

2011 ACRM-ASNR Annual Conference

Progress in Rehabilitation Research

atlanta

OCTOBER 11 – 15, 2011 / HYATT REGENCY / ATLANTA, GEORGIA

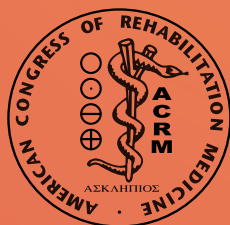
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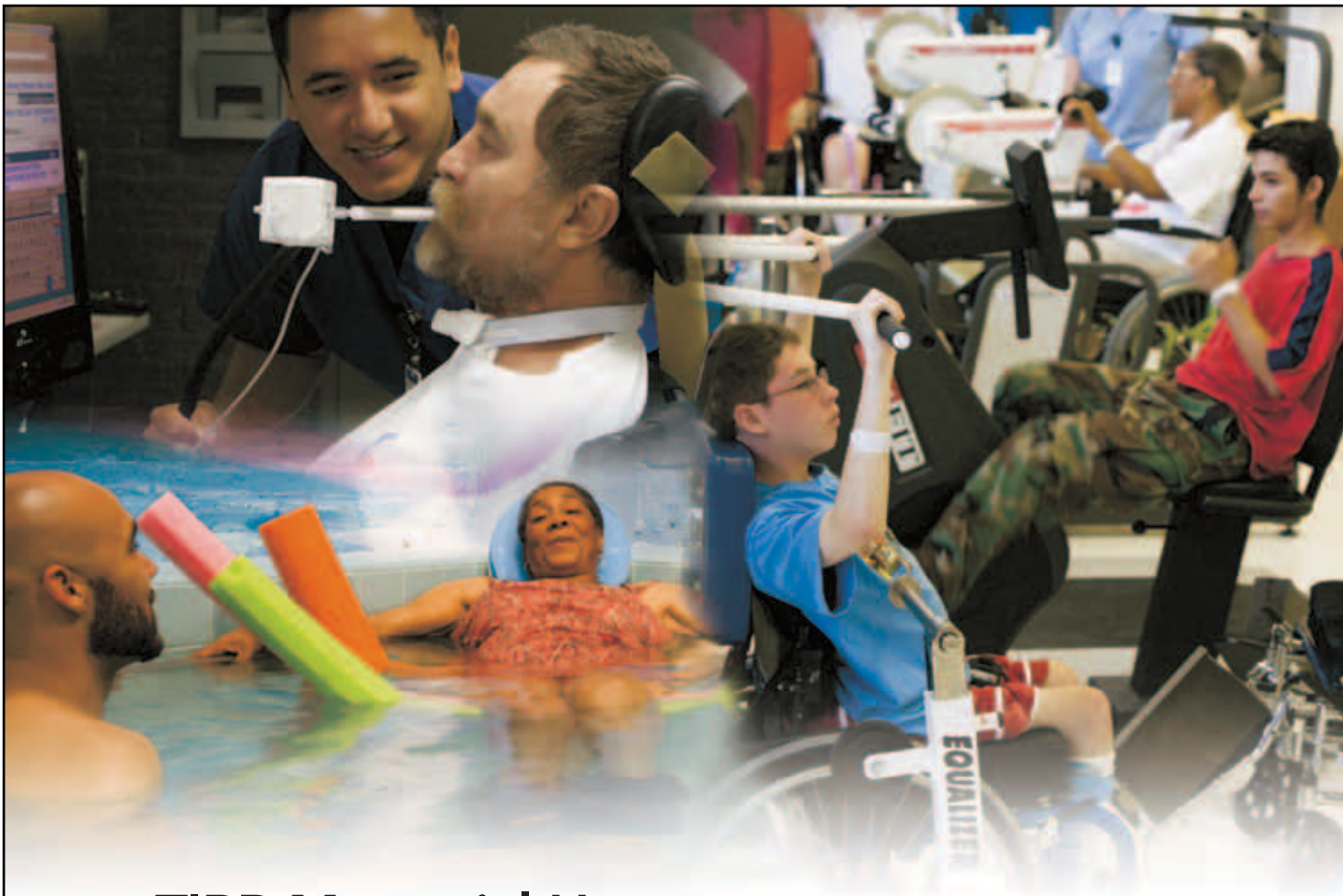


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Progress in Rehabilitation Research

What an exciting week this will be! Thanks to the hard work and dedication of our Program Committee, we have a jam-packed program of cutting-edge content sure to engage and enlighten early career and seasoned rehabilitation professionals alike.

Thanks to so many of you, the ACRM-ASNR Progress in Rehabilitation Research is no longer the best kept secret in rehabilitation. As we come together this week in Atlanta, we are making history. This is our biggest annual conference ever! We hope you'll agree it is also the best place to learn the latest in innovative rehabilitation research, technology and evidence-based practice.

This year, we offer six full-day, concentrated study pre-conference courses and an Early Career Development Course for those seeking intensive programming. We thank Shepherd Center and Emory University for hosting two of those offsite sessions. Turn to page 15 for details.

We are also fortunate to have with us this year, six nationally and international recognized plenary speakers and lecturers. They are:

- Randolph J. Nudo, PhD, Kansas University Medical Center, Kansas City, KS
- Donald G. Stein, PhD, Emory University School of Medicine, Atlanta, GA
- Michael Weinrich, MD, National Institutes of Health, Bethesda, MD
- Carolee Winstein, PhD, PT, FAPTA, University of Southern California, Los Angeles, CA
- David W. Wright, MD, FACEP, Emory University, Atlanta, GA
- Keith D. Cicerone, PhD, ABPP-Cm, FACRM

The educational content of this meeting is truly outstanding, covering all aspects of rehabilitation and bringing researchers and clinicians together to improve the lives of people living with disabilities and those who care for them. Don't miss this opportunity to earn continuing education credit by registering for CME / CEU credit at the Registration Desk.

Your Program Committee worked diligently to bring the best possible meeting to Atlanta and we are pleased to report that in direct response to your 2010 meeting evaluations, this year you will find:

- More symposia focused on stroke;
- Greater emphasis on knowledge translation;
- CME / CEU certificates are now available online; and
- A fully-accessible venue.

Year after year you tell us the most valuable aspect of this meeting is the opportunity to network with rehabilitation colleagues across disciplines and national borders, so we're expecting our most popular event, the President's Reception and Awards Gala, to sell out again this year! We'll meet at the spectacular Georgia Aquarium to honor excellence in our field and enjoy an evening of camaraderie and fine food prepared by the legendary Wolfgang Puck. Private admission to the world's largest aquarium is included. Tickets are still available at the Registration Desk, but they won't be for long...

Now is a perfect time to check out our Special Interest and Networking Groups, and get involved. Please review the At-a-Glance beginning on page 10, for a list of dates, times and special luncheon programming. Reserve your tickets at the Registration Desk.

And finally, we are delighted to announce that the next ACRM-ASNR Progress in Rehabilitation Research will meet in beautiful Vancouver, BC as we return to Canada in October 2012.

So many people have worked tirelessly to deliver the right mix of specialty focus, scholarship, interdisciplinary exchange, research and practical application in clinical practice to this educational program. We thank them for their commitment to ACRM, ASNR, and to the field of rehabilitation medicine.

We hope you enjoy the experience!

Very best regards,

Gary R. Ulicny, PhD
ACRM President



Anna M Barrett, MD
ASNR President



2011 ACRM-ASNR Program Committee

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2011

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ACRM-ASNR Annual Conference

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Progress in Rehabilitation Research



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CONTINUING EDUCATION

for 9 Disciplines

NEW! Online Delivery of CME/CE/CEU Certificates

In addition to more certifications, 2011 attendees gain 24/7 access from their computer to submit course evaluation forms and download certificates. Certificates will be awarded to those participants who attend the conference, sign the session rosters, and complete an evaluation form. The number of continuing education credits/contact hours/units awarded will be based upon the number of conference hours attended and the requirements of the specific accrediting organizations.

Continuing Education

Attendees of the 2011 ACRM-ASNR Progress in Rehabilitation Research Annual Conference may earn continuing education credits by participating in pre-conference courses, plenary sessions, symposia, oral poster sessions, the Stroke Networking Group Luncheon, the Brucker International Luncheon, the SCI-SIG Luncheon Meeting and the ACRM John Stanley Coulter Lecture.

Statement of Need

Interprofessional exchange, interaction, and cooperation are the cornerstones of optimal patient care. Educational interventions that promote interprofessional learning and collaboration are needed to advance clinical and scientific research and its subsequent translation to clinical practice. The 2011 ACRM-ASNR Progress in Rehabilitation Research Annual Conference will bring together national and international experts, across multiple specialties, with the common goal of sharing current and future research as well as evidence-based interventions relevant to health care professionals in physical medicine and rehabilitation.

Learning Objectives

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Identify current and future research in rehabilitation medicine.
2. Discuss recent research findings and their potential impact on the clinical care of rehabilitation patients.
3. Apply evidence-based knowledge and skills to enhancing patient care.
4. Identify strengths and weaknesses in the evidence base for treatment approaches to rehabilitation medicine.
5. Identify fundamental issues in ethics, cultural diversity, and evidence-based practice as applied to rehabilitation medicine.

ACRM-ASNR aims to offer continuing education credits for everyone on the rehabilitation team. A single processing fee (\$60) entitles attendees to any/all certifications.

Intended Audience

This activity is intended for physiatrists, physical therapists, occupational therapists, speech pathologists, rehabilitation nurses, psychologists, rehabilitation case managers, rehabilitation counselors, disability specialists, and other professionals serving the field of rehabilitation medicine.

Method of Participation

In order to claim credit, participants must:

- Register for continuing education on the registration form.
- Pay the CE single processing fee (\$60).
- Sign the attendance form located at the entrance to each CE activity.
- Attend the live CE activities.
- Complete the CE Evaluation Form online.

Upon successful completion of the online evaluation form, you can instantly download and print your certificate of credit. Login information will be sent to you via e-mail if you have registered for continuing education.

Physician Continuing Medical Education

27.75 AMA PRA Category 1 Credits™

ACCREDITATION STATEMENT:

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Elsevier Office of Continuing Medical Education, the American Congress of Rehabilitation Medicine (ACRM), and the American Society for Neurorehabilitation (ASNR). The Elsevier Office of Continuing Medical Education is accredited by the ACCME to provide continuing medical education for physicians.

DESIGNATION STATEMENT:

The Elsevier Office of Continuing Medical Education designates this live activity for a maximum of 27.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

DISCLOSURE STATEMENT: As a sponsor accredited by the ACCME, it is the policy of the Elsevier Office of Continuing Medical Education (EOCME) to require the disclosure of anyone who is in position to control the content of an education activity including faculty, authors, editors and planning committee members. All relevant financial relationships with any commercial interests and/or manufacturers must be disclosed to participants at the beginning of each activity.



CME
CONTINUING MEDICAL EDUCATION

Registered Nurse/Rehabilitation Nurse Continuing Education

33.3 Contact Hours

Dannemiller is a provider approved by the California Board of Registered Nursing, Provider Number 4229. This activity is designated for 33.3 contact hours.

RNs outside California must verify with their licensing agency for approval of this course.



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Psychology Continuing Education

27.5 APA Credits

This Conference is approved for a maximum of 27.50 hours of continuing education. APA Division 22, Rehabilitation Psychology is approved by the American Psychological Association to sponsor continuing education for psychologists. APA Division 22 maintains responsibility for this program and its content.

DIVISION OF REHABILITATION PSYCHOLOGY

Division 22/American Psychological Association



Occupational Therapy Continuing Education

27.75 CEUs

Dannemiller is an American Occupational Therapy Association (AOTA) Approved Provider of continuing education.

"The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA."

AOTA CEUs: 2.75 (27.75 Contact Hours)



**APPROVED PROVIDER of
CONTINUING EDUCATION**
by The American Occupational
Therapy Association, Inc.

Speech-Language-Hearing Therapy Continuing Education

2.75 CEUs

The University of Maryland is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. This program is offered for up to 2.75 ASHA CEUs. (Intermediate level, Related area.)



University of Maryland, Department of Hearing and Speech Sciences
is approved by the Continuing Education Board of the American
Speech-Language-Hearing Association (ASHA) to provide continuing education
activities in speech-language pathology and audiology. See course
information for number of ASHA CEUs, instructional level and content area.
ASHA CE Provider approval does not imply endorsement of
course content, specific products or clinical procedures.

Case Manager Continuing Education

27.75 CEUs

The 2011 ACRM-ASNR Annual Meeting has been pre-approved by the Commission for Case Manager Certification (CCMC) to provide continuing education credit to Certified Case Managers (CCMs). Maximum clock hours available is 27.75 hours.

Rehabilitation Counselor Continuing Education

27.75 CEUs

The 2011 ACRM-ASNR Annual Meeting has been pre-approved by the Certified Rehabilitation Counselor Certification Commission (CRCC®) to provide continuing education credit to Rehabilitation Counselors. Maximum clock hours available is 27.75 clock hours.

Disability Management Specialist Continuing Education

27.75 CEUs

The 2011 ACRM-ASNR Annual Meeting has been pre-approved by the Certification of Disability Management Specialists Commission to provide continuing education credit to Disability Management Specialists. Maximum clock hours available is 27.75 clock hours.

Physical Therapy Continuing Education

27.75 CEUs

The Georgia State Board of Physical Therapy does not pre-approve courses or providers. This conference has been designed to meet the continuing education requirements of the Georgia State Board of Physical Therapy. Full attendance qualifies for 27.75 clock hours.

SPONSORS

Thank You Conference Sponsors

Please extend your gratitude for the generous support of these organizations...

PLATINUM

Shepherd Center
Rehabilitation Institute of Chicago

SPECIAL THANKS to the
Shepherd Center, primary sponsor of
the President's Reception and Henry B.
Betts Awards Gala at the
Georgia Aquarium Friday night.
See page 12 for more info.

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EXHIBITORS

Exhibitor Welcome Reception with Poster Viewing and Outstanding Poster Awards Presentation

LOCATION: Thursday, October 13, 6:00 PM – 7:00 PM
Grand Hall East

EXHIBITS OPEN: Friday, October 14, 8:00 AM – 6:30 PM
Saturday, October 15, 8:00 AM – 10:30 AM



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American Congress of Rehabilitation Medicine (ACRM)

www.acrm.org

Representatives: Jenny Richard,
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Reston, VA 20190
317-471-8760

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www.appi.org

Representative: Adam Barett
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1-800-368-5777

American Society of Neurorehabilitation (ASNR)

www.asnr.com

Representative: Shannon Wild
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Minneapolis, MN 55416
952-543-5349

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www.bioness.com

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Valencia, CA 91355

Children's Healthcare of Atlanta

www.choa.org/rehab

Representative: Jackie Hendon
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Atlanta, GA
404-790-6355

Cleveland FES Center

www.neurotechnetwork.org

Representative: Jennifer French, MBA
11000 Cedar Avenue, Suite 230
Cleveland, OH 44106
216-231-3257

Elsevier

www.elsevierhealth.com

Representative: TBD
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Philadelphia, PA
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Santa Clara Valley Medical Center

www.tbi-sci.org

Representative: Stephanie Kolakowsky-Hayner
Rehabilitation Research Center
751 S Bascom Ave
San Jose, CA 95128

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TUESDAY, OCTOBER 11		LOCATION
7:30 AM – 5:30 PM	Registration	Regency Area
7:30 AM – 6:00 PM	CDC Workshop	Hong Kong
6:00 PM – 8:00 PM	Early Career Development Course Reception	Peachtree St Plaza
WEDNESDAY, OCTOBER 12		LOCATION
7:30 AM – 5:30 PM	Registration	Regency Area
7:30 AM – 8:00 AM	BREAK FOR PRE-CONFERENCE SESSIONS	Outside meeting space(s)
8:00 AM – 8:30 AM	Early Career Development Course Breakfast	Centennial
8:30 AM – 5:15 PM	Early Career Development Course Meeting	Centennial
8:00 AM – 5:30 PM	Pre-Conference Symposia: Spinal Cord Injury: New Directions in Assessment, Repair & Rehabilitation	Offsite @ Shepherd
8:00 AM – 5:30 PM	Pre-Conference Symposia: Quality Measures for Rehabilitation: Policy, Provider and Patient Perspectives	Hanover F & G
8:00 AM – 5:30 PM	Pre-Conference Symposia: NIH R24 Infrastructure Networks: Providing Resources for Rehabilitation Research	Regency VI
8:00 AM – 5:30 PM	Pre-Conference Symposia: Assessing the Quality & Applicability of Systematic Reviews using a Systematic Approach	Regency VII
8:00 AM – 12:00 PM	Pre-Conference Symposia: Non-Invasive Brain Stimulation: Current Applications in the Neurorehabilitation of Patients After Stroke	Chicago A & B
8:00 AM – 5:30 PM	Pre-Conference Symposia: Pediatric Traumatic Brain Injury	Courtland
10:15 AM – 10:45 AM	BREAK	Outside meeting space(s)
12:30 PM – 2:00 PM	Pre-Conference Symposia: Practical Demonstration of Transcranial Magnetic Stimulation (TMS) Techniques in Workshops	Offsite @ Emory
12:00 PM – 1:00 PM	NIH R24 INFRASTRUCTURE NETWORKS LUNCH	Outside meeting space (Regency VI)
12:00 PM – 12:30 PM	EARLY CAREER DEVELOPMENT LUNCH	Outside meeting space (Centennial)
12:30 PM – 1:30 PM	LUNCH (ON OWN)	
3:30 PM – 4:00 PM	BREAK	Outside meeting space(s)
6:00 PM – 8:30 PM	ASNR Board meeting	Inman
6:00 PM – 7:00 PM	ACRM Outcomes & Measurement Networking Group	Chicago A & B

THURSDAY, OCTOBER 13		LOCATION
7:30 AM – 5:30 PM	Registration	Regency Area
12:15 PM – 7:00 PM	Exhibits OPEN	Grand Hall East
12:15 PM – 7:00 PM	Poster Displays	Grand Hall East
7:00 AM – 8:00 AM	Archives Editors Meeting	Chicago B
8:00 AM – 9:00 AM	BI-ISIG Prognosis After TBI Task Force	Chicago A
8:00 AM – 8:30 AM	Welcome Remarks	Regency VII
8:30 AM – 10:00 AM	PLENARY SESSIONS	Regency VII
	The Future of Clinical Trials in Stroke Neurorehabilitation: Rationale, Challenges & Opportunities for Innovative Approaches	
10:00 AM – 10:30 AM	B R E A K	Regency Foyer
10:00 AM – 11:00 AM	ACRM International Committee Meeting	Hanover F & G
10:30 AM – 12:00 PM	ASNR LECTURES	Regency VII
	ASNR Outstanding Neurorehabilitation Clinician Scientist and Kenneth M. Viste, Jr., MD Award Lectures	
	• Neuroprosthetic Tools for Repair of the Injured Brain	
	• Neurorehabilitation Approaching the End of the Beginning?	
12:00 PM – 1:30 PM	Stroke Networking Group Luncheon — <i>Ticketed Event</i>	Regency VI
12:00 PM – 1:30 PM	<i>Neurorehabilitation & Neural Repair</i> Editorial Meeting	Dunwoody
12:15 PM – 1:30 PM	Brucker International Luncheon — <i>Ticketed Event</i>	Courtland
12:00 PM – 1:00 PM	BI-ISIG Community-Based Treatment Task Force	Chicago A
1:30 PM – 3:00 PM	Sheldon Berrol Memorial Chautauqua Lecture: Insults Real and Imagined: A Clinical and Scientific Inquiry into Mild TBI, Post Traumatic Stress Disorder, and Post-Concussive Syndrome	Regency VII
1:30 PM – 3:00 PM	CONCURRENT SYMPOSIA	
	• Outcomes from a Health Care Home for Persons with Disabilities	Hanover A & B
	• Integrating Interactive Media into Neurorehabilitation; an Evidence-Based Interdisciplinary Approach	Hanover D & E
	• Expanding the Conditions that Respond to Constraint-Induced-Movement (CI) Therapy	Hanover C
3:00 PM – 3:30 PM	B R E A K	
3:30 PM – 5:00 PM	CONCURRENT SYMPOSIA	
	• Life Transitions and Rehabilitation: From Case Studies to Epidemiology	Hanover A & B
	• Empirically -Based Interventions for Post-TBI Depression	Hanover D & E
	• Balancing Law, Social Policy and Clinical Practice	Hanover C
3:30 PM – 5:00 PM	Annual BI-ISIG Summit	Hanover F & G
6:00 PM – 7:00 PM	Exhibitor Welcome Reception and Presentation of Outstanding Poster Awards	Grand Hall East
6:30 PM – 7:30 PM	ACRM-ASNR Board of Directors Social	Dunwoody
7:30 PM – 9:00 PM	ASNR Early Participants Reception	ASNR Suite

FRIDAY, OCTOBER 14		LOCATION
7:30 AM — 5:30 PM	Registration	Regency Area
8:00 AM — 6:30 PM	Exhibits OPEN	Grand Hall East
7:15 AM — 6:30 PM	Poster Displays	Grand Hall East
4:30 PM — 6:30 PM	Poster Authors Present	Grand Hall East
7:15 AM — 8:00 AM	B R E A K prior to start	Grand Hall East
7:15 AM — 8:15 AM	CONCURRENT SYMPOSIA — BREAKFAST SESSIONS <ul style="list-style-type: none"> • Specificity of Exercise for Stroke Rehabilitation: a Debate • Disparities in Health Outcomes after TBI and SCI • Screening for Traumatic Brain Injury • Strategies for Designing Wheeled Mobility and Seating Intervention Studies 	Hanover D & E Hanover C Hanover F & G Hanover A & B
8:15 AM — 8:30 AM	B R E A K	
8:30 AM — 10:00 AM	PLENARY SESSIONS PART 1: Progesterone and Brain Injury: What's Next? PART 2: In Search of a Clinical Treatment for Acute Traumatic Brain Injury: The Hope of Progesterone	Regency VII
10:00 AM — 10:30 AM	B R E A K	Regency Foyer
10:30 AM — 12:00 PM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Current Science and Controversy in Sports Concussion. • Approaches to Neural Regeneration: Implications for Neurorehabilitation • Providing Evidence-Based Prognoses for Persons with Brain Injury and Their Families. • Raising Expectations for Gait Recovery after Stroke: An Evidence-Based Approach • World Health Organization Report on Disability. 	Hanover A & B Hanover D & E Hanover C Hanover F & G Baker
12:00 PM — 1:30 PM	LUNCH (ON OWN)	
12:00 PM — 1:30 PM	Spinal Cord Injury Special Interest Group (SCI-SIG) Luncheon Meeting — Ticketed Event	Courtland
1:30 PM — 3:00 PM	ACRM Membership Meeting	Regency VII
1:30 PM — 3:00 PM	ASNR Membership Meeting	Regency VI
1:30 PM — 3:00 PM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Technology to Advance Mobility Outcomes in Rehabilitation Research • Complex Regional Pain Syndrome: Translating Research into Clinical Practice • Collaborative Research Network Development: Prism Adaptation for Spatial Neglect • Variations in Inpatient TBI Rehabilitation by Age: Patients, Treatments, Outcomes .. 	Hanover A & B Hanover D & E Hanover C Hanover F & G
3:00 PM — 3:30 PM	B R E A K	Regency Foyer
3:30 PM — 5:00 PM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Making Evidence-Based Treatments Accessible via Tele-Health • Medicine at the Nanoscale: Implications for Neurorehabilitation • Evaluation and Treatment of Mild Traumatic Brain Injury Using Regulated Exercise. • Patient Engagement in Acute and Post-Acute TBI Rehabilitation 	Hanover A & B Hanover D & E Hanover C Hanover F & G
3:30 PM — 5:30 PM	Oral Presentation of Scientific Papers & Deborah L. Wilkerson Award Winner	Baker
	<ul style="list-style-type: none"> • Neuromuscular Electrical Stimulation Efficacy in Acute Stroke Tube Dependent Dysphagia • Stepping-Out: Psychosocial and Functional Impact of a 12-Week Home-Based Physical Activity Program After Brain Injury • Efficacy of "Care Call" Telerehabilitation Intervention for Persons with Spinal Cord Dysfunction: Randomized Controlled Trial • Excessive Central Fatigue Limits Motor Function of Cancer Survivors with Fatigue Symptom • Empowerment/Engagement: Front-line Clinicians Enhance the Research Process • Results of the Citicoline Brain Injury Treatment (CO BRIT) Trial 	
4:00 PM — 6:00 PM	BI-ISIG Girls & Women with Traumatic Brain Injury (TBI) Task Force	Courtland
7:00 PM — 11:00 PM	President's Reception and Henry B. Betts Awards Gala — Ticketed Event	Georgia Aquarium

