# 20<sup>th</sup> International Seating Symposium

# March 4<sup>th</sup> - 6<sup>th</sup>, 2004

# Westin Bayshore Resort & Marina

1601 Bayshore Drive Vancouver, BC Canada

## Pre-Symposium Workshops

Wednesday March 3<sup>rd</sup>, 2004 at various locations

- Adding Evidence to Clinical Research and Practice
- The Business Side of Assistive Technology
- Power Wheelchairs: Maximizing Potential
- A Team Protocol for Prevention and Treatment of Pressure Wounds
- The Basis of Wheelchair Maintenance
- Human Sitting Behaviour
- Making the Match: From Assessment to Product
- Molded Seating: Where do I Start?
- Seating System Fabrication

SPONSORED BY:

Sunny Hill Health Centre for Children Vancouver, BC

Interprofessional Continuing Education The University of British Columbia

School of Health and Rehabilitation Sciences The University of Pittsburgh

RESNA, Washington, DC





## Wednesday March 3<sup>rd</sup>, 2004



## Pre-Symposium Workshops

Registration for the Pre-Symposium workshops and Symposium proper are on one form, on the last page of this brochure. Please see registration form on the last page of this brochure and indicate which workshop(s) and instructional sessions you will be attending at this event.

Workshops PS1 through PS8 will be held at the Westin Bayshore. PS9 will be held at the Sunny Hill Health Centre for Children.

#### Adding Evidence to Clinical Research and Practice

William C. Miller Jan Miller-Polgar Morning Session: 9:00 am to 12:30 pm

Single-subject research design (SSRD) is a quantitative, flexible, rigorous, clinically oriented approach that provides an ideal method to identify whether intervention has produced change in the targeted outcome within an individual. Thus, SSRD is one method that provides clinicians with an evidence-based approach that can be used to validate their daily practice and contribute to research. This quasi-experimental research approach, in which the subject acts as their own control and uses repeated measurements of the targeted behaviour or outcome over time is ideal for the area of wheelchair and seating practice. SSRD primarily relies on visual analysis and requires minimal statistical manipulation. In this interactive workshop we will define and review different SSRD designs using examples relevant to the area of wheelchair and seating practice. Participants are encouraged to bring their ideas so they can leave with a research design to address their clinical and research irritations.

(PSI) Cost: \$75

(\$65 if Symposium registrant)

#### The Business Side of Assistive Technology Corrinne Carriere

Afternoon Session: 1:30 pm to 4:30 pm

This interactive workshop will discuss the business side of Assistive technology and the planning necessary to be effective and efficient in today's competitive work environment. It will include setting goals and objectives, time management, identifying target markets, developing a business plan, documenting results and outcomes, and knowing your product and service.

(PS2) Cost : \$75

(\$65 if Symposium registrant)

#### Power Wheelchairs: Maximizing Potential

Ian Denison Doug Gayton Susan Johnson Taylor Full Day: 9:00 am to 4:00 pm Limited Enrollment

If you manage to stay awake for the duration of the workshop, you will leave knowing more about power wheelchairs and the factors to consider when helping a client select one than you can imagine! This workshop will help you understand "why?" and enable you to help your clients select the most appropriate chair for their needs. During this workshop the limitations inherent in the five basic configurations and descriptions of successful and not so successful attempts to overcome these limitations will be explained. Hands-on opportunities to adjust the chairs to optimize their performance for a variety of clients will be provided. You will drive numerous chairs to see what they are capable of. The workshop also features an opportunity to interact with a number of power wheelchair users to hear their side of the story as well as a chance to meet the manufacturers representatives.

(PS3) Cost: \$150

(\$135 if Symposium registrant)

#### A Team Protocol for Prevention and Treatment of **Pressure Wounds**

Jillian Swain, Stephen Sprigle, Gilbert Logan, Karen Lagden, Salimah Mitha, Eric Wasylenko, Ed Thompson, Bryan Smith, Jim MacKinnon Full Day: 9:00 am to 4:00 pm Limited Enrollment

This day workshop will provide you with a written protocol and manual for wound prevention and treatment from a team perspective. Each team member will present the section from the protocol which includes assessment tools, interpretation and goal setting. Extensive practical sessions will include: interface pressure mapping, wound measurement and risk assessment. This protocol is applicable in acute care, long term care, and community care. It is a framework for seating clinic to provide assessment and provision of assistive technology that will prevent sitting acquired pressure wounds (SAPUs). A clinical protocol for providing and interpreting interface pressure mapping will also be distributed. This workshop is appropriate for all team members and teams interested in a systematic assessment framework. (PS4) Cost : \$150

(\$135 if Symposium registrant)

#### The Basis of Wheelchair Maintenance

Mark Dilabio Wendi Harder Morning Session: 9:00 am to 12:30 pm Limited Enrollment

Small wheelchair adjustments significantly impact wheelchair performance. This hands-on workshop will provide opportunities to learn and practice wheelchair adjustments and routine maintenance. Opportunities for adjusting seating components will also be offered. This workshop will be of interest to wheelchair users, therapists and care-givers.

> Cost : \$75 (\$65 if Symposium registrant)

#### Human Sitting Behaviour: What Influences What Bengt Engstrom Two Hours 9:00 am to 11:00 am

Limited Enrollment

(PS5)

This highly interactive instructional session reviews normal sitting behaviour in relation to seat unit design. The goal is discovering how humans compensate in sitting - and why - to better understand long-term, "abnormal" sitting behaviour and compensations often leading to negative consequences for the client. The main discussion is about the position of the head, spine and pelvis based on compensations of the legs and arms and functional differences between symmetrical and asymmetrical postures. (PS6)

Cost: \$50

## (\$45 if Symposium registrant)

#### Making the Match: From Assessment to Product

Joanne Yip Francine Miller JoAnne Chisholm Two Hours 11:00 am to 1:00 pm Limited Enrollment

Moving from assessment to final product is often the most challenging part of the seating process. Understanding just how your physical, functional, socio-economic and environmental findings translate into a seating and mobility system that will fulfil your client's needs and wishes is key to successful outcomes. The ability to articulate these findings as product parameters is a skill that requires conceptualizing the final product, communicating clearly to others what is desired and working in partnership with your medical equipment dealer and seating technician. (PS7) Cost: \$50

(\$45 if Symposium registrant)



#### Molded Seating: Where do I start? Sheila Buck Todd Dinner Two Hours 2:00 pm to 4:00 pm

Participants will understand how the assessment and simulation phase is critical to the ability to begin completing molded shapes. Common orthopedic and tonal changes will be reviewed with emphasis on determining when to mold. A demonstration will be completed on how to transfer simulation assessment findings to the completion of molded shapes. We will also review how the final shape can be enhanced to maximize the sitting tolerance, increase the pressure relief capabilities, and to accommodate orthopedic and tonal changes. Alternate materials used in offthe shelf seating will also be explored in how they can enhance molded systems.

