### **Celebrate, Collaborate, Continue the Journey...** 20 Years of Forging New Frontiers in Childhood Injury Prevention

The 2015 Annual Conference of the Injury Free Coalition for Kids® November 13-15, 2015

The 2014 Injury Free Coalition for Kids<sup>®</sup> Conference in Fort Lauderdale, FL, is bringing together medical experts and community leaders from around the country to exchange information and techniques designed to prevent injuries, reduce violence, and better understand the economic difference injury prevention makes in a healthcare conscious economy. Lessons learned and best practices of programs developed around the country will be discussed through scientific abstracts, lectures, panel discussions and workshops presented by the country's leading experts in the field of injury prevention and epidemiology.

Attendees of Forging New Frontiers include principal investigators (physicians), and program coordinators (nurses, health educators, social workers, community leaders and researchers). In addition to renewing their convictions, the conference is an opportunity for these childhood injury prevention advocates to network with representatives from around the country.

The objectives of the 2015 Annual Conference are to provide participants with an opportunity to:

- Study and encourage research in the field of injury prevention.
- Learn about designing, planning and building healthy communities.
- Share and explore challenges and successes in community-based injury prevention programming
  with a goal of helping trauma centers develop and improve injury prevention programs.
- Share information about innovative injury prevention best practices.
- 奔 Describe how trauma centers can develop and evaluate community-based injury prevention programs.
- Identify opportunities for multi-city projects and research as well as opportunities to learn more about
  translating research into practice in minority and resource-limited communities.
- Provide attendees with the opportunity to revitalize their creative energies in order to continue to innovate and sustain healthy communities.

#### Accreditation

#### CHES

Sponsored by Cincinnati Children's, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to 15.5 total Category 1 contact education contact hours. Maximum advanced-level continuing education contact hours available are 0.

#### **Continuing Medical Education**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Cincinnati Children's and the Injury Free Coalition for Kids at the Center for Injury Epidemiology and Prevention, Mailman School of Public Health, Columbia University. Cincinnati Children's is accredited by the ACCME to provide continuing medical education for physicians. Cincinnati Children's designates this live activity for a maximum of 16.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### Disclosure

Cincinnati Children's requires all clinical recommendations to be based on evidence that is accepted within the profession of medicine and all scientific research referred to, reported or used in support of or justification of patient care recommendations conform to the generally accepted standards of experimental design, data collection and analysis. All faculty will be required to complete a financial disclosure statement prior to the conference and to disclose to the audience any significant financial interest and/or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in his/her presentation and/or commercial contributor(s) of this activity. All planning committee members and/or faculty members were determined to have no conflicts of interest pertaining to this activity.

### **Table of Contents**

ii-iii	Table of Contents
1	Welcome: Michael J. Mello, MD MPH
2	Welcome: Barbara Barlow, MD, MA
3	Keynote Speaker: Carolyn Cumpsty-Fowler, PhD, MPH
4	Keynote Speaker: David Fowler, MB.ChB. M.Med path.(forens)
5	Keynote Speaker: Frederick Rivara, MD, MPH
6	Keynote Speaker: Grant T. Baldwin, PhD, MPH
7	2015 Abstract of the Year Nominees
8	2015 Program Coordinator of the Year
9-10	Schedule at a Glance
11-17	Agenda
18-20	Acknowledgements & Disclosure
22	Abstracts:
23	Flame time of cigarette lighter necessary to achieve temperature capable of inflicting skin burn
23	Swimming pool electrical injuries: steps toward prevention
24	Not child's play: national estimates of microwave-related burn injuries among young children
25	Frequency of caregiver calls to the state poison control center for liquid nicotine exposure
25	Factors associated with suicide among those adolescents and young adults not in mental health treatment at the time of death
26	Confidence as a factor in pediatrician screening and referral practices related to suicide
27	Higher rates of in-hospital mortality, self-inflicted injury, and prolonged hospitalization in states with lenient vs. strict gun control laws: a propensity score-matched analysis
28	Higher Incidence and associated mortality with self-inflicted injury between 1997 and 2012: a trend analysis of pediatric firearms injuries
29	Evaluation of child passenger safety programs in the emergency department and inpatient units of a children's hospital
30	Determinants of usage of age-appropriate child safety seats in Connecticut
30	Adapting child passenger safety presentations for various community situations
31	Evaluating distracted driving behaviors in parents of children in suburban and rural areas of Alabama
32	Risky teen driving behaviors and factors influencing teens
33	Reaching the teen community through career and technical education