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SATURDAY, OCTOBER 15		LOCATION
7:30 AM – 5:30 PM	Registration	Regency Area
7:30 AM – 8:00 AM	COFFEE AT START	Outside Meeting room(s)
8:00 AM – 9:00 AM	ACRM John Stanley Coulter Lecture: Facts, Theories, Values: Shaping the Course of Rehabilitation	Chicago A & B
8:00 AM – 10:30 AM	Exhibits OPEN	Regency V
9:00 AM – 9:30 AM	BREAK	Regency Foyer
9:30 AM – 11:00 AM	NIDRR Fellow Presentation <ul style="list-style-type: none"> • Relationship of Pre-Injury Coping on Outcomes in Adults with Mild Traumatic Brain Injury • Recovery of Overground Locomotion via Targeted Robotic Gait Training in Rats with SCI • Substance Use in Young Adults with Pediatric-Onset Spinal Cord Injury • Toward a Practical Brain-Computer Interface for Individuals with Severe Motor Disabilities • Screening for Traumatic Brain Injury: A Comparison of Two Distinct Approaches 	Dunwoody
9:30 AM – 11:00 AM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Spinal Cord Injury and Caregiving: Who Needs Help? • Life and Death in the Aging Brain after a TBI • Military Rehabilitation Research: Implications for Military and Civilian Rehabilitation Practice • Exercise After Stroke: Clinical Models, Cardiometabolic Health & Community Translation 	Hanover A & B Hanover D & E Hanover C Hanover F & G
10:00 AM – 10:30 PM	BREAK	
11:15 AM – 12:45 PM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Restoration and Compensation in Brain Injury & Stroke Rehabilitation Therapies: Physical, Cognitive, and Language • Activity-Based Therapies in Spinal Cord Injury • Part 1: Medical and Behavioral Complexity of Persons with Disorders of Consciousness • Measuring the Impact of Cognitive Deficits in the Real World • New Advances in Assessing Safety Risk Following Traumatic Brain Injury 	Baker Hanover A & B Hanover D & E Hanover C Hanover F & G
12:45 PM – 2:00 PM	LUNCH (ON OWN)	
2:00 PM – 3:30 PM	CONCURRENT SYMPOSIA <ul style="list-style-type: none"> • Updating the Neurological Classification for Prognosis in Traumatic SCI • Part 2: Medical and Behavioral Complexity of Persons with Disorders of Consciousness • Principles of Community-Based Residential Care for Persons with TBI • Implementing Engaged Scholarship in Rehabilitation Research 	Hanover A & B Hanover D & E Hanover C Hanover F & G
2:00 PM – 5:45 PM	ACRM Board Meeting	Dunwoody
6:30 PM – 9:00 PM	ACRM Board Meeting	Dunwoody
SUNDAY, OCTOBER 16		LOCATION
8:00 AM – 12:15 PM	ACRM Board Meeting	Dunwoody

MEETINGS

atlanta SPECIAL EVENTS

Wednesday October 12

ACRM Outcomes & Measurement Networking Group Meeting
6:00 PM – 7:00 PM / Chicago A & B

ASNR Board of Directors Meeting
6:00 PM – 8:30 PM / Inman

Thursday October 13

Archives of Physical Medicine and Rehabilitation
Editors Meeting
7:00 AM – 8:00 PM / Chicago B

BI-ISIG Prognosis after TBI Task Force Meeting
8:00 AM – 9:00 AM / Chicago A

ACRM International Meeting
10:00 AM – 11:00 PM / Hanover F & G

BI-ISIG Community-Based Treatment Task Force Meeting
12:00 PM – 1:00 PM / Chicago A

Neurorehabilitation and Neural Repair Editorial Board Meeting
12:00 PM – 1:30 PM / Dunwoody

Brain Injury Interdisciplinary Special Interest Group (BI-ISIG)
Annual BI-ISIG Summit
3:30 PM – 5:00 PM / Hanover F & G

ACRM-ASNR Board Meeting
6:30 PM – 7:30 PM / Dunwoody

Friday, October 14

ACRM Membership Meeting
1:30 PM – 3:00 PM / Regency VII

ASNR Membership Meeting
1:30 PM – 3:00 PM / Regency VI

BI-ISIG Girls & Women with Traumatic Brain Injury
Task Force Meeting
4:00 PM – 6:00 PM / Courtland

Saturday, October 15

ACRM Board of Governors Meeting
2:00 PM – 5:45 PM / Dunwoody

Sunday, October 16

ACRM Board of Governors Meeting
8:00 AM – 12:15 PM / Dunwoody

Look for ★ **SPECIAL EVENT** in the daily schedule
(pages 16 – 37) for complete event details.

Tuesday October 11

Center for Disease Control (CDC) Workshop on Emerging
Rehabilitation Modalities (By Invitation)
7:30 AM – 6:00 PM / Hong Kong

Early Career Development Course Reception
(ECD Attendees Only)
6:00 PM – 8:00 PM / Peachtree Street Plaza

Thursday October 13

ACRM Stroke Networking Group Luncheon // Ticketed Event 
12:00 PM to 1:30 PM / Regency VI

Brucker International Luncheon // Ticketed Event 
12:15 PM – 1:30 PM / Courtland


ASNR Lectures: ASNR Outstanding Neurorehabilitation Clinician
Scientist and Kenneth M. Viste, Jr., MD Award Lectures
8:00 AM – 9:00 AM / Chicago A & B


SHELDON BERROL MEMORIAL CHAUTAUQUA LECTURE:
Insults Real and Imagined: A Clinical and Scientific
Inquiry into Mild TBI, Post Traumatic Stress Disorder,
and Post-Concussive Syndrome
1:30 PM – 3:00 PM / Regency VII

Exhibitor Welcome Reception with Poster Viewing and Outstanding
Poster Awards Presentatio
6:00 PM – 7:00 PM / Grand Hall East

ASNR Early Participants Reception
7:30 PM – 9:00 PM / ASNR Suite

Friday, October 14

ACRM Spinal Cord Injury Special Interest Group
(SCI-SIG) Luncheon Meeting // Ticketed Event 
12:00 PM – 1:30 PM / Courtland

President's Reception and
Henry B. Betts Awards Gala // Ticketed Event 
7:00 PM – 11:00 PM / Georgia Aquarium, Atlanta, GA
Cocktails & Buffet Dinner catered by Wolfgang Puck.
Free private admission included

Saturday, October 15

ACRM John Stanley Coulter Lecture
8:00 AM – 9:00 AM / Chicago A & B

EARLY CAREER

Please join us!

EARLY CAREER DEVELOPMENT RECEPTION

Tuesday evening, October 11

6:00 PM – 8:00 PM

Peachtree St Plaza

Meet mentors, senior scientists, participants and event organizers at this friendly, easy-to-enjoy social event.

COURSE DIRECTOR: Claire Kalpakjian, PhD

FACULTY: Theresa Ashman, PhD, New York University Langone Medical Center, New York, NY; Barbara Bregman, PhD, Georgetown University, Washington, DC; Alex Dromerick, MD, Georgetown University School of Medicine, Washington, DC; Jeanne Hoffman, PhD, University of Washington, Seattle, Washington; Stephanie Kolakowsky-Hayner, PhD, CBIST, Santa Clara Valley Medical Center, San Jose, CA; Jim Malec, PhD, FACRM, Indiana University School of Medicine/Rehabilitation Hospital of Indiana, Indianapolis, IN; Sue Ann Sisto, PhD, Stony Brook University, Stony Brook, NY; Elizabeth Skidmore, PhD, OTR/L, University of Pittsburgh, Pittsburgh, PA; Jill Wecht, EdD, James Peters VA Medical Center, Bronx, NY; Carolee Winstein, PhD, PT, FAPTA, University of Southern California, Los Angeles, CA; Cindy Harrison-Felix, PhD, Craig Hospital, Englewood, CO

EARLY CAREER DEVELOPMENT COURSE

Wednesday, October 12

8:00 AM – 5:15 PM

Navigating Your Road to Independence: Lessons Learned from Seasoned Travelers

Does your early career seem like an obstacle course or treadmill training? Curious how successful senior colleagues coped with early failures and successes? Want strategies to connect and build a productive career as an independent researcher?

The 2011 Early Career Course delivers real-world solutions to the challenges of launching and growing a noteworthy research career from seasoned rehabilitation scientists who traveled the same road and arrived successfully. Tap this unique wellspring of insight, experience and wisdom as you mingle with senior and mid-career colleagues—and even a few pioneers in rehabilitation research.

EDUCATION SESSIONS

- 1) Apply for Learner's Permit: Select, Approach and Engage in Responsible Relationships with Mentors and Collaborators
- 2) Getting Behind the Wheel: Road Map to Successfully Negotiate Faculty Positions and Research Resources
- 3) Navigating the Early to Mid-Career Turnpike: Getting the Green Light for Promotion and Tenure
- 4) Fellow Travelers on the Highway of Life: Time Management, Family Management and Maintaining Balance

MENTORING PROGRAM

Participants are matched with senior scientists who share similar interests. Enjoy one-on-one time during a mentoring lunch. This is a special opportunity for career mentoring during and after the course. A popular favorite!

Pediatric Traumatic Brain Injury (TBI)

8:00 AM – 5:30 PM

COURSE DIRECTOR: Juliet Haarbauer-Krupa, PhD, CCC, Children's Healthcare of Atlanta, Atlanta, GA

FACULTY: Stacy Suskauer, MD, Johns Hopkins School of Medicine, Baltimore, MD; Lyn Turkstra, PhD, University of Wisconsin-Madison, Madison, WI; Gillian Hotz, PhD, University of Miami Miller School of Medicine, Miami, FL; Keith Yeates, PhD, Nationwide Children's Hospital, Columbus, OH; Linda Ewing-Cobbs, PhD, University of Texas Health Science Center at Houston, Houston, TX; Roberta DePompei, PhD, University of Akron, Akron, OH; Gerry Taylor, PhD, University Hospitals Medical Center, Cleveland, OH; Shari Wade, PhD, Children's Hospital Medical Center, University of Cincinnati, Cincinnati, OH; Jeanne Dice-Lewis, PhD, Children's Hospital of Colorado, Aurora, CO; Bonnie Todis, PhD, Western Oregon University, Corvallis, OR; Joseph Marcantuono, PhD

This course offers two main topics in pediatric brain injury rehabilitation:

- 1) Impact of acquired brain injuries on the developing brain and
- 2) Evidence-based treatment interventions for children and youth across the lifespan.

Participants will learn about:

- Research findings on the impact of a neurologic insult on the developing brain.
- Models of care and outcomes for acquired brain injuries in children.
- Impact of brain injury on parents and evidence-based interventions for parents and caregivers.
- Assessment and intervention for disorders of consciousness in children.
- Issues related to school re-entry and long-term educational pathways.
- Research on novel technology interventions.
- Transition to adulthood and vocational outcomes for teens with acquired brain injuries.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the impact of traumatic brain injuries on the developing brain in pediatric patients.
2. Select and incorporate evidence-based treatment interventions for pediatric patients with traumatic brain injuries.

NIH R24 Infrastructure Networks: Providing Resources for Rehabilitation Research

8:00 AM – 5:30 PM

COURSE DIRECTORS: Kenneth J. Ottenbacher, PhD, OTR, FACRM, University of Texas Medical Branch, Galveston, TX

FACULTY: Jonathan Bean, MD, Spaulding Rehabilitation Hospital, Boston, MA; Paolo Bonato, PhD, Spaulding Rehabilitation Hospital, Boston, MA; Roger Fielding, PhD, Tufts University, Boston, MA; James E. Graham, PhD, DC, University of Louisville, Louisville, KY; Alan M. Jette, PhD, MPH, PT, Boston Medical Center, Boston, MA; Amol Karmarkar, PhD, OTR, University of Texas Medical Branch, Galveston, TX; Chantele Singleton, MS, Boston University, Boston, MA

This course provides resources for rehabilitation researchers in two areas: (1) selecting appropriate outcome measures for clinical research and (2) conducting research using large datasets. These topics are presented in a full-day course with two complimentary, but distinct, components. Participants may attend either or both sessions.

The morning session explores opportunities to identify the skills necessary to conduct outcomes research using large administrative or research databases.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the purpose and mission of the NIH 24 Infrastructure Network Program.
2. Identify the services available through the R24 Infrastructure Networks/Centers focused on outcome research.
3. Describe how to apply for pilot funding, training opportunities, and visiting scientist positions.
4. Discuss basic issues and challenges in conducting outcome research using secondary analysis of large datasets.

The afternoon session explores optimizing selection of outcome measures in rehabilitation clinical research using a case-based approach.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss advances in rehabilitation outcomes measures from three distinct approaches: patient-reported outcomes, performance-based measures, and instrumented outcome measures.
2. Describe critical considerations in selecting outcome measures: capturing dimensions impacted by the intervention; responsiveness to the effects of the intervention; establishing validity in the targeted population; and feasibility.
3. Using real-life clinical research problems presented in case studies, participants should be able to select and justify the appropriate type and combination of outcome measures from the three measurement approaches.

Spinal Cord Injury: New Directions in Assessment, Repair, and Rehabilitation

8:00 AM – 5:30 PM

(Offsite Location) Transportation provided to Shepherd Center, the nation's largest hospital dedicated to spinal cord injury. Transportation from Meeting Hotel to Shepherd Center at 7:30 AM and 11:30 AM. Transportation from Shepherd Center to Meeting Hotel at 2:00 PM and 6:00 PM.

COURSE DIRECTORS: Keith Tansey, MD, PhD, Emory University, Atlanta, GA; Deborah Backus, PhD, PT, Emory University, Atlanta, GA

FACULTY: Linda Jones, PT, MS, Geron Corporation Menlo Park, CA; Karl Johe, PhD, Neuralstem, Inc, Rockville, MD; Wise Young, MD, PhD, SCINet USA; Armin Curt, MD, University Hospital Balgrist of Zürich, Switzerland; Maria Knikou, PhD, Northwestern University, Chicago, IL; Art Sherwood, PhD, Baylor College of Medicine, Houston, TX; Gail Forest, PhD, Kessler Foundation, West Orange, NJ; Hunter Peckham, PhD, Case Western Reserve University, Cleveland, OH; Arthur Prochazka, PhD, Institution, Canada University of Alberta, Edmonton, AB, CA; Milos Popovic, PhD, Toronto Rehabilitation, Toronto, ON, CA; Therese E. Johnston, PT, PhD, MBA, Assistant Professor, University of the Sciences, Philadelphia, PA; MJ Mulcahey, OT, PhD, Shriners Hospitals for Children, Philadelphia, PA; Susie Charlifue, PhD, Craig Hospital, Englewood, CO; Mike Jones, PhD, Shepherd Center, Atlanta, GA; Gale Whiteneck, PhD, Craig Hospital, Englewood, CO

This course will bring together an international group of experts to discuss advances in restoration and rehabilitation research in spinal cord injury.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Advances in clinical trials aimed at repair after SCI;
2. Neurophysiological assessments that may be useful in defining changes in neural function with repair or rehabilitation strategies;
3. Strategies for augmenting upper and lower limb neural and functional recovery in people with SCI;
4. Issues related to performing research along the continuum of recovery, as well as during the development and aging processes in people with SCI; and
5. Research methods that may be employed to advance rehabilitation research in SCI.

Non-Invasive Brain Stimulation: Current Applications in the Neurorehabilitation of Patients After Stroke

8:00 AM – 12:00 PM

COURSE DIRECTORS: Cathrin M. Buetefisch, MD, PhD, Emory University, Atlanta, GA; Leonardo G. Cohen, MD, National Institute of Neurological Disorders and Stroke, Bethesda, MD

FACULTY: H. Branch Coslett, MD, William B Kelley Prof of Neurology, Philadelphia, PA; M. Oliveri, University of Palermo, Italy; Gottfried Schlaug, MD, PhD, Harvard Medical School, Boston, MA; George F. Wittenberg, MD, PhD, University of Maryland, Baltimore, MD

This course covers the following topics:

1. Neurophysiological measures after injury to the motor cortex and its projections.
2. TMS protocols: their merits and their pitfalls.
3. Two competing hemispheres? TMS protocols for measurement and modulation of interhemispheric inhibition.
4. Enhancing motor recovery after stroke: rTMS versus Transcranial Direct Cortical Stimulation (tDCS).
5. rTMS and tDCS in the treatment of aphasia.
6. rTMS protocols in the evaluation and treatment of neglect.
7. Future directions of non-invasive cortical stimulation in restorative neurology.

Practical Demonstration of Transcranial Magnetic Stimulation (TMS) Techniques in Workshops

LIMITED TO 20 PARTICIPANTS

12:30 PM – 2:00 PM

(Offsite Location) Transportation provided to Emory University.

INSTRUCTORS: Cathrin M. Buetefisch, MD, PhD, Emory University, Atlanta, GA; Andrew J. Butler, PhD, Emory University, Atlanta, GA

Assessing the Quality and Applicability of Systematic Reviews Using a Systematic Approach

8:00 AM – 5:30 PM

COURSE DIRECTOR: Marcel Dijkers, PhD, FACRM, Mount Sinai School of Medicine, New York, NY

FACULTY: Tamara Bushnik, PhD, FACRM, Rusk Institute for Rehabilitation Medicine, New York, NY; Allen Heinemann, PhD, ABPP (RP), FACRM, Rehabilitation Institute of Chicago, Chicago, IL; Alexander Libin, PhD, MS, MedStar Health Research Institute, Washington, DC; Mark Sherer, PhD, FACRM, Baylor College of Medicine, Houston, TX

Clinicians, researchers and policy makers, who more and more are forced to rely on systematic reviews because of the ever-increasing professional literature, will finish the course with a better understanding of systematic reviews, and a tool to help them critically evaluate any reviews they may consider applying to their work.

Utilizing a combination of lectures and workgroups, this course will:

- Describe the process of creating systematic reviews.
- Present and review a checklist and accompanying manual to help participants evaluate the applicability and quality of systematic reviews (including meta-analyses).
- Explain the reasons for various elements.
- Enable participants to practice using the checklist by evaluating a rehabilitation-relevant systematic review.

The course will not deal with the actual translation of systematic review results to practice, other than addressing the questions: is this review applicable to my question, and does it address the problem, population (etc.) that I deal with.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the importance of systematic reviews in contemporary clinical care, research and program administration.
2. Elucidate the steps in a systematic review, and the pitfalls in each step of which reviewers and potential users (readers) need to be aware.
3. Explain the nature of the checklist components and why these elements are important.
4. Use the checklist, applying it to a published systematic review.

Quality Measures for Rehabilitation: Policy, Provider and Patient Perspectives

8:00 AM – 5:30 PM

COURSE DIRECTOR: Anne Deutsch, RN, PhD, CRRN, Rehabilitation Institute of Chicago, Chicago, IL

FACULTY: Helen Burstin, MD, MPH, The National Quality Forum, Washington, DC; Gerben DeJong, PhD, FACRM, National Rehabilitation Hospital, Washington, DC; Barbara Gage, PhD, Research Triangle Institute, Washington, DC; Allen W. Heinemann, PhD, ABPP (RP), FACRM, Rehabilitation Institute of Chicago, Chicago, IL; Kwang-Youn Kim, PhD, Northwestern University, Chicago, IL; Holly DeMark Neumann, MPP, Rehabilitation Institute of Chicago, Chicago, IL; Kenneth J. Ottenbacher, PhD, OTR, FACRM, University of Texas Medical Branch, Galveston, TX; Suzanne Snyder, MBA, PT, CPUM, Carolinas Rehabilitation, Charlotte, NC

The United States offers advanced health care services; however, the care is not always accessible, effective, safe, and efficient. In calling for a strong response to improve the quality of health care, the Institute of Medicine noted that the only way to know if health care quality is improving is to document performance using standardized measures of quality.

The course will begin with a review of the key characteristics of a quality measure, including the review criteria (importance, scientific acceptability, usability and feasibility) used by the National Quality Forum. The second segment will include a review of the current status of quality measures from several perspectives. The third segment of the course will focus on data collection and data analysis challenges. This will include presentations focused on several case-mix adjustment approaches, identification of clinically important differences in patient outcomes and challenges in defining adverse events occurring in inpatient rehabilitation programs. The final segment will include a panel of researchers discussing possible future policy changes that would affect rehabilitation care and potential research opportunities related to these changes.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the characteristics of a quality measure appropriate for public reporting and pay-for-performance activities.
2. Describe the current status of quality measure development.
3. Describe the impact of data analysis challenges on the development of quality measures.
4. Identify future research opportunities associated with quality measurement efforts.

Registration

7:30 AM – 5:30 PM / REGENCY AREA

Exhibits Open

12:15 PM – 7:00 PM / GRAND HALL EAST

Poster Displays

12:15 PM – 7:00 PM / GRAND HALL EAST

Poster Displays with Authors Present

5:00 PM – 7:00 PM / GRAND HALL EAST

Archives of PM&R Editors Meeting

7:00 AM – 8:00 AM / CHICAGO B

BI-ISIG Prognosis After TBI Task Force

8:00 AM – 9:00 AM / CHICAGO A

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PLENARY SESSION**The Future of Clinical Trials in Stroke Neurorehabilitation:
Rationale, Challenges & Opportunities for Innovative
Approaches**

8:00 AM – 8:30 AM / WELCOME REMARKS / REGENCY VII

8:30 AM – 10:00 AM / REGENCY VII

SPEAKER: Carolee Winstein, PhD, PT, FAPTA, University of Southern California, Los Angeles, CA**FACULTY:** Bruce Dobkin, MD, University of California at Los Angeles, Los Angeles, CA; Pamela Duncan, PhD, PT, FAPTA, FAHA, Duke University, Durham, NC; Alexander Dromerick, MD, Georgetown University School of Medicine, Washington, DC; John Krakauer, MD, The Johns Hopkins Hospital, Baltimore, MD; Walter Koroshetz, MD, NIH/NINDS, Bethesda, MD

Clinical trials have long been seen as the scientific gold standard for providing the best evidence to inform clinical practice. Here, we examine the rationale, challenges, and opportunities for the future of clinical trials in stroke neurorehabilitation. Considerable clinical trial research has focused on the acute stroke event, including tPA and other physiological interventions. There is a growing body of work including clinical trials focused on motor rehabilitation including robotics, electrical stimulation, behavioral interventions and brain-computer interface. This is an exciting time to convene a group of experienced clinical trialists with a leading representative from NINDS to discuss the future of clinical trials in stroke neurorehabilitation.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Summarize the remarkable advances in neuroscience that have stimulated several different lines of translational research in stroke neurorehabilitation.
 2. Discuss the pros and cons of clinical trial research including Phase 1, II and III definitive randomized controlled trials in advancing practice and changing policy for stroke neurorehabilitation.
 3. Discuss the rationale, challenges and opportunities for the future of clinical trials in stroke neurorehabilitation.
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CAROLEE WINSTEIN, PhD, PT, FAPTA

Dr. Carolee Winstein, PhD, is Professor of Biokinesiology and Physical Therapy and Associate Professor of Neurology and Director of the Motor Behavior and Neurorehabilitation Laboratory at USC. Dr. Winstein is currently Project Director/PI on the DOE/NIDRR funded study *Optimizing Participation Through Technologies (OPTT)* — RERC for Successful Aging With Disability and Co-Principal Investigator on the NIH/NINDS funded study *The Interdisciplinary Comprehensive Arm Rehabilitation Evaluation (I-CARE)*. She currently serves on the Advisory Board of the NIDRR-funded Rehabilitation Engineering and Research Center in Chicago, and the National Advisory Board on Medical Rehabilitation Research for NIH/NCMRR. She has received several awards from the APTA, including the Eugene Michels New Investigator Award and the Marion Williams award for Research in Physical Therapy, and was elected a Catherine Worthingham Fellow of the APTA.

ACRM International Committee Meeting

10:00 AM – 11:00 AM / HANOVER F&G

BREAK 10:00 AM - 10:30 AM REGENCY FOYER

ASNR LECTURES

★ SPECIAL EVENT

10:30 AM – 12:00 PM / REGENCY VII

OUTSTANDING NEUROREHABILITATION CLINICIAN SCIENTIST

Neuroprosthetic Tools for Repair of the Injured Brain

PRESENTER: Randolph J. Nudo, PhD, Landon Center on Aging, Kansas City, KS

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe examples of how technology and science have been combined to interface the injured nervous system with the outside world.
2. Explain the capacity of the brain to rewire its connections spontaneously after injury.
3. Describe new approaches to influence functional and structural connectivity in the injured brain using neuroprosthetic approaches.