(PS8) Cost: \$50

(\$45 if Symposium registrant)

## Workshop to be held at the Sunny Hill Health Centre for Children

(bus transportation will be provided to and from this location to the Westin Bayshore Hotel)

## Seating System Fabrication

Dave Cooper, Bob Stickney, Gord Broughton Limited Enrollment (20) Full Day: 9:00 am to 4:00 pm

This workshop will demonstrate the variety of techniques we use to position clients. Seating modalities for custom positioning of clients with moderate to complex needs will be covered. We will use foam in box, foam in place, and foam and plywood techniques. Modifications of commercial components to meet the needs of clients and caregivers will be presented. The use of the internet for seating and positioning related information will also be demonstrated.

#### (PS9) Cost: \$150

(\$135 if Symposium registrant)

8:30	Opening Ro	emarks	Maureen O'Donnell			
8:45	Keynote	Towards International Collabo Accessible City	pration on Repair Discoveries and the <b>Honourable Mike Harcourt</b>			
<i>9:30</i>	Plenary	Life is Communication: Sittin	ng Patterns - Pathological or Logical? Bengt Engstrom			
10:00	Plenary	Why Current Pediatric Seatir are Not Working	ng Systems Configured to "Support Growth" <b>Karen Kangas</b>			
10:30	Refreshment	Break (held in the exhibit hall)				
11:15	Plenary	Pressure Management	Jillian Swain			
11:40	Plenary	Brain Interfacing	Gary Birch			
12:05	Plenary	Seating & Positioning: An In	teractive CD Rom e-Learning Tool Iona Novak			
12:30	Lunch	(registrants are on their own)				
2:00	Instructional S	essions – Group A				

#### A1 In Search of Seating Alternatives that Elevate Both Functional AND Skin Outcomes for the Aging Wheelchair User Joan Padgitt Tom Hetzel Intermediate

Because persons with disabling impairments live longer, and lead more active lives, there has been a dramatic increase in the number of people using wheelchairs for 20 or more years. While posture is always considered when recommending seating components, skin integrity issues are paramount in keeping a person safely seated in their wheelchair for functional lengths of time. We are often faced with the choice between achieving good skin outcomes or good postural outcomes. This presentation will introduce the concept of "force isolation" and discuss mechanisms for providing firm accurate postural support while meeting the challenging combination of both skin and postural control goals.

#### A2 Eight Days a Week

#### Kathryn Fisher Brenlee Mogul-Rotman

Intermediate This instructional session will explore issues beyond basic and essential seating and mobility. The presentation will address various daily activities and the integration of assistive technologies. Case studies will illustrate the use of equipment for alternate positioning, sleep, bathing, transfers, community access, vocation, and leisure pursuits. How client goals are met through coordination of team work and technology will be highlighted. As daily life becomes more hectic, our clients must be provided with the tools to keep up the pace...eight days a week.

#### A3 Early Equipment Interventions for the Pediatric Client Sheena Schoger Beginner - Intermediate Babies, diagnosed with a condition or disability, often have parents who are overwhelmed with the

prospect of a future that involves surgeries, therapy appointments, wheelchairs, walkers, etc.. Our responsibility is to provide the parent with the required resources and equipment to ease parental loads and enhance acquisition of therapy goals. This presentation will provide an opportunity to exchange ideas and methods of providing equipment that will be accepted and assist these parents.

#### A4 Delivering Seating and Mobility to the Rest of the World Wayne Hanson Kathleen Riley All Levels How can we provide world class seating and mobility for people in third world countries?

This presentation will address the many challenges that confront the wheelchair distribution team, when delivering seating and mobility.



## A5 Successful Equipment Prescription for Specialty Populations of Bariatric and Geriatric Patients

## Manufacturer Amy Bjornson

#### All Levels

This workshop will address common problems and issues when prescribing equipment in both the bariatric and geriatric populations. The population of both of these groups is rapidly expanding in the US and will become an ever increasing portion of our business. This presentation will address the unique seating challenges that these populations present including cost and funding issues. Using case studies, this presentation will offer creative seating suggestions using currently available equipment.

#### A6 Sports Galore

#### Nicole Wilkins Richard Peter Sonja Magnuson All Levels

Join us for an interesting inside view into a variety of manual and power wheelchair sports. Through discussion, video and slides you will have the opportunity to see how several sports are played and hear about the athletes' experiences. Several sport-specific wheelchairs will be reviewed and the athletes will share how their everyday wheelchairs are set-up.

- 3:00 Refreshment Break (held in the exhibit hall)
- 3:45 Instructional Sessions Group B

Karen Hardwick

#### BI Seating & Positioning for Medical Issues in Individuals with Developmental Disabilities

#### Intermediate

This presentation discusses the role of seating and positioning in treatment or management of medical conditions in individuals with developmental disabilities. The issues include positioning for medication administration, circulatory problems, poor esophageal motility, etc. Included is a discussion of technology that is available for use in evaluation and solutions for positioning challenges. Examples of technology used to gather information include Doppler ultrasound and Ankle Brachial Index (ABI).

