2022.

We seek to foster a cordial, collaborative, and supportive learning community. Diversity of opinions, conflicting perspectives, variable experiences and abilities are all respected and encouraged. In order to honor these traits, please conduct yourself with a high level of professional and academic standards within this instructional setting.

Please reflect upon Discussion Board questions with thoughtful answers and non-biased, critical statements of your colleagues' learning. For students to receive credit for a course and receive a passing grade you must complete all elements as reflected in this syllabus. Please refer to each module for the specific rubric. Please note, all videos must be viewed in order to receive credit for that week.

FEEDBACK

Each session will feature an opportunity for feedback immediately upon completion. Please fill out this information that explicitly asks:

- What went well?
- What could have been better?
- What other details would you like to provide feedback on from this course module?

Upon conclusion of the entire course, we will ask for your feedback as well regarding the course as a whole. Thank you for reflecting on the course as you work through the educational experience.

ACCESSIBILITY

Please contact the Academy if you require special accommodations for this course. Accessible materials and personal assistance are available with at least 45-days advance notice.