### Table of Contents, Cont.

- 33 Severe unintentional injuries to Ohio children: what should we really be addressing at well-child visits?
- 34 The association of body mass index (BMI), mortality and restraint status for teen drivers involved in fatal motor vehicle crashes
- 35 Child passenger safety (CPS) training for pediatric interns: Does it work?
- 36 An educational program for physicians to teach the principles of injury anticipatory guidance and earn certification credits
- 36 Simulation education to promote injury prevention knowledge for medical students
- 37 Testing the reliability of an injury prevention screening tool between individuals within a household
- 38 Serious unintentional injuries to Ohio children: Is there urban/rural variation?
- 38 Services to patients injured through interpersonal violence: A survey of children's hospitals
- 39 Environmental safety assessments of family homeless shelters
- 40 Testing the reliability of an injury prevention screening tool between individuals within a household
- 41 The Johns Hopkins Center for Injury Research and Policy: Prescription medication dangers for children
- 41 Effectiveness of the safe routes to school program in reducing school-age pedestrian and bicyclist injury: A nationwide evaluation
- 42 Implementation evaluation of Iowa's anti-bullying law
- 42 Creating safer routes to school; our 15 year journey in San Diego
- 43 Improvement in quality of life for youth exposed to violence following summer camp intervention
- 44 The fifty year lifecycle of window falls and window fall prevention in New York City
- 44 Limiting pediatric injury recurrence through bedside consult programs
- 46-53 Faculty
- 54-65 Bios
- 66-67 Evaluation & Accreditation



#### Welcome!

We are so pleased that you are joining us for our 20th Annual Injury Free Coalition for Kids National Conference. Many of us have been coming for many years and several for all twenty years. If you are new, I'm sure that you will find the conference rewarding and will continue to join us for the next twenty.

The program committee has worked hard to establish a busy agenda for the next two and half days that will educate us, stimulate us and also allow us to network with others in the organization. We have important keynote speakers each day starting with Carolyn J. Cumpsty-Fowler, PhD, MPH who will discuss with us how best to evaluate our prevention programs. Also Dr. David Fowler who will present us with important information on the Biomechanics of Injury on Friday afternoon.

We honored to have Dr. Frederick Rivara join us from the University of Washington. Dr. Rivara will be honored with the Injury Free Coalition for Kids Pioneer award for his national leadership and exemplary career in injury prevention. Dr. Grant Baldwin from the National Center for Injury Prevention and Control will deliver our keynote address on Sunday morning and provide us with important insights from the CDC.

Our agenda is also full of our membership presenting the amazing work they do to help keep children safe. We will hear about injury prevalence and prevention strategies related to consumer products, child passenger safety, adolescent driving, and self-inflicted injuries. Presenters will discuss their site's evaluation of their programs, teaching injury prevention to trainees and current gaps in injury prevention.

I'm sure you will agree that this will be an exciting weekend. Much of the conference is possible because of our sponsors. This year we have a special conference sponsorship in the Robert Wood Johnson Foundation. They have a long history with Injury Free with their investment in Injury Free over two decades ago. They return for our twentieth anniversary conference to help us celebrate the return on that generous investment – the amazing work being done at Injury Free sites across the country.

Best wishes for an enjoyable conference,

Michael J. Mello, MD MPH Injury Free Coalition for Kids Board President Professor of Emergency Medicine Professor of Health Services, Policy and Practice Professor of Medical Science Brown University Providence, Rhode Island



Welcome to the 20th Annual Conference of the Injury Free Coalition for Kids:

The National Program Staff looks forward to hearing your presentations and those of our outstanding keynote speakers. We are especially pleased to honor Dr. Frederick Rivara as our Pioneer awardee of 2015.