#### **B2** Outside the Box, NOT Out of the Box

#### Kathleen Riley

Patrick Meeker

#### All Levels

Intermediate

This presentation will share unique applications of specialty controls, which have allowed two individuals to achieve independent mobility. Ari, a 19 year old with Werdnig Hoffman disease received a custom system with fiber optic switches while Rama, a 50 year old with ALS received a Magitek system with split sensors. Case presentation format will tell their stories.

**B3** My Shoulder Hurts, Now What? A Review of Pathomechanics

There is abundant research and information regarding the correlation between upper extremity overuse injuries and manual wheelchair use. However, in our practice, we often see clients with specific questions regarding what they should now do to correct their functional limitations and, most commonly, relieve their pain. Do we, as seating and mobility specialists, have an up-to-date understanding of current conservative treatments and surgical management options for shoulder and upper extremity injuries? This program will review the most common injuries to the upper extremity experienced by our clients including musculotendinous damage, cartilage and connective tissue defects, neurological damage and functional biomechanical aberrations. Assessment, conservative rehabilitation techniques and surgical repair options will be reviewed. Post-op prognosis and long-term outcomes will also be discussed to better understand the short-term and long-term implications these interventions will have on our clients' lives.

 B4
 Seating Education for Clients, Caregivers & Colleagues: Is it Worth the Effort?

 Ingrid Barlow
 All Levels

This workshop will explore the benefits, challenges and methods of education provided to Glenrose Rehabilitation Hospital clients and caregivers. The benefits include empowering clients in decision making, improving clinic effectiveness and efficiency, and providing options for service delivery. It is very important when using a client-centred approach to ensure the client is empowered to make decisions by being informed. When everyone has better information, referrals are more appropriate, seating and mobility issues are better identified at assessment and enhance clinic efficiency and effectiveness during intervention. Various educational methods will be described including individual counselling in assessments and fittings, developing printed materials (brochures and newsletters), in-services and workshops (e.g. Alberta Seating Workshop, Wheelchair and Seating Maintenance Workshop). How the workshops have been developed, evaluated and modified will also be discussed.

## **B5** Sensory Processing & Integration in Childrens' Seating and Mobility Systems

#### Karen Kangas

In the past, primarily, adaptive seating systems were developed from an anatomical perspective with principles of physics implemented. Managing the body's skeletal system, particularly the spine and pelvis were believed to provide a child with the "right" and "optimal" posture to use. However, the body and its control of the skeletal system is not anatomical, but rather physiological in nature. Creating systems which support pelvic mobility, trunk control, and shoulder girdle strength can be challenging as children attempt to gain control and grow. Postural stability must be supported, but postural mobility must also be able to occur within a system. Sensory processing and sensory integration must be understood and supported as a repertoire of postural movements are supported and promoted within the structural components of seating systems.

Intermediate - Advanced

**B6** Powered Mobility: The Ever-changing Story of Center Wheel Drive

#### Manufacturer Michael Babinec

#### All Levels

The most recent technology advances in powered mobility over the last five years include those inherent to center wheel drive chairs. Not all center wheel drive chairs perform the same, and not all center wheel drive power chairs have the same application. This presentation will explore the development of center wheel drive power wheelchairs, address center of gravity management options for this choice, detail clinical and functional application of recent advancements, correlate these advancements to related needs of the powered mobility user and discuss the strengths and liabilities of this evolving mobility option.

Reception (to be held in the exhibit hall) 4:45

# Friday March 5th, 2004

Registration 8:00

- 8:30 Instructional Sessions – Group C
  - Cl Effects of Tire Pressure and Type on Rolling Resistance

Bonita Sawatzky lan Denison Shoulder pain among wheelchair users who have spinal cord injuries is reported between 60 - 100%. Despite the shoulder problems, it's not uncommon to see wheelchairs with low or flat tires. To reduce the need for regular inflating of tires, people have switched to the popular solid tire. The use of these tires may still contribute to repetitive strain disorders. Data will be presented on how each tire performs during a standardized roll down protocol with the tires at their recommended pressure (RTP) as well as how these different tires perform under various pressures. Physiological energy expenditure that shows the human cost of wheeling with various tires and pressures will also be detailed.

- **C2** Comparison: Manual Tilt-in-space Wheelchairs Used in Long-term Care Elizabeth Sebesta Sandy Daughen **Beginner** - Intermediate Danny Webb This presentation will begin with a review of some of the clinical reasons for prescribing a tilt-in-space wheelchair in a long-term care facility. Some wheelchair terminology will be defined. Six tilt-in-space wheelchairs, from a variety of manufacturers, will be presented. Charts comparing some of the most relevant features and specifications of the six chairs will be distributed, in order to assist therapists in making informed choices about which tiltin-space wheelchair will best meet a resident's needs.
- C3 Transportation for Children and Youth: BC Law and Clinical Best Practice

#### Sonja Magnuson

Transportation safety is an important area for clinicians working with children and youths who have disabilities. This presentation comes with a powerful punch. An ex-coroner presents the circumstances of a tragic car crash that occurred in British Columbia (BC) several years ago. Four of the five occupants of this crash were children. The ensuing investigation of this crash highlights how child restraints and seat belts work to save lives. The BC laws regarding child restraints are reviewed with a specific focus on the implications and best practice for children and youth with disabilities. This population often has complex medical issues that need to be addressed for safe transportation. Although legalities and the case presented here are from BC, the best practice strategies for transportation of children and youth are drawn from various North American sources.

C 4 Power to the People

#### Sheila Buck Kathryn Fisher Brenlee Mogul-Rotman **Beginner - Intermediate**

This session will provide participants the opportunity to explore beyond the traditional realms of power mobility. Case studies will illustrate the use of power wheelchairs, scooters and power assists within various client populations and age groups. The assessment process to determination of need and outcomes will be discussed. Function, use and interaction will be reviewed to make the case for exploring power mobility through the stages of physical development, progression of a disability and aging.

**C**5 Just Weld it! Prescribing Custom Ultralights with Confidence Kendra Betz

> A wheelchair should "fit like a glove" with a highly customized configuration that provides optimized comfort, function and performance. The ultralight custom welded frames, when properly prescribed, are the lightest chairs available that best meet individual postural support and mobility needs. Additionally, the custom frames are responsive, efficient and low maintenance. This session will focus on strategies to confidently and competently prescribe custom welded manual chairs for appropriate candidates. Case examples will be utilized to demonstrate the evaluation process, use of empirical trials and successful prescription of custom frames.

#### **C6** Functional Positioning/Independent Mobility for Clients with Complex Needs

Manufacturer Phil Mundy Nancy Balcom Intermediate The seminar objective is to provide practical instruction in assessing and dispensing adaptive mobility devices for people with disabilities. The presentation draws on clinical experiences of prescribing therapists, Rehab Technology Suppliers and PDG staff during their work developing various mobility related products with an emphasis on manual wheelchair positioning, bariatrics, individuals exhibiting high agitation, and device mounting applications.

## Intermediate

All Levels

## Intermediate

#### Power Positioning for Function DI Sheila Buck Alan Boyd

#### Advanced

Participants will understand how the assessment and simulation phase is critical to the ability to begin completing an assessment for alternate power positioning. Common functional concerns and needs will be reviewed with emphasis on determining when to provide powered positioning options. We will then take these basic need concepts and move outside the box, and your day to day comfort zone with traditional seating and mobility to explore areas of mobility and positioning that are often not thought of as possible. Come with ideas and an open mind to explore the area of custom and on the market powered positioning devices and how they can enhance your client's function and outlook on life.

#### **D2** Programming the Electronics for Powered Mobility Systems for Children

Karen Kangas Lisa Rotelli Intermediate - Advanced

Programmable electronics and alternative head access allow us to assist children in becoming independently mobile. Their mobility and skills with mobility increase as their experience increases. Their "machine knowledge" (how to manage the chair itself) as well as their "body knowledge" (how they control their bodies within the chair), and their mobility knowledge (managing multiple environments and accessibility) all change. It is important that the chair's performance reflect these changes, too. When a child is first learning to be mobile, the mobility system needs to be programmed to be as simple as possible, so that success and control are insured. However, as the child develops experience and competence, the configuration of the chair, and its programming must change. This session will share both MKIV ("Mark 4" Invacare's electronics) and P&G (Penny & Giles electronics, used in Quantum, Qtronix & Permobil), as these are the two most commonly used electronic packages in the USA. We will be able to compare and contrast how the programming is different when using head access, and how it needs to be programmed "in process" with the experience of each child's skills and needs.

#### **D3** Wheelchair Skills Training Program (WST): Testing and Training Protocols

#### R. Lee Kirby

Chris Maurer

The Wheelchair Skills Program (WSP) consists of the Wheelchair Skills Test (WST) and the Wheelchair Skills Training Program (WSTP). The WSP is a set of evaluation and training tools designed to help practitioners optimize the safety and manoeuvrability challenges that face wheelchair users and their caregivers. The WST and WSTP Manuals can be downloaded from www.wheelchairskillsprogram.ca. During this session, we will present the background and growing body of research evidence supporting the use of the WSP, recent developments and future directions. On completion of the session, attendees will be better able to explain the rationale and elements of the WSP, and how the WSP might be implemented in their own settings.

#### **D4** Essential Collaboration Between Driving & Seating Specialists

#### All Levels

Advanced

The mobility device, vehicle and driving equipment are the most expensive items purchased by consumers with disabilities. Lack of coordination of services may result in unnecessary expense or effort for a client working towards independent community mobility. Driver rehabilitation and seating professionals need to work together to ensure this does not happen. Case studies of clients situations, where the collaboration between the seating and driving specialist was a crucial part of the successful outcome of independent community mobility, will be detailed.

#### D5 Transporting People in Wheelchairs in Vans & School Buses

**Beth Anderson** 

Linda van Roosmalen Doug Hobson All Levels

This instructional session will highlight wheelchai transporation safety standards and product development to imrove wheelchair safety when transporting people using wheelchairs in motor vechicles. Wheelchair design, wheelchair securement systems and occupant restraint systems and their affect on safety during transport will be presented and discussed.

**D6** Selecting Speciality Controls for Power Wheelchairs

#### Manufacturer Elizabeth Cole

All Levels

This presentation will look at the various types of input devices currently available to operate a power wheelchair and various auxiliary functions. There will be an in-depth discussion of the features, application and appropriate clients for different types of joysticks and alternative drive controls operated from a variety of access sites. Features of proportional and non-proportional devices, different types of switches, momentary and latched operations and programming parameters will be covered. A brief overview of how to integrate auxiliary devices such as ECU's, communication devices and augmentative communication devices will be included.

10:30 **Refreshment Break** 



POSTER PRESENTATIONS (Available for viewing on all three days of the Symposium)

The Effect of Two Different Spinal Orthosis on Respiratory Movements

#### A. Agustsson

Reliability of a Method to Manage a Seating and Mobility Waitlist

#### Sandy Daughen

Wheelchair Skills Training for OT Students: Results of a North American Curriculum Questionnaire

#### R. Lee Kirby

How to Make a Cushion for Post-Surgery Relief or Abdominal-Perineal Resection

## Gilbert Logan

Time Study on the Factors Affecting the Relationship Between Independent Mobility & Modes of Daily Activities **Yoshinori Saito** 

		Simultaneous P	aper Sessions			
		Room I		Room 2	Room 3	
I	1:15	Effect of Seat Inclination on Seating Pressures of Individuals with SCI Chris Maurer		Pressure Management in Positioning Clients with Severe Pelvic Obliquity using Pressure Mapping Technology <b>Michael Banks, Eva Ma</b>	Lateral Tilt-in-Space: Innovative Design for a Unique Problem <b>Kevin Clements</b>	
I	1:25	Relationship Between Cushion Type, Backrest Height, Seated Posture and Reach <b>Stephen Sprigle</b>		Pilot Study to Detect Blanche Response Jeanne Zanca	A Retrospective of Three Years of Lateral Tilt-in-Space <b>Dave Cooper</b>	
I	1:35	Q & A			<b></b>	
1	1.40	Development of	Reliable Measures of	Q & A	Q & A	
1	<ul> <li>11:40 Development of Reliable Measures of Postural Stability</li> <li>Stephen Sprigle, Chris Maurer</li> </ul>		у	Customized Back Prothesis Fitting <b>Peter Jung</b>	Lessons Learned: The TOTWalker Grant Project Christine Wright-Ott, Richard Escobar	
I	1:50	A Seating Interface Test Fixture Design Allen Siekman		Development of aCushion for Post-Surgery Relief Gilbert Logan	Interface Pressure Mapping Feet Jillian Swaine, Shannon McGrath	
I	2:00	Q & A		Q & A	Q & A	
I	2:05			Corrective Seating and Pain: A role for Intramuscular Stimulation <b>Daryl Caves, Grant Huston, Ian Denison</b>	Evaluation of an Intelligent Manual Wheelchair for Individuals with Visual Impairments <b>Richard Simpson, Ed LoPresti</b>	
Ι	2:15	2:15 The Anti-Thrust Seat Allen Siekman		Effects of Camber on Energy Cost in the Experienced and Inexperienced Wheelchair User <b>Angie Perdios, Bonita Sawatzky</b>	Pelvic Positioning Evaluations for Wheelchair Selection Ana Allegretti	
I	2:25	Q & A		Q & A	Q & A	
I	2:30	Lunch (provide	ed in the exhibit hall)			
2	2:00	Plenary	Seating, Mobility and ICF William C. MIller			
2	2:25	25 Plenary Manual Wheelchair Skills: Past, Present and Future R. Lee Kirby				
2	2:50	50 Plenary Seating via Telehealth: Benefits and Challenges Angela Sekulic Ingrid Barlow and Tele Rehabilitation for Seating and Wheeled Mobility, Evaluation and Service Delivery Laura Cohen				
3	:25	Refreshment Break	(held in the exibit hall)			
4	:10	Chris Bar Resea	arch Forum			
5	:15	Adjourn				
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A	dapt	ation and Evalua		for Children with Severe Disabilities		
A	Coll	aborative Project to		ech Air Loss Sensor System for Roho Seat Cushion	S	
It	em A	analysis of the Seate	Tamara Vos, Mikel Whe ed Postural Control Measure			
S	eating	g Simulator for Ren	Lori Roxborough, Man note Access	ureen Story		
	cum		David Jordan			
A	Moł	oile Rocker Base to	Provide Calming Sensory Inp	but		
מ	roto	type Device: Clinic	Lynore McLean al Determination for the Stal	bility of an Occupied Wheelchair		
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Andrew Brulé

Saturday March 6<sup>th</sup>, 2004

Registration

0.00	Registration			
8:30	Opening Remarks	Maureen O'Donnell		
	Simultaneous Paper Sess	ions		
	Room I		Room 2	
8:45	Recovery of Postural Control F Beth Ott	Following Brain Injury	Best Practices of OT & PT Performing Mobility Evaluations Mary	Seating and Isaacson
8:55	Click It or Ticket: Seat Belt Us Linda van Roosmalen M. F	ability Among Wheelchair Riders Reed	Current Practices for Providing Pedia Jan Furumasu	tric Powered Mobility
<i>9:05</i>	Q & A		Q & A	
9:10	A Matter of Degree: Designing of Deformity and the Challenge Susan Parker Tiffany Paavo	es a Rural Area Presents	Using a Scoring Guideline to Organiz of Wheelchair Evalutations Judy Larson	e Scheduling
9:20	Seating Assessment / Prescripti Joanna Rainer	on in a Rural Area	A New Database System for Seating and <b>Ajax Lau</b>	1 Mobility
<i>9:30</i>	Q & A		Q & A	
<i>9:35</i>	Effects on Discomfort and Who Barbara Crane Margo Holn Doug Hobson		Seating and Mobility Script Concordan Laura Cohen	ce Test Validation
<i>9:</i> 45	Q & A		Q & A	
9:50	Refreshment Break			
10:00	Instructional Sessions – Gro	oup E		

#### EI The Evidence Basis of Using Gait Trainers

#### Virginia Paleg

Evidence that supports using gait trainers will be presented using videos and case studies to illustrate actual clinical protocols and outcomes using a variety of devices. This course will offer a brief review of the essential processes, both cortical and spinal, necessary for walking. Over ten different brands of gait trainers will be shown and compared.

#### **E2** How to do a Cost Analysis in Assistive Technology

#### Frances Harris Stephen Sprigle

This session will introduce the basic concepts and tools needed to perform cost analyses in assistive technology. Cost analyses are an integral part of economic evaluations, which have become one of the principal methodologies in outcomes research, both within the general health care field and specifically in assistive technology. Such analyses are useful, not only as tools for outcomes researchers, but also as a means for service providers to measure and evaluate the costs specific to their programs. We will consider cost variables unioue to assistive technology and, using examples from the literature and our own experiences, illustrate the complexities inherent in assessing those variables. Special attention will be given to examining the various trade-offs, choices, and challenges each cost analysis strategy poses for clinicians and researchers.

#### E3 Modifications for Mobility

#### **Richard Escobar** Christine Wright - Ott

Is straight from the factory good enough for everyone? Over the past 3 years, we have completed over 150 support walker evaluations for clients requesting a means for upright mobility. The majority of clients required a specific custom modification to provide comfort, increased endurance and function. This presentation will provide an overview of custom modifications of support walkers, and other mobility devices including recreational equipment for children and adults. Features of support walkers that affect user performance and a "feature matching" method to select the most appropriate support walker, options or modificationsfor an individual will be included.

All Levels

Beginner

# Intermediate

E4 Vertical Mobility: An Overlooked Necessity

Manufacturer Julianna Arva Mark Schmeler

#### Intermediate

Humans move in three dimensions and complete access to the environment requires the ability to move in all dimensions. Seat elevators and passive standing are common wheelchair features that provide vertical mobility. The purpose of this session is to review and discuss the state of evidence for vertical mobility from the perspective of their indications and how this relates to "medical necessity". How this relationship can be used to justify need will also be discussed. Case study examples, research evidence and sample methods of wording justification will be presented to assist practitioners in their daily work.

