Purpose and Audience

This conference provides a unique opportunity to bring together clinicians (physicians and nurses), social workers, researchers, forensic scientists, engineers, and others from a wide range of disciplines to share their research efforts, discuss research challenges and controversies in this field, and develop crossdisciplinary collaborations to further advance our understanding of abusive head injuries.

Abusive head injuries remain a significant medical and social problem in society. Significant progress has been made in our understanding of the presentation, radiographic features, pathology, and biomechanics of these injuries over the past four decades. Despite this progress, a number of controversies remain, and much more research is needed.

A broad range of disciplines, including clinicians, engineers, and forensic and basic scientists, are working to advance knowledge in this field. Unfortunately, these disciplines often work in isolation, each bringing their own points of view, research methodology, and even technical language to the problem. Interdisciplinary collaboration is infrequent, and research is often fragmented and uncoordinated.

Anticipated Outcomes

Upon completion of this program, participants should be able to:

- Interpret findings from studies related to pediatric abusive head trauma (AHT) from a broad range of disciplines
- Evaluate ongoing controversies related to pediatric AHT
- Promote intercollegial AHT research across disciplines

Credit

Penn State College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Penn State College of Medicine designates this live activity for a maximum of 13.5 AMA PRA Category 1 Credit(s)TM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

It is our policy to ensure balance, independence, objectivity, and scientific rigor in all of our sponsored educational programs. Faculty and course directors have disclosed relevant financial relationships with commercial companies, and Penn State has a process in place to resolve any conflict of interest. Complete faculty disclosure will be provided to program participants at the beginning of the activity.

Access

Penn State encourages persons with disabilities to participate in its programs. If you anticipate needing any type of special accommodation or have questions about the physical access provided, please contact Continuing Education in advance of your participation.

Location/Transportation

Edged by the Adirondack Mountains, The Hotel Burlington is located in Burlington, Vermont, along the waterfront of beautiful Lake Champlain. This location is right in the heart of the community, near the area's top dining and entertainment options. Just steps away you will find the scenic boardwalk and the historic Church Street Marketplace. Enjoy water sports on Lake Champlain or take a scenic bike ride on the Waterfront Bike Path. Additional highlights include the Shelburne Museum. Flynn Center for the Performing Arts, and Ben & Jerry's Factory, where samples are front and center.

Accommodations

This conference will be held at the Hilton Burlington. Complimentary Wi-Fi and airport shuttle service (with prior arrangements) are available for guests. The airport is 10 minutes from the hotel. Accommodations are the responsibility of the participant.

Rooms are available at the Hilton for conference participants by calling the resort directly at 800-HILTON or 802-658-6500 and mentioning that you are attending the Penn State Continuing Education conference. Room rates are \$175 for a city view and \$209 for a lake view (plus taxes). These rates are guaranteed if you make reservations by May 30, 2013. We recommend making reservations as early as possible.

For More Information/To Register Online

• Call: 717-531-6483

• Email: ContinuingEd@hmc.psu.edu

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This publication is available in alternative media on request.

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Program				
DAY 1—	THURSDAY, JUNE 27, 2013			
7–8 a.m.	Final Registration/Materials/Continental Breakfast			
8:00	Welcome and Introductory Remarks Mark S. Dias, MD Professor of Neurosurgery Vice Chair, Clinical Neurosurgery Penn State Milton S. Hershey Medical Center Penn State College of Medicine Hershey, Pennsylvania			
8:15	BIOMECHANICAL MODELS OF ABUSIVE HEAD TRAUMA: METHODS AND LIMITATIONS			
	 Animal, cadaver, and human surrogate models of the child Review of available mechanical properties for pediatric tissues, and implication for accuracy of model predictions Kinematic- and finite-element computer models Use of models to inform clinical presentation and differential diagnosis 			
	Biomechanical Models of Abusive Head Trauma Susan S. Margulies, PhD Professor of Bioengineering University of Pennsylvania Philadelphia, Pennsylvania			
	Chris Morison, PhD Regional Manager HamiltonJet Christchurch New Zealand			
	Biomechanical Modeling of Retinal Hemorrhages Nagarajan Rangarajan, PhD Associate Professor Department of Neurosurgery VA Medical Center–Research Milwaukee, Wisconsin			
	Modeling Real-Life Traumatic Brain Injuries: How Do They Correlate? Jonathon Hughes, PhD(c) Cardiffe University Cardiffe, Wales United Kingdom			
12:00 noon	Lunch			
1:00-1:25	 Scientific Session I (Abstract Presentations) Incidence of abusive head trauma/shaken baby syndrome in Japan (Yamada F, Fujiwara T, Ohashi H, Motoyama, K) 			
1:25-1:50	• The prevalence and risk factors of shaking and smothering among 4-month-old infants in Japan (Fujiwara T, Yamada F)			
1:50-2:15	Two peaks in age-related incidence curve of shaken baby syndrome confirmed by child welfare facilities in Japan (Yamada F, Fujiwara T, Okuyama M)			
2:15-2:40	The use of primary prevention efforts and quality improvement to reduce the incidence of abusive head trauma in Vermont.			

of abusive head trauma in Vermont

(Patno KM, Murphy L)

	2:40-3:05	• Effectiveness of public health practice against shaken baby syndrome/abusive head trauma in Japan (Fujiwara T, Yamada F, Miyazaki Y)
	3:05	KEYNOTE PRESENTATION
		The Forensic Autopsy in Pediatric Abusive Head Injury Elizabeth Bundock, MD, PhD Deputy Chief Medical Examiner Burlington, Vermont
	4:00	Adjournment
DAY 2—FRIDAY, JUNE 28, 2013		
	7–8 a.m.	Final Registration/Materials/Continental Breakfast
		Optional Breakfast Seminar Establishing a Valid Evidence Base for AHT and Mimics
	8:00	KEYNOTE PRESENTATION
		Spinal Imaging in Abusive Head Trauma Arabinda Choudhary, MD Associate Professor of Radiology and Pediatrics Penn State Milton S. Hershey Medical Center Penn State College of Medicine Hershey, Pennsylvania
	9:00-9:25	Scientific Session II (Abstract Presentations) • The pathology of bleeding around the spinal cord and spinal nerve roots (Squier W, Mack J)
	9:25-9:50	• Lack of evidence for a relationship between hypoxia and subdural hemorrhage in neonates with congenital heart disease (Hayman R, Beca J, Reed P, Hope A, Kelly P)
	9:50-10:15	• Infant Brain Trauma: The role of neurogenic inflammation (Squier W, Mack J, Brady S)
	10:15	Break
	10:45-11:10	 Scientific Session III (Abstract Presentations) Retinal Hemorrhage in Abusive Head Trauma: Finding a common language (Levin AV, Cordovez JA, Leiby B, Pequignot E, Tandon A)
	11:10-11:35	• Retinal Hemorrhage in Abusive Head Trauma vs Trauma: MRI study (Choudhary AK, Boal D, Dias MS)
	11:35-12:30	Lunch
	12:30-12:55	Scientific Session IV (Abstract Presentations) • Biomechanical evaluation of inflicted head trauma (Lloyd JD, Lee WE)
	12:55-1:20	Confessed Ccases of skull compression (Donaruma-Kwoh M)
	1:20-1:45	The potential impact of a future, validated, Similar male for madiation physics

clinical prediction rule for pediatric abusive

head trauma (Hymel KP) for the Pediatric

Brain Injury Research Network (PediBIRN)

investigators

• Utility of a child abuse screening algorithm in an urban pediatric emergency department (Edwards G, Garcia N, George T, Gettig K, Higginbotham E, Higginbotham N, Hopper E, Lawson K, Maxson T, Roth J) 2:10-2:35 Cortical venous injury in abusive head trauma (Choudhary AK, Thamburaj K, Boal D, Dias MS) 2:35 Break 3:00 **KEYNOTE PRESENTATION** Point/Counterpoint: Cortical Venous Sinus Thrombosis Gary Hedlund, DO Adjunct Professor of Radiology University of Utah College of Medicine Chief of Pediatric Neuroimaging Primary Children's Medical Center Salt Lake City, Utah Julie Mack, MD Assistant Professor of Radiology Penn State Milton S. Hershey Medical Center Penn State College of Medicine Hershey, Pennsylvania **Concluding Remarks** 4:15 Mark S. Dias, MD 4:30 Program Evaluation and Adjournment **Registration/Cancellation Policy** Register online, by fax, or by mail. Registrations will be confirmed

by email upon receipt of payment, authorization to bill, or a credit card guarantee. If you do not receive a confirmation from Penn State within two weeks, phone 717-531-6483 to confirm your registration. Walk-ins and late registrations can be accepted only if space is available.

Cancellations received later than June 20, 2013, will be assessed a \$75 processing fee. No refunds will be made for cancellations received after June 24, 2013. The University reserves the right to cancel or postpone any course or activity because of insufficient enrollment or other unforeseen circumstances.

Please provide a cell phone number so we can reach you in the event of last-minute changes or cancellation. If a program is canceled or postponed, the University will refund registration fees but is not responsible for any related costs, charges, or expenses, including cancellation/change charges assessed by airlines or travel agencies. Preregistered participants will be notified if a program is filled or canceled.



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