KENNETH M. VISTE, JR., MD AWARD LECTURE

Neurorehabilitation Approaching the End of the Beginning?

PRESENTER: Michael Weinrich, MD, National Institute of Health, Bethesda, MD

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Outline the origins of Neurorehabilitation.
 2. Describe the current challenges to Neurorehabilitation practice.
 3. Highlight opportunities for advancing research and practice in Neurorehabilitation.
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RANDOLPH J. NUDO, PhD

RANDOLPH J. NUDO, PhD is Director of the Landon Center on Aging and Professor in the Department of Molecular and Integrative Physiology at the Kansas University Medical Center in Kansas City, Kansas. He is the Marian Merrell Dow Distinguished Professor in Aging. Dr. Nudo has published over 100 articles on the topic of brain plasticity after injury, and has been invited to give over 200 national and international presentations for academia and industry. Dr. Nudo has been funded continuously by the National Institutes of Health for over 25 years, and currently holds the prestigious Javits Investigator Award in Neuroscience. He serves on the board of directors of the American Society of Neurorehabilitation, is Associate Editor of the journals Neurorehabilitation and Neural Repair, and Restorative Neurology and Neuroscience, as well as Deputy Editor of the journal Brain Stimulation. He is recognized internationally for his work on the effects of rehabilitative training on functional plasticity after stroke, and is currently collaborating with engineers to develop microimplantable devices for repairing neural circuits after stroke, traumatic brain injury and spinal cord injury.



MICHAEL WEINRICH, MD

DR. WEINRICH is director of the National Center for Medical Rehabilitation Research at NIH. Prior to joining NIH in 2000, he was professor of neurology at University of Maryland School of Medicine and medical director for rehabilitation at Kernan Hospital in Baltimore. He received his undergraduate and medical education at Harvard University, trained in neurophysiology at the NIH, and served on the faculty at Stanford University. In 1998 he served as the AAN-ANA-CNS public policy fellow in the office of Congressman Cardin. His research has spanned development of new rehabilitative approaches for severe aphasia, health services for vulnerable populations, and membrane biophysics.

ACRM STROKE NETWORKING GROUP LUNCHEON & SPECIAL GUEST SPEAKER ★SPECIAL EVENT



12:00 PM – 1:30 PM / REGENCY VI // TICKETED EVENT //

SPEAKER: Anna Barrett, MD; Director, Stroke Rehabilitation Research, Kessler Foundation Research Center; President, ASNR

TOPIC: New Directions for Translation in Stroke Rehabilitation

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Outline the origins of Neurorehabilitation.
2. Describe the current challenges to Neurorehabilitation practice.
3. Highlight opportunities for advancing research and practice in Neurorehabilitation.

Neurorehabilitation & Neural Repair Editorial Meeting

12:00 PM – 1:30 PM / DUNWOODY

BRUCKER INTERNATIONAL LUNCHEON ★SPECIAL EVENT



12:15 PM – 1:30 PM / COURTLAND // TICKETED EVENT //

ISSUES IN INTERNATIONAL COLLABORATION IN REHABILITATION RESEARCH

COURSE DIRECTOR/LUNCHEON SPEAKER: John Stone, PhD, Center for International Rehabilitation Research Information & Exchange (CIRRIE), Buffalo, NY

Drawing on material from a conference conducted by the Center for International Rehabilitation Research, Dr. Stone will present reflections on the difficulties and best practices in research collaboration across boundaries. Factors such as distance, language, funding, administrative differences, and trust will be discussed. Attendees will have an opportunity for roundtable and brainstorming discussions.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss difficulties and best practices in research collaboration across international boundaries.
2. Describe factors that can contribute to those difficulties.

SHELDON BERROL MEMORIAL CHAUTAUQUA LECTURE ★SPECIAL EVENT

Insults Real and Imagined: A Clinical and Scientific Inquiry into Mild TBI, Post Traumatic Stress Disorder, and Post-Concussive Syndrome

1:30 PM – 3:00 PM / REGENCY VII

COURSE DIRECTOR / FACILITATOR: Keith D. Cicerone, PhD, ABPP-CN, FACRM, Neuropsychology & Cognitive Rehabilitation, JFK-Johnson Rehabilitation Institute, Edison, NJ

FACULTY: Kathleen Bell, MD, University of Washington Medical Center, Seattle WA; Mary Hibbard, PhD, ABPP-Rp, Rusk Institute of Rehabilitation Medicine, New York, NY; Ronald Ruff, PhD, Neuropsychologist, San Francisco, CA; Rodney Vanderploeg, PhD, ABPP-Cn, James A. Haley Veterans Hospital, Tampa, FL

The Chautauqua will address the clinical and scientific bases for understanding the putative mechanisms of injury; nature of cognitive, somatic and emotional symptoms; and causes of chronic disability in people who have sustained a traumatic insult associated with mild traumatic brain injury. This presentation will utilize a "Town Hall" format to identify the elements of critical inquiry and generate discussion from experts on mild TBI among both civilian and military population.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Identify and describe the putative cognitive, physical and emotional symptoms that occur as a result of cerebral concussion.
2. Identify and describe the non-neurologic factors that contribute to symptom presentation and maintenance after traumatic insults identified with mild brain injury.
3. Discuss the similarities and differences between clinical presentations of various forms of traumatic insult (e.g., blast injury vs. acceleration/deceleration vs. impact injury) and the role of contextual factors in civilian and military populations.

BI-ISIG Community-Based Treatment Task Force

12:00 PM – 1:00 PM / CHICAGO A

CONCURRENT SYMPOSIA

Outcomes from a Health Care Home for Persons with Disabilities

1:30 PM – 3:00 PM / HANOVER A & B

COURSE DIRECTOR: Nancy Flinn, PhD, OTR/L, Courage Center, Minneapolis, MN

FACULTY: Erin Simunds, MSPT, Courage Center, Minneapolis, MN

Health care reform has recognized that gaps in primary care effect the long-term health of patients with disabilities and complex health conditions, and remediation of these gaps can decrease health costs and improve health.

Individuals with complex or chronic conditions require various specialists to improve and maintain overall health, but this care is often fractured and isolated. Primary care delivered through a health care home coordinates services through a single point of contact and minimizes the multiple barriers to care faced by individuals with disabilities.

Disability-competent primary care includes care pathways for common health conditions experienced by individuals with disabilities, flexible options for care delivery, and coordination of care through reciprocal interaction between medical, psychological and rehabilitation professionals.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the role that a disability-competent primary care health care home for persons with disabilities plays in health care reform.
2. Describe the demographic factors of individuals with disabilities who can benefit from primary care delivered through a health care home approach.
3. Identify the health benefits experienced by adults with disabilities after receiving primary care services under this model.

CONCURRENT SYMPOSIA

Integrating Interactive Media into Neurorehabilitation: An Evidence-Based Interdisciplinary Approach

1:30 PM – 3:00 PM / HANOVER D & E

COURSE DIRECTOR: Steven L. Wolf, PhD, PT, FAPTA, FAHA, Department of Rehabilitation Medicine, Emory University School of Medicine, Atlanta, GA

FACULTY: Thanassis Rikakis, PhD, School of Arts, Media and Engineering, Arizona State University, Tempe, AZ; Yinpeng Chen, PhD, Arizona State University, Tempe, AZ; Zev Rymer, MD, PhD, Rehabilitation Institute of Chicago, Northwestern University, Chicago, IL

Evidence-based Interactive Neurorehabilitation (INR) requires broad interdisciplinary knowledge that cannot be mastered by a single clinician or researcher. Principles and evidence from neuroscience, rehabilitation, physical therapy, engineering, computer science, arts and cognitive sciences must inform development and application of INR systems. This session establishes simple guidelines that can help inform selection and use of INR systems by clinicians and streamline research directions in INR for:

Clinicians who want to test, explore or adopt Interactive Neurorehabilitation (INR) systems

Researchers interested in development of INR systems

Clinicians or researchers who want to explore combinations of INR systems with existing practices or other technologies (e.g. robotics)

Health administrators interested in practical issues of INR implementation (staff training, cost, insurance reimbursement etc).

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the significance of new interactive media technologies for neurologic rehabilitation.
2. Evaluate the potential advantages for the use of Interactive Neurorehabilitation (INR), in comparison to prevailing standards of care or with advanced robotic therapies, and select the appropriate INR systems for specific neurorehabilitation challenges.
3. Recognize the applications of INR systems in the home, or in outpatient or community-based clinical settings.

CONCURRENT SYMPOSIA

Expanding the Conditions that Respond to Constraint-Induced-Movement (CI) Therapy

1:30 PM – 3:00 PM / HANOVER C

COURSE DIRECTOR: Edward Taub, PhD, University of Alabama at Birmingham, Birmingham, AL

FACULTY: Victor Mark, MD, University of Alabama at Birmingham, Birmingham, AL; Gitendra Uswatte, PhD, University of Alabama at Birmingham, Birmingham, AL; David Good, MD, Pennsylvania State University, Hershey, PA

The outcomes reported in the pediatric CI therapy literature are virtually all positive but vary in size. This symposium will discuss reasons for the variance in outcomes, thereby suggesting ways that clinicians and researchers might change the protocols they employ to optimize outcomes. The value of rehabilitation for individuals with progressive CNS disorders is often questioned. This symposium will present a therapeutic approach that holds promise for producing persistent improvement in more-affected arm function in multiple sclerosis (MS) patients. For both clinicians and researchers, the findings, along with the results from other recent studies, will suggest that a change in this perspective might be at least considered.

There are few interventions that have controlled evidence for improving more-affected arm function in stroke survivors with severe upper-extremity hemiparesis, i.e., those with plegic or nearly plegic hands. This symposium will present a therapeutic approach that has controlled evidence for producing large improvements in real-world use of the more-affected arm in such individuals. For clinicians, the findings will suggest a therapeutic option for their patients where few or none had been available. For researchers, the study will suggest therapeutic elements that they might consider incorporating into treatments being developed for this population.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe how the brains of young children with cerebral palsy change after pediatric upper-extremity CI therapy.
2. Develop a therapeutic treatment plan for producing persistent improvement in arm function in patients with multiple sclerosis.

3. Develop a treatment plan for producing persistent improvement in patients with chronic, severe upper-extremity hemiparesis after stroke, i.e., those with plegic or nearly plegic hands.

BREAK 3:00 PM – 3:30 PM

ANNUAL BI-ISIG SUMMIT

3:30 PM – 5:00 PM / HANOVER F & G

CONCURRENT SYMPOSIA

Life Transitions and Rehabilitation: From Case Studies to Epidemiology

3:30 PM – 5:00 PM / HANOVER A & B

COURSE DIRECTOR: Tamara Bushnik, PhD, FACRM, Rusk Institute for Rehabilitation Medicine, New York, NY

FACULTY: Alexander Libin, PhD, MS, MedStar Health Research Institute, Washington, DC; Manon Schladen, MSE, PMP, EdS, MedStar Health Research Institute, Washington, DC; Sunil Sen-Gupta, MD, MPH, George Washington University, Washington, DC; Alexander Dromerick, MD, National Rehabilitation Hospital, Washington, DC

A Life Transition (LiT) refers to the completed or recurring significant change, and embraces a variety of human conditions: a reintegration into the community after a life-changing injury (TBI, SCI, or stroke); an adaptation to aging in persons with degenerating neurological disorders (Alzheimer's or Parkinson's disease); or a transition from deployment to civilian life in military veterans. LiT represents a simultaneously complex, multi-factorial, and both highly social and individual process. Our working definition of LiT builds upon WHO framework and recent IOM reports on Disability in America and IOF/EOF Veterans.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Identify an evidence-based Life Transition framework for best practices in medical rehabilitation, more specifically, chronic health conditions, neurorehabilitation, and impairments due to the impact of war (e.g. in OIF/IEF returning veterans).
2. Identify unmet needs of clinical populations vulnerable to changes triggered by Life Transitions.
3. Foster a discussion about the cross-cutting evidence-based topics in specialty areas (e.g., acute care, in-patient settings, and home care) as the basis for an integrated model of practice and educational programs for health care providers.

CONCURRENT SYMPOSIA

Empirically-Based Interventions for Post-TBI Depression

3:30 PM – 5:00 PM / HANOVER D & E

COURSE DIRECTOR: Theodore Tsoulosides, PhD, Mount Sinai School of Medicine, New York, NY

FACULTY: Teresa Ashman, PhD, New York University Langone Medical Center, New York, NY; Joshua Cantor, PhD, Mount Sinai School of Medicine, New York, NY

This session will provide a review of the existing knowledge on post-TBI depression and suicidality and the treatment of post-TBI depression. It will thus bring clinicians up to date on this literature.

We will present new evidence regarding effective treatments for post-TBI depression and provide details of the nature of these treatments and their successful implementation in clinical practice. Individual differences among persons with TBI and how those differences may guide individualized treatment decisions will be addressed along with directions for future research needed in this area.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize the risk of post-TBI depression and suicidality and the treatment of post-TBI depression.
2. Describe interventions that may be effective in reducing depressive symptoms after TBI.
3. Identify the key components and challenges of each intervention presented.

CONCURRENT SYMPOSIA

Balancing Law, Social Policy and Clinical Practice

3:30 PM – 5:00 PM / HANOVER C

COURSE DIRECTOR: Neil Brooks, PhD, Rehab Without Walls, Milton Keynes, UK

FACULTY: Carolyn Zollar, JD, American Medical Rehabilitation Providers Association, Washington, DC

Social policies and new laws are impacting care delivery and clinicians and administrators want a quick and easy way to know what is happening and what they should pay attention to. This session addresses lessons learned from both sides of the ocean to enrich participants' thinking.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Articulate the differences and similarities between Europe and North America on laws and social policies as they relate to disability.
2. Determine how countries are balancing policy and financial challenges and facilitate the delivery of quality clinical practices.
3. Reflect on how these changes impact access and delivery of their services and how they need to prepare to maintain quality rehabilitation in their practices.

EXHIBITOR WELCOME RECEPTION

★SPECIAL EVENT

WITH POSTER VIEWING AND OUTSTANDING
POSTER AWARDS PRESENTATION

6:00 PM – 7:00 PM / GRAND HALL EAST

ACRM-ASNR Board Meeting

6:30 PM – 7:30 PM / DUNWOODY

ASNR Early Participants Reception

7:30 PM – 9:00 PM / ASNR SUITE

Registration

7:30 AM – 5:30 PM / REGENCY AREA

Exhibits Open

8:00 AM – 6:30 PM / GRAND HALL EAST

Poster Displays

7:15 AM – 6:30 PM / GRAND HALL EAST

BREAK 7:15 AM – 8:00 AM GRAND HALL EAST

CONCURRENT SYMPOSIA

BREAKFAST SESSION

Specificity of Exercise for Stroke Rehabilitation: A Debate

7:15 AM – 8:15 AM / HANOVER D & E

COURSE DIRECTOR: Michael Weinrich, MD, National Institutes of Health, Bethesda, MD

FACULTY: Robert Wagenaar, PhD, Boston University, Boston, MA; Pamela Duncan, PhD, Wake Forest University, Winston-Salem, NC; Alexander Dromerick, MD, Georgetown University, Washington, DC; Mary Stuart, ScD, University of Maryland, Baltimore, MD

There is a pressing need for maintenance rehabilitation, as evidence by the class action suit filed recently against CMS for not providing such. It is not yet clear what the content of such rehabilitation should be.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the evidence for and against specific exercise prescription for stroke rehabilitation in the acute period.
2. Describe the evidence for and against specific exercise prescription for stroke rehabilitation in the chronic period.
3. Discuss the issues around implementing exercise programs for stroke in the community setting.

CONCURRENT SYMPOSIA

BREAKFAST SESSION

Disparities in Health Outcomes After TBI and SCI

7:15 AM – 8:15 AM / HANOVER C

COURSE DIRECTOR: James Krause, PhD, Medical University of South Carolina, Charleston, SC

REPLACE LINES BELOW FOR FACULTY LIST IN PREVIOUS VERSION

FACULTY: Michael DeVivo, PhD, University of Alabama Birmingham, Birmingham, AL; David Staten, PhD, South Carolina State University, Orangeburg, SC

Clinicians and researchers will access state-of-the-art research on health disparities and neurologic injuries including the first study to systematically investigate differences in chronic health conditions among blacks with SCI and TBI compared with the general population and the largest longitudinal study with respect to scope of measurement of risk factors and outcomes among those with SCI (n=2615).

Rehabilitation clinicians will gain knowledge to better provide care for their patients. Rehabilitation researchers will gain knowledge to target research projects so that each prevention or intervention strategy developed will have the greatest impact on all racial groups.

Participants will come away with a better overall understanding of the trends of SCI and TBI across racial groups and who is at risk for specific chronic conditions or adverse events.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe how rates of chronic conditions among black persons with SCI and TBI compare with rates for the black general population.
2. Identify disparities in a minimum of three adverse health outcomes in persons with SCI.
3. Describe the trends of SCI among underserved populations.

CONCURRENT SYMPOSIA

BREAKFAST SESSION

Screening for Traumatic Brain Injury

7:15 AM – 8:15 AM / HANOVER F & G

COURSE DIRECTOR: Wayne Gordon, PhD, ABPP-CN, FACRM, Mount Sinai School of Medicine, New York, NY

FACULTY: Yelena Goldin-Lauretta, PhD, Mount Sinai School of Medicine, New York, NY; Chari Hirshson, PhD, Mount Sinai School of Medicine, New York, NY; Kristen Dams-O'Connor, PhD, Mount Sinai School of Medicine, New York, NY

Researchers and clinicians will expand their understanding of conceptual and theoretical issues related to TBI screening approaches; gain insight into the development, validation and application of a new TBI screening tool; and understand the limitations and identify directions for future exploration and application of TBI screening methods.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the development and practical applications of the Brain Injury Screening Questionnaire (BISQ).
2. Describe the key issues related to screening for TBI.
3. Describe primary findings and knowledge gained from recent screening studies in different populations.

CONCURRENT SYMPOSIA

BREAKFAST SESSION

Strategies for Designing Wheeled Mobility and Seating Intervention Studies

7:15 AM – 8:15 AM / HANOVER A & B

COURSE DIRECTOR: Stephen Sprigle, PhD, PT, Georgia Institute of Technology, Atlanta, GA

FACULTY: David Brienza, PhD, University of Pittsburgh, Pittsburgh, PA; Sharon Sonenblum, PhD, Georgia Institute of Technology, Atlanta, GA

Clinicians are under increasing pressure to provide evidence for the effectiveness of wheeled mobility and seating interventions. This morning session will provide guidance to help clinicians and others interested in conducting studies of wheeled mobility and seating.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe issues to consider when designing studies of wheeled mobility and seating interventions.
2. Identify various study design options and the pros and cons of each.
3. Discuss lessons learned from past research studies and how these may apply to the participant's practice.

BREAK 8:15 AM – 8:30 AM

PLENARY SESSION

8:30 AM – 10:00 AM / REGENCY VII

PART 1: Progesterone and Brain Injury: What's Next?

SPEAKER: Donald G. Stein, PhD, Asa G. Candler Professor, Distinguished Professor of Emergency Medicine, Department of Emergency Medicine, Emory University School of Medicine, Atlanta, GA

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe science-based methods of diagnosing sports concussion.
2. Identify science-based strategies for return to play.
3. Reflect on the issues pertaining to science on repetitive concussion, second-impact syndrome (SIS), and chronic traumatic encephalopathy (CTE).

PART 2: In Search of a Clinical Treatment for Acute Traumatic Brain Injury: The Hope of Progesterone

SPEAKER: David W. Wright, MD Assistant Professor of Emergency Medicine, Director of Emergency Neurosciences Emory University School of Medicine; and Project Leader for the Phase II clinical trial and Principal Investigator for Phase III clinical trial ProTECT™ (Progesterone for TBI, Experimental Clinical Treatment)

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe science-based methods of diagnosing sports concussion.
2. Identify science-based strategies for return to play.
3. Reflect on the issues pertaining to science on repetitive concussion, second-impact syndrome (SIS), and chronic traumatic encephalopathy (CTE).



DONALD G. STEIN, PhD

DONALD G. STEIN, PhD, is Asa G. Candler Professor and Distinguished Professor in Emergency Medicine at the Emory University School of Medicine in Atlanta, Georgia. Stein's research has long focused on recovery of function after traumatic injury to the brain. His group was one of the first to demonstrate sex differences in the outcome of severe cortical injury. The recovery was highly related to the hormonal state of the females at the time of injury. Later investigations showed that progesterone promotes functional recovery through its ability to eliminate cerebral edema and other effects of inflammation and tissue breakdown. Injections of progesterone were also effective in male animals.

Dr. Stein's laboratory now studies progesterone and its metabolites in pediatric, adult and aged models of TBI and stroke. His group works with medical colleagues in emergency medicine, neurology, pediatrics and neuro-ophthalmology. His basic research has led to two independent Phase II clinical trials testing progesterone for moderate to severe traumatic brain injury and now to an NIH-sponsored, nationwide Phase III clinical trial. He has received continuous grant support from a variety of federal agencies since 1965.

Dr. Stein is the author of over 450 book chapters, reviews and papers on recovery from brain injury. He has authored or edited 16 books on the topic. *Brain Repair* (Oxford University Press, 1995) has now been published in five languages.

DAVID W. WRIGHT, MD, is a tenured Associate Professor in the Department of Emergency Medicine at Emory University, and the Director of the division of *Emergency Neurosciences*.

Dr. Wright is a translational researcher with a bench-top to bedside approach to problem solving, working in both the basic sciences and clinical research arena. He is the Principal Investigator for the large NIH funded multicenter clinical trial called, ProTECT III, Progesterone for Traumatic Brain Injury; the world's first large scale clinical trial of this treatment. He also services as the site Principal Investigator for the NETT southeastern HUB. He

is a practicing Emergency Room physician working in the Emory University Hospital ED and Grady Memorial Hospital Emergency Department, the regions only Level I trauma center. In addition, he is conducting collaborative research with the Georgia Institute of Technology to develop new technologies for detecting cognitive impairment resulting from mild TBI and early Alzheimer's disease. He has won several awards for research excellence from the Society of Academic Emergency Medicine and was the recipient of the 2008 Health Care Heroes Award from the Atlanta Business Chronicles. He is currently one of the top 3 NIH funded emergency medicine researchers in U.S.



DAVID W. WRIGHT, MD

BREAK 10:00 AM – 10:30 AM REGENCY FOYER

CONCURRENT SYMPOSIA

Current Science and Controversy in Sports Concussion

10:30 AM – 12:00 PM / HANOVER A & B

COURSE DIRECTOR: Stephen Macciocchi, PhD, ABPP, Shepherd Center, Atlanta, GA

FACULTY: Lisa McGuire, PhD, Center for Disease Control and Prevention, Atlanta, GA; Michael Ferrara, PhD, ATC, University of Georgia, Athens, GA; L. Stephen Miller, PhD, University of Georgia, Athens, GA

Sports concussion is a very common injury affecting a wide segment of our population. Existing science on sports concussion is extensive but in some ways conflicting. Sports concussion is an important health problem that requires expertise in diagnosis and management. Rehabilitation professionals will benefit from a scientific review from a panel with no conflict related to proprietary tests or protocols.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe science-based methods of diagnosing sports concussion.
2. Identify science-based strategies for return to play.
3. Reflect on the issues pertaining to science on repetitive concussion, second-impact syndrome (SIS), and chronic traumatic encephalopathy (CTE).

CONCURRENT SYMPOSIA

Approaches to Neural Regeneration: Implications for Neurorehabilitation

10:30 AM – 12:00 PM / HANOVER D & E

COURSE DIRECTOR: Krish Sathian, MD, PhD, Atlanta VA Medical Center, Atlanta, GA

FACULTY: Randy Trumbower, PT, PhD, Atlanta VA Medical Center, Atlanta, GA; Arthur English, PhD, Atlanta VA Medical Center, Atlanta, GA; Shan Yu, PhD, Atlanta VA Medical Center, Atlanta, GA; Nicholas Boulis, MD, PhD, Atlanta VA Medical Center, Atlanta, GA; Ravi Bellamkonda, MD, Georgia Institute of Technology, Atlanta, GA

This is a timely area of research because concepts of neural regeneration pertain to neurologic rehabilitation and have only recently been uncovered. Much work is still pending publication, underscoring the cutting-edge nature of this line of research. Discussion between basic scientists and clinicians will highlight the challenges of translation from bench to bedside, and ways to increase the likelihood of success.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Examine new research directions in the field of neural regeneration.
2. Describe the value of regenerative medicine in the field of neurorehabilitation.
3. Identify potential ways to interface discoveries in neural regeneration with clinical care.

CONCURRENT SYMPOSIA

Providing Evidence-Based Prognoses for Persons with Brain Injury and Their Families

10:30 AM – 12:00 PM / HANOVER C

COURSE DIRECTOR: Jim Malec, PhD, FACRM, PM&R Indiana University School of Medicine, Rehabilitation Hospital of Indiana, Indianapolis, IN

FACULTY: Ron Seel, PhD, Crawford Research Institute, Shepherd Center, Atlanta, GA; Flora Hammond, MD, PM&R Indiana University School of Medicine, Rehabilitation Hospital of Indiana, Indianapolis, IN

Improving patient and family knowledge about the risk for disability and making appropriate plans are part of good clinical practice. However, misinformation can have negative consequences on patient motivation, compliance, and the relationship of the provider with patient and family. Providers should know the limitations of outcomes predictions made on the basis of clinical knowledge, experience, and available research. Methods will be described to communicate outcome predictions framed in appropriate degrees of certainty and uncertainty in ways that are generally understandable and meaningful.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the strengths and limitations of predicting outcomes of brain injury rehabilitation based on clinical judgment or statistical modeling.
2. Discuss the best methods for reading and evaluating published reports of prediction models.
3. Describe recommended methods for translating clinical experience and statistical models into understandable and meaningful prognostic statements to patients and families.

CONCURRENT SYMPOSIA

Raising Expectations for Gait Recovery After Stroke: An Evidence-Based Approach

10:30 AM – 12:00 PM / HANOVER F & G

COURSE DIRECTOR: Karen McCain, PT, DPT, NCS, University of Texas Southwestern Medical Center, Dallas, TX

FACULTY: Patricia Smith, PhD, PT, NCS, University of Texas Southwestern Medical Center, Dallas, TX

After stroke, the primary question in the minds of patients is whether they will be able to walk again. Providing the best outcome is the goal of the patient as well as the rehabilitation professional. ESTT (Early Standardized Treadmill Training) is a comprehensive, evidence-based approach, including attention to assistive device use and ankle-foot orthosis design. ESTT is an early, efficient, effective, and standardized method of gait training after stroke that can be implemented as part of a comprehensive rehabilitation approach. It can be completed in 30 minutes per day utilizing one therapist and one trained technician. ESTT is the only published approach to begin gait training on the treadmill *before* commencement of over ground gait training.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize the need for gait recovery after stroke.
2. Apply evidence-based protocols to the retraining of gait after stroke.
3. Describe the basic elements of ESTT and its application in an acute rehabilitation setting.

CONCURRENT SYMPOSIA

World Health Organization Report on Disabilities 2011

10:30 AM – 12:00 PM / BAKER

COURSE DIRECTOR: Katherine Seelman, PhD, University of Pittsburgh, Pittsburgh, PA**FACULTY:** John Stone, PhD, Barry Willer, PhD, State University of New York at Buffalo, Buffalo, NY; Venus Ilagan, President, Rehabilitation International, Manila, PH; Fofi Constantinidou, PhD, University of Cyprus, Nicosia, CY

The WHO report on disability took six years and the contributions of countless professionals and consumers in many different countries. Slated for release in the summer of 2011, this is the first presentation of the report at a conference of professionals. This World Report on Disabilities will be of considerable interest to clinicians, researchers and policy makers.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe and understand the process whereby the WHO Report on Disability was created and the logic behind this process.
2. Describe the primary recommendations of the WHO Report on Disability and the implications for rehabilitation services in the U.S. and other countries.
3. Describe the types and range of rehabilitation services perceived as being evidence-based by the WHO and its affiliated organizations throughout the world.

LUNCH (ON OWN) 12:00 PM – 1:30 PM

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★ SPECIAL EVENT

**FUNCTIONAL ELECTRICAL STIMULATION
IN SCI: CLINICIAN AND CONSUMER
PERSPECTIVES**

TICKET

12:00 PM – 1:30 PM / COURTLAND // TICKETED EVENT //

COURSE DIRECTOR Candy Tefertiller, DPT, ATP, NCS, Craig Hospital, Englewood CO**FACULTY:** Jennifer French, Executive Director, Neurotech Network, Tampa, FL; Beth Pharo, PT, Shepherd Center, Atlanta, GA; Nicholas Evans, MHS, Shepherd Center, Atlanta, GA

Researchers and clinicians will gain an understanding of the current practice and use of FES technologies from both the clinical and end-user perspectives, which may be useful in shaping future development of FES technology.

Clinical guidelines will be discussed regarding the appropriate application of FES technologies in the clinical setting, and lower-cost alternatives to commercially available products will be reviewed to increase FES utilization in systems where funding is limited. Practical application of FES in the clinical setting will be evaluated from a programmatic perspective to include outcomes measures and financial considerations.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss the opportunities and challenges of implementing FES in the clinical setting.
2. Describe the multiple uses of FES from the perspectives of the consumer and clinician.
3. Assess practical applications for successful implementation in the clinic and the home environment for FES, and discuss lower-cost alternatives to commercially available FES technologies.

ACRM Membership Meeting

1:30 PM – 3:00 PM / REGENCY VII

ASNR Membership Meeting

1:30 PM – 3:00 PM / REGENCY VI

CONCURRENT SYMPOSIA

Technology to Advance Mobility Outcomes in Rehabilitation Research

1:30 PM – 3:00 PM / HANOVER A & B

COURSE DIRECTOR: Karen J. Nolan, PhD, Kessler Foundation Research Center, West Orange, NJ, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, NJ

FACULTY: Gail F. Forrest, PhD, Kessler Foundation Research Center, West Orange, NJ & University of Medicine and Dentistry of New Jersey, The New Jersey Medical School, Newark, NJ; Sue Ann Sisto, PT, MA, PhD, Stony Brook University, Stony Brook, NY

This session underscores the confines of traditional clinical measures commonly utilized for measuring changes in mobility, and introduces rehabilitation researchers and clinicians to current technology-driven measures to advance mobility outcomes in rehabilitation.

We will demonstrate the utility of technology-based quantifiable mobility outcomes and explain how these measures can be fully integrated into routine clinical and research settings. The direct benefits to patient care will be demonstrated and attendees will gain a usability template for combining technology with traditional clinical measures, the combination of which optimizes patient care and outcomes.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Differentiate traditional functional clinical assessments currently utilized in the clinical setting from technology-driven mobility outcomes, which create quantifiable measures in rehabilitation medicine and research.
2. Describe the utility of technology to create quantifiable mobility outcome and relate how they can be utilized to describe biomechanical mechanisms that lead to improved functional performance.
3. Identify key technologically driven mobility outcome measures that can be fully integrated into routine clinical and research settings alongside traditional measures to direct treatment options and accurately measure changes in function.

CONCURRENT SYMPOSIA

Collaborative Research Network Development: Prism Adaptation for Spatial Neglect

1:30 PM – 3:00 PM / HANOVER C

COURSE DIRECTOR: Kimberly Hreha, OTR/L, Kessler Foundation Research Center, West Orange, NJ

FACULTY: Peii Chen, PhD, Kessler Institute for Rehabilitation West Orange, NJ; Anna Barrett, MD, Kessler Institute for Rehabilitation, West Orange, NJ; Robin Hedeman, OTR, MHA, Kessler Institute for Rehabilitation, West Orange, NJ

Be part of an initiative to advance the rehabilitation of survivors of right-hemisphere stroke survivors. Specific evidence of increased stroke health care costs and burden of care associated with spatial neglect, as well as the resulting effect of reducing the potential benefit of other rehabilitative interventions will be presented. Attendees can contribute to a database on the feasibility and applicability of this treatment method.

Clinicians and researchers will assist in developing guidelines to provide a more comprehensive and standardized way to treat spatial neglect impairments. Collaborative partnerships will develop. Participants also can assist in developing a procedures manual.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize patient demographics and characteristics and the impact of post-stroke spatial neglect.
2. Recognize the evidence supporting specific rehabilitative interventions to improve function in stroke survivors with spatial neglect.
3. Reflect on the major translational obstacles to research on the systematic treatment of spatial neglect treatment research.

CONCURRENT SYMPOSIA

Variations in Inpatient TBI Rehabilitation by Age: Patients, Treatments, Outcomes

1:30 PM – 3:00 PM / HANOVER F & G

COURSE DIRECTOR: Susan Horn, PhD, Institute for Clinical Outcomes Research, Salt Lake City, UT

FACULTY: Murray Brandstater, MD, PhD, Loma Linda University Medical Center, Department of Physical Medicine and Rehabilitation, Loma Linda, CA; David Ryser, MD, Intermountain Medical Center Neuro Specialty Rehabilitation Unit, Salt Lake City, UT; Marcel Dijkers, PhD, FACRM, Mt. Sinai School of Medicine, Department of Rehabilitation Medicine, New York, NY

As the number of elderly people admitted to inpatient rehabilitation after TBI (rather than dying in acute care or being discharged directly to a nursing home) is growing, stakeholders need a better understanding of the nature and outcomes of rehabilitation for this age group. This program aims to achieve that through systematic comparisons with three younger age groups, using data from a study whose design and number of subjects offers significant improvement over previous research in this area. The database addresses: severity of illness and injury, comorbid conditions, and polypharmacy as statistical controls; Rancho Scale, GCS, GOS, FIM, and DRS along with cognitive level and psychosocial characteristics; and premorbid levels of functioning, medical conditions, level of independence, and other prior co-morbid conditions.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe how the TBI PBE study addresses comprehensive TBI rehabilitation care in order to determine those treatments that are associated with better outcomes for specific types of patients.
2. Describe differences, by age group, in patient characteristics, severity of illness and injury, comorbidities, and functioning of TBI patients during rehabilitation and after discharge.
3. Describe differences, by age group, in patient characteristics, severity of illness and injury, comorbidities, and functioning of TBI patients during rehabilitation and after discharge.

CONCURRENT SYMPOSIA

Complex Regional Pain Syndrome: Translating Research into Clinical Practice

1:30 PM – 3:00 PM / HANOVER D & E

COURSE DIRECTOR: Martin Grabojs, MD, FACRM, Baylor College of Medicine, Physical Medicine and Rehabilitation, Houston, TX**FACULTY:** R. Norman Hardin, MD, Rehab Institute of Chicago, Chicago, IL; Sri Vasudevan, MD, University of Wisconsin-Milwaukee, Milwaukee, WI

This condition is widely discussed and diagnosed. It is vital to understand the pathophysiology of Complex Regional Pain Syndrome if one is to understand its evaluation and treatment. This will be addressed in detail, with multiple possible theories addressed. The evaluation and its classification have been updated recently. A more comprehensive and specific classification will be presented, based on recent research for utilization in the clinical and research diagnosis of Complex Regional Pain Syndrome. The treatment of this syndrome is in evolution, and newly proposed treatments have questionable effectiveness and cost efficacy. This program will address the evidence-based studies on treatment, especially as they relate to the proposed pathophysiology of Complex Regional Pain Syndrome. New treatments will be explored, along with critiques.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe how recent research is changing clinical practice for Complex Regional Pain Syndrome.
2. Recognize the current etiology of Complex Regional Pain Syndrome.
3. Describe current concepts for the evaluation and treatment of Complex Regional Pain Syndrome.

BREAK 3:00 PM – 3:30 PM

REGENCY FOYER

CONCURRENT SYMPOSIA

Making Evidence-Based Treatments Accessible via Tele-Health

3:30 PM – 5:00 PM / HANOVER A & B

COURSE DIRECTOR: Gitendra Uswatte, PhD, University of Alabama at Birmingham, Birmingham, AL**FACULTY:** Charles Bombardier, PhD, University of Washington, Seattle, WA; Dawn Ehde, PhD, University of Washington, Seattle, WA; Robert Teasell, MD, University of Western Ontario, London, Ontario, CN

Tele-health is one of the new frontiers in healthcare. However, rehabilitation professionals have little training in, or exposure to, this mode of delivery. This symposium will give clinicians and researchers an opportunity to become familiar with three different tele-health interventions that span simple to sophisticated technologies and that target different impairments and consumer groups.

Rehabilitation professionals today agree that, whenever possible, healthcare consumers should be offered an evidence-based treatment for their condition. Unfortunately, practical issues, such as access to a medical center where the appropriate expertise resides, often stood in the way. Now, these efficacious interventions are becoming widely available.

The three projects will offer models for finding ways to deliver evidence-based treatments that promote their widespread dissemination. A common

concern about tele-health interventions is that the relationship between the care provider and the patient will be adversely affected by the distance between them. Dr. Ehde will present data that address this concern in her presentation, as well as discuss variables that influence the quality of the relationship between the care provider and consumer. Tele-health interventions raise questions about treatment fidelity and outcomes. Dr. Bombardier will discuss ways to monitor therapeutic processes and outcomes remotely.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe how to adapt an existing cognitive-behavioral therapy (CBT) pain intervention for tele-health delivery in patients with acquired central nervous system (CNS) injury.
2. Describe how a successful motivational interviewing approach to physical activity promotion can be conducted via telephone, and how key process and outcome variables can be monitored.
3. Describe a tele-health intervention for producing persistent improvement in real-world use of the more-affected arm in patients with chronic, mild to moderate upper extremity hemiparesis after stroke.

CONCURRENT SYMPOSIA

Medicine at the Nanoscale: Implications for Neurorehabilitation

3:30 PM – 5:00 PM / HANOVER D & E

COURSE DIRECTOR: Michael Weinrich, MD, National Institutes of Health, Bethesda, MD**FACULTY:** Ravi Bellamkonda, PhD, Georgia Institute of Technology, Atlanta, GA

This session presents two examples of new, hot research in nanomedicine with implications for rehabilitation.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe possibilities for using nanoparticles to image pathophysiology in blood vessels.
2. Describe use of nanoparticles for targeted drug delivery to the nervous system.
3. Recognize the limitations of available nanotechnologies.

CONCURRENT SYMPOSIA

Evaluation and Treatment of Mild Traumatic Brain Injury (TBI) Using Regulated Exercise

3:30 PM – 5:00 PM / HANOVER C

COURSE DIRECTOR: Barry Willer, PhD, State University of New York at Buffalo, Buffalo, NY

FACULTY: John Leddy, MD, State University of New York at Buffalo, Buffalo, NY

Presenters will describe the use of an exercise stress test to evaluate the physiologic condition of individuals with mTBI. The faculty will provide video examples of actual assessments and demonstrate even the subtle aspects of symptom evaluation. Presenters will describe how a threshold of exercise tolerance is determined and how a prescription for exercise-based treatment is developed. Participants will learn how a threshold of exercise tolerance is determined and how a prescription for exercise-based treatment is developed. Presenters also will describe how an exercise stress test can assist with differential diagnosis, including the characteristic responses of those with cervicogenic headache, depression, vestibular issues, and visual disturbance. In addition, the primary predictors of outcomes will be discussed.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss the purpose of exercise testing for individuals with mild traumatic brain injury (mTBI) and be able to conduct such an assessment.
2. Identify the threshold of exercise tolerance of individuals with mTBI and be able to prepare an exercise-based prescription for patients with mTBI who are suitable for such treatment.
3. Recognize which symptoms relate to mTBI and which symptoms may be related to other causes.

CONCURRENT SYMPOSIA

Patient Engagement in Acute and Post-Acute TBI Rehabilitation

3:30 PM – 5:00 PM / HANOVER F&G

COURSE DIRECTOR Ronald Seel, PhD, Shepherd Center, Atlanta, GA

FACULTY: Flora Hammond, MD, Rehabilitation Hospital of Indiana, Indianapolis, IN; Susan Horn, PhD, International Severity Information Systems, Inc., Salt Lake City, UT; William Garmoe, PhD, ABPP-CN, National Rehabilitation Hospital, Washington, DC

There is virtually no research on engagement in the TBI rehabilitation population; therefore, these new data from PBE studies will appeal to clinicians as well as researchers.

Providing information on patient engagement in acute rehabilitation and associated factors will allow clinicians to develop a cognitive framework about engagement specific to: (a) normative expectations of patient engagement in TBI rehabilitation; (b) the longitudinal course of engagement; (c) what levels of engagement become problematic and adversely impact outcomes; and (d) identifying associated risk factors that are amenable to treatment. Likewise, researchers may use information presented to assess the value of engagement measures and design testable interventions that address engagement and associated factors.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Define engagement in rehabilitation and describe a wide range of factors that may potentially impact patient engagement.
2. Identify typical levels of patient engagement in SLP, OT and PT, the extent that engagement improves over time; and which factors are most highly associated with engagement.
3. Discuss the levels of engagement that should concern clinicians about possible adverse effects on outcomes, as well as potential strategies to improve engagement in the acute rehabilitation setting.

Oral Presentation of Scientific Papers & Deborah L. Wilkerson Award Winner

3:30 PM – 5:30 PM / BAKER

Neuromuscular Electrical Stimulation Efficacy in Acute Stroke Tube Dependent Dysphagia

PRESENTER: David Kushner, MD, University of Miami School of Medicine, Rehabilitation Medicine, Miami, FL

FACULTY: Kenneth Peters, MS,CCC-SLP, University of Miami School of Medicine, Rehabilitation Medicine, Miami, FL; Stacy Thomashaw-Eroglu, MS,CCC-SLP, University of Miami School of Medicine, Rehabilitation Medicine, Miami, FL; Perless Melissa, MS,CCC-SLP, University of Miami School of Medicine, Rehabilitation Medicine, Miami, FL; Douglas Johnson-Greene, PhD, MPH,ABPP, University of Miami School of Medicine, Rehabilitation Medicine, Miami, FL

The purpose is to compare efficacy of Neuromuscular Electrical Stimulation (NMES) with Progressive Resistance Therapy (PRT) to Traditional Dysphagia Therapy (TDT) for treatment of feeding tube dependent dysphagia in acute stroke patients during inpatient rehabilitation.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe science-based methods of diagnosing sports concussion.
2. Identify science-based strategies for return to play.
3. Reflect on the issues pertaining to science on repetitive concussion, second-impact syndrome (SIS), and chronic traumatic encephalopathy (CTE).

Stepping-Out: Psychosocial and Functional Impact of a 12-Week Home-Based Physical Activity Program After Brain Injury

PRESENTER: Stephanie Kolakowsky-Hayner, PhD, CBIST, Santa Clara Valley Medical Center, Rehabilitation Research Center, San Jose, CA

FACULTY: Jerry Wright, MS, CBIST, Santa Clara Valley Medical Center, San Jose, CA; Kimbely Bellon, BSW, CBIS, Santa Clara Valley Medical Center, San Jose, CA; Jeffrey Englander, MD, Santa Clara Valley Medical Center, San Jose, CA; Tamara Bushnik, PhD, Rusk Institute for Rehabilitation, New York, NY

Fatigue is present in a high percentage of community-based individuals with TBI. Physical activity and exercise interventions can

positively impact many of the ongoing fatigue-related issues and improve QOL. A replicable protocol will be presented.

Efficacy of “Care Call” Tele-rehabilitation Intervention for Persons with Spinal Cord Dysfunction: Randomized Controlled Trial

PRESENTER: Alan Jette, PhD, PT, New England Regional SCI Center, Boston Medical Center, Boston, MA; Health & Disability Research Institute, Boston University School of Public Health, Boston, MA

FACULTY: Bethlyn Houlihan, MSW, MPH, New England Regional SCI Center, Boston Medical Center, Boston, MA; Pengsheng Ni, MD, MPH, Health & Disability Research Institute, Boston University School of Public Health, Boston, MA; Michael Paasche-Orlow, MD, MA, MPH, Department of Medicine, Boston University School of Medicine, Boston, MA; Robert H. Friedman, MD, Department of Medicine, Boston University School of Medicine, Boston, MA; Stan Ducharme, PhD, Department of Physical Medicine and Rehabilitation, Boston University School of Medicine, Boston, MA; Jane Wierbicky, RN, New England Regional SCI Center, Boston Medical Center, Boston, MA; Judi Zazula, MS, OTR/L, New England Regional SCI Center, Boston Medical Center, Boston, MA; David Rosenblum, MD, New England Regional SCI Center, Gaylord Hospital, Wallingford, CT; Steve Williams, MD, New England Regional SCI Center, Boston Medical Center, Boston, MA

Self-care can impact the onset and severity of secondary conditions following spinal cord dysfunction (SCD). Pressure ulcers can be prevented through patient education. Depression can be successfully managed if treatment is received. Nonetheless, persons with SCD do not generally receive the necessary follow-up care that could promote self-management behaviors.

Although a promising strategy, few tele-rehabilitation interventions have been evaluated to identify successful, low-cost approaches; such a system could bring not only substantial long-term cost savings, but also, enhanced quality of life for people with SCD.

Care Call is an innovative tele-rehabilitation intervention designed to empower and motivate people with SCD to improve their skin care and mental health. The system does not replace but rather supplements the clinician's role.

Care Call could help numerous people using a low risk, low-cost approach for long-term patient monitoring and service provision across multiple settings.

Excessive Central Fatigue Limits Motor Function of Cancer Survivors with Fatigue Symptom

PRESENTER: Guang Yue, PhD, Associate Professor, Cleveland Clinic, Biomedical Engineering/Rehab Medicine, Cleveland, OH

FACULTY: Ela Plow, PhD, Cleveland Clinic, Biomedical Engineering/Rehab Medicine, Cleveland, OH; Mellar Davis, MD, Cleveland Clinic, Biomedical Engineering/Rehab Medicine, Cleveland, OH

The majority of cancer survivors have diminished motor abilities. Fatigue has the greatest impact on quality-of-life in cancer survivors. Mechanisms underlying cancer-related fatigue (CRF) are not well known. The purpose of the study was to determine whether central or peripheral (muscle) mechanism plays a more dominant role in CRF during typical daily motor activities.

Empowerment/Engagement:

Front-line Clinicians Enhance the Research Process

PRESENTER: Julie Gassaway, MS, RN, Institute for Clinical Outcomes Research, Salt Lake City, UT

FACULTY: Gale Whiteneck, PhD, Craig Hospital, Englewood, CO

The purpose is to describe how to engage front-line clinicians in the research process; provide details of how clinical champions held the interest of their peers to participate in research data collection over an extended period of time; and will describe the mechanism designed by clinicians to capture details about daily care processes that they believe are relevant to post-discharge outcomes.

Results of the Citicoline Brain Injury Treatment (COBRIT) Trial

PRESENTER: Thomas Novack, PhD, University of Alabama at Birmingham, Physical Medicine and Rehabilitation, Birmingham, AL

FACULTY: Ross Zafonte, MD, Harvard Medical School, Cambridge, MA; Beth Ansel, PhD, National Center for Medical Rehabilitation Research, Bethesda, MD; Sureyya Dikmen, PhD, University of Washington, Seattle, WA; Tessa Hart, PhD, Moss Rehabilitation Research Institute, Philadelphia, PA; Joe Ricker, PhD, University of Pittsburgh, Pittsburgh, PA; Dale Hesdorffer, PhD, Columbia University, New York, NY; Keith Atkins, PhD, Harborview Medical Center, Seattle, WA; Kim Boase, BA, University of Maryland, Baltimore, MD; Bizhan Aarabi, MD, University of Texas Dallas, Dallas, TX; Carlos Marquez de la Plata, PhD, Virginia Commonwealth University, Richmond, VA; Nancy Hsu, PsyD, Semmes-Murphey Clinic, Memphis, TN

This study evaluates the effectiveness of a medication administered acutely to improve outcome following TBI. A broad selection of outcome measures was used at 1, 3, and 6 months after injury. The outcome measures are combined to produce a global statistic that generates maximum yield from the data collection while maximizing the potential to detect meaningful differences between groups.

Deborah L. Wilkerson Award Winner: Potential for Upper limb Functional and neural recovery in people with chronic, incomplete tetraplegia

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss the upper limb impairments that may respond to rehabilitation interventions in people with incomplete tetraplegia.
2. Discuss changes in upper limb function after a variety of upper limb activity based interventions in people with incomplete tetraplegia.

BI-ISIG Girls & Women with Traumatic Brain Injury (TBI) Task Force Meeting

4:00 PM – 6:00 PM / COURTLAND

PRESIDENT'S RECEPTION AND HENRY B. BETTS AWARDS GALA

7:00 PM – 11:00 PM / GEORGIA AQUARIUM

★SPECIAL EVENT

TICKET

Registration

7:30 AM – 5:30 PM / REGENCY AREA

Coffee at Start

7:30 AM – 8:00 PM / OUTSIDE MEETING ROOM(S)

Exhibits Open

8:00 AM – 10:30 AM / GRAND HALL EAST

ACRM JOHN STANLEY COULTER LECTURE: FACTS, THEORIES, VALUES: SHAPING THE COURSE OF NEUROREHABILITATION

★SPECIAL EVENT

8:00 AM – 9:00 AM / CHICAGO A & B

LECTURER: Keith D. Cicerone, PhD, ABPP-Cn, FACRM

This distinguished lectureship was created to honor John Stanley Coulter, MD in celebration of his many contributions to rehabilitation. President from 1923 to 1926, he also served as treasurer and editor of *Archives of Physical Medicine and Rehabilitation*. To be named the Coulter Lecturer is to be recognized for professional achievements that have contributed significantly to the field of rehabilitation.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Participants will be able to discuss how evidence and theory interact in evaluating the effectiveness of (cognitive) rehabilitation.
2. Participants will be able to describe how direct and indirect values shape our interpretation of rehabilitation research.

BREAK 10:00 AM – 10:30 AM

NIDRR Fellow Presentations

9:30 AM – 11:00 AM / DUNWOODY

Relationship of Pre-Injury Coping on Outcomes in Adults with Mild Traumatic Brain Injury

NIDRR ARRT FELLOW: Kacey Maestas, PhD, Baylor College of Medicine, Department of Physical Medicine and Rehabilitation, Brain Injury Research Center, TIRR Memorial Hermann, Houston, TX

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Identify pre-injury coping profiles among adults with mild traumatic brain injury (mTBI).
2. Examine the relationship of these profiles to psychiatric, quality-of-life, and community integration outcomes.

Recovery of Overground Locomotion via Targeted Robotic Gait Training in Rats with SCI

NIDRR ARRT FELLOW: Nathan Neckel, PhD, Georgetown University, Neuroscience Department, Washington, DC



KEITH CICERONE, PHD

KEITH CICERONE, PhD, is a seminal figure in brain injury rehabilitation. He has made significant contributions to the field for over 30 years. Dr. Cicerone entered the field of brain injury rehabilitation almost at its inception, when individuals began to survive severe brain injuries due to improved emergency response systems and neurosurgical techniques. At that time, he began to develop psychological and learning-based interventions to rehabilitate the cognitive, affective, behavioral, and social impairments that frequently result from brain injury. The early methods that he developed that appeared to be of benefit in clinical practice became the focus of Dr. Cicerone's research to obtain more definitive evidence of their efficacy. He remained active in clinical practice as his research career developed, and his research has always focused on developing and testing methods that will improve the functioning and ultimately the quality of life of individuals with brain injury.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss robotic gait training as a popular treatment option.
2. Describe gains in device poorly transferred to overground walking.
3. Describe animal studies with novel training patterns that can help improve robotic gait training.

Substance Use in Young Adults with Pediatric-onset Spinal Cord Injury

NIDRR ARRT FELLOW: Miriam Hwang, MD, PhD, Shriners Hospitals for Children, Chicago, IL, Medical College of Wisconsin, Milwaukee, WI

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Discuss risk-taking behaviors including substance abuse that may be associated with the incident that resulted in spinal cord injury (SCI) in children and adolescents.
2. Describe SCI and its complications that may lead to substance use as a method to cope with the physical and psychological changes associated with SCI in this population.
3. Describe substance use in young adults with pediatric-onset SCI that may affect the psychosocial outcomes of these individuals throughout adulthood.

4. Describe factors associated with substance use that will enable clinicians caring for children or adolescents with SCI to counsel them on substance use and its potential association with negative outcomes as they transition to adulthood.

Toward a Practical Brain-Computer Interface for Individuals with Severe Motor Disabilities

NIDRR ARRT FELLOW: Stefanie Blain, PhD, University of Michigan, Physical Medicine and Rehabilitation, Ann Arbor, MI

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe developments in a novel technology that can be used by individuals with severe motor disabilities to communicate.
2. Describes two novel interventions that have been developed to address issues of training and focus in teaching individuals with severe motor disabilities to use their brains to directly control a computer interface.
3. Define study factors that are current barriers to the adoption of brain-computer interfaces as practical, day-to-day technologies.

Screening for Traumatic Brain Injury: A Comparison of Two Distinct Approaches

NIDRR ARRT FELLOW: Yelena Goldin-Lauretta, PhD, Clinical Neuropsychology and Rehabilitation Postdoctoral Fellow, Mount Sinai School of Medicine, Rehabilitation Medicine, New York, NY

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Examine conceptual and theoretical issues related to TBI screening approaches, gain insight into the application and outcome differences of TBI screening tools.
2. Describe the limitations of TBI screening, and identify directions for future exploration and application of these screening methods.

CONCURRENT SYMPOSIA

Spinal Cord Injury and Caregiving: Who Needs Help?

9:30 AM – 11:00 AM / HANOVER A&B

COURSE DIRECTOR: Susan Charlifue, PhD, Craig Hospital, Englewood, CO

FACULTY: Line Beauregard, PhD, Laval University, Quebec, QC, CN; Kathryn Boschen, PhD, University of Toronto, Toronto, ON, CN; Tamara Bushnik, PhD, Rusk Institute for Rehabilitation Medicine, New York, NY; Sara Guilcher, BSc, MSc, MSc (PT), Rusk Institute for Rehabilitation Medicine, New York, NY; Tara Jeji, MD, MBA, Ontario Neurotrauma Foundation, Toronto, ON, CN

When a person sustains a traumatic injury, the initial focus of clinicians and researchers is on the injured individual and his/her health and emotional needs. The needs of the family, out of necessity, often are minimized, resulting in family members potentially feeling unprepared to assume caregiving activities. When caregivers are unable to cope effectively with all role responsibilities, their health and well-being, as well as that of the care recipient, may be jeopardized.

This session highlights the issues facing caregivers, from their own perspective, and will help illustrate where rehabilitation professionals can focus their efforts to better equip caregivers to manage the extensive responsibilities they may face when their family members return to the community. The presenters identify gaps in social support networks available to caregivers and offer suggestions to address those gaps.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize the perspective of caregivers of individuals with spinal cord injury (SCI) as it relates to their caregiving roles and activities.
2. Recommend needed services and supports for formal and informal caregivers of people with SCI.
3. Describe the role of caregivers to support community living and participation for individuals with SCI.

CONCURRENT SYMPOSIA

Life and Death in the Aging Brain After a TBI

9:30 AM – 11:00 AM / HANOVER D & E

COURSE DIRECTOR: Cynthia Harrison-Felix, PhD, Craig Hospital, Englewood, CO

FACULTY: Wayne Gordon, PhD, ABPP-CN, FACRM, Mount Sinai School of Medicine, New York, NY; Chari Hirshson, PhD, Mount Sinai School of Medicine, New York, NY; Flora Hammond, MD, Indiana University School of Medicine, Rehabilitation Hospital of Indiana, Indianapolis, IN

All clinicians who work with individuals who sustain a TBI will gain a greater understanding of the importance of age at injury, medical comorbidities, and the risk factors associated with sustaining a TBI as an older adult. Discussion of future projects about the long-term outcomes of sustaining a traumatic brain injury in the older adult population, with the possibility of developing prevention and/or treatment studies will be of interest to researchers. A collaborative discussion to identify priorities and directions for future research will be beneficial to all attendees.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the life expectancy after TBI in the general population as well as the older adult population.
2. Describe the long-term perspective of older adults who survive a TBI.
3. Identify directions for prevention and treatment planning.

CONCURRENT SYMPOSIA

Military Rehabilitation Research: Implications for Military and Civilian Rehabilitation Practice

9:30 AM – 11:00 AM / HANOVER C

COURSE DIRECTOR: Mary Vining Radomski, PhD, OTR/L, Sister Kenny Research Center, Minneapolis, MN

FACULTY: Lt Col. John Scherer, PhD, U.S. Army Medical Research Materiel Command, Clinical and Rehabilitative Medicine Research Program, Fort Detrick, MD; Douglas Cooper, PhD, Brooke Army Medical Center, San Antonio, TX; Linda Resnik, PT, PhD, OCS, Brown University/Providence VA Medical Center, Providence, RI; Jason Wilken, MPT, PhD, Center for the Intrepid/Brooke Army Medical Center, San Antonio, TX; Leighton Chan, MD,

MPH, Center for Neuroscience and Regenerative Medicine/NIH, Bethesda, MD; Stephanie Panker, MD, Rehabilitation & Reintegration Division (Army Office of the Surgeon General, Falls Church, VA,

This session will be of interest to rehabilitation clinicians and researchers because they will: receive an update on military rehabilitation research including current mechanisms and priorities for funding; learn details of multiple lines of military rehabilitation research currently underway and how this work is relevant to civilian clinical practice; exchange ideas with military rehabilitation researchers; and obtain information on how civilian researchers can collaborate with military researchers.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe military rehabilitation research entities/structures, funding mechanisms, research priorities, and examples of military rehabilitation studies now underway.
2. Discuss critical success factors for military-civilian research collaborations.
3. Determine the potential relevance of current military rehabilitation research to civilian rehabilitation practice.

CONCURRENT SYMPOSIA

Exercise After Stroke: Clinical Models, Cardiometabolic Health and Community Translation

9:30 AM – 11:00 AM / HANOVER F & G

COURSE DIRECTOR: Richard Macko, MD, Veterans Affairs Maryland Health Care System, Baltimore, MD

FACULTY: Christine MacDonell, CARF, Aging Services and Medical Rehabilitation, Washington, DC; Alexander Dromerick, MD, National Rehabilitation Hospital and Georgetown University School of Medicine, Washington, DC; Mary Stuart, PhD, University of Maryland, Baltimore County, Catonsville, MD; Marilyn MacKay-Lyons, PhD, Dalhousie University, Halifax, NS, CN

The facilitation of research by the International Commission on Accreditation of Rehabilitation Facilities (CARF) accredited sites presents an enormous opportunity to prospectively analyze and improve systems level stroke rehabilitation care. The possibility that CARF could galvanize real world research to improve stroke care in an ongoing fashion may be the most important tool enacted by the new CARF standards. Targeted areas for health research, common outcomes and language, consideration to ethnic and geographic disparities, and long-term clinically relevant tracking become possible, but only if this initiative is properly harnessed by clinical researchers and health services investigators.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the International CARF mission and the new standards for medical rehabilitation of stroke.
2. Recognize the role of facilitating research including new approaches to rehabilitative care and risk factor modification.
3. Recognize the importance of preventing physical inactivity and physical deconditioning to vascular health, physical function, and cognitive function after stroke.
4. Develop possible strategies for addressing this new standard to optimize health and function for stroke survivors across the continuum of care.

5. Recognize the invigorated CARF emphasis on long-term care of stroke as a chronic disease model, and develop strategies for community translation and tracking to optimize continuity of care and outcomes.
6. Conceptualize the partnerships and protocols that could produce sustainable vehicles for ongoing health and wellness of stroke survivors at the community level.

BREAK 10:00 AM – 10:30 AM

CONCURRENT SYMPOSIA

Restoration and Compensation in Brain Injury and Stroke Rehabilitation Therapies: Physical, Cognitive, and Language

11:15 AM – 12:45 PM / BAKER

COURSE DIRECTOR: Mel B. Glenn, MD, Spaulding Rehabilitation Hospital Boston, Boston, MA

FACULTY: Anne T. O'Brien, PT, NCS, Spaulding Rehabilitation Hospital Boston, Boston, MA

The success of constraint-induced motor therapy (CIMT) suggests the possibility that compensation in rehabilitation may entail a trade-off with restoration. If CIMT, which can be viewed as a restorative approach to motor therapy, is effective in the chronic setting, does that indicate that compensatory approaches used in the acute setting have resulted in incomplete recovery of the impaired extremity? Are there similar trade-offs in the rehabilitation of cognitive and language skills, e.g., is training in the use of external memory and organizational aids done at the expense of core cognitive skills? Which approach works best for which conditions and at what timeframe post-injury in physical, language, and cognitive rehabilitation for people with acquired brain injury? Restoration and compensation are defined and a distinction is made between clinical and physiologic restoration and compensation. Clinical restoration and compensation refer to changes in physical, language, and cognitive activity as they relate to the manner in which the activity is carried out, whereas physiologic restoration and compensation concern themselves with the locus of physiologic activity in the central nervous system during such activities. Caveats associated with these concepts are presented. Research-based evidence is provided for the success of clinical restoration versus compensation in physical, language, and cognitive rehabilitation therapies both with respect to the impairment being treated and the time since injury. Possible conclusions and concerns are presented and explored.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Distinguish between physiological and clinical definitions of restoration and compensation.
2. Discuss the optimal timing for interventions targeting restoration vs. compensation in physical rehabilitation, and the supporting evidence.
3. Discuss the optimal timing for interventions targeting restoration vs. compensation in cognitive rehabilitation, and the supporting evidence.

CONCURRENT SYMPOSIA

Activity-Based Therapies in Spinal Cord Injury

11:15 AM – 12:45 PM / HANOVER A & B

COURSE DIRECTOR: Michael Jones, PhD, Shepherd Center, Atlanta, GA**FACULTY:** Candace Tefertiller, DPT, ATP, NCS, Craig Hospital, Denver, CO; Eric Harness, Project Walk, Carlsbad, CA; Paula Denison, Rehabilitation Institute of Michigan, Detroit, MI

Gain insight into the return-on-investment in activity-based therapy programs and the long-term maintenance needs. This session is designed to give attendees a better understanding of activity-based therapy programs, the interventions used, intended beneficiaries, and intended benefits. Empirical evidence to support the benefits of activity-based therapy programs, including improvements in health and wellness will be presented.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize what comprises an activity-based therapy program, the interventions used, intended beneficiaries, and intended benefits.
2. Describe the empirical evidence to support benefits of activity-based therapy programs, including improvements in health and wellness.
3. Recognize the obstacles to formal validation studies, such as randomized clinical trials.
4. Reflect on the return-on-investment in activity-based therapy programs as well as the efforts required to maintain any gains in neuromotor functioning attained.

CONCURRENT SYMPOSIA

PART 1: Medical and Behavioral Complexity of Persons with Disorders of Consciousness

11:15 AM – 12:45 PM / HANOVER D & E

COURSE DIRECTOR: Risa Nakase-Richardson, PhD, James A. Haley Veterans Hospital, Tampa, FL**FACULTY:** Johanna Tran, MD, James A. Haley Veterans Hospital, Tampa, FL; John Whyte, MD, PhD, FACRM, Moss Rehabilitation Research Institute, Elkins Park, PA; Robert Brunner, MD, Spain Rehabilitation Hospital, UAB, Birmingham, AL; Joseph Giacino, PhD, FACRM, Spaulding Rehabilitation Hospital, Boston, MA; Stuart Yablon, MD, Baylor Institute for Rehabilitation, Dallas, TX; Kathleen Kalmar, PhD, JFK Johnson Rehabilitation Institute, Edison, NJ; David Cifu, MD, National PM&R Services, Veterans Health Administration, Washington, DC

There is growing evidence that persons with disorders of consciousness referred for inpatient rehabilitation improve in cognitive, motor and behavioral domains. Although rehabilitation samples are selected, the dynamics of acute rehabilitation that may enhance these outcomes are unknown. Speculation includes enhanced medical management of common comorbidities of this patient group may facilitate recovery and outcome. However, there is a paucity of data regarding the frequency and nature of the medical complexities of persons with DOCS. Moreover, no established guidelines exist about their long-term medical management.

The purpose of Part 1 of this symposium series is to present data from the same three separate multi-center studies examining in greater detail the complex medical needs of persons with DOCS. Discussion regarding

long-term medical management systems of care with comments from a stakeholder panel.

Although evidenced-based guidelines do not exist for this patient group, practitioners are increasingly being called on to manage these patients acutely and long-term. In the absence of guidelines, Part 2 of this symposium, slated for Saturday, October 15 2:00 pm – 3:30 pm, is an educational series of the complex comorbidities, shared treatment approaches, and case studies from both the civilian and military/veteran populations.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe common medical comorbidities of persons with disorders of consciousness.
2. Compare and contrast medical comorbidities for the veteran and civilian populations with this disorder.
3. Identify common reasons for re-hospitalization among people with this disorder.

CONCURRENT SYMPOSIA

Measuring the Impact of Cognitive Deficits in the Real World

11:15 AM – 12:45 PM / HANOVER C

COURSE DIRECTOR: Deirdre Dawson, PhD, OT Reg (ON), University of Toronto, Toronto, ON, CN**FACULTY:** Carolina Bottari, PhD, University of Montreal, Montreal, QC, CN; Yael Goverover, PhD, OT, New York University, New York, NY

The importance of using ecologically valid measures to assess and evaluate outcomes in adults with acquired brain injury will be highlighted. Information about three innovative assessments that measure aspects of complex everyday-life performance, and provide information about cognitive impairments that interfere with this performance, will be presented. Also included will be a discussion of the clinical and research utility of assessments of everyday-life performance, as they relate to adults with acquired brain injury and multiple sclerosis.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Recognize the issues related to limited ecological validity of standardized neuropsychological assessments.
2. Describe three assessments of real-world behavior that provide insight into clients' cognitive impairments and abilities.
3. Consider the relevance of these assessments to clinical and/or research settings.

CONCURRENT SYMPOSIA

New Advances in Assessing Safety Risk Following Traumatic Brain Injury

11:15 AM – 12:45 PM / HANOVER F & G

COURSE DIRECTOR: Ronald Seel, PhD, Shepherd Center, Atlanta, GA**FACULTY:** Stephen Macciocchi, PhD, ABPP, Shepherd Center, Atlanta, GA; Craig Vellozo, University of Florida, Gainesville, FL

Safety risk is an area of concern for the entire interdisciplinary rehabilitation team. This session provides synthesized empirical data on the perceptions of family members who observe survivors after return to the

home and community on a wide range of activities — information that otherwise would be unavailable to clinicians.

The lack of a standardized safety measure has limited the data collection efforts of researchers who study TBI rehabilitation. This lack of data limits researchers' ability to target causal factors in experimental interventions that might reduce risk and injuries among persons with TBI. We will present data on scales that measure safety risk specific to individual impairments (in areas such as attention, physical functioning, impulsivity, and judgment) that are most often linked to safety risk after TBI.

Insurers are also keenly aware of the need to improve safety risk to appropriately provide for supervision resources and often express interest in improved assessment. The prognostic data validating the safety risk measure will be of interest to providers as well as clinicians.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Define safety, risk and harm and discuss components of a theoretical model of safety risk following TBI based on the WHO model of disability.
2. Describe family members' perceptions of survivors' safety risk behavior on 121 activities in the home and community including primary environmental risk and protective factors.
3. Discuss the use of safety measure data, identified risk factors, and survivor functioning for treatment planning and harm-prevention strategies.

LUNCH (ON OWN) 12:45 PM – 2:00 PM

CONCURRENT SYMPOSIA

Updating the Neurological Classification for Prognosis in Traumatic SCI

2:00 PM – 3:30 PM / HANOVER A & B

COURSE DIRECTOR: Ralph Marino, MD, MS, FACRM, Thomas Jefferson University, Philadelphia, PA

FACULTY: Daniel Graves, PhD, FACRM, Baylor College of Medicine, Houston, TX; John Steeves, PhD, ICORD, Vancouver, BC, CN; M.J. Mulcahey, PhD, OTR/L, Shriners Hospitals for Children, Philadelphia, PA

Data will be presented from several longitudinal databases: Sygen, SCI Model Systems, EMSCI. Faculty includes experts on the reliability of the neurological exam in adults and children. Participants will help design a study to improve accuracy of prognosis after SCI.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the effect on prognosis of changes to the classification of SCI that have been proposed (e.g., different definition for incomplete, separating light touch and pin prick preservation).
2. Compare the reliability and validity of components of the neurological exam in adults and children.
3. List three modifications to the current classification of SCI that could improve the prognostic validity of the classification.

CONCURRENT SYMPOSIA

Part 2: Medical and Behavioral Complexity of Persons with Disorders of Consciousness

2:00 PM – 3:30 PM / HANOVER D & E

COURSE DIRECTOR: Lawrence Horn, MD, Wayne State University, School of Medicine, Detroit, MI

FACULTY: Brian Greenwald, MD, Mount Sinai School of Medicine, New York, NY; Mary Himmler, MD, Walter Reed Army Medical Center, Washington, DC; Rocco Armonda, MD, Walter Reed Army Medical Center, Washington, DC; Marissa McCarthy, MD, James A. Haley Veterans Hospital, Tampa, FL; Risa Nakase-Richardson, PhD, James A. Haley Veterans Hospital, Tampa, FL; Stuart Yablon, MD, Baylor Institute of Rehabilitation, Dallas, TX; Flora Hammond, MD, Indiana University, Indianapolis, IN

There is growing evidence that persons with disorders of consciousness referred for inpatient rehabilitation improve in cognitive, motor and behavioral domains. Although rehabilitation samples are selected, the dynamics of acute rehabilitation that may enhance these outcomes are unknown. Speculation includes enhanced medical management of common comorbidities of this patient group may facilitate recovery and outcome. However, there is a paucity of data regarding the frequency and nature of the medical complexities of persons with DOCS. Further, no established guidelines exist about their long-term medical management.

The purpose of Part 1 of this symposium, slated for Saturday, October 15 11:15 am – 12:45 pm, is to present data from the same three separate multi-center studies examining in greater detail the complex medical needs of persons with DOCS. The session will include discussion regarding long-term medical management systems of care with comments from a stakeholder panel.

Although evidenced based guidelines do not exist for this patient group, practitioners are increasingly being called on to manage these patients acutely and long-term. In the absence of guidelines, Part 2 of this symposium is an educational series of the complex comorbidities, shared treatment approaches, and case studies from both the civilian and military/veteran populations.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. List four common medical comorbidities in severe TBI.
2. Describe how alertness and cognition are influenced by medical comorbidities for persons with severe TBI.
3. Describe the clinical presentation of common medical comorbidities among persons with limited cognitive and behavioral repertoire.

CONCURRENT SYMPOSIA

Principles of Community Based Residential Care for Persons with TBI

2:00 PM – 3:30 PM / HANOVER C

COURSE DIRECTOR: Nathan Zasler, MD, Tree of Life Services, Inc., Richmond, VA**FACULTY:** Michael Martelli, PhD, Tree of Life Services, Inc., Richmond, VA

The session will provide information on the long-term community management of persons with TBI and address challenges that are commonplace but unfortunately not necessarily well addressed in the neurorehabilitation literature. Attendees will gain tools to facilitate more effective long-term management of persons with TBI once in community.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe methods for maintaining motivation and hope in long-term community based care of persons with TBI.
2. Describe the effects of aging with neurodisability including cognitive and physical impairment progression in long-term community-based care of persons with TBI.
3. Recognize the ethical issues related to management of risk in the context of maximizing in long-term community based care of persons with TBI.

CONCURRENT SYMPOSIA

Implementing Engaged Scholarship in Rehabilitation Research

2:00 PM – 3:30 PM / HANOVER F & G

COURSE DIRECTOR: Angelle Sander, PhD, Baylor College of Medicine, Houston, TX**FACULTY:** John Morris, PhD, Shepherd Center, Atlanta, GA; Lisa Hannold, PhD, North Florida/South Georgia VA Medical Center, Gainesville, FL; Anthony Lequerica, PhD, Kessler Foundation Research Center, West Orange, NJ

This session will assist rehabilitation researchers in promoting knowledge translation through the process of engaged scholarship and provide rehabilitation researchers with practical tips on how to engage consumers in the research process. Rehabilitation researchers will learn how technology can be used to engage consumers, including use of social media and techniques to engage consumers from diverse populations.

LEARNING OBJECTIVES

To support the attainment of knowledge, competence, and performance, the learner should be able to achieve the following objectives:

1. Describe the concept of engaged scholarship and give 2 examples of how it can be applied in rehabilitation research.
2. Describe 2 uses of technology to engage consumers in rehabilitation research.
3. Describe 2 techniques that can be used to implement engaged scholarship with diverse populations.

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2:00 PM – 5:45 PM | DUNWOODY

SUNDAY, OCTOBER 16, 2011

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8:00 AM – 12:15 PM | DUNWOODY



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ORAL & POSTER PRESENTATIONS

Provided here are the abstracts of scientific papers and posters presented at the 2011 ACRM-ASNR Annual Conference: *Progress in Rehabilitation Research*, Atlanta, Georgia, October 11 – 15, 2011. Papers and posters were chosen by the joint ACRM-ASNR program committee. The abstracts have not been subjected to formal peer review by the Editorial Board of the Archives of Physical Medicine and Rehabilitation. Abstracts are published online in the October issue of *Archives of Physical Medicine and Rehabilitation*, and can be found online at www.archives-pmr.org.



ORAL PRESENTATIONS

NEUROREHABILITATION

Article 1 (NIDRR)

Toward a Practical Brain-Computer Interface for Individuals with Severe Motor Disabilities.