**E5** "It's Just Like Riding a Bike" ... Seating Evaluation and Interventions for Handcycles

#### Kendra Betz

## Advanced

Handcycling has become one of the most popular and fastest growing adaptive sports for both recreation and competition. All factors considered for everyday wheelchair and seating system prescription must also be addressed with handcycles. The rider's type and extent of disability, functional skill level, musculoskeletal presentation, and intended use of the handcycle will guide equipment selection. Case examples of riders with disabilities will be utilized to illustrate interventions for equipment configuration and customization including the use of aftermarket products and design of custom cushions. The intent of his advanced level instructional session is to educate experienced seating clinicians about the evaluation, prescription and modification of handcycles to optimize rider performance, satisfaction and safety.

#### **E6** Developing Client Centered Guidelines for Power Mobility

#### Ben Mortenson Jeanette Boily William Miller All Levels

Despite the advantages of power mobility, there are risks associated with its use. Accidents, which may occur for a variety of reasons including disease progression, behavioural issues and environmental factors, are a serious concern within residential facilities and within the community. Because of the impact of loss of independent mobility, the decision to withdraw a person's power mobility for safety reasons can be controversial and ethically problematic. In the absence of a gold standard to assess when a client is safe with power mobility, therapists generally rely on their clinical reasoning to make a decision about whether to provide, limit or discontinue power mobility use. As such, many agencies have developed guidelines to assist in decision making around such contentious issues. This interactive workshop will allow participants to review and critique a variety of strategies to deal with approaches to power mobility safety issues.

II:15 Adjourn

## **RELATED ACTIVITIES**

Saturday Ipm

**RESNA ATP and ATS exams** (4hrs, exams are simaultaneous), follwed by RET Exams (1.5 hrs)

March 6<sup>th</sup>, 7<sup>th</sup> & 8<sup>th</sup> WGII Group Meeting

## Symposium Organizing Committee

#### Lori Roxborough (Chair) MSc., OT/PT Sunny Hill Health Centre for Children

David Cooper

MSc. (Kinesiology), Rehabilitation Technologist, Sunny Hill Health Centre for Children

## Margaret Francis

Administrative Assistant, Therapy Dept. Sunny Hill Health Centre for Children

#### Elaine Liau

Director, Interprofessional Continuing Education, University of British Columbia, Vancouver, BC

#### Maureen O'Donnell

MD, MSc, FRCPC, Head and Assistant Professor, Division of Developmental Paediatrics, Department of Paediatrics, University of British Columbia, Vancouver, BC

#### Maureen Story

BSR (PT/OT), Sunny Hill Health Centre for Children and Access Community Therapist Ltd., Vancouver, BC

#### Bonita Sawatzky, Ph.D

Department of Orthopaedics, BC's Children's Hospital, Vancouver, BC

## EXHIBITORS

21st Century Scientific Inc. Accessible Designs **Action Products** Adaptive Engineering Lab Inc. Advanced Health Care Products Inc. Altimate Medical Inc. Body Tech NW Bodypoint Designs, Inc. Freedom Concepts Inc. Frog Legs, Inc. Innovation In Motion Marken International Inc. Motion Concepts /PDC Ontario Rehabilitation Technology Consortium & Variety Ability Systems Inc. Otto Bock Health Care Sammons Preston Rolyan Shoppers Home Health Care SOS Rehab Symmetric Designs Ltd. Tekscan Inc. The Roho Group Varilite Vista Medical Ltd. Vitacare Inc.

(\*please note exhibit space is still available at time of publication)

## Symposium Presenters

A. Agustsson, PT, MS, Landspitali, University Hospital, Divison of Rehabilitation, Kopavogur, Iceland Ana Allegretti University of Pittsburgh, Human Engineering Research Laboratories, Pittsburgh, PA Beth Anderson, OTR/L, CDRS, Shepherd Center, Atlanta, GA Julianna Arva, M.S., ATP Pediatric Product Specialist, Permobil Inc. Chatham, NJ Michael Babinec, OTR/L, ATP, ABDA Manager, Rehab Training & Education, Elyria, OH Nancy Balcom, B.Sc Kinesiology, PDG Inc., Vancouver, BC Michael B. Banks, M.A., CRTS, ATS Director, Walla Wall HomeMedical Inc. Walla Walla, WA Ingrid Barlow, M.Sc., OT(C) Adult Coordinator, Glenrose Hospital Seating Clinic, Edmonton, AB Kendra Betz, MSPT SCI Clinical Specialist, VA Puget Sound Health Care System, Seattle, WA Gary Birch, Dr., BA. Sc. Executive Director, Neil Squire Foundation and Adjunct Professor, Department of Electrical and Computer Engineering, University of British Columbia, Vancouver, BC Amy Bjornson, PT, ATP Sunrise Medical, Longmont Alan Boyd, B.Eng., Motion Concepts, Milton, Ont. Jeanette Boily, BScOT, CPL.OT, George Pearson Centre, Vancouver Hospital & Health Sciences Centre, Vancouver, BC Gord Broughton, Seating Technologist, Sunny Hill Health Centre for Children, Vancouver, BC Andrew Brulé, Ma.Sc., P.Eng, Sunny Hill Health Centre for Children, Vancouver, BC Sheila Buck, B.Sc (OT), Reg. ATP (Ont) Therapy NOW! Milton, ON Corrine Carriere, President & Owner Carriere Consulting Inc., Oakville, ON Darryl Caves, B.Sc., PT GF Strong Rehabilitation Centre, Vancouver, BC JoAnne Chisholm, MSc. OT, Access Community Therapists Ltd., Vancouver, BC Kevin Clements, Manager Seating and Mobility, Regency Park Rehabilitation Engineering, Regency Park, South Australia Laura Cohen, PT, ATP Research Associate, PhD Student, Human Engineering Research Laboratories, Pittsburgh, PA Elizabeth Cole, Director of Education, Sunrise Medical Inc., Longmont, CO Dave Cooper, Rehabilitation Technologist Sunny Hill Health Centre for Children, Vancouver, BC Barbara Crane, Ph.D, Department of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, PA Sandy Daughen, OT, Coordinator of Rehabilitation Services, The Lodge at Broadsmead,

Tillicum and Veterans Care Society, Victoria, BC

lan Denison, PT, ATP SCI Programme GF Strong Rehabilitation Centre, Vancouver, BC Mark Dilabio, Seating Technologist, Sunny Hill Health Centre, Vancouver, BC Todd Dinner, President Signature 2000, Milton, ON **Bengt Engstrom** Bengt Engstrom Seating, Värmdö, Sweden Richard Escobar, BSc, ATP Mobility for Discovery, Palo Alto, CA Kathryn Fisher B.Sc.OT, ATS, OT(C) Reg (Ont.) Occupational Therapist, Therapy Supplies and Rental Ltd., Toronto, ON Jan Furumasu, BSPT, CART, Rancho Los Amigos National Rehabilitation Center, Downey, CA Doug Gayton, ATP, GF Strong Rehab Centre, Vancovuer Coastal Health Authority, Vancouver, BC Wayne Hanson, Director, Advanced Product Development for Pediatrics, Sunrise Medical, Bozeman, MT Honourable Mike Harcourt Vancouver. BC Wendi Harder, B.Sc Kinesiology, ATS, Motion Specialties Karen Hardwick, Ph.D., OTR, FAOTA Director, Rehabilitation Therapies, Austin State School, Texas Department MHMR, Nutritional Management, TDMHMR, Austin, TX Frances Harris, PhD, Center for Rehabilitation Technology, Helen Hayes Hospital, West Haverstram, NY Tom Hetzel, PT, ATP Ride Designs, Sheridan, CO Doug Hobson, Associate Professor, Co-Director, Rehabilitation Engineering Research Center, School of Health and Rehabilitation Sciences, University of Pittsburgh, Pittsburgh, PA Grant Huston, B.Sc., PT GF Strong Rehabilitation Centre, Vancouver, BC Mary Isaacson, Dr. MA, OTR/L, ATP Principal, Adaptabilities and Assistant Professor, University of Oklahoma, Tulsa, OK David Jordan, B.Sc, OT, Sunny Hill Health Centre for Children, Vancouver, BC Peter Jung, Orthotec Nottwil AG, Swiss Paraplegic Center, Nottwil, Switzerland Karen Kangas, OTR/L Occupational Therapist, Clinical Educator, Practising Clinician and Consultant (private practice), Shamokin, PA R. Lee Kirby, MD, FRCPC Division of Physical Medicine and Rehabilitation, Dalhousie University, c/oNova Scotia Rehabilitation Centre, Halifax, NS Karen Langden, RN, ET, Wound Care Specialist Judy Larson, OTR/L, Staff Occupational Therapist, Carrie Tingley Hospital, Alburquerque, NM Ajax Lau, Seating Clinic, Prince of Wales Hospital, Physiotherapy Department, Hong Kong Gilbert Logan, PhD Director, Rehabilitation Engineering Centre, Royal Brisbane Hospital, Queensland, Australia Ed LoPresti, PhD, President, AT Services Eva Ma, OTR, ATP, Private Practic Consultant Jim MacKinnon, Consumer, Calgary, AB Sonja Magnuson, M.Sc, OT, Sunny Hill Health

Centre for Children, Vancouver, BC

Joan Mather, B.Sc, PT, Glenrose Rehabilitation Hospital Seating Service, Edmonton, AB Chris Maurer, MPT, ATP Shepherd Center, Atlanta, GA Shannon McGrath, B.Sc. (OT), Occupational Therapy Consultant, Jillian Swaine Occupational Therapy Services, Calgary, AB Lynore McLean, B.Sc, PT, Sunny Hill Health Centre for Children, Vancouver, BC Patrick Meeker, MS, PT, Regional Clinical Specialist, The ROHO Group, Belleville, IL Francine Miller, BSc. (OT) Access Community Therapists Ltd., Vancouver, BC William C. Miller, PhD., Assistant Professor, UBC School of Rehab Sciences VGH OT Research Scientist, Vancouver, BC Jan Miller-Polgar, PhD, Associate Professor School of Occupational Therapy, University of Western Ontario, London, ON Jean L. Minkel, PT, Principal, Minkel Consulting, New Windsor, NY Salimah Mitha, RD, Dietician Consultant, Calgary, AB Ben Mortenson, Clinical Practice Leader, Occupational Therapy, Purdy Pavillion ECU, Vancouver Hospital and Health Sciences Centre, Vancouver. BC Phil Mundy, P.Eng, Product Design Group, Vancouver. BC Iona Novak, B.AppSc., OTR, Acc OT Occupational Therapist, Research Fellow, The Spastic Centre, Brookvale, NSW Beth Ott, M.Sc., PT, Sunny Hill Health Centre for Children, Vancouver, BC Joan Padgitt, PT, ATP Ride Designs, Sheridan, CO Virginia Paleg, MS, PT, Silver Spring, MD Susan Parker, PT, ATP Marquette General Health Systems, Marquette, MI Tiffany Paavola, OTR, ATP Marquette General Health Systems, Marquette, MI Angie Perdios, MSc Candidate School of Human Kinetics, University of British Columbia, Vancouver, BC Richard Peter, Program Coordinator, BC Wheelchair Sports Association, Vancouver, BC Joanna Rainer, Vernon Jubilee Hospital, Vernon, BC Kathleen Riley, PT, ATS, CRTS, Branch Manager, National Seating and Mobility, Mooresville, NC Brenlee Mogul-Rotman, B.Sc.O.T., ATP, OT Reg. (Ont.), Occupational Therapist, Toward Independence, Richmond Hill, Ontario Lori Roxborough, MSc., OT/PT, Sunny Hill Health Centre for Children Yoshinori Saito, Kawasaki University of Medical Welfare, Dept. of Medical Welfare Environmental Design, Kurashiki City, Okayama Pref., Japan Bonita Sawatzky, PhD, Assistant Professor Department of Orthopaedics, University of British Columbia, Vancouver, BC Mark Schmeler, MS, OTR/L, ATP, Director, Center for Assistive Technology, UPMC and Instructor, Dept. of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, PA

Sheena Schoger, Children's Rehabilitation Centre of Essex, Windsor, ON

Elizabeth Sebesta, OT

Tillicum and Veterans' Care Society, Victoria Angela Sekulic, B.Sc., OT(C) Glenrose Rehabilitation Hospital Seating Service Edmonton, AB

**Takeshi Shigenari**, Kinki Welfare University, Dept. of Welfare Business, Faculty of Social Welfare, Hukusaki-cho, Kanzaki-gun, Japan

Allen R. Siekman, Director of Design, Beneficial Designs Inc., Santa Cruz, CA

**Richard Simpson**, PhD, ATP, Assistant Professor, Department of Rehabilitation Science & Technology, University of Pittsburgh, Pittsburgh, PA

Stephen Sprigle, Ph.D., PT, Director

Center for Assistive Technology & Environmental Access, Georgia Institute of Technology, Atlanta, GA

Atlanta, GA

Brian Smith, Consumer, Calgary, AB Bob Stickney, Seating Technologist, Sunny Hill

Health Centre for Children, Vancouver, BC Maureen Story, BSR (PT/OT), Sunny Hill Health Centre for Children, Access Community Therapists

Ltd., Vancouver, BC Jillian Swaine, B.Sc. (OT), Occupational Therapy

Consultant, Jillian Swaine Occupational Therapy Services, Calgary, AB

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

Vern Taylor, Vista Medial, Winnipeg, MB

Ed Thompson, Consumer, Calgary, AB

Linda van Roosmalen, PhD, IDSA, Pittsburgh, PA Tamara Vos, OTR, Dept. of Physical Medicine and Rehabilitation, Mayo Clinic and Foundation, Rochester, MN

**Eric Wasylenko**, MD, Palliative Care Consultant, Calgary Regional Palliative and Hospice Care Service, Calgary, AB

Danny Webb, Rehab Equipment Specialist, MEDIChair, Victoria, BC

**Mikel Wheeler**, COTA, Dept. of Physical Medicine and Rehabilitation, Mayo Clinic and Foundation, Rochester, MN

Nicole Wilkins, B.Sc., OT, Sunny Hill Health Centre for Children, Vancouver, BC

Christine Wright-Ott, MPA, OTR/L

Occupational Therapist; and Principal Investigator, TOT Walker NIDRR Project, Mobility for Discovery, Palo Alto, CA

Joanne Yip, BSR, OT/PT

GF Strong Rehab Centre, Vancouver/Richmond Health Board, Vancouver, BC

Jeanne Zanca, MPT, PhD (candidate), Research Associate, Department of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, PA



## **General Information**

## Symposium Objectives

At the completion of this symposium, participants will be able to:

- I. Describe the range of seating and mobility techniques available for clients with a variety of disabilities.
- 2. Discuss the emerging research evidence supporting seating and mobility practices.
- 3. Locate resources for seating and mobility practice.
- 4. Explain the advantages and disadvantages of a number of innovative service models and new technologies.

## Location

The Westin Bayshore Resort & Marina 1601 Bayshore Drive (parallel to West Georgia Street) Vancouver, B.C. Canada V6G 2V4

## Hotel Accommodation

Please make your own reservation by calling the Westin directly. One night's guarantee by credit card is usually required. Identify yourself with the Seating Symposium. Hotel tax of 10% and 7% GST must be added to all rates. Telephone: toll free anywhere in North America 1-800-937-8461; Local calls 604-682-3377; Fax 604-691-6980.

#### Rates

CAD \$145 single

CAD \$155 double occupancy.

A block of rooms has been booked and will be held at the conference rate until **February 3^{rd}, 2004**.

## **Tourism Information**

Vancouver provides visitors with many opportunities to experience the West Coast lifestyle. If you would like more information on travelling in the area or other accommodations, please call these numbers:

**Tourism BC** 1-800-HELLO-BC (435-5622)

www.hellobc.com

#### Tourism Vancouver

Tel: 604-683-2000

Fax: 604-682-6838

www.tourism-vancouver.org

## Registration

You may register by:

- 1. telephone or fax with credit card
- online at www.interprofessional.ubc.ca
   or by mail with a cheque or credit card.

See Registration Form for details. All Symposium fees listed are in Canadian dollars (CAD\$). The tuition fee includes course materials, refreshment breaks and a reception scheduled for **Thursday, March 4<sup>th</sup>**, **2004**.

**Registration Fees** 

## Charge-by-phone

To charge by phone (Mastercard or Visa only), please call: **604-822-2801**, or **toll free within Canada 1-877-328-7744** or Fax **604- 822-4835**.

Please see registration form for details. Pre-registration

prior to February 19th, 2004 is strongly recommended

to ensure you receive your course selections. You may

register for either the pre-symposium courses and/or

full program ( $2\frac{1}{2}$  days), or for single days.

## Registration via the internet

Secure, fast, online registration is available for Visa and Mastercard holders at the conference organizer's website: www.interprofessional.ubc.ca. Please ensure that you have a copy of the program to assist you in your workshop selections while online. A registration receipt will be mailed to all registrants regardless of payment method after processing by our office.

## Refunds

Will be made (less a CAD\$50.00 processing fee) if written notice of withdrawal is received by **February 19<sup>th</sup>**, **2004**. No refunds will be granted for withdrawal after that date.

## Cancellation

The Division of Interprofessional Continuing Education reserves the right to cancel or move Pre-Symposium or main Symposium programs if registration is insufficient. In the event of cancellation, a refund, less a CAD \$50 handling charge, will be returned.

# Study Credits and Certificate of Attendence

A Certificate of Attendance will be issued to all participants listing pre-approved continuing education credits

**Physicians**: MainPro and AMA Category 1 credits applied for.

American Occupational Therapy Association: Continuing education credits applied for.

**Canadian Association of Occupational Therapists:** Sponsorhip has been applied for.

## Registration

## Register online at www.interprofessional.ubc.ca

## IN 9530

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