

# Seventeenth International Seating Symposium

*Seating & Mobility for People with Disabilities*



February 22–24, 2001

Rosen Centre Hotel  
Orlando, Florida  
U.S.A.

## Announcing the First Annual Chris Bar Research Forum

### Sponsored by:

- **University of Pittsburgh**  
School of Health and Rehabilitation Sciences  
- Department of Rehabilitation Science and Technology  
- Rehabilitation Engineering Research Center on Wheelchair Mobility (RERC)
- **Sunny Hill Medical Centre for Children**
- **University of British Columbia**
- **NIDRR** - National Institute on Disability and Rehabilitation Research
- **RESNA** - The Rehabilitation Engineering and Assistive Technology Society of North America

## Presymposium Workshops

February 21, 2001

Rosen Centre Hotel  
Orlando, Florida

- **Back to Basics and Beyond**
- **The Business Side of Assistive Technology**
- **Funding Wheelchair Seating/ Mobility Technology and Services**
- **Kids vs. Adults: Is There a Difference in Seating?**

**Course Director:** Elaine Trefler, MEd, OTR/L, FAOTA, ATP

Assistant Professor  
University of Pittsburgh  
School of Health and Rehabilitation Sciences  
Department of Rehabilitation Science and Technology

## Presymposium Workshops: February 21, 2001

### Back to Basics and Beyond

This beginner level course is designed for persons just entering the assistive technology field as a supplier or practitioner. In order to provide quality services, team members in today's market must know not only their own jobs but must understand the focus of their team members' roles as well. Assessment tools and techniques and the resulting implications for use in determining product parameters will be reviewed.

Content areas will include:

- Assessment technologies
- Mat assessment
- Seating materials and technologies including planar and contoured approaches
- Wheelchair technology
- Wheelchair measuring and configuration options
- Clinical indicators of tilt/recline
- Matching client needs to technology options

Case studies will illustrate concepts of evaluation, prescription and fitting practice. Where possible, available products and hands-on sessions will ensure an interactive educational session.

*\*Beginner*

#### Faculty:

**Sheila Buck, B.Sc.OT, ATP**  
THERAPY NOW! Milton, ON, Canada

***This course requires a registration fee of \$125***

**Time: 8:00 AM to 5:00 PM**

Continuing Education Units (CEUs) will be awarded by the University of Pittsburgh  
School of Health and Rehabilitation Sciences, Department of Rehabilitation Science & Technology

Location: The Rosen Centre Hotel  
Salon 9

### The Business Side of Assistive Technology

This workshop will outline ways to set goals and objectives, define target markets, develop solid sales strategies, and good time-management skills. It will help you develop ways of staying focused, setting realistic time lines, and monitoring effectiveness and outcomes through good follow-up practices. You will learn strategies to reduce administrative time while still providing necessary documentation. This workshop will be interactive and provide you the opportunity to share your ideas.

Guest lecturer Corrine Parver, J.D., PT, will present "Doing It Right The First Time: How To Avoid Fraud and Abuse". This session will be followed by "lunch with the lawyer", which will provide an opportunity for an informal question and answer period. (Participants are responsible for their own lunch).

*\*Intermediate/Advanced*

#### Faculty:

**Corrinne Carriere**  
Carriere Consulting, Oakville, ON, Canada  
**Corrine Parver, J.D., PT**  
Dickstein, Shapiro Morin Oshinsky, LLP Washington, DC

***This course requires a fee of \$125***

**Time: 8:00 AM to 5:00 PM**

Continuing Education Units (CEUs) will be awarded by the University of Pittsburgh, School of Health and Rehabilitation Sciences, Department of Rehabilitation Science & Technology

Location: The Rosen Centre Hotel  
Salon 4

## Funding Wheelchair Seating/Mobility Technology and Services

Financing wheelchair and seating technology and services has become a very complex process. It is also a moving target leaving many in the technology service delivery team struggling to understand what can be funded and how to process the claims. The service delivery process has also evolved to include new players who have a stake in the outcome but their roles are often not clear to the existing team members.

This one-day workshop will provide a comprehensive overview of the funding process itself and the perspectives of all parties who make up the service delivery team. The program will include:

- An overview of health care financing and its impact on the funding of wheelchair seating and mobility technology and services
- Structure of the Durable Medical Equipment Regional Carriers (DMERCs) including the coding process, clinical qualifiers and Certificates of Medical Necessity
- Discussion on eligibility issues for various funding sources
- How to match the assessment information with interventions and the documentation necessary to obtain funding
- Perspectives of constituents of the service delivery team

*\*Intermediate*

### Faculty:

**Mark Schmeler, MS, OTR/L, ATP** *\*Course Coordinator*

*University of Pittsburgh, Pittsburgh, PA*

**Rory Cooper PhD**

*University of Pittsburgh, Pittsburgh, PA*

**Gerry Dickerson, ATS, CRTS**

*A&J Care, Inc., Glendale, NY*

**Ann Eubank, OTR, ATP** 

*ROHO, Inc., Belleville, IL*

**Barbara Levy, PT, ATP**

*Thoms Rehabilitation Hospital, Asheville, NC*

**Jack M. Sanders III, ATS**

*Clear Choice Health Plans, Bend, OR*

**Elaine V. Toskos, OTR, ATP**

*Rusk Institute for Rehabilitation Medicine, New York, NY.*

***This course requires a registration fee of \$125***

**Time: 8:00 AM to 5:00 PM**

Continuing Education Units (CEUs) will be awarded by the University of Pittsburgh, School of Health and Rehabilitation Sciences, Department of Rehabilitation Science & Technology

Location: The Rosen Centre Hotel  
Signature 2

## Kids vs. Adults: Is There a Difference in Seating?

Everyone learns skeletal anatomy through study of the adult structure. The child is not an "adult in miniature" however. Along with anticipated growth comes a significant change in skeletal proportion, shape, and orientation. In addition, neurological changes can occur, which affect posture, tone, and joint stability. These differences will be identified through lecture, slide presentation, and skeletal models. Information will be related to the recommendation of seating and positioning systems.

*\* Beginner*

### Faculty:

**Cathy Mulholland, OTR** 

*Mulholland Positioning Systems, Santa Paula, CA*

**Kathy Riley, PT, CRTS**

*National Seating and Mobility, Mooresville, NC*

***This course requires a registration fee of \$60***

**Time: 1:00 PM to 5:00 PM**

Continuing Education Units (CEUs) will be awarded by the University of Pittsburgh, School of Health and Rehabilitation Sciences, Department of Rehabilitation Science & Technology

Location: The Rosen Centre Hotel  
Salon 10

# Seventeenth International Seating Symposium

## Audience

Assistive technology practitioners (ATP)  
Assistive technology suppliers (ATS)  
Educators  
Manufacturers  
People with disabilities  
Physicians  
Rehabilitation engineers  
Vocational rehabilitation counselors

## Introduction

Presentations will cover evaluation, provision, research, and quality assurance issues in seating and mobility for people with physical disabilities. The symposium will include scientific and clinical papers, in-depth workshops, panel sessions, and an extensive exhibit hall.

## Program Objectives

- Identify seating and mobility interventions for people with physical disabilities
- Discuss service delivery practices
- View current research
- Recognize seating and mobility technologies

Materials available in alternate formats upon request.

## Continuing Education Credit

The University of Pittsburgh, School of Health and Rehabilitation Sciences awards Continuing Education Units to individuals who enroll in certain educational activities. The CEU is designated to give recognition to individuals who continue their education in order to keep up-to-date in their profession. One CEU is equivalent to 10 hours of participation in an organized continuing education activity. Each person should claim only those hours of credit that he or she actually spent in the educational activity. Health professionals are awarded up to 1.5 continuing education units (CEUs) for up to 15.0 hours of instruction. Each person should claim credit only for those hours that he or she actually spent in the educational activity.

## Exhibits

An expanded exhibit hall will be filled with commercial and non-profit organizations from North America and abroad. There will be ample opportunity to explore technical seating and mobility options. After a successful trial last year, several Instructional Courses, using state-of-the-art techniques and technology, will be held in the Exhibit Hall. Watch for Instructional Course locations designated "Center Stage – Exhibit Hall".

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## Wednesday, February 21, 2001

7:00 AM - 6:00 PM

Registration (*Registration Desk 2*)

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## Thursday, February 22, 2001

8:00 AM

Registration and Continental Breakfast

8:30 AM

Opening (*Junior Ballroom*)

*Clifford E. Brubaker, PhD*

*Dean, University of Pittsburgh*

*School of Health and Rehabilitation Sciences*

*Rory Cooper PhD*

*Professor and Chairman, University of Pittsburgh*

*School of Health and Rehabilitation Sciences*

*Department of Rehabilitation Science and Technology*

*Elaine Trefler, MEd, OTR/L, FAOTA, ATP*

*Assistant Professor, University of Pittsburgh*

*School of Health and Rehabilitation Sciences*

*Department of Rehabilitation Science and Technology*

9:00 AM

Sunrise Medical

Keynote Address

**Zen and the Art of Wheelchair Maintenance – Experiences On A Journey Through Seating**

*Geoff I. Bardsley, PhD*

*TORT Centre, Ninewells Hospital, Dundee, Scotland*

**10:00 AM**

General Session (*Junior Ballroom*)

## **Innovations and Findings in Current Seating Research**

*Shirley Fitzgerald, PhD*

*University of Pittsburgh, Pittsburgh, PA*

Results and limitations of literature in seating research over the past two years will be presented to assist clinicians in targeting relevant reading material to support practice.

### **Chest Supports: Why They Are Not Working!**

*Karen Kangas, OTR/L*

*Shamokin, PA*

For persons with sensorimotor processing problems and hypertonicity, chest supports are not working. Strategies that can assist in upright posture and increased head control will be presented.

### **The Role of the Shoulder During Wheelchair Propulsion**

*Alicia Koontz, MS, ATP*

*VA-Pittsburgh Healthcare System, Pittsburgh, PA*

Recent research has involved identification of key biomechanical shoulder variables associated with shoulder injury in manual wheelchair users.

### **Development of a Method of Measuring Force Through a Kneeblock for Children with Cerebral Palsy**

*Rachel McDonald, B.App.Sc.(OT)*

*Post. Grad. Dip. (Biomechanics)*

*The Institute of Child Health and Great Ormond Street Hospital for Children NHS Trust, London, United Kingdom*

A method to objectively measure the forces felt by a child with cerebral palsy using a kneeblock in conjunction with a sacral support will be presented.

**11:00 AM**

Exhibit Hall opens (*Grand Ballroom*)

Walk-about Lunch (*Exhibit Hall, included in tuition*)

**1:00 PM**

Instructional Courses (*One Hour*)

### **1. Power Chair: Features & Functions - Demonstration (Center Stage - Exhibit Hall)**

*Kathryn Fisher, B.Sc.(OT), OT(C)*

*Therapy Supplies and Rental Ltd., Toronto, ON*

*David Harding*

*Motion Specialties, Toronto, ON, Canada*

The recent explosion in choice of power wheelchair configurations has increased the opportunity to match a client's needs but has created confusion in the prescription process. This workshop will explore the development of power wheelchair drives and features and apply these options to clinical assessment factors.

*\*Beginner*

### **2. Dynamic Seating Components for Reduction in Spastic Activity and Enhancement of Function**

*David Cooper, M.Sc, RT*

*Mark Dilabio, RT*

*Gord Broughton, RT*

*Sunny Hill Centre for Children, Vancouver, BC, Canada*

*Dalthea Brown, MS, PT, ATP*

*University of Pittsburgh, PA*

Dynamic seating components that allow controlled movement of the user present numerous advantages for people with uncontrolled spasticity and limited function. This workshop will review various approaches of implementing dynamic solutions and describe applications of these techniques with successful outcomes.

*\*Intermediate*

### **3. When Ethics Isn't Enough – Making Tough Decisions in a Changing Clinical Environment**

*Simon Margolis, CO, ATS/P*

*National Seating and Mobility, Inc., Plymouth, MN*

Clinicians, both suppliers and practitioners, are confronted daily with situations in which the ethical thing to do may not be the right thing to do. The presentation/discussion will address other factors to consider when making clinical service delivery decisions.

*\*Advanced*

#### 4. Cervical Flexion Problems and Possibilities $\Delta$

*David (Scott) Pickett, CRTS*

*Michelle Gunn, ATP*

*Whitmyer Biomechanix, Inc., Tallahassee, FL*

This course will explore the problems related to seating and positioning in persons with cervical flexion and cervical flexion with head extension. The focus will be on fully understanding this most difficult of positioning challenges. The selection and applications of positioning interventions to correct or accommodate, will also be discussed.

*\*Intermediate*

#### 5. Can Therapeutic Positioning Effect Functional Outcomes?

*Faith Saftler Savage, PT, ATP*

*Natick, MA*

This workshop will teach how to develop functional outcomes for therapeutic positioning using the Disablement Model from the World Health Organization. Case studies will be used to illustrate the effectiveness of the model.

*\*Beginner/Intermediate*

#### 6. Seating Interventions for People with Spinal Cord Injuries with Secondary Orthopedic Complications

*Stephanie Tanguay, OTR, ATP/S*

*National Seating and Mobility, Royal Oak, MI*

Orthopedic changes and surgical interventions result in complex seating needs for spinal cord injured clients. Case studies will illustrate custom systems required by secondary diagnosis such as heterotrophic ossification, hip disarticulation, and hemipelvectomy. Orthotics and molded seating solutions will be shown.

*\*Beginner*

#### 7. Slip Sliding Away - Dealing with the Client that Slides

*Lois Tucker, OTR/L, ATP*

*National Seating and Mobility, Mineola, NY*

Sliding is one of the most frequently observed patterns in our clients. We will discuss the issues that cause the client to slide out of their optimal positioning, out of their wheelchair, and the positional, postural and functional problems that occur as a result. Prevention techniques and ways to control the perpetual slide from occurring will be explored.

*\*Intermediate*

2:00 PM

Break

2:30 PM

Instructional Courses (*Two Hours*)

#### 8. Mat Evaluation - Demonstration (Center Stage, Exhibit Hall)

*Adrienne Bergen, PT, ATP, ATS, CRTS*

*National Seating and Mobility, Westbury, NY*

Principles of a mat assessment will be combined with prescription and product options. Persons with disabilities from the Orlando area will serve as clients for the demonstrations.

*\*Beginner*

#### 9. Innovative Solutions for Seating and Positioning

*Mark Dilabio, RT*

*David Cooper, M.Sc, RT*

*Gord Broughton, RT*

*Sunny Hill Health Centre for Children, Vancouver, BC, Canada*

From inexpensive and simple solutions to elaborate creations, we have it all! Side, prone and supine lyers, slings for turning, walking aids, commode and cycle adaptations, inexpensive tilt, adapted furniture; these are some of the ideas that we would like to pass on. We also have elaborate solutions that address specific needs and will devote time to look at lateral tilt of sitting and recumbent positioning systems.

*\* All*

#### 10. Pressure Mapping

*Martin Ferguson-Pell, PhD*

*Emma Parry, SROT, ATP*

*University College of London, United Kingdom*

Pressure mapping is gaining an increasingly important place in the toolkit of the seating specialist. Manufacturers rely upon pressure mapping data to compare their products with competitors. Researchers and manufacturers of pressure mapping systems emphasize the limited accuracy of these devices and urge that they are used knowledgeably. The presenters of this session are working closely with the pressure mapping manufacturers to develop clinical guidelines and supporting educational modules to promote the correct use of the pressure mapping technologies.

Participants in this session will obtain an overview of these guidelines and gain an insight into how they may be incorporated into international standards for "pressure mapping devices".

*\*Intermediate-Advanced*

### **11. Factors for Integrating Wheelchairs and Transportation**

*Marty Gallagher, MS, LOTR*

*Ann Havard, LOTR, CDRS*

*Mike Shipp, MEd, CDRS*

*Louisiana Tech University, Ruston, LA*

This workshop will present methods for accurately measuring the key components in seating systems for clients requiring moderate to maximal positioning and pelvic stability/mobility. Measurement techniques for a variety of seating components will be taught.

*\*Intermediate*

### **12. Measuring and Recording Seated Posture - A Proposed Standard**

*Douglas Hobson, PhD*

*University of Pittsburgh, Pittsburgh, PA*

Standardized terminology and definitions are required in order to be able to accurately measure, record and communicate information about the posture of a wheelchair-seated person. This session will present proposed terms and definitions for an integrated geometric reference system that permits the measurement of a person's seated posture relative to a baseline or neutral posture.

*\*Advanced*

### **13. Children in Power**

*Karen Kangas, OTR/L*

*Shamokin, PA*

All children can be functionally independent in mobility with today's technology of seating and programmable mobility. Changing attitudes, obtaining new technology and expertise, and learning to teach mobility will be discussed using case studies.

*\*Intermediate/Advanced*

### **14. The Effects of Seating on Respiratory Function**

*Jill Sparacio, OTR/L, ATP, ABDA*

*Downers Grove, IL*

This course will discuss how to effectively evaluate respiratory patterns and how to impact them through the use of postural supports. It will include strategies used to enhance rather than limit respiratory function that is often compromised by neurological impairments.

*\*Beginner*

**4:30 PM**

Adjournment

**5:00 PM**

Welcome Reception (*Exhibit Hall*)

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**Friday, February 23, 2001**

**7:30 AM**

Continental Breakfast (*Exhibit Hall*)

**8:30 AM**

*Track A: Paper Presentations*

*Track B: Instructional Courses*

### **Track A - Paper Presentations**

#### **Issues in Pediatric Practice (Junior Ballroom F)**

*Moderator: Jessica Presperin Pedersen, MBA,*

*OTR/L, ATP*

*Presperin Pedersen and Associates*

*Chicago, IL*

#### **High Tech Solutions for a Special Needs Client**

*Kathryn Fisher, B.Sc.(OT), OT(C)*

*Therapy Supplies and Rental Ltd., Toronto, ON, Canada*

*Gloria Liebel, OT (C)*

*Bloorview MacMillan Centre, Toronto, ON, Canada*

This presentation will explore the process involved in determining what type of assistive technology is appropriate for a child with high needs (athetoid cerebral palsy). Using a case study we will demonstrate our struggle to co-ordinate and prescribe all the technology required for this child to achieve her highest level of function within her environment.

### **Parent Versus Therapist: Views Of Their Child's Adaptive Seating System**

*Rachel McDonald B.App.Sc. (OT),  
Post. Grad. Dip. (Biomechanics)  
The Institute of Child Health and Great Ormond Street  
Hospital for Children NHS Trust, London, Kingdom*

This paper will discuss the development and pilot of a measure to explore the differences between parent's and therapist's views of adaptive seating systems provided for children with cerebral palsy.

### **A Retrospective Study of the Effect of Postural Management Programmes in the Management of Hip Dislocation and Spinal Curvature in Bilateral Cerebral Palsy**

*Terry Pountney MA, MCSP  
Chailey Heritage Clinical Services, East Sussex, Kingdom*

This paper will discuss the findings of a retrospective study of hip migration and spinal curvature of 58 children and young adults who have had surgical intervention and used a variety of postural management equipment in different settings.

### **Developing Pre and Post Baclofen Pump Outcome Measures for Seating with Individuals with Cerebral Palsy**

*Susan Johnson Taylor, OTR/L  
Rehabilitation Institute of Chicago, Chicago, IL*

It has become more common in the past few years to use a baclofen pump as a means to control spasticity with individuals who have cerebral palsy. Because of the sometime dramatic changes in tone, there is usually a concomitant change in the support necessary to obtain and maintain the seated position. This paper will review the decision-making process for the recommendation of baclofen pump insertion, as well as look at some means to measure spasticity prior to and after surgery.

**8:30 AM**

**Instructional Courses (One Hour)**

### **15. Clinical Use of Simulation - Demonstration (Center Stage - Exhibit Hall)**

*Kelly G. Waugh, MA, PT  
New Providence, NJ  
Mark Schmeler, MS, OTR/L, ATP  
University of Pittsburgh, Pittsburgh, PA*

Simulation is used clinically to determine optimal posture, facilitate measurement and enable consumers to understand the dynamics of various postural options. Both the process and several products will be highlighted in this session.

**\*Beginner/Intermediate**

### **16. Custom Contoured Seating – The Next Step**

*Gord Broughton, RT  
David Cooper, M.Sc, RT  
Mark Dilabio, RT  
Sunny Hill Health Centre for Children, Vancouver,  
BC, Canada*

Making custom contoured positioning systems can be enhanced to improve growth potential, adjustability and ease of use by making them modular. This workshop will describe a modular approach to contoured seating that includes separating portions of the moulded shape, and inclusion of orthotic components and malleable sections using both custom and off the shelf componentry.

**\*Intermediate**

### **17. Personal Mobility, Vehicle Mobility...Strengthening the Link**

*Brenlee Mogul-Rotman, B.Sc.OT(C), OTR, ATP  
Toward Independence, Richmond Hill, ON, Canada  
Kathryn Fisher, B.Sc.(OT), OT(C)  
Therapy Supplies and Rental Ltd. Toronto, ON, Canada  
Terry O'Neill  
Kino Mobility Inc., Toronto, ON, Canada*

This workshop will describe common problems associated with incompatibility of personal mobility equipment and modified vehicles. Perspectives from a clinician, seating/mobility equipment vendor and vehicle modification specialist will highlight the team approach. Case studies will be used to illustrate problems experienced as well as success in optimizing personal and community mobility.

**\*Intermediate**

## 18. Seating for People with Multiple Sclerosis (MS) in a Long Term Care Facility

*Faith Saftler Savage, PT, ATP*  
Natick, MA

This course will review the pathology and specific issues that effect the person with MS. Seating interventions will be discussed from basic manual mobility to power wheelchairs with tilt and head control systems. Long term care with multiple caregivers concerns will also be covered.

*\*Beginner/Intermediate*

9:30 AM

Break (*Exhibit Hall*)

10:30 am

Instructional Courses (*One Hour*)

## 19. Mat Evaluation(Center Stage - Exhibit Hall)

*Jean Minkel, MA, PT*  
Minkel Consulting, New Windsor, NY

The mat assessment is one of the most critical components of a seating evaluation. An experienced clinician will demonstrate the steps in the assessment process and discuss the prescription implications.

*\*Beginner*

## 20. Power Wheelchairs: A New Definition

*Ian Denison, PT*  
*Doug Gayton, ATP*  
G F Strong Rehab Centre - Vancouver Hospital and Health Sciences Centre, Vancouver, BC, Canada

This session identifies the factors that contribute to the performance of a powered wheelchair depending on whether the wheel-drive of the chair is a front, center, or rear wheel drive. Strengths and weaknesses of each configuration will be compared in the following environments: indoors, outdoors, and off-road.

*\*Intermediate*

## 21. How to Avoid the Pitfalls in Assistive Technology Research

*Shirley Fitzgerald, PhD*  
University of Pittsburgh, Pittsburgh, PA

This workshop is designed to provide an understanding of basic research methods to the clinician. The first part of this session will be an overview to research and then will progress to an interactive session of problem solving research issues. Bring ideas for research projects with you.

*\*All*

## 22. The Use of Technological Advances to Evaluate Seating and Positioning in Individuals with Severe Orthopedic and Developmental Disabilities

*Karen Hardwick, PhD, OTR, FOATA*  
Austin State School, Austin, TX

Technologies such as Doppler ultrasound, the ABI (Ankle Brachial Index), pressure mapping systems, pulse oximetry, and video fluoroscopy can assist clinicians to effectively evaluate individuals with profound disabilities who cannot communicate verbally. These tools can provide objective measures to make clinical decisions and also provide concrete data for research. This session will present case studies illustrating each of the techniques described.

*\*Intermediate/Advanced*

## 23. The Importance of the Therapist in the Wheelchair Decision-making Process for Older Adults

*Debbie Jones, PT*  
Tualatin, OR

With fewer dollars available for durable medical equipment (DME), the final decision-making process needs to include a therapist. Too often wheelchairs are supplied without a complete evaluation of the user to determine individual needs. This can lead to poorly fitted systems or systems that can not be modified as the client progresses. This session will review the evaluation process, with the inclusion of case studies, and explain how to find a therapist that has the knowledge to perform wheelchair evaluations.

*\*Intermediate*

## 24. Seating, Access, and Mobility II: Those Children Who Grow Up !

*Karen Kangas, OTR/L  
Shamokin, PA*

With children who are non-speaking, have physical disabilities, and require alternative access for powered mobility and other assistive technology, finally getting these systems to work is empowering. Then they grow and change. Should the system of seating, access, and technology be replicated or, changed with them? This session will explore how to allow this transition to support the continued growth of these children, now young adults, and face the ensuing complicated issues involved.

*\*Intermediate/Advanced*

## 25. The Use of Adjustable Modular Wheelchairs as Fleet

*Mark Schmeler, MS, OTR/L, ATP  
University of Pittsburgh, Pittsburgh, PA*

This presentation will focus on the strategies and outcomes of using a modular manual wheelchair frame as a fleet concept. Outcomes have resulted in being able to better fit people, meet needs in a more timely manner, and have reduced the time and cost associated with repairs and modifications.

*\*Intermediate*

**11:30 AM**

Lunch (*on your own*)

**1:00 PM**

Instructional Courses (*Two Hours*)

## 26. Transport Wheelchairs (Center Stage - Exhibit Hall)

*Douglas Hobson, PhD  
University of Pittsburgh, Pittsburgh, PA*

Industry is responding to the need for wheelchairs that comply with the new industry standards for transport wheelchairs. Models of wheelchairs that meet the standard will be presented and discussion about the special transport features will follow.

*\*Intermediate*

## 27. The Seated Posture and Pressure Ulcer Connection Δ

*Cynthia Fleck, RN, BSN, ET, CWS  
Tina Roesler, MS, PT, ABDA  
Crown Therapeutics, Chicago, IL*

This multidisciplinary session will address pressure ulcer etiology and the direct impact of wheelchair configuration and cushion selection on skin integrity. It will also provide strategies for prevention and treatment of ischemic ulcers in the seated client.

*\*Intermediate/Advanced*

## 28. The Challenge of Optimal Seating for People with Joint Contractures

*Marygrace DiStasio Mangine, OTR/L  
Cheryl T. West, MSPT  
Magee Rehabilitation, Philadelphia, PA*

Total body contractures pose problems when determining appropriate seating and mobility systems. This session will introduce low and high technology seating adaptations for maximizing function, increasing independence, and attaining equal weight distribution.

*\*Advanced*

## 29. Back in Style

*Thomas Hetzel, PT, ATP  
Aspen Systems, Denver, CO*

This course will outline the biomechanical principles and clinical indicators to be considered when selecting a back support. Tips on evaluating current technologies in respect to how they address the person to support surface and support surface-to-mobility base interfaces will be covered.

*\*Beginner/Intermediate*

## 30. Linking Clinical Presentation with Power Wheelchair Programming

*Lois Tucker, OTR/L, ATP  
National Seating & Mobility, Mineola, NY*

This workshop will present guidelines and computer software for programming powered wheelchairs based on client diagnosis, driver controller, and environmental needs. Clinical presentations will include discussions related to clients, including those with physical and cognitive challenges.

*\*Intermediate*

### 31. Reimbursement - Rehab 101 — All You Need to Know & More to Get Your Client What They Really Need

*Peggy Walker, RN*

*U S Rehab - Division of VGM, Blythewood, SC*

Basic rules for reimbursement for durable medical equipment, including mobility and seating/positioning equipment, will be presented. Reviewer perspectives, justification wording and custom vs. modification items will be discussed.

*\*All*

### 32: Application of Research Findings into Clinical Practice

(One hour only)

*Rosemarie Cooper, MPT*

*Shirley Fitzgerald, PhD*

*Trisha Thorman, OTR/L*

*VA Pittsburgh Healthcare System, Pittsburgh, PA*

Clinical research has a direct impact on clinical practice. This workshop will use research projects at the Human Engineering Research Laboratories (HERL) to describe how research results have influenced the clinical wheelchair prescription and provision process.

*\*All*

**3:00 PM**

**Break (Exhibit Hall)**

**3:30 PM**

*Track C Chris Bar Research Forum*

*Track D Clinical Forum – Practice and Research*

### Track C: Chris Bar Research Forum

*Sponsored by ROHO, Inc.*

**Chair:** *Geoff Bardsley, PhD*

*TORT Centre, Ninewells Hospital, Dundee, Scotland*

**Participants:**

*David Brienza, PhD*

*University of Pittsburgh, Pittsburgh, PA*

*Martin Ferguson-Pell, PhD*

*University College of London, United Kingdom*

*Robert Graebe Δ*

*ROHO Inc. Belleville, IL.*

*Barbara Levy, PT, ATP*

*Thoms Rehabilitation Hospital, Asheville, NC*

*Steven Sprigle, PhD, PT*

*Helen Hayes Hospital, West Haverstraw, NY*

*Geoff Taylor Δ*

*Verg Inc., Winnipeg, MB, Canada*

The 2001 Chris Bar Research Forum will be a British Parliamentary-style Debate on the use of pressure measurement for the prevention and management of pressure ulcers. The motion to be debated is as follows:

***This House believes pressure measurement is irrelevant to the clinical practice of preventing and managing pressure ulcers.***

*Participation in the debate is encouraged*

### Track D: Clinical Forum – Practice and Research

**Moderator:** *Mary Ellen Buning, OT, OTR/L, ATP*

*University of Pittsburgh, Pittsburgh, PA*

### Quantification of Forces Associated with Full Body Extensor Thrust in Children

*Dalthea Brown, MSPT, ATP*

*University of Pittsburgh, Pittsburgh, PA*

A force sensing array mat was used to gather data on the magnitude, location and force-time characteristics exerted on the back panel of seating systems during extensor thrusting of 18 children between the ages of 5 and 16 years. The recorded data was used as input to a two-dimensional, rigid-body computer model of a dynamic seating system. Various resistive seat-to-back elements were used in the model to select combinations that would optimize seat-to-back opening angle under experimentally determined thrusting forces.

### What Consumer's Bring to Wheelchair Selection: The Results of a Study

*Mary Ellen Buning, OT, OTR/L, ATP*

*University of Pittsburgh, Pittsburgh, PA*

Preliminary results from a study examining the impact of WheelchairNet on consumer decision-making will be shared with clinicians and suppliers to reform their approach to consumers. Suggestions for better utilization of consultative models leading to improved service delivery and increased consumer satisfaction will be offered to stimulate discussion.

## **Back Support Options: Functional Outcomes for Persons with SCI**

*Laura May, PhD*

*University of Alberta, Edmonton, AB, Canada*

This study compares the functional outcomes for four physical tasks when persons with Spinal Cord Injuries (SCI) use each of three back support options.

## **Outcome of Clinical Training on the Comprehensive Effectiveness of Wheelchair Prescriptions**

*Laura Cohen, PT*

*University of Pittsburgh, Pittsburgh, PA*

This paper will report on the study that investigates the level of expertise of therapists, related to wheel and seating prescription, as they enter the workforce. It describes four educational interventions used to elevate their level of expertise in the prescription of wheelchairs and seating systems. Preliminary results will be presented.

**5:00 PM**

**Adjournment**

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**Saturday, February 24, 2001**

**8:00 AM**

**Continental Breakfast (Ballroom Pre-function Area)**

**8:30 AM**

**Paper Session**

*Moderator: Laura Cohen, PT*

*University of Pittsburgh, Pittsburgh, PA*

## **A Study On The Relationship Between Buttock-Seat Cushion Interface Pressure And Pressure Ulcer Incidence In At-Risk Elderly Wheelchair Users**

*David Brienza, PhD*

*University of Pittsburgh, Pittsburgh, PA*

The relationship between interface pressure measurements and pressure ulcer incidence in a clinical trial is presented.

## **Function and Performance of the Rocket Multidirectional Powered Wheelchair Δ**

*Geoff Fernie, PhD, PEng*

*Centre for Studies in Aging, Sunnybrook & Women's College Health Sciences Centre, Toronto, ON, Canada  
Nimble Inc., Concord, ON, Canada*

The function and performance of the Rocket multidirectional powered wheelchair in indoor and outdoor environments will be described and related to decisions that were made during design and development process.

## **The Prevalence and Type of Wheelchair and Seating Needs Among the Institutionalized Elderly**

*William Miller, PhD, MScOT*

*School of Rehabilitation Science*

*University of British Columbia Vancouver, BC, Canada*

The psychometric properties of the Seating Identification Tool (SIT), a clinical screening tool used to identify the need for formal wheelchair and seating intervention, is presented.

## **The Psychometric Properties of the Seating Identification Tool (SIT)**

*William Miller PhD, MScOT*

*School of Rehabilitation Science*

*University of British Columbia Vancouver, BC, Canada*

This paper reports the results of a population based study designed to identify the prevalence and type of wheelchair and seating needs from a random sample of subjects in long-term care facilities. The Seating Identification Tool (SIT) was used as a clinical screen to identify individuals who have wheelchair and seating needs.

## **Influence of Service Dogs in Psychosocial and Functional Outcomes as Measured by the Rosenberg Self-Esteem Scale and Revised Craig Handicap Assessment and Reporting Technique (Chart)**

*Karen Frost, MBA*

*University of Pittsburgh, Pittsburgh, PA*

Service dogs represent a viable means of assistive intervention that can provide psychosocial benefits while closing the gap between technological capabilities and user needs. This paper reports on the current results of an on-going, prospective, case-control pilot study.

**10:00 AM**

**Break**

**10:30 AM**

**Special Session – Policy Change: Can We Make A Difference  
(Junior Ballroom)**

**Moderator: Jean Minkel, MA, PT**

*Minkel Consulting, New Windsor, NY*

*Panel Members*

**Morris (Mickey) Milner, PhD, PEng, CCE**

*Vice President of Research and Development  
Bloorview MacMillan Centre, Toronto, ON, Canada*

**Emma Parry, SROT**

*Research Therapist, Centre for Disability Research and  
Innovation, University College of London, United  
Kingdom*

**Peter Thomas, Esq.**

*Attorney and Disability Advocate, Washington, D.C.*

**Lori Warren, Artist**

*Parent, Orlando, FL*

Feeling constrained by service delivery systems? Frustrated by funding problems? Ready to take out a contract on the Director of Special Education? Pondering how to get research dollars in a time of cutbacks and consolidation? There is an old saying, "If you are not part of the solution, perhaps you are part of the problem". Come and hear this international panel of consumer, lawyer, clinician and administrator/researcher discuss current activities designed to create positive change in systems of service delivery of assistive technology including funding. Each panel member has experience in being part of the solution. Hear about their battles and learn strategies used to effect change.

**12:30 PM**

**Adjournment**

**Δ** *Indicates presentation by a representative of a product manufacturer*

*All presenters are from the USA unless other wise indicated.*

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## Location/Accommodations

### The Rosen Centre Hotel

9840 International Drive  
Orlando, FL 32819  
USA

Reservations: (800) 204 - 7234  
(407) 996 - 9840  
Fax: (407) 996 - 2659

### Visit the Website: [www.rosencentre.com](http://www.rosencentre.com)

A block of rooms has been reserved. When calling for reservations, please state that you are attending the International Seating Symposium, and use reservation code number G452/0201 to receive these reduced rates. Rooms will be provided on a space-available basis after January 16, 2001.

### Airfares:

We have named Navigant International the official travel coordinator for the Symposium. They have negotiated special conference rates with USAirways and Delta. To obtain the special rates, contact them directly and identify yourself as attending the International Seating Symposium. Contact Navigant at 1-800-433-8785; Monday-Friday between 8:00 am - 5:00 pm, Eastern Time. Within the 412 area code or outside of the United States, please call 412-521-7823.

## Symposium information contact person

**Linda Szczepanski, CMP**  
*Conference Coordinator*  
*University of Pittsburgh,*  
*SHRS, Department of Rehabilitation Science and*  
*Technology*

Telephone: (412) 647-4222  
Fax: (412) 647-1277  
E-mail: [szczepan@pitt.edu](mailto:szczepan@pitt.edu)

## Web Site

Visit the International Seating Symposium web site often for continuing updates and developing information.

[www.rst.upmc.edu/ISS/ISS2001.html](http://www.rst.upmc.edu/ISS/ISS2001.html)

## Registration information

### On Line Registration

Web Site: [www.rst.upmc.edu/ISS/ISS2001.html](http://www.rst.upmc.edu/ISS/ISS2001.html)

For security reasons, on-line registration will be a two-step process:

- 1 Fill in the registration form, and submit electronically
- 2 print out the payment form and fax it with credit card information, or mail it with a check. If we do not receive payment by January 5, 2001, you will be required to pay the full fee of \$350.

### If paying by check

Please make it payable to: University of Pittsburgh and send it with this form to:

University of Pittsburgh,  
SHRS - RST  
Attn: Linda Szczepanski  
5035 Forbes Tower  
Pittsburgh, PA 15260

### Cancellations

All cancellations must be made in writing. Tuition for cancellations postmarked before January 21, 2001, will be completely refunded; after January 21, but before February 7, tuition will be refunded minus a \$35 administrative fee; No tuition will be refunded if postmarked after February 7, 2001.



### Special Needs

We encourage participation by all individuals. If you have a disability, advance notification of any special needs will help us better serve you. Please notify us of your needs at least four weeks in advance.

### Tuition

\$300 .00 (\$350.00 for registrations postmarked after January 5, 2001)

Tuition Includes:

- Registration materials
- Continental breakfasts and breaks
- Thursday luncheon
- Welcome reception
- Proceedings
- Continuing education credit

# Registration Form

## Seventeenth International Seating Symposium

Orlando, Florida

February 22-24, 2001

Social Security Number \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Country \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Email: \_\_\_\_\_

Degree(s) \_\_\_\_\_

Affiliation \_\_\_\_\_

I will attend Back to Basics and Beyond, on Wednesday, February 21, and am enclosing tuition.

I will attend The Business Side of Assistive Technology, on Wednesday, February 21, and am enclosing tuition.

I will attend Funding Wheelchair Seating & Mobility Technology, & Services on Wednesday, February 21, and am enclosing tuition.

I will attend Kids vs. Adults, Is There a Difference in Seating on Wednesday, February 21, and am enclosing tuition.

I will  I will not attend the Welcome Reception on Thursday evening.

I have special needs (please describe and contact Linda Szczepanski)

\_\_\_\_\_

Please indicate your choices for:

### Thursday

1:00 to 2:00 PM — 1-hour Instructional Courses (select one)

1  2  3  4  5  6  7

2:30 to 4:30 PM — 2-hour Instructional Courses (select one)

8  9  10  11  12  13  14

### Friday

8:30 to 10:00 AM, (select one)

Paper Presentation Track or a 1-hour Instructional Course

Track A – Issues in Pediatric Practice

or

1-hour Instructional Courses

15  16  17  18

10:30 to 11:30 AM — 1-hour Instructional Courses

(select one)

19  20  21  22  23  24  25

1:00 – 3:00 PM — Instructional Courses (select only one)

26  27  28  29  30  31  32

### Payment

Payment **MUST** Accompany registration.

### Pre-Conferences, Wednesday, February 21, 2001

Back to Basics and Beyond, \$125 \$ \_\_\_\_\_

The Business Side of Assistive Technology, \$125 \$ \_\_\_\_\_

Funding Wheelchair Seating & Mobility Technology, & Services, \$125 \$ \_\_\_\_\_

Kids vs. Adults, Is There a Difference in Seating, \$60 \$ \_\_\_\_\_

Symposium Tuition \$300, (\$350 if postmarked after January 5, 2001) \$ \_\_\_\_\_

**TOTAL ENCLOSED** \$ \_\_\_\_\_

Method of payment (All payments to be made in U.S. dollars.)

Check  VISA  MasterCard

To be completed by credit card users only:

Card Number \_\_\_\_\_

Expiration date \_\_\_\_\_

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*Department of Rehabilitation Science and Technology*

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