We are excited to reconnect with all of you, compatriots in the war against injury, and to greet Injury Free members from our new Injury Free sites: Lincoln and Bellevue Hospitals in New York City and Phoenix Children's Hospital. We also welcome back many members who have worked with us over the years and gone on to other adventures.

This conference is designed provide you with program ideas, new information and Injury Free partners to help you in your daily mission to keep children and their families safe in their communities.

Injury Free continues to partner with the Toys"R"Us Children's Fund and the Bloomberg Philanthropies to fund Safe at Home projects across the country. This year we were also proud to be able to provide funds for Ask Programs completed with assistance of the Brady Foundation and the AAP. Partners are essential to all that we do.

Little Tykes and SofSurfaces have over the years continued to support both playground projects and the conference.

This year we celebrate our partnership with The Robert Wood Johnson Foundation which supported the development of Injury Free with twenty years of grant support and has made a major contribution to this meeting through the Special Contribution Fund of the Princeton Area Community Foundation.

Please use our time together to renew your spirits and celebrate the progress we have all made this year and over twenty years. Network and find new partners for the important work that you do.

Sincerely,

Barbara Barlow MD, MA Professor of Surgery in Epidemiology Emerita Associate Director Center for Injury Epidemiology and Prevention Columbia University, Mailman School of Public Health Executive Director and Founder Injury Free Coalition for Kids



### Carolyn J. Cumpsty-Fowler, PhD, MPH

Assistant Professor, Johns Hopkins University School of Nursing Johns Hopkins Bloomberg School of Public Health Director of Evaluation and Core Skills Training Mid Atlantic Public Health Training Center

Dr. Carolyn Cumpsty-Fowler is an Assistant Professor at the Johns Hopkins University School of Nursing. She holds a joint appointment at the Johns Hopkins Bloomberg School of Public Health and is Director of Evaluation and Core Skills Training at the Mid Atlantic Public Health Training Center. Since 1993 she has been on the faculty of the Johns Hopkins Center for Injury Research and Policy; serving as faculty director for the Johns Hopkins Summer Institute Principles and Practice of Injury Prevention since 1999. Following training in nursing, midwifery and community health at the University of Cape Town (UCT), Dr Cumpsty-Fowler began her career in injury prevention; completing a PhD at UCT and a post-doctoral fellowship with Professor Susan Baker at Johns Hopkins. From 1999-2010, Dr. Cumpsty-Fowler led the injury prevention program and Child Death Review Team at Baltimore County Department of Health.

Dr. Cumpsty-Fowler remains engaged in public health practice-related evaluation. As part of Johns Hopkins Hospital's Healthy Work Environment research team, Dr. Cumpsty-Fowler uses evaluation and assets-based leadership methodologies in QI, capacity development and culture change interventions related to patient safety. Dr. Cumpsty-Fowler, an award-winning educator, serves on the Partnership for a Safer Maryland's Board of Directors, the Safe States Alliance's Workforce Development Committee, the National Center for the Review and Prevention of Child Deaths' Advisory Committee, and Chaired two advisory committees for the CDC's National Center for Injury Prevention and Control from 2005-2014.



### David Fowler, MB.ChB. M.Med path.(forens) FAAFS, FCAP, FNAME, DABP Chief Medical Examiner State of Maryland

Dr. David Fowler is the Chief Medical Examiner for the state of Maryland. He oversees a death investigation system for a population of nearly 6,000,000 people in 23 counties and Baltimore city.

He graduated at the University of Cape Town in 1983 and did a year of general medical and surgical internship, followed by a year of pediatric pathology at the Red Cross Children's Hospital in Cape Town. He then started and completed a five-year full time training program in forensic pathology at the University of Cape Town earning his master of medicine in forensic pathology. This was followed by additional training in the United States at the University of Maryland and the Office of the Chief Medical Examiner for the state of Maryland. In addition to his specialist qualification from South Africa is also board certified in anatomic and forensic pathology by the American Board of Pathology.

Dr. Fowler is an Associate Professor at the University of Maryland in the departments of pediatrics and pathology, adjunct faculty at the University of Baltimore, faculty at the National Study Center for Trauma and EMS, the Johns Hopkins Bloomberg School of Public health Injury Center, George Washington University, and Visiting Professor at multiple other universities. He also has regular teaching commitments at the FBI Academy in Quantico.

He is part of the editorial team and author of several chapters in new publications on forensic neuropathology and forensic pathology as well has having contributed chapters in emergency medical textbooks and forensic pathology textbooks and has coauthored over 80 peer reviewed journal articles. He is currently the Vice President the National Association of Medical Examiners as well as chair of the inspection and accreditation committee of that association.



#### Frederick Rivara, MD, MPH Seattle Children's Guild Endowed Chair in Pediatric Research Vice Chair and Professor Department of Pediatrics University of Washington

Frederick P. Rivara MD, MPH is the holder of the Seattle Children's Guild Association Endowed Chair in Pediatrics, Professor of Pediatrics and adjunct Professor of Epidemiology at the University of Washington. He is chief of the Division of General Pediatrics and vice chair of the Department of Pediatrics in the School of Medicine. Dr. Rivara earned a bachelor's degree at the College of the Holy Cross in Worcester, MA and received his MD from the University of Pennsylvania and an MPH from the University of Washington. He completed residencies at the Children's Hospital Medical Center in Boston and the University of Washington and was a Robert Wood Johnson Clinical Scholar at the University of Washington. He also served in the National Health Service Corps in Hazard, KY. He is editor-in-chief of The Journal of American Medical Association—Pediatrics.

Dr. Rivara served as founding director of the Harborview Injury and Research Center in Seattle for 13 years, founding president of the International Society for Child and Adolescent Injury Prevention, and his contributions to the field of injury control have spanned 30 years. He has received numerous honors including the Charles C. Shepard Science Award from the Centers for Disease Control and Prevention, the American Public Health Association, Injury Control and Emergency Health Services Section Distinguished Career Award, and the American Academy of Pediatrics, Section on Injury and Poison Prevention, Physician Achievement Award, and UW School of Public Health distinguished Alumni Award. Rivara was elected to the Institute of Medicine in 2005. Rivara is also a founding board member of the Washington State Academy of Science. Dr. Rivara was chosen as a recipient of the Stanley Stamm Housestaff Role Model Award by the pediatric residents of the University of Washington.

His research interests have included the epidemiology and outcome of youth sports concussions, efficacy and promotion of bicycle helmets, prevention of pedestrian injuries, youth violence, the epidemiology of firearm injuries, intimate partner violence, interventions for alcohol abuse in trauma patients and the effectiveness of trauma systems in the care of pediatric and adult trauma patients. He continues as an active clinician, teacher, investigator, and advocate at the University of Washington and Seattle Children's Hospital.



#### Grant T. Baldwin, PhD, MPH Division Director, Unintentional Injury Prevention National Center for Injury Prevention and Control

Grant Baldwin, PhD, MPH is the Director of the Division of Unintentional Injury Prevention (DUIP) at the National Center for Injury Prevention and Control (NCIPC) in the Centers for Disease Control and Prevention. He has served in this capacity since September of 2008.

Unintentional injuries are the leading cause of death for persons 1 to 44 years of age. DUIP is dedicated to reducing the number and severity of unintentional injuries through science-based programs and applied research. The CDC is focused on preventing injuries and fatalities from motor vehicle-related crashes, older adult falls, prescription drug overdoses, and traumatic brain injuries – especially those caused in youth sports and recreation. Child injury prevention remains a key focal area too.

Dr. Baldwin joined the CDC Injury Center in November 2006 as acting Deputy Director. In this role, he assisted the NCIPC Director in providing overall leadership and direction for the Center. He began his career at CDC in September 1996.