Stefanie Blain (University of Michigan, Ann Arbor, MI), Jane Huggins, Timothy Stump, Patrick Monahan.

Key Words: Nonverbal communication; Attitude to computers; Community-based participatory research; Electroencephalography; Rehabilitation.

Key Words: Brain injuries; Depression; Models, statistical; Rehabilitation.

SPINAL CORD INJURY (SCI)

Article 2

Efficacy of "Care Call" Telerehabilitation Intervention for Persons with Spinal Cord Dysfunction: Randomized Controlled Trial.

Bethlyn Vergo Houlihan (New England Regional SCI Center, Boston Medical Center, Boston, MA, Department of Health Policy & Management, Boston University School of Public Health, Boston, MA), Alan Jette, Pengsheng Ni, Michael Paasche-Orlow, Robert H. Friedman, Stan Ducharme, Jane Wierbicky, Judi Zazula, David Rosenblum, Steve Williams.

Key Words: Rehabilitation.

Article 3 (NIDRR)

Recovery of Overground Locomotion via Targeted Robotic Gait Training in Rats with SCI.

Nathan Neckel (Georgetown University, Washington, DC), Barbara Bregman.

Key Words: Robotics; Gait dysfunction, neurologic; Spinal cord injuries; Animal research; Rehabilitation.

Article 4 (NIDRR)

Substance Use in Young Adults with Pediatric-onset Spinal Cord Injury.

Miriam Hwang (Shriners Hospitals for Children, Chicago, IL, Medical College of Wisconsin, Milwaukee, WI), Kathy Zebracki, Kathleen Chlan, Lawrence Vogel.

Key Words: Pediatric; Spinal cord injury; Substance use; Outcome; Rehabilitation.

Article 5

Empowerment/Engagement: Front-line Clinicians Enhance the Research Process.

Julie Gassaway (Institute for Clinical Outcomes Research, Salt Lake City, UT), Gale Whiteneck.

Key Words: Rehabilitation.

STROKE

Article 6

Neuromuscular Electrical Stimulation Efficacy in Acute Stroke Tube Dependent Dysphagia.

David Kushner (University of Miami School of Medicine, Miami, FL), Kenneth Peters, Stacy Thomashaw-Eroglu, Perless Melissa, Douglas Johnson-Greene.

Key Words: Stroke; Dysphagia; Rehabilitation; Neuromuscular electrical stimulation; Functional Oral Intake Scale

TRAUMATIC BRAIN INJURY (TBI)

Article 7

Results of the Citicoline Brain Injury Treatment (COBRIT) Trial.

Thomas Novack (University of Alabama at Birmingham, Birmingham, AL), Ross Zafonte, Beth Ansel, Sureyya Dikmen, Tessa Hart, Joe Ricker, Dale Hesdorffer, Keith Atkins, Kim Boase, Bizhan Aarabi, Carlos Marquez de la Plata, Nancy Hsu.

Key Words: Traumatic brain injury; Acute intervention; Citicoline; Rehabilitation.

Article 8 (NIDRR)

Relationship of Preinjury Coping on Outcomes in Adults with Mild Traumatic Brain Injury.

Kacey Maestas (Baylor College of Medicine, Houston, TX, Brain Injury Research Center, TIRR Memorial Hermann, Houston, TX), Angelle Sander.

Key Words: Brain injuries, traumatic; Rehabilitation; Adaptation.

ORAL & POSTER PRESENTATIONS

Article 9

Stepping-out: Psychosocial and Functional Impact of a 12-Week Home-based Physical Activity Program after Brain Injury. Stephanie Kolakowsky-Hayner (Santa Clara Valley Medical Center, San Jose, CA), Jerry Wright, Kimbely Bellon, Jeffrey Englander, Tamara Bushnik.

Key Words: Rehabilitation; Brain injury; Walking.

Article 10 (NIDRR)

Screening for Traumatic Brain Injury: A Comparison of Two Distinct Approaches.

Yelena Goldin-Lauretta (Mount Sinai School of Medicine, New York, NY), Wayne Gordon, Yuka Matsuzawa, Tiffany Mitchell, Lisa Spielman, Theodore Tsaousides, Joshua Cantor.

Key Words: Traumatic brain injury; Screening; Rehabilitation.

OTHER

Article 11

Excessive Central Fatigue Limits Motor Function of Cancer Survivors with Fatigue Symptom.

Guang Yue (Cleveland Clinic, Cleveland, OH), Ela Plow, Mellar Davis.

Key Words: Rehabilitation.

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MEASUREMENT

Poster 1

Test- Retest Reliability of the Functional Mobility Assessment (FMA).

Amit Kumar (Department of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, PA, Division of Rehabilitation Science, University of Texas Medical Branch, Galveston, TX), Mark Schmeler, Amol Karmarkar, Diane Collins, Rosemarie Cooper, Rory Cooper, Hyekyoung Shin, Margo Holm.

Key Words: Outcomes; Assistive device; Functional; Test-retest; Reliability; Rehabilitation.

Poster 2

Responsiveness of Four Participation Measures for Outcomes of Outpatient Rehabilitation.

Carlijn van der Zee (Rudolf Magnus Institute of Neuroscience and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and Rehabilitation Center De Hoogstraat, Utrecht, The Netherlands), Marcel Post.

Key Words: Social participation; Outcome assessment; Rehabilitation.

Poster 3

Evaluation of Patient and Proxy Responses on the Activity Measure for Post-Acute Care.

Alan Jette (Boston University School of Public Health, Boston, MA), Pengsheng Ni, Elizabeth Rasch, Jed Appelman, M. Elizabeth Sandel, Leighton Chan.

Key Words: Rehabilitation; Functional recovery; Outcomes.

Poster 4

Validation of the Utrecht Scale for Evaluation of Rehabilitation – Participation (USER-Participation).

Marcel Post (De Hoogstraat, Utrecht, The Netherlands, Swiss Paraplegic Research, Nottwil, Switzerland), Carlijn Van der Zee.

Key Words: Validation studies; Disabled persons; Questionnaires; Outcome assessment; Community participation; Rehabilitation.

Poster 5

A Systematic Review of the Health-related Quality of Life Measures following Total Knee Arthroplasty.

Saurabh Mehta (McMaster University, Hamilton, Ontario, Canada), Mary Law, Jean-Sébastien Roy.

Key Words: Health-related quality of life; Total knee arthroplasty; Patient-reported outcomes; Clinimetric properties; Rehabilitation.

Poster 6

Evaluation of Item Difficulty on the Coma Recovery Scale with Implications for Emergence Criteria.

Shital Pavawalla (James A. Haley Veterans' Hospital, Tampa, FL), Risa Nakase-Richardson, Stuart Yablon, Mark Sherer, Clea Evans, Scott Barnett.

Key Words: Rehabilitation; Traumatic brain injury (TBI); Minimally conscious state (MCS).

Poster 7

Normative Data for the Balance Error Scoring System in Community-Dwelling Adults.

Grant Iverson (University of British Columbia, Vancouver, BC, Canada, Copeman Healthcare Centre, Vancouver, BC, Canada), Michael Koehle.

Key Words: Brain injuries; Balance; Rehabilitation.

Poster 8

Sensor-enabled Radio Frequency Identification Tags for Remotely Monitoring Everyday Arm Activity: Sensitivity and Specificity.

Joydip Barman (Department of Biomedical Engineering, University of Alabama at Birmingham, Birmingham, AL, Department of Psychology, University of Alabama at Birmingham, Birmingham, AL), Gitendra Uswatte, Touraj Ghaffari, Nilanjan Sarkar, Brad Sokal, Ezekiel Byrom, Eva Trinh, Christopher Varghese, Michael Brewer, Alan Shih.

Keywords: Arm; Activity; Ambulatory monitoring; Rehabilitation; Stroke.

Poster 9

Development and Testing of the Stroke Assessment of Fall Risk (SAFR): A Pilot Study.

Terry Breisinger (UPMC Rehabilitation Institute, Pittsburgh, PA), Grace Campbell.

Key Words: Rehabilitation; Stroke; Accidental falls.

Poster 10

Accuracy of a Functional Activity Monitor in Identifying Functional Activities, Activity Duration and Step Frequencies.

Inbal Sapir (Boston University, College of Health and Rehabilitation Sciences, Boston MA), Robert Wagenaar, Stacey Markovic, Yuting Zhang, Cheng-Chieh Lin, Lucia Vaina, Thomas Little.

Key Words: Functional activities monitor; Accelerometer; Gyroscope; Rehabilitation.

Poster 11

Relative Responsiveness of a 9-Item Version of the Arm Motor Ability Test after Robotics Treatment in Persons with Stroke.

Michael O'Dell (Division of Rehabilitation Medicine and Department of Public Health, Weill Cornell Medical College, New York, NY), Grace Kim, Paul Christos, Lisa Rivera, Kerri Fitzgerald, Delia Gorga.

Key Words: Stroke; Responsiveness; Arm motor ability test; Rehabilitation.

Poster 12

Addressing Selection Bias in Observational Rehabilitation Research Using Large Datasets.

Amol Karmarkar (University of Texas Medical Branch, Galveston, TX), James Graham, Kenneth Ottenbacher.

Key Words: Rehabilitation; Measurement; Observational Rehabilitation Research.

Poster 13

Concordance of Actigraphy with Overnight Polysomnography: A Pilot Study.

Tracy S. Kretzmer (Department of Mental Health and Behavioral Sciences, James A. Haley Veterans Hospital, Tampa, FL, University of South Florida, Department of Psychology, Tampa, FL), Bradley J. Daniels, Praveen K. Gootam, Marissa McCarthy, Bryan Merritt, William M. Anderson, Risa Nakase-Richardson.

Key Words: Polysomnography (PSG); Actigraphy (ACG); Traumatic brain injury (TBI); Sleep; Rehabilitation.

Poster 14

Advanced Longitudinal Data Analysis.

Christopher Pretz (Craig Hospital, Englewood, CO), Scott Kreider.

Key Words: Rehabilitation; Longitudinal Data Analysis.

Poster 15

Self Reported Functional Outcome Measure in the Field of Prosthesis: A Systematic Review.

Pallavi Sood (University of Pittsburgh, Pittsburgh, PA), Diane Collins, Mark Schmeler, Amit Kumar, Harry Browne, Amol Karmarkar.

Key Words: Functional outcome measures; Lower extremity amputation; Prosthetics; Reliability and validity; Rehabilitation.

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Poster 16

Progress in Four Postacute Brain Rehabilitation Program Types Compared through the MPAL-4 Outcome Info System.

James Malec (Indiana University School of Medicine, Rehabilitation Hospital of Indiana, Indianapolis, IN), Vicki Eicher, Mary Pat Murphy, Thomas Murphy.

Key Words: Brain injury; Rehabilitation; Outcome measurement.

Poster 17

Comprehensive Care in Multiple Sclerosis—From Theory to Practice.

Ben Thrower (Shepherd Center, Atlanta, GA), Andrew C. Carlos.

Key Words: Multiple sclerosis; Comprehensive care; Managed care organization; Rehabilitation.

Poster 18

Early Impaired Self-Awareness is Associated with Age and Depression in Acquired Brain Injury.

Shannon Juengst (University of Pittsburgh, Pittsburgh, PA), Emily Grattan, Elizabeth Skidmore.

Key Words: Rehabilitation; Brain injuries; Awareness.

Poster 19

Strategy Training to Ameliorate the Effects of Age-related Executive Dysfunction: A Pilot Randomized Controlled Trial.

Deirdre Dawson (University of Toronto, Toronto, Canada, Kunitz Lunenfeld Applied Research Unit, Baycrest, Toronto, Canada), Julie Richardson, Malcolm Binns, Helene Polatajko, Angela Troyer, Gordon Winocur, Tom Schweizer.

Key Words: Aging; Executive function; Rehabilitation.

Poster 20

Changes in Motor-evoked Potential Induced by Non-invasive Transcutaneous Direct Current Stimulation of the Neck.

Hyung-Ik Shin (Seoul National University College of Medicine, Seoul, Republic of Korea), Chai-Young Lim.

Key Words: Rehabilitation; Neurorehabilitation; Non-invasive Transcutaneous Stimulation.

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Poster 21

Relationships Between Social Problem Solving and Neurobehavioral Functioning in a Brain Injury Population.

Summer Ibarra, (Rehabilitation Hospital of Indiana, Indianapolis, IN), Samantha Backhaus, Devan Parrott.

Key Words: Brain injury; Social problem solving; Rehabilitation.

Poster 22

Speed's Impact on Muscle Demands during Partial Body Weight Supported Training on a Motorized Elliptical.

Judith M. Burnfield (Madonna Rehabilitation Hospital's Institute for Rehabilitation Science & Engineering, Lincoln, NE), Gretchen A. Hildner, Thad W. Buster, Adam P. Taylor, Yu Shu.

Key Words: Gait; Rehabilitation; Electromyography; Exercise therapy.

Poster 23

The Effect of Repetitive Transcranial Magnetic Stimulation on Brain Injured Patients with Dysphagia.

Gijeong Yun (Asan Medical Center, Seoul, Songpa-gu/ Pungnap-2dong, Republic of Korea), Sook Joung Lee, Min-Ho Chun.

Key Words: Stroke; rTMS; Dysphagia; Swallowing; Neurorehabilitation; Rehabilitation.

Poster 24

The Effect of Wii-based Interventions on Physical, Cognitive and Social Functioning among Pre-frail Elderly Persons.

Salvador Bondoc (Quinnipiac University, Hamden, CT), Pamela Hewitt, Nicole Frey, Brittany McQuide, Amy Johnson.

Key Words: Rehabilitation; Neurorehabilitation; Wii-based Intervention; Pre-Frail Elderly Persons.

Poster 25

New Access Technology for Individuals with Severe Physical Limitations Using AAC.

Susan Fager (Madonna Rehabilitation Hospital, Lincoln, NE), David Beukelman.

Key Words: Rehabilitation; Neurorehabilitation; Technology; Severe Physical Limitations; AAC.

Poster 26

Memory Notebook Training for Individuals with Acquired Brain Injury with Involvement of Significant Other.

Kristine Kingsley (NYU Langone Medical Center, New York, NY), Donna Langenbahn.

Key Words: Memory notebook training; Significant other; Acquired brain injury; Rehabilitation.

Poster 27

Impaired Left-Dominant Brain-Immune Network as a Driver of Infection in Brain Injury Patients.

Pasquale Frisina (Kessler Institute for Rehabilitation, West Orange, NJ), Peii Chen, Ann Kutlik, Anna Barrett.

Key Words: Brain-lateralization; Immune-function; Brain-injured patients; Health-outcomes; Rehabilitation.

Poster 28

Effects of Parkinson Disease (PD) on Heading Direction and Coordination of Walking During Navigation.

Cheng-Chieh Lin (College of Health and Rehabilitation Sciences: Sargent College, Boston University, Boston, MA), Robert Wagenaar, Daniel Young, Alice Cronin-Golomb.

Key Words: Optic flow speed; Spatial frequency; Lateral drift; Parkinson's disease; Rehabilitation.

Poster 29

Very Early Constraint-Induced Movement Therapy (VECTORS): Effects of Timing or Dose on Upper Extremity Function.

Hui-Chun Chen (Department of Kinesiology, University of Wisconsin, Madison, WI), Alexander W. Dromerick, Dorothy Farrar Edwards.

Key Words: Exercise therapy; Stroke; Rehabilitation.

Poster 30

The Adequacy of Depression Treatment after Spinal Cord Injury or Traumatic Brain Injury.

Charles Bombardier (University of Washington, Seattle, WA).

Key Words: Traumatic brain injury; Spinal cord injury; Depression; Treatment; Rehabilitation.

Poster 31

Assessing Neglect in Severely Brain-injured Patients Diagnosed with Minimally Conscious State.

Caroline Schnakers (Coma Science Group, Cyclotron Research Centre, University of Liège, Liège, Belgium), Karin Sparmant, John Whyte, Steven Laureys, Steve Majerus.

Key Words: Severe brain injury; Minimally conscious state; Attention; Neglect; Rehabilitation.

Poster 32

Effects of Treadmill Inclination in the Gait of Individuals with Chronic Hemiparesis.

Ana Lindquist (Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil), Cinthia Moreno, Luciana Mendes, Emilia Silva, Heloisa Britto.

Key Words: Stroke; Treadmill test; Rehabilitation; Kinematics.

Poster 33

A Population Based Perspective of Older Adults with Acquired Brain Injury (ABI).

Angela Colantonio (Toronto Rehabilitation Institute, Toronto, Ontario, Canada, University of Toronto, Dept. of Occupational Science and Occupational Therapy, Toronto, Ontario, Canada), Amy Chen, Rika Vander Laan, Daria Parsons, Brandon Zagorski.

Key Words: Acquired brain injury; Older adults; Rehabilitation.

Poster 34

Discrepant Verbal Versus Nonverbal Memory in OEF/OIF Combat Veterans and Possible Association with Tinnitus.

James J. Muir (Veterans Affairs Northern California Health Care System, Martinez, CA), Michael A. Cole, Utaka Springer, Diana Partovi.

Key Words: Traumatic brain injury (or TBI); Memory; Tinnitus; Rehabilitation.

Poster 35

Effects Of Alcohol Use In Veterans With Mild TBI and/or Behavioral Health Conditions.

Amy Herrold (Hines VA Hospital, Hines, IL), Judi Babcock-Parziale, Walter High, Bridget Smith, Charlesnika Evans, Amanda Urban, Kurt Noblett, Theresa Pape.

Key Words: Alcohol; Traumatic brain injury; Depression; Anxiety; Rehabilitation.

Poster 36

The Influence of Corrective Lenses on Foot Displacement during Gait: Implications on Falling and Disability.

Dennis Tomashek (University of Wisconsin-Milwaukee, Milwaukee, WI), Kevin Keenan, Kurt Beschoner, Roger Smith.

Key Words: Gait; Falls; Multifocal lens glasses; Motion analysis; Rehabilitation.

SPINAL CORD INJURY (SCI)

Poster 37

Patient Factors Causing Therapists To Change Treatments In SCI Rehabilitation.

Marcel Dijkers (Mount Sinai School of Medicine, New York, NY), Jeanne Zanca, Gale Whiteneck.

Key Words: Rehabilitation; Health services; Health services research; Hospitals; Allied health personnel; Comorbidity.

Poster 38

Factors Complicating SCI Rehabilitation: Cause or Consequence of Long Stays?

Marcel Dijkers (Mount Sinai School of Medicine, New York, NY), Gale Whiteneck, Jeanne Zanca.

Key Words: Rehabilitation; Health services; Health services research; Hospitals; Allied health personnel; Comorbidity.

Poster 39

Forced Change In Treatments Sessions: Therapists' Ratings of Patient Participation.

Marcel Dijkers (Mount Sinai School of Medicine, New York, NY), Jeanne Zanca, Gale Whiteneck.

Key Words: Rehabilitation; Health services; Health services research; Hospitals; Allied health personnel; Comorbidity.

Poster 40

Effects of Cycling on Bone and Muscle in Pediatric Spinal Cord Injury.

Therese E. Johnston (University of the Sciences, Philadelphia, PA), MJ Mulcahey, Randal R. Betz, Richard T. Lauer.

Key Words: Functional electrical stimulation; Cycling; Spinal cord injury, Pediatrics; Rehabilitation.

Poster 41

Perceived Benefits from Participating in an Underwater Treadmill Training Program.

Sandra L. Stevens (Middle Tennessee State University, Murfreesboro, TN).

Key Words: Spinal cord injury; Underwater treadmill; Gait training; Rehabilitation.

Poster 42

Development of the Nottwil Environmental Factors Inventory for SCI (NEFI-SCI).

Jan Reinhardt (Department of Health Sciences and Health Policy, University of Lucerne and SPF, Nottwil, Lucerne, Switzerland, Swiss Paraplegic Research, Nottwil, Lucerne, Switzerland), Sibylle Graf, Marie-Eve Drouin, Marcel Post, Gale Whiteneck, Luc Noreau, Susan Charlifue.

Key Words: Activities of daily living; Adaptation; Psychological Disability evaluation; Environment; Environment design; Outcome assessment (Health Care); Psychometrics; Rehabilitation; Reproducibility of results; Social environment; Spinal cord injuries.

Poster 43

Association of Race, Cultural Factors, and Quality of Life in Persons with Spinal Cord Injury.

Larissa Myaskovsky (VA Pittsburgh Healthcare System, Pittsburgh, PA, University of Pittsburgh, Pittsburgh, PA), Kelly Burkitt, Alison Lichy, Inger Ljungberg, Denise Fyffe, Haishin Ozawa, Galen Switzer, Michael Fine, Michael Boninger.

Key Words: Health status disparities; Minority health; Quality of life; Rehabilitation; Spinal cord injuries.

Poster 44

Gluteal Blood Flow and Oxygenation During Muscle Activation vs. Pressure Relief Movements in Wheelchair Users.

Thomas Janssen (Faculty of Human Movement Sciences, VU University Amsterdam, Amsterdam, The Netherlands, Reade, Center for Rehabilitation and Rheumatology, Amsterdam, The Netherlands), Tim van Dijk, Maremka Zwinkels, Christof Smit.

Key Words: Electrical stimulation; Pressure ulcer; Paraplegia; Tetraplegia; Paralysis; Rehabilitation.

Poster 45

Client-centeredness in Inpatient Spinal Cord Injury Rehabilitation: Results from an Exploratory Study.

Christina Papadimitriou (Northern Illinois University, Dekalb, IL).

Key Words: Rehabilitation; Client-centeredness; SCI.

Poster 46

Management of Syringomyelia Post SCI: An Evidence Based Review.

Swati Mehta (Lawson Health Research Institute, London, ON, Canada, St. Joseph's Health Care London, London, ON, Canada), Robert Teasell, Keith Sequeira.

Key Words: Spinal cord injury; Rehabilitation; Syringomyelia.

Poster 47

Evidence Based Management of Depression following Spinal Cord Injury: A Meta-Analysis.

Swati Mehta (Lawson Health Research Institute, London, ON, Canada, St. Joseph's Health Care London, London, ON, Canada), Steve Orenczuk, Robert Teasell.

Key Words: Spinal cord injury; Rehabilitation; Depression.

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Somatosensory Augmentation Combined with Active Movement to Improve Upper Limb Function in Individuals with Tetraplegia.

Debbie Backus (Shepherd Center, Emory University, Atlanta, GA).

Key Words: Rehabilitation; Upper limb; Tetraplegia.

Poster 49

Investigation of Factors Associated with Inadequate Wheelchair Skills in Persons with Spinal Cord Injury.

Shahla Hosseini (University of Pittsburgh, Department of Physical Medicine and Rehabilitation, Pittsburgh, PA), Amanda Harrington, Michelle Oyster, Rory Cooper, Michael Boninger.

Key Words: Spinal cord injuries; Wheelchairs; Rehabilitation.

Poster 50

Trends in Suicide Mortality after Spinal Cord Injury 1973-2009.

Yue Cao (University of Alabama at Birmingham, Birmingham, AL), Yuying Chen, Michael J. DeVivo.

Key Words: Rehabilitation; Suicide Trends; Mortality.

Poster 51

Natural Course of Life Changes after Spinal Cord Injury: A 35-year Longitudinal Study.

James S. Krause (Medical University of South Carolina, Charleston, SC), Jennifer L. Bozard, Karla S. Reed.

Key Words: Spinal cord injury; Aging; Social participation; Employment; Quality of life; Adjustment.

Poster 52

Violence Related Spinal Cord Injury: Variations in Demographic, Functional Impairment and Psychotherapy/Counseling Use.

Michelle C. Hudson (Rehabilitation Institute of Chicago, Chicago, IL), Ana Miskovic, Allen W. Heinemann, Catherine S. Wilson.

Key Words: Spinal cord injury; Violence; Psychotherapy; Rehabilitation.

Poster 53

Function Before and After Tendon Transfer for Lateral Pinch and Finger Flexion in Tetraplegic Patient.

Thomas Armstrong (University of Michigan, Ann Arbor, MI), Kevin Chung, Sandeep Sebastian, Charoes Woolley, Patricia Burns, Rosemarie Figuereo.

Key Words: Tetraplegia; Hand, Grip; Outcomes assessment; Rehabilitation.

Poster 54

Rehabilitation Outcomes among Individuals with Spinal Cord Disease.

Jean Hsieh (National Rehabilitation Hospital, Washington, DC), Suzanne Groah, Inger Ljungberg, Gerben DeJong.

Key Words: Spinal diseases; Rehabilitation; Treatment outcome.

Poster 55

Group Therapy Utilization in Inpatient Spinal Cord Injury Rehabilitation.

Jeanne Zanca (Mount Sinai School of Medicine, New York, NY), Marcel Dijkers, Gale Whiteneck.

Key Words: Rehabilitation; Group Therapy; Inpatient Spinal Cord Injury.

Poster 56

The Relationship of Life Satisfaction to Neurological Category and Time Post Spinal Cord Injury.

Jerry Wright (Santa Clara Valley Medical Center, San Jose, CA), Stephanie Kolakowsky-Hayner.

Key Words: Rehabilitation; Injuries; Spinal cord injuries; Quality of Life.

Poster 57

Impact of Electrical Stimulation Parameters on Muscle Torque and Fatigue in People with SCI.

C. Scott Bickel (University of Alabama at Birmingham, Birmingham, AL), Donald Lein, Chris Gregory.

Key Words: Neuromuscular electrical stimulation; Muscle fatigue; Skeletal muscle; Spinal cord injury; Rehabilitation.

Poster 58

An Investigation of Area-Level Influences on Racial Disparities in Functioning after Spinal Cord Injury.

Amanda Botticello (Kessler Foundation Research Center, West Orange, NJ), University of Medicine & Dentistry of New Jersey, Newark, NJ), Denise Fyffe, Trevor Dyson-Hudson, Steven Kirshblum.

Key Words: Rehabilitation.

STROKE

Poster 59

Memory Self-efficacy Training After Stroke; Predictors of Success.

Ellen van Loon (Rijndam Rehabilitation Centre, Rotterdam, The Netherlands), Laurien Aben, Majanka Heijenbrok-Kal, Erny Groet, Rudolf Ponds, Jan Busschbach, Gerard Ribbers.

Key Words: Neurorehabilitation; Stroke; Memory training; Memory self-efficacy; Rehabilitation.

Poster 60

Therapeutic Intensity and Functional Gains during Inpatient Rehabilitation.

Hua Wang (Kaiser Foundation Rehabilitation Center, Vallejo, CA), Michelle Camicia, M. Elizabeth Sandel, Joseph Terdiman, Murali K. Mannava, Steve Sidney.

Key Words: Rehabilitation therapy; functional outcomes; intensity; Rehabilitation.

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Poster 61

Unilateral Spatial Neglect May Not Impede Upper Extremity Recovery in Individuals with Sub-acute Stroke.

Emily Grattan (University of Pittsburgh, Pittsburgh, PA), Elizabeth Skidmore.

Key Words: Rehabilitation; Perceptual disorder; Hemiplegia.

Poster 62

Pseudobulbar Affect in Stroke: A National Stroke Association Survey.

Stephen Page (University of Cincinnati, Cincinnati, OH), Amy Jensen, Susan Work.

Key Words: Cerebrovascular accident; Affect; Stroke; Data collection; Rehabilitation.

Poster 63

Retention of Motor Changes in Chronic Stroke Survivors Who Were Administered Mental Practice.

Stephen Page (University of Cincinnati, Cincinnati, OH), Valerie Hermann, Peter Levine.

Key Words: Hemiplegia; Cerebrovascular accident; Occupational therapy; Rehabilitation.

Poster 64

Influence of Biofeedback on Gait Training of Hemiparetic Subjects: Randomized Controlled Clinical Trial.

Ana Lindquist (Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil),

Ana Brasileiro, Larissa Lucena, Gabriela Gama, Emilia Silva.

Key Words: Stroke; Biofeedback; Gait; Hemiparesis; Rehabilitation.

Poster 65

3 Dimensional Instrumented Gait Analyses (3DIGA): A Novel Approach to Analyze Post Stroke Gait Disorder.

Abhishek Srivastava (Kokilaben Hospital, Maharashtra, India), Shirish Hastak.

Key Words: Biomechanics; Gait analysis; Kinematics; Rehabilitation; Stroke.

Poster 66

Modified Ashworth Scale (MAS) at the Ankle. Risk of Error in Adults with Stroke.

Andrea Merlo (Motion Analysis Laboratory, Dept. of Neurorehabilitation, AUSL di Reggio Emilia, Correggio (RE), Italy), Isabella Campanini, Francesco Lombardi.

Key Words: Muscle spasticity; Ashworth; Assessment; Validation study; Diagnostic error; Rehabilitation.

Poster 67

Stroke Caregiving Influences Cognitive Functioning among Older Adults.

Amanda Botticello (Kessler Foundation Research Center, West Orange, NJ, University of Medicine and Dentistry of New Jersey, Newark, NJ), Peii Chen.

Key Words: Care giver; Cognition; Stroke; Rehabilitation.

Poster 68

Effect of Methylphenidate and/or Levodopa Combined with Physiotherapy on Mood and Cognition After Stroke.

Ahmad Delbari (Karolinska Institute, Stockholm, Sweden), Reza Salman-Roghani, Johan Lökk, Leili Shahgholi, Reza Frouzan, Seyed Shahabodin Tabatabaei.

Key Words: Rehabilitation.

Poster 69

Tongue-Based Biofeedback for Balance in Stroke: Results of an 8-Week Pilot Study.

Stephen Page (The University of Cincinnati Academic Medical Center, Cincinnati, OH), Mary Beth Badke, Jack Sherman, Pierce Boyne, Kari Dunning.

Key Words: Balance; Stroke; Medical devices; Rehabilitation.

Poster 70

Training Memory Self-efficacy in the Chronic Stage after Stroke: A Randomized Controlled Trial.

Laurien Aben (Erasmus MC, Rotterdam, The Netherlands, Rijndam Rehabilitationcentre, Rotterdam, The Netherlands), Majanka H. Heijenbroek-Kal, Ellen M.P. van Loon, Erny Groet, Rudolf W.H.M. Ponds, Jan J.V. Busschbach, Gerard M. Ribbers.

Key Words: Neurorehabilitation; Stroke; Memory training; Memory self-efficacy; Rehabilitation.

Poster 71

Yoga Improves Balance and Balance Confidence after Stroke.

Arlene Schmid (Roudebush VAMC, Indianapolis, IN, Indiana University, Indianapolis, IN), Peter Altenburger, Tracy Dierks, Marieke Van Puymbroeck, Nancy Schalk, Kristine Miller, Linda Williams, Teresa Damush.

Key Words: Rehabilitation; Stroke; Yoga; Balance; Integrative medicine.

Poster 72

Therapeutic-Yoga: Impact on Pain and Physical Impairments after Stroke.

Kristine Miller (Roudebush VAMC, Indianapolis, IN, Indiana University, Indianapolis, IN), Tracy Dierks, Marieke Van Puymbroeck, Nancy Schalk, Linda Williams, Teresa Damush, Arlene Schmid.

Key Words: Stroke; Yoga; Exercise therapy; Rehabilitation.

Poster 73

Eight-Week Yoga Intervention Improves Quality of Life, Activity, and Social Participation after Stroke.

Arlene Schmid (Roudebush VAMC, Indianapolis, IN, Indiana University, Indianapolis, IN),

Marieke Van Puymbroeck, Peter Altenburger, Tracy Dierks, Kristine Miller, Nancy Schalk, Teresa Damush, Jeffrey Crabtree, Dawn Neumann, Linda Williams.

Key Words: Stroke; Yoga; Quality of life; Rehabilitation.

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Poster 74

Non-Infarcted Brain Volume Predicts CI Therapy Outcomes in Chronic Stroke.

Tyler Rickards (University of Alabama at Birmingham, Birmingham, AL), Victor Mark, Edward Taub, Chelsey Sterling, Gitendra Uswatte, Ameen Barghi, Michael Graham.

Key Words: Rehabilitation.

Poster 75

Corpus Callosum Size Predicts Paretic Arm Spontaneous Use and Maximal Movement Ability in Chronic Stroke.

Chelsey Sterling (University of Alabama at Birmingham, Birmingham, AL), Victor Mark, Edward Taub, Tyler Rickards, Gitendra Uswatte, Ameen Barghi, Michael Graham, Angela Chandler.

Key Words: Corpus callosum; Stroke; Arm; Motor recovery; Planimetry; Rehabilitation.

Poster 76

Motor Unit Number Estimates Show Decreases in Paretic Muscles of Stroke Survivors.

Xiaoyan Li (Rehabilitation Institute of Chicago, Chicago, IL), Ying-Chih Wang, William Zev Rymer, Ping Zhou.

Key Words: Motor unit; Motor unit number index (MUNIX); Surface EMG; M-wave; Stroke; Rehabilitation.

Poster 77

Stroke Outcomes: The Impact of Post-acute Care Site.

Leighton Chan (National Institutes of Health, Clinical Research Center, Rehabilitation Medicine Department, Bethesda, MD), Elizabeth Sandel, Elizabeth Rasch, Joseph Terdiman, Jed Appelman, Diane Brandt, Peigfei Cheng, Allen Jette.

Key Words: Stroke; Rehabilitation; Post-acute care; HMO; Function.

Poster 78

The Effects of Direct Current Brain Polarization on Motor Recovery of Lower Extremity in Stroke.

Hong Min Kim (Asan Medical Center, Seoul, Republic of Korea), Sang Il Lee, Min Ho Chun.

Key Words: Rehabilitation.

Poster 79

Persistence and Prevalence of Pain in Adults with Hemiparesis: Prospective Observational Study of 51 Patients.

Samuel Bierner (UT Southwestern, Dallas, TX), Jose Barreto, Judith Hembree, David Garrigues, Jennifer Zahn.

Key Words: Stroke; Pain, intractable; Pain measurement; Muscle spasticity; Rehabilitation.

Poster 80

Physical Therapy Activities in Stroke, Knee Arthroplasty, and Traumatic Brain Injury Rehabilitation and Functional Outcomes.

Jean Hsieh (National Rehabilitation Hospital, Washington, DC), Gerben DeJong, Koen Putman, Randall Smout, Susan Horn, Wenqiang Tian.

Key Words: Physical therapy; Rehabilitation; Treatment outcome.

Poster 81

Five-year Mortality and Related Prognostic Factors for Persons with a Stroke Initially Admitted to a Rehabilitation Centre.

Liesbet De Wit (Katholieke Universiteit Leuven, Leuven, Belgium), Koen Putman, Willy De Weerd.

Key Words: Rehabilitation.

Poster 82

Robot-assisted Treadmill Training during Rehabilitation of Stroke Patients.

Michiel van Nunen (VU University, Amsterdam, The Netherlands), Karin Gerrits, Thomas Janssen, Arnold de Haan.

Key Words: Stroke; Walking ability; Robotics.

Poster 83

Why is Spatial Neglect Under-documented?

Peii Chen (Kessler Foundation Research Center, West Orange, NJ, University of Medicine and Dentistry of New Jersey, Newark, NJ), Pasquale Frisina, Cristin McKenna, Ann Kutlik, Anna Barrett.

Key Words: Stroke rehabilitation; Spatial neglect; Team conference; Medical documentation; Rehabilitation.

Poster 84

An Upper Limb Telerehabilitation Program in Chronic Stroke.

Jeanne M. Langan (School of Kinesiology, University of Michigan, Ann Arbor, MI), Susan H. Brown.

Key Words: Stroke; Telerehabilitation; Rehabilitation; Kinematic.

Poster 85

Robotic Upper Limb Therapy as Treatment for Shoulder Subluxation in Stroke Patients.

Carolyn Dohle (The Burke Rehabilitation Hospital, White Plains, NY), Avrielle Rykman, Johanna Zipse, Bruce Volpe.

Key Words: Rehabilitation; Robotic; Stroke.

Poster 86

Visuospatial Training after Right-Brain Stroke.

Peii Chen (Kessler Foundation Research Center, West Orange, NJ, University of Medicine and Dentistry of New Jersey, Newark, NJ), John DeLuca.

Key Words: Rehabilitation.

Poster 87

Preliminary Findings Favor Meta-Cognitive Strategy Training over Attention Control in Acute Stroke Rehabilitation.

Elizabeth Skidmore (Kessler Foundation Research Center, West Orange, NJ, University of Medicine and Dentistry of New Jersey, Newark, NJ), Ellen Whyte, Deirdre Dawson, Margo Holm, Emily Grattan, Mary Amanda Dew, James Becker.

Key Words: Stroke; Cognition; Rehabilitation.

Poster 88

Feasibility of Training Dual Task Walking After Stroke.

Prudence Plummer-D'Amato (Northeastern University, Boston, MA), Raymond Villalobos, Moria Vayda, Erin Johnson, Myriam Moser, Laura Hennessy, Joy Huebner, Jacqueline Reinschmidt, Keith Poulin, Bijan Najafi.

Key Words: Rehabilitation.

Poster 89

Influence of Treadmill Training with Body Weight Support and Proprioceptive Neuromuscular Facilitation on Hemiparetic Gait.

Ana Lindquist (Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil), Tatiana Ribeiro, Emilia Silva, Elida Galvão.

Key Words: Rehabilitation.

Poster 90

Occurrence of Muscle Overactivity in Stroke Patients in Bedrest Condition.

Andrea Merlo (LAM - Motion Analysis Laboratory, Dept of neurorehabilitation, Hosp. of Correggio, AUSL Reggio Emilia, Correggio (RE), Italy), Isabella Campanini.

Key Words: Rehabilitation.

Poster 91

The Efficacy of Using a Combined Regimen of Portable Robotics and a Repetitive Task Specific Practice to Increase Motor Function in the Upper Arm.

Valerie Hill (University of Cincinnati, Cincinnati, OH), Stephen Page.

Key Words: Rehabilitation.

Poster 92

The Effect of Repetitive Transcranial Magnetic Stimulation on Subacute Stroke Patients.

Yujeong Kang (Asan Medical Center, Seoul, Republic of Korea), Ha Jeong Kim, Min Ho Chun.

Key Words: Repetitive transcranial magnetic stimulation, Stroke, Motor function. Key Words: Rehabilitation.

Poster 93

Use of Theory and Motor Learning Principles in Post-Stroke Walking Training Research: A Scoping Review.

Vince DePaul (McMaster University, Hamilton, Ontario, Canada, St. Joseph's Healthcare Hamilton, Hamilton, Ontario, Canada), Laurie Wishart.

Key Words: Stroke; Gait; Rehabilitation; Learning; Review.

Poster 94

Coping Style Predicts Depression, Burden and Life Dissatisfaction in Carers of Patients with Subarachnoid Hemorrhage.

Esther Jacobs (Rijndam revalidatiecentrum, Rotterdam, The Netherlands), Majanka Heijenbroek-Kal, Mike van Kessel, L Khajeh, F van Kooten, Gerard Ribbers.

Key Words: Rehabilitation.

Poster 95

Hemiparetic Gait: Comparison between Overground and Treadmill Walking.

Ana Lindquist (Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil), Luciana Mendes, Cinthia Moreno, Emilia Silva, Heloisa Britto.

Keywords: Walking; Stroke; Treadmill; Kinematics; Rehabilitation.

Poster 96

Superficial Versus Deep Peroneal Nerve Stimulation during Plantar Loading in Acute Stroke: A Case Report.

Karen J. Nolan (Kessler Foundation, West Orange, NJ, UMDNJ - New Jersey Medical School, Newark, NJ), Mathew Yarossi, Gary N.F. Galang.

Key Words: Rehabilitation; Hemiplegic gait, Electrical stimulation.

Poster 97

StepWatch Measures of Community Ambulation in Individuals with Hemiplegia following Stroke.

Karen J. Nolan (Kessler Foundation Research Center, West Orange, NJ, UMDNJ - New Jersey Medical School, Newark, NJ), Mathew Yarossi, Brian Franco.

Key Words: Rehabilitation; Hemiplegic gait, Community ambulation.

Poster 98

Stroke Survivors with Aphasia May Overestimate Communication Skills: Survivor versus Caregiver Report.

James Maniscalco (Kessler Foundation Research Center, West Orange, NJ), Darlene Williamson, Anna Barrett.

Key Words: Aphasia; Stroke; Agnosia; Communication; Caregivers; Rehabilitation.

Poster 99

Robot-Assisted Distal Upper Extremity Repetitive Task Practice in Chronic Stroke Survivors.

James Lynskey (A. T. Still University, Mesa, AZ), Pamela Bosch, Kay Wing, Jennifer Janowicz, Jennifer Kramer, Candice Reed.

Key Words: Stroke; Upper extremity; Robotics; Rehabilitation.

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TRAUMATIC BRAIN INJURY (TBI)

Poster 100

Use of Dihydroergotamine in Treating Chronic, Blast-related Post-traumatic Headaches.

Tracy S. Kretzmer (James A Haley VAMC, Tampa, FL), Edward J. Hickling, Georgia Laliotis, Scott D. Barnett, Susan Hagan, Shalah Thomas, Gail Latlief.

Key Words: Post traumatic headaches; Dihydroergotamine; Blast injury; Concussion; Mild TBI; Military; Rehabilitation.

Poster 101

Utility of the MPAI-4 for Self-reported Outcomes in a Military Sample With TBI.

Jacob Kean (Indiana University School of Medicine, Indianapolis, IN), James Malec, Douglas Cooper, Amy Bowles.

Key Words: Brain injuries, traumatic; Patient outcome assessment; Rehabilitation outcome; Outpatient care; Rehabilitation.

Poster 102

Using Film Clips to Assess Affect Recognition and Empathy in People With and Without TBI.

Dawn Neumann (Indiana University, Indianapolis, IN), Barbra Zupan, Sheri Bartel, Flora Hammond.

Key Words: Brain injury; Emotions; Empathy; Rehabilitation.

Poster 103

Addressing Executive Dysfunction after Brain Injury: A Pilot Tele-Rehabilitation Study.

Edith Ng (Toronto Rehab, Toronto, ON, Canada, University of Toronto, Toronto, ON, Canada), Helene Polatajko, Deirdre Dawson.

Key Words: Brain injuries; Rehabilitation; Internet; Executive function.

Poster 104

Use of Goal Attainment Scaling in Clinical Trials for Traumatic Brain Injury: Challenges and Solutions.

Laura van Veldhoven (Baylor College of Medicine, Houston, TX, Brain Injury Research Center, TIRR Memorial Hermann, Houston, TX), Tessa Hart, Angelle Sander.

Key Words: Rehabilitation.

Poster 105

Perceptions of Deficits over Time among Traumatic Brain Injury Survivors: A Content Analysis. Nora Goudsmit (Mount Sinai School of Medicine, New York, NY),

Christine Dorantes, Michael Nguyen, Joshua Cantor, Theodore Tsousides, Wayne Gordon, Kristen Dams-O'Connor.

Key Words: Content analysis; Traumatic brain injury; Self awareness; Self perception; Rehabilitation.

Poster 106

The Use of Goal Attainment Scaling with Veterans with Traumatic Brain Injury and Post-Traumatic Stress Disorder.

Angela Yi (Shepherd Center, Atlanta, GA), Bonnie Schaudé, Sarah Bonham.

Key Words: Traumatic brain injury; PTSD; Goal attainment scaling; Rehabilitation.

Poster 107

Discrepancies in Worker Characteristics and Requirements Between Pre-injury and Post-injury Employment Following Traumatic Brain Injury. Theodore Tsousides (Mount Sinai School of Medicine, New York, NY),

Svetlana Serova, Lisa Spielman.

Key Words: Traumatic brain injury; Employment; Vocational outcomes; Return to work; Community integration; Rehabilitation.

Poster 108

A Prospective Study on Return to Work Three Years after Moderate to Severe Traumatic Brain Injury.

Erik Grauwmeijer (Rijndam Rehabilitation Centre, Rotterdam, The Netherlands), Majanka Heijenbrok, Gerard Ribbers.

Key Words: Rehabilitation.

Poster 109

Correlation of Performance-Based Balance Measures, Posturography and Confidence in Individuals with Traumatic Brain Injury.

Corrie Mancinelli (West Virginia University School of Medicine, Morgantown, WV), Tracy Rice, Jessica Garcia, Amy Lancaster, Heather Rinkevich, Bethany Stemple.

Key Words: Balance dysfunction; Confidence index; Outcomes measures; Rehabilitation.

Poster 110

Do Epoch and Thresholds Alter Polysomnography and Actigraphy Agreement among Medically Complex TBI Patients?

Bradley J. Daniels (Department of Mental Health and Behavioral Sciences, James A. Haley Veterans Hospital, Tampa, FL), Risa Nakase-Richardson, Tracy Kretzmer, Praveen K. Gootam, Suzanne McGarity, Marissa McCarthy, William M. Anderson, Jamie Zeitzer.

Key Words: Polysomnography (PSG); Actigraphy (ACG); Traumatic brain injury (TBI); Sleep; Rehabilitation.

Poster 111

Sexually Intrusive Behaviors in Brain Injury Clients: Staff Training and Perceptions.

Ann Marie McLaughlin (ReMed, Paoli, PA), Helen Carmine, James Conway, Scott Peters, Peter Wright.

Key Words: Rehabilitation; Sexuality; Training; Behavior.

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Development of a Dual- and Multi-task Protocol to Inform Military Return to Duty Decisions.

Karen McCulloch (University of North Carolina at Chapel Hill, Chapel Hill, NC), Margaret Weightman, Mary Radomski, Sarah Goldman, Leslie Davidson, Tanja Roy, Erica Stern.

Key Words: Rehabilitation.

Poster 113

Content Analysis of Goal Setting among Traumatic Brain Injury Survivors.

Christine Dorantes (Mount Sinai School of Medicine, New York, NY), Nora Goudsmit, Michael Nguyen, Joshua Cantor, Theodore Tsoulosides, Kristen Dams-O'Connor.

Key Words: Content analysis; Traumatic brain injury; Goal setting; Rehabilitation.

Poster 114

Do Neurobehavioral Measures Obtained During Coma Recovery Need Adjusting for Rater Severity or Leniency?

Theresa Pape (US Dept. of Veterans Affairs, Hines VA, Hines IL, Northwestern University, Chicago IL), Trudy Mallinson, Ann Guernon.

Key Words: Rater bias; Disordered consciousness; Rehabilitation.

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Preventing Slips of Action: Evidence from Younger and Older Adults with Mild Traumatic Brain Injury.

Amanda Clark (Baycrest Center for Geriatric Care, Toronto, Canada, University of Waterloo, Waterloo, Canada), Eric Roy.

Key Words: Aging; Brain injuries; Cognition; Attention; Rehabilitation.

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TBI in Preschool Children: High Risk for Consequences and Disparities in Identification.

Juliet Haarbauer-Krupa (Children's Healthcare of Atlanta, Atlanta, GA).

Key Words: Rehabilitation.

Poster 117

Mild to Moderate Work-related Traumatic Brain Injury: A Pilot Study.

Sara Salehi (University of Toronto, Toronto, Ontario, Canada, Toronto Rehabilitation Institute, Toronto, Ontario, Canada), Angela Colantonio, Oshin Vartanian, Angela Carter.

Key Words: Traumatic brain injury (TBI); Return to work (RTW); Work-related TBI; Rehabilitation.

Poster 118

Needs and Burdens of Caregivers of People with TBI.

Sarah Heaner (Shepherd Center, Atlanta, GA), Nicole Thompson, Ron Seel, Stephen Macciocchi.

Key Words: Traumatic brain injury; Rehabilitation; Caregivers.

Poster 119

Delirium Phenomenology In TBI Rehabilitation and Palliative Care Cohorts Using Factor Analysis of the DRS-R98.

Malene Abell (Indiana University, Bloomington, IN), Jacob Kean, Paula Trzepacz, David Meagher.

Key Words: Phenomenology; Delirium; Factor analysis; Rehabilitation.

Poster 120

Case Study of Five Patients with Severe Traumatic Brain Injuries that Underwent Hyperbaric Oxygen Treatment.

Robert Kent (James A Haley VA/Veterans Administration, Tampa, FL), Marissa McCarthy, Risa Nakase-Richardson, Jill Massengale, David Cifu, Alfred Frontera.

Key Words: TBI; Hyperbaric oxygen treatment; Seizure; Disorder of consciousness; Rehabilitation.

Poster 121

Acute Stress Disorder in US Military Service Members Following Polytrauma and Mild-Moderate Traumatic Brain Injury.

Grant Iverson (University of British Columbia, Vancouver, BC, Canada, Defense and Veterans Brain Injury Center, Washington, DC), Rael Lange, Louis French.

Key Words: Brain injuries; Traumatic stress; Rehabilitation.

Poster 122

Mortality after Traumatic Brain Injury in an Older and Ethnically Diverse Urban Population.

Chari Hirshson (Mount Sinai School of Medicine, New York, NY), Pascale Josama, Kristen Dams-O'Connor, Joshua Cantor, Theodore Tsoulosides, Lisa Spielman, Wayne Gordon.

Key Words: TBI; Aging; Mortality; Rehabilitation.

Poster 123

Traumatic Brain Injuries as a Risk Factor for Alzheimer's Disease.

Giulio Pasinetti (Mount Sinai School Of Medicine, New York, NY, James J. Peters Veterans Affairs Medical Center, Bronx, NY).

Key Words: Rehabilitation; TBI biomarkers; Alzheimer's disease predisposition.

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Prevalence of Headache Following Mild Traumatic Brain Injury.

Jeanne Hoffman (University of Washington, Seattle, WA), Sylvia Lucas, Kathleen Bell, Sureyya Dikmen.

Key Words: Brain injury; Traumatic; Headache; Rehabilitation.

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Sleep Diagnoses among A TBI Cohort Referred for Polysomnography During Inpatient Rehabilitation.

Tracy S. Kretzmer (Department of Mental Health and Behavioral Sciences, James A. Haley Veterans Hospital, Tampa, FL, University of South Florida, Department of Psychology, Tampa, FL), Risa Nakase-Richardson, Praveen K. Gootam, Marissa McCarthy, Bryan Merritt, William M. Anderson.

Key Words: Polysomnography (PSG); Traumatic brain injury (TBI); Sleep disorders; Rehabilitation.

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Utility of the AIS Score of the Head to Categorize TBI Severity for Secondary Analysis.

Jeffrey Cuthbert (Research Department, Craig Hospital, Englewood, CO), John Corrigan, Cynthia Harrison-Felix, Victor Coronado, Marcel Dijkers, Allen Heinemann, Gale Whiteneck.

Key Words: Inpatient rehabilitation; Traumatic brain injury; Patient discharge; Rehabilitation.

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The Experience of Litigation among Survivors of TBI – Are There Perceived Barriers to Recovery?

Yuka Matsuzawa (Mount Sinai Medical Center, New York, NY), Marcel Dijkers, Theodore Tsaousides, Wayne Gordon, Joshua Cantor, Tansif Billah, Pascale Josama.

Key Words: Rehabilitation; Traumatic brain injury; Litigation.

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Driving Behaviors, Triggers and Management Strategies Reported by Veterans with mTBI/PTSD: A Pilot Study.

Elizabeth "Lisa" Hannold (MF/SG Veterans Affairs Medical Center, Gainesville, FL). Sherrilene Classen, Desiree Lanford.

Key Words: Rehabilitation; Veterans with mTBI/PTSD; Driving.

Poster 129

Longitudinal Changes in Self-reported Quality of Life among Individuals with TBI 10-55 Years Post-injury.

Julie E. Balzano (Mount Sinai School of Medicine, New York, NY), Lisa A. Spielman, Theodore Tsaousides, Joshua B. Cantor, Kristen Dams-O'Connor.

Key Words: TBI; Quality of life; Longitudinal; Perceived QOL; Rehabilitation.

Poster 130

Assessing Remnant Attentional Processing in Minimally Conscious Patients using an Active Electrophysiological Paradigm: Preliminary Results.

Caroline Schnakers (Coma Science Group, Cyclotron Research Center, University of Liège, Liège, Belgium), Joseph Giacino, Dina Habbal, Melanie Boly, Steve Majerus, Steven Laureys.

Key Words: Severe brain injury; Consciousness; Minimally conscious state; Attention; Electrophysiology; Rehabilitation.

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Age Functional Decline and Level of Assistance Up To 10 Years Post Traumatic Brain Injury.

Stephanie Kolakowsky-Hayner (Santa Clara Valley Medical Center, San Jose, CA), Flora Hammond, Jerry Wright, Thomas Novak, Jeff Englander, Ramon Diaz-Arrastia, Andrew Dennison, Paul Sueno.

Key Words: Rehabilitation; Brain injury; Aging.

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Health and Wellness in TBI: Associations among Health-Related Constructs and Quality of Life Measures.

Cynthia Braden (Craig Hospital, Englewood, CO), Lisa Brenner, Lenore Hawley, Jody Newman, Jeffrey Cuthbert, Kristi Staniszewski, Cynthia Harrison-Felix.

Key Words: Rehabilitation.

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(Withdrawn)

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Heterogeneity of Symptoms among Adults with Osteoarthritis: Implications for Rehabilitation.

Susan Murphy (University of Michigan, Ann Arbor, MI), Angela Lyden, Kristine Phillips, David Williams, Daniel Claus.

Key Words: Osteoarthritis; Pain; Occupational therapy; Rehabilitation.

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Real-world Use of Powered Tilt and Recline Wheelchairs.

Sharon Sonenblum (Georgia Institute of Technology, Atlanta, GA), Stephen Sprigle.

Key Words: Wheelchairs; Pressure ulcer; Rehabilitation.

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Determining Minimal Clinically Important Difference For Two Field Walk Tests In Coronary Artery Disease Patients.

Vincent Gremeaux (Pôle Rééducation-Réadaptation, Centre Hospitalier Universitaire de Dijon, Dijon, France, Montreal Heart Institute Cardiovascular and Prevention Center (Centre ÉPIC), Montreal, Quebec, Canada), Mathieu Gremeaux, Armelle Hannequin, Yves Laurent, Davy Laroche, Jean-Marie Casillas.

Key Words: Coronary artery disease; Rehabilitation; Exercise test; Outcome assessment (health care); Walking.

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Using Field Walk Tests to Individualize Exercise Training in Coronary Artery Disease Patients.

Vincent Gremeaux (Pôle Rééducation-Réadaptation, Centre Hospitalier Universitaire de Dijon, Dijon, France, INSERM 887, Dijon, France), Odile Troisgros, Sylvie Benaïm, Armelle Hannequin, Yves Laurent, Jean-Marie Casillas, Charles Benaïm.

Key Words: Cardiac rehabilitation; Walking; Exercise; Coronary artery disease; Exercise test; rehabilitation.

Poster 138

Does Eccentric Endurance Training Improve Walking Capacity In Coronary Artery Disease Patients? A Pilot Study.

Vincent Gremeaux (Pôle Rééducation-Réadaptation, Centre Hospitalier Universitaire de Dijon, Dijon, France, Montreal Heart Institute Cardiovascular and Prevention Center (ÉPIC), Montreal, Quebec, Canada), Gaëlle Deley, Jean-Luc Philipp, Michel Pousson, Jean-Marie Casillas.

Key Words: Coronary artery disease; Exercise; Walking ; Muscle contraction; Exercise tolerance; Rehabilitation.

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Primary Care: A Health Care Home for Persons with Disabilities and Complex Health Conditions.

Nancy Flinn (Courage Center, Minneapolis, MN), Erin Simunds, Guthrie Byard.

Key Words: Medical home; Patient focused care; Primary care; Prevention; Chronic illness; Rehabilitation.

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Electrical Injury and PTSD: A Deficit in Delayed Recall.

Alisa Grigorovich (St. John's Rehab Hospital, Toronto, ON, Canada), Jana Atkins, Larry Leach, Manuel Gomez, Joel Fish.

Key Words: Electric injuries; Stress disorders; Post-traumatic; Memory; Rehabilitation.

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Effects of Structured and Unstructured Practice on Motor Outcomes.

Simone V. Gill (Boston University, Boston, MA), Elizabeth Schweiger.

Key Words: Practice regimens; Motor development; Adaptation; Rehabilitation.

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Intersection of Gender, Race, and Poverty: A Study of Wisdom Through IDA's Eyes.

Mona Mikael (NYU Rusk Institute, New York, NY), Joy Asamen.

Key Words: Narrative research; Aging; Senior women; Race; Gender; Homeless; Rehabilitation.

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Efficacy of Cyclic Stretching in the Prevention of Equinus in Sub-acute Patients with UMNS.

Andrea Merlo (Motion Analysis Laboratory, Dept. of Neurorehabilitation, AUSL of Reggio Emilia, Correggio (RE), Italy), Isabella Campanini, Francesco Lombardi.

Key Words: Stroke; Equinus deformity; Cyclic stretching; Prevention; Rehabilitation.

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Effectiveness of Electromyographic Biofeedback Training on Quadriceps Strengthening In Osteoarthritis of Knee.

Shahnawaz Anwer (Jamia Hamdard, New Delhi, India, National Institute for the Orthopedically Handicapped, Kolkata (WB), India), Nishat Quddus, Mohammad Miraj, Ameer Equebal.

Key Words: Biofeedback; Exercise; Arthritis; Arthropathy; Strength; Rehabilitation.

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Factors Associated with Unplanned Discharge to Acute Care in an Inpatient Oncology Rehabilitation Population.

Sarah Elmi (St John's rehab hospital, Toronto, ON, Canada), Sara McEwen.

Key Words: Cancer; Discharge destination; Rehabilitation.

Poster 146

Buruli Ulcer Treatment in Cameroon, Measuring the Implementation of a Rehabilitation Program in a Low Resource Setting.

Hubert Vuagnat (Wound Care Team, University Hospitals of Geneva, Geneva, Switzerland), Grégoire Tientcheu, Eric Comte.

Key Words: Rehabilitation.

Poster 147

Perceived Effort and Cardiovascular Response to Upper-extremity Challenge in Individuals with Multiple Sclerosis.

Brad Sokal (University of Alabama at Birmingham, Birmingham, AL), Gitendra Uswatte, Rex Wright, Edward Taub, Victor Mark, David Morris, David Brennan, Eva Trinh, Joydip Barman.

Key Words: Effort; Heart rate; Multiple sclerosis; Arm; Hemiparesis; Rehabilitation.

Poster 148

Exercise in HIV Infection: the Value, the Difficulties in Community-based Implementation.

Meredith Harris (Northeastern University, Boston, MA, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa).

Key Words: HIV; HIV Infection; Community based; Exercise; Rehabilitation.

Poster 149

Predictors Of Physical Therapy Consultation Among Older Patients During Acute Hospitalization.

Rod Welsh (University of Texas Medical Branch at Galveston, Galveston, TX), Amit Kumar, Allison Ottenbacher, Steve Fisher.

Key Words: Physical therapy department, hospital; Referral and consultation; Hospitalization; Length of stay; Rehabilitation.

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A Comparison of Effects of Augmented Reality and Verbal Information Based Interventions in Elderly Women after Hip Replacement.

Lutz Schega (Otto-von-Guericke University, Magdeburg, Saxonia-Anhalt, Germany), Daniel Hamacher, Robert C. Wagenaar.

Key Words: Movement analysis; Rehabilitation; Hip replacement.

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The Effects of Low Level Laser Irradiation on Sciatic Nerve Regeneration.

Chia-Hsin Chen (Department of Physical Medicine and Rehabilitation, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung, San-Ming District, Taiwan, Department of Physical and Rehabilitation Medicine, Kaohsiung Medical University Hospital, Kaohsiung, San-Ming District, Taiwan), Chau-Zen Wang, Yan-Hsiung Wang, Mao-Hsiung Huang.

Key Words: Low level laser; Sciatic nerve; Nerve regeneration; Rehabilitation.

Poster 152

Cognitive Aging and Quality of Life in Greek Cypriot Adults.

Fofi Constantinidou (University of Cyprus, Nicosia, Cyprus)

Key Words: Aging; Memory; Cognition; Neuropsychological performance; Quality of life; Rehabilitation.

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Are Physical Therapy Activities Adapted to the Existence of Obesity? – Evidence from Unilateral Knee Replacement.

Wenqiang Tian (National Rehabilitation Hospital, Washington, DC, MedStar Health Research Institute, Hyattsville, MD), Gerben DeJong.

Key Words: Physical therapy; Obesity; Rehabilitation.

Poster 154

Augmenting Physical Therapy through Modulation of Dorsal Premotor-motor Connectivity.

Fortunato Battaglia (New York College of Podiatric Medicine, New York, NY, Columbia University, New York, NY), David Freedberg.

Key Words: Rehabilitation.

Poster 155

Effects of Treadmill Inclination on the Gait of Children with Down Syndrome: A Cross-Sectional Study.

Ana Lindquist (Federal University of Rio Grande do Norte, Natal, Rio Grande do Norte, Brazil), Thayse Moura.

Key Words: Rehabilitation.

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Examining the Effects of Nintendo Wii Fit Exercise Program in Individuals with Multiple Sclerosis.

Matthew Plow (Cleveland Clinic, Cleveland, OH), Marcia Finlayson. Key Words: Multiple sclerosis; Video games; Exercise; Physical fitness; Patient compliance; Rehabilitation.

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Effects of Demographics on Medical Device Purchase Preferences by Individuals with Disabilities.

Rochelle Mendonca (University of the Sciences in Philadelphia, Philadelphia, PA), Roger Smith.

Key Words: Accessibility; Medical decision-making; Rehabilitation.

Poster 158

Developmental Myosin Expression in Skeletal Muscle Post-stroke.

LeAnn Snow (University of Minnesota, Minneapolis, MN), Zhenhong Nan, Walter Low, LaDora Thompson.

Key Words: Stroke; Skeletal muscle; Immunohistochemistry, Myosin heavy chain; Rehabilitation.

Poster 159

Yawn-associated movement of the hemiplegic limb: a possible clue to patterns of motor recovery in pyramidal tract lesions.

Sravani V. Mudumbi (SUNY Upstate Medical, Syracuse, NY).

Key Words: Rehabilitation; Stroke; Yawn.

Poster 160

Biofeedback for the Neurogenic Bladder.

Sravani V. Mudumbi (SUNY Upstate Medical, Syracuse, NY).

Keywords: neurogenic bladder; neuropathic bladder; urinary incontinence; urinary retention; biofeedback therapy; physiotherapy; rehabilitation therapy; visual auditory feedback; electromyogram; EMG

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FUNCTIONAL ELECTRICAL STIMULATION (FES)

Chair: Therese Johnston, PT, PhD

SECONDARY CONDITIONS AND AGING

Chair: Jeanne Zanca, PhD

FITNESS & WELLNESS IN SCI

Chair: Sue Ann Sisto, PT, PhD

Stroke Networking Group Task Forces

COGNITION TASK FORCE

Chair: Elizabeth Skidmore, PhD, OTR/L

LIVING LIFE AFTER YOUNG STROKE TASK FORCE

Chair: Tamara Bushnik, PhD, FACRM

MOVEMENT INTERVENTIONS TASK FORCE

Chair: Stephen Page, PhD, MS, S/OT



ACRM Awards

Edward Lowman Award

This award is granted in honor of Edward Lowman, MD who recognized the importance of multidisciplinary teams in rehabilitation. Each winner's career reflects an energetic promotion of the spirit of interdisciplinary rehabilitation.

HONOREE: Gale Whiteneck, PhD, FACRM
Director of Research
Craig Hospital, Englewood, CO

Distinguished Members Award

Established in 1988, this award honors professionals who contribute significantly to the development and functioning of ACRM, demonstrating leadership skills, organizational abilities, and public service. Criteria to achieve this award includes membership in good standing plus extraordinary service to this organization, including as a Committee Chair or member, taskforce member, and/or interdisciplinary special interest group or networking group member.

HONOREES:
Martin Grabois, MD, FACRM
Professor and Chairman
Dept of Physical Medicine and Rehabilitation
Baylor College of Medicine, Houston, Texas

Stephen Page, PhD, MS, S/OT
Ohio State University, Cincinnati, Ohio

Gold Key Award

This certificate of merit, established in 1932, is for members of medical and allied professions who render extraordinary service to the cause of rehabilitation. It is the highest honor given by ACRM.

HONOREE: Wayne Gordon, PhD, ABPP/Cn, FACRM
Jack Nash Professor & Associate Director
Mount Sinai School of Medicine
Department of Rehabilitation Medicine, New York, NY

Deborah L. Wilkerson Early Career Award

This memorial fund honors Deborah L. Wilkerson, a beloved member, former President, and ACRM Fellow. Deborah was devoted to improving the quality of rehabilitation and independent living services for people who needed them. She demonstrated commitment to person-centered services and was an advocate for individuals with disabilities.

HONOREE: Deborah Backus, PhD
Associate Director SCI Research
Shepherd Center
Assistant Professor
Division of Physical Therapy
Emory University School of Medicine, Atlanta, GA

Fellow of ACRM Award

The Fellow of the ACRM award is presented to individuals who contribute significantly to the field of rehabilitation and to ACRM.

HONOREE: Sue Ann Sisto, PT, MA, PhD, FACRM
Professor, Physical Therapy
Research Director, Division of Rehabilitation Sciences
School of Health Technology & Management
Stony Brook University, Stony Brook, NY

HONOREE: Angela Colantonio, PhD, OT Reg. (Ont), FACRM
Saunderson Family Chair in ABI Research
Toronto Rehabilitation Institute
Professor, Department of Occupational Science & Occupational Therapy
University of Toronto
Toronto, ON, Canada

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ACRM would like to thank our Institutional Members for their continued support.

The positive impact of aligning with ACRM through Institutional Membership pays in immeasurable ways. If you are interested in becoming an Institutional Member of ACRM please contact Jenny Richard who will customize a package specifically tailored to your organization.

JENNY RICHARD

ACRM Director Member Services
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The American Society of Neurorehabilitation is a medical specialty society established to advance the discipline of neurorehabilitation. The ASNR is committed to the prevention of further disability and disease in our patients and achievement of maximal functional outcomes, the advancement of scientific and technological innovations impacting neurologic disability and disease, the scientific understanding of neurologic injury and recovery, and the promotion of evidence-based clinical practice in this field. The ASNR works to promote basic science and clinical research in neurorehabilitation, evidence based clinical practice, and access to healthcare and social opportunities for all individuals with chronic disabling neurologic conditions. Our educational mission includes specialty training in neurorehabilitation at the fellowship level and continuing medical education of neurorehabilitation professionals.

Learn more at **www.ASNR.com**

MISSION STATEMENT

The mission of the ASNR is to promote the medical and social wellbeing of persons with disabling neurological disorders, to advance training and research in the basic and clinical sciences that can lead to functional recovery of neurologically impaired persons, and to disseminate the knowledge of this research among professionals and the general public.

The ASNR promotes:

- Specialty training and identification of those with expertise in neurorehabilitation
- Professional and public education
- Basic science and clinical research in neurorehabilitation
- Communication and collaboration with people with neurological disorders related organizations
- Mission of Neurorehabilitation Research

ASNR Education Foundation

The American Society of Neurorehabilitation Research and Education Foundation (ASNRREF) was developed as a not-for-profit tax-exempt endowment fund to support research and education in neurorehabilitation. The Foundation was established in honor of Fletcher McDowell, MD, Labe Scheinberg, MD, and Norman Namerow, MD.

Fletcher McDowell MD focused on the care and recovery of patients following stroke. Labe Scheinberg MD established the first multidisciplinary Multiple Sclerosis care clinic and advocated for a similar approach at other MS clinics. Norman Namerow, MD was the primary advocate for multidisciplinary care of patients with traumatic brain injury. These three individuals actively lobbied within the American Academy of Neurology, and the American Neurologic Association to recruit additional support from within the field of Neurology. Their efforts led to creation of the American Academy of Neurology Section on Neurorehabilitation in 1985, and eventually to the creation of the American Society of Neurorehabilitation in 1990.

The Neurorehabilitation Research and Education Fund is a vehicle for perpetuating their goals of applying Neuroscience to Neurorehabilitation. We solicit donations from our physician and allied health professional colleagues, as well as from patients and family members who would like to support Neurorehabilitation research and education.



ASNR Awards

Outstanding Neurorehabilitation Clinician-Scientist Award

The award, based on the evaluation of his or her peers, to mechanisms of neural repair, translational research from mechanisms of repair or clinical Neurorehabilitation. Nominations are invited from the membership of the American Society of Neurorehabilitation. The American Society of Neurorehabilitation Education Foundation Board of Directors, made up of Past Presidents of the American Society of Neurorehabilitation (ASNR) selects the recipient of the award.

2011 RECIPIENT: Randolph J. Nudo, PhD

Fellows of American Society of Neurorehabilitation

The title of Fellow of the American Society of Neurorehabilitation is reserved for individuals who have contributed significantly to the field of Neurorehabilitation, and also to the American Society of Neurorehabilitation.

2011 RECIPIENTS: Bruce H. Dobkin, MD and Michael E. Selzer, MD, PhD

Kenneth Viste, Jr., MD Memorial Lectureship

Kenneth M. Viste, Jr., MD was a tireless advocate for Neurorehabilitation and ASNR, and was active in the organization since its inception as President, Membership Committee Chair and a member of the Practice Issues Committee. ASNR honors his memory by presenting the award annually to an individual that has supported the mission and vision of ASNR.

2011 RECIPIENT: Michael Weinrich, MD

Presidential Award

The ASNR offers the Presidential Award for the best basic science poster presented by a student, resident, post-doctoral fellow, or a clinician within five years of training. The purpose of this award is to encourage research relevant to Neurorehabilitation by young clinicians and/or investigators enrolled in training programs relevant to Neurorehabilitation. While the contestant must be the senior author of the abstract, there are no restrictions on co-authorship.

Fletcher H. McDowell Award

The ASNR offers the Fletcher H. McDowell Award for the best basic science poster presented by a student, resident, or post-doctoral fellow, or a clinician within five years of training. The purpose of this award is to encourage research relevant to Neurorehabilitation by young clinicians and/or investigators enrolled in training programs relevant to Neurorehabilitation. While the contestant must be the senior author of the abstract, there are no restrictions on co-authorship.

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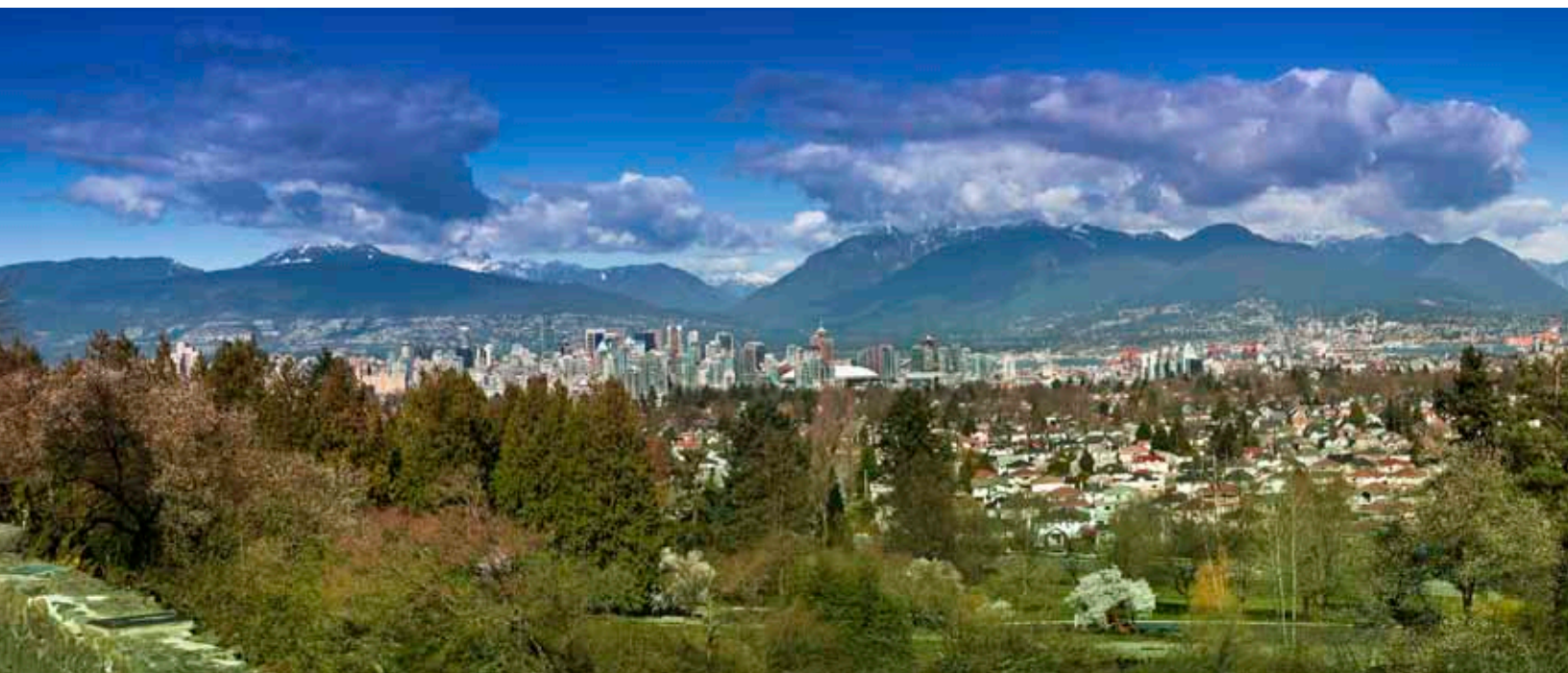
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