Dr. Baldwin received his PhD in Health Behavior and Health Education at the University of Michigan School of Public Health in 2003. He also received a MPH in Behavioral Sciences and Health Education from the Rollins School of Public Health at Emory University in 1996. Currently, he is also an adjunct Associate Professor at Emory University's Rollins School of Public Health.



### Congratulations to the 2015 Abstract of the Year Award Nominees

The abstracts below were selected and nominated to receive an award for abstract of the year. Each abstract was judged on the degree to which the research topic identified a new area of study and/or addressed the topic in a novel and unique manner, the degree to which the methodology of the research was scientifically valid, the degree to which the research topic was relevant to injury control or violence prevention, the degree to which the presenter articulated the research and responded to questions and critiques and the degree to which the author communicated the hypothesis, methodology, research, results, and conclusion of the research through written word.

Scoring and ranking will take place during the conference and the award will be presented Sunday afternoon at the conclusion of the conference. There will be two awards: one for best original research abstract and one for best program design.

#### **Program Design**

An educational program for physicians to teach the principles of injury anticipatory guidance and earn certification credits Cincinnati Children's Hospital Medical Center, Cincinnati, OH

#### **Original Research**

Flame time of cigarette lighter necessary to achieve temperature capable of inflicting skin burn Christopher's Hospital for Children, Philadelphia, PA

Higher rates of in-hospital mortality, self-inflicted injury, and prolonged hospitalization in states with lenient vs. strict gun control laws: a propensity score-matched analysis

Jackson Memorial Hospital (Holtz Children's Hospital) & University of Miami Health System, Miami, FL

Higher incidence and associated mortality with self-inflicted injury between 1997 and 2012: a trend analysis of pediatric firearms injuries Jackson Memorial Hospital (Holtz Children's Hospital) & University of Miami Health System, Miami, FL

The association of body mass index (BMI), mortality and restraint status for teen drivers involved in fatal motor vehicle crashes Columbia University, New York, NY

Child passenger safety (CPS) training for pediatric interns: Does it work? Hasbro Children's Hospital, Providence RI

Testing the reliability of an injury prevention screening tool between individuals within a household Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Environmental safety assessments of family homeless shelters Boston Children's Hospital, Boston, MA

The fifty year lifecycle of window falls and window fall prevention in New York City Columbia University, New York, NY

### Congratulations and Thank You for Your Service: **2015 PC of the Year**





#### PURNIMA UNNI, MPH, CHES:

Purnima Unni is the Pediatric Trauma Injury Prevention Manager at the Monroe Carell Jr. Children's Hospital at Vanderbilt, Nashville, Tennessee, and serves as the main media spokesperson on pediatric injury prevention topics. Ms. Unni has a Master of Public Health degree from Portland State University, Oregon, and undergraduate degrees in Education and Psychology from the University of Mumbai, India. She is also a Certified Health Education Specialist (CHES).

In the for more than 20 years Ms. Unni has been active in the field, she has developed and implemented a number of innovative injury prevention programs in Nashville and its surrounding counties. Among them is the Teen Motor Vehicle Safety Program with which she has educated over 9,000 teenagers on safe driving using a multi-faceted partnership between her institution and several high schools in the region. She first piloted this program in two local high schools, demonstrated its effectiveness, and obtained grant funding to expand it to 5 schools. This year 11 schools from 10 counties in the Middle Tennessee area participated. Many students were forever changed by the experience. They then went back to their schools and run a year-long campaign to educate their peers about safe driving with specific emphasis on distracted driving. The program has received national recognition and has been published.

When it comes to ATV injuries, Purnima recognized the problem before it became a major issue among area children. She saw a rise in ATV related injuries based on Trauma Registry data, and partnered with 4H of Tennessee to develop and lead a multidisciplinary state wide coalition for ATV safety that consists of government agencies like the TN 4H, Department of education, hospitals, and non-profit organizations. This program has touched more than 250 children in 4 years, but is really only in its infancy, as she works to revise the curriculum and secure funds to sustain it. She is currently the co-chair of the Tennessee ATV Safety Coalition.

Faced with the issue of limited resources, she has secured funding through gifts and grants from external agencies and leveraged resources available in Vanderbilt University through student projects and internships. Over the last 4 years she has raised more than \$783,000 for injury prevention programs and has mentored 13 student interns.

She actively works to form partnerships with local agencies to tackle injury prevention issues. She is a member of several national and state committees. She has been selected to be on the expert panel for the Governor's Highway Safety Administration's new report on "Other influencers" pertaining to teen driver safety. At the state level, she has been appointed by the Tennessee Governor, Bill Haslam, to serve as the safety expert on the newly created Tennessee OHV Advisory Committee. She is also on the advisory board for "The Safer Tennessee Project," a new gun violence prevention organization focused on reducing the number of gun-related injuries and deaths in Tennessee. She is a member of the Committee on Pediatric Emergency Care (COPEC), the Tennessee Committee on Trauma and the Tennessee Commissioner's Council on Injury Prevention and Control. She is also a member of the American Public Health Association and the Pediatric Trauma Society.

Purnima's commitment to child advocacy has allowed her to improve two complementary areas of interest, trauma and pediatric emergency medicine. It is with these dual interests in mind that she sought to contribute to the body of knowledge around fall and drowning injuries. She performed a review of the existing literature and enlisted the expertise of her institution's subspecialists to develop and refine a study question that was both novel and relevant to practice. She has presented her research nationally, and composed manuscripts to disseminate information about drowning rates in the region.

Ms. Unni has a strong interest in research and has published in the Journal of Trauma and Acute Care Surgery, American Journal of Emergency Medicine, and the Journal of Pediatric Surgery. She has also presented her work at numerous state and national conferences. She has also served as an ad hoc reviewer for "Pediatrics" and several APHA conferences.

### Celebrate, Collaborate, Continue the Journey...

### 20 Years of Forging New Frontiers in Childhood Injury Prevention

The 2015 Annual Conference of the Injury Free Coalition for Kids®

November 13-15, 2015

Schedule at a Glance Room			
Wednesday, November 11, 2015			
3:00-5:00 PM Rec	pistration	Conf. Rm. 209	
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Thursday, Novem	ber 12, 2015		
Noon-5:00 PM Re	gistration	Conf. Rm. 209	
Friday, November	13, 2015		
7:00-8:30 AM	Breakfast	Atrium	
7:00-8:30	Registration	Conf. Rm. 209	
8:30-8:40	Logistics: E. Lenita Johnson, MA	Salons A-D	
8:40-8:50	Welcome: Michael Mello, MD, MPH, Board President	Salons A-D	
8:50-9:00	Robert Wood Johnson Foundation Welcome	Salons A-D	
9:00-9:10	Introduction of Keynote Speaker: Dawne Gardner, MPH	Salons A-D	
9:10-10:10	Keynote Speaker: Carolyn Cumpsty-Fowler, PhD, MPH	Salons A-D	
	"Forging Evaluation-Informed Collaborations and Collaborative Evaluation"		
10:10–10:25	Break		
10:25–11:45	Panel Discussion: Consumer Product Injuries	Salons A-D	
11:45 AM-1:15PM	Lunch	Atrium	
1:15-1:25	Introduction of Keynote Speaker: Art Cooper, MD	Salons A-D	
1:25-2:25	Keynote Speaker: David R. Fowler, MB, ChB, M. Med. Path (Forensic)	Salons A-D	
	"The Biomechanics of Injury"		
2:25-2:40	Break		
2:40-4:00	Panel Discussion: Self-inflicted Injuries	Salons A-D	
4:00-5:30	PI Meeting	Gulfstream A & B	
	PC Meeting	Salons A-D	
6:00-7:30	Reception	Aqua Terra Ballroom	
Dinner on your ow	<i>i</i> n		
7:30 Board Meetir	ng	Gulfstream A	
Saturday, Novemb	per 14, 2015		
7:00-8:00 AM	Breakfast	Atrium	
8:00-8:05	Opening Remarks: Michael Mello, MD, MPH	Salons A-D	
8:05-8:15	Pioneer Award Presentation and Introduction of Keynote Speaker: Barbara Barlow, MD	Salons A-D	
8:15-9:00	Keynote Speaker: Frederick Rivara, MD, MPH	Salons A-D	
	"Prevention of injuries to children and adolescents: where we've been and where we need to g	0."	
9:00-9:15	Break		
9:15-10:35	Panel Discussion: Injury Free Travel for the Next 20 Years - Evaluation and Community Outreach	Salons A-D	
10:35-10:50	Break		
10:50-12:10 PM	Panel Discussion: Teen Driving	Salons A-D	
12:10-1:30	Lunch	Atrium	
1:30-2:40	Panel Discussion: Injury Prevention Education for Trainees	Salons A-D	
2:40-2:55	Break	<b>o</b> + -	
2:55-4:10	Panel Discussion: Identifying Gaps in Injury Prevention	Salons A-D	
5:30-6:30	Reception	Atrium	
6:30	Dinner	Salons A-D	
0 1 1			
Sunday, Novembe	Pr 15, 2015	A.L. '	
7:00-8:00 AM	Breaktast	Atrium	

8:00-8:45 AM	Business Meeting	Salons A-D
8:45-9:00	Break	

		Room
Sunday, November 15,	2015, continued	
9:00-9:10	Introduction of Keynote Speaker: Michael Mello, MD, MPH Board President	Salons A-D
9:10-10:00	Keynote Speaker: Grant T. Baldwin, PhD, MPH	Salons A-D
	"It Takes a 'Safe' Village: CDC Perspective on Child Injury Prevention"	Salons A-D
10:00-10:15	Break	
10:15-11:35	Panel Discussion: Research and Programs Improving the Safety of Children Conducted by the CDC Injury Control Research Centers	Salons A-D
11:35-11:50	Break	
11:50-1:10 PM	Panel Discussion: Program Evaluation	Salons A-D
1:30	Box Lunch (Shuttles to Beach)	Atrium

### Agenda

#### Time & Room

Wednesday November 11, 2015 3:00-5:00 Registration Conf. Rm. 209 Thursday November 12, 2015 Noon-5:00 PM

Conf. Rm. 209

#### Friday November 13, 2015

7:00-8:30 Atrium	Breakfast
7:00-8:30	Registration
Conf. Rm. 209	
8:30-8:40	Logistics: E. Lenita Johnson, MA
Salons A-D	
8:40-8:50	Welcome: Michael Mello, MD, MPH Board President
Salons A-D	
8:50-9:00	The Robert Wood Johnson Foundation Video
Salons A-D	
9:00-9:10	Introduction of Keynote: Dawne Gardner, MPH
Salons A-D	
9:10-10:10	Keynote Speaker: Carolyn Cumpsty-Fowler, PhD, MPH
Salons A-D	"Forging Evaluation-Informed Collaborations and Collaborative Evaluation"

Evaluation is a powerful but under-utilized tool to bridge the gap between good ideas and good outcomes. It is the tool we use to assure we "do no harm". Evaluation should be used to inform every step of our program journey. Embracing evaluation demonstrates a commitment to excellence and continuous improvement. In this session we will introduce evaluative thinking and the benefits of using it throughout the whole program journey. Evaluative thinking helps us forge stronger and more strategic collaborations, build better programs, and develop the ability to do collaborative evaluations of our programs.

This session will enable participants to:

- 1) Describe the costs and dangers of inadequate evaluation.
- 2) Discuss how evaluation is used to provide valuable information during the life of a program.
- 3) Discuss how to incorporate evaluative thinking in program decision making.
- 4) Recognize that evaluative thinking is systematic and disciplined, but easier than you think.
- 5) Identify the benefits of collaborative evaluation strategies.

#### 10:10-10:25 Break

#### 10:25-11:45 Panel Discussion: Consumer Product Injuries

Salons A-D

Deaths, injuries, and property damage from consumer product incidents cost the nation more than \$1 trillion annually. According to the Consumer Product Safety Commission (CPSC), approximitely 966,120 children from birth to 4 years of age were seen in US emergency departments for consumer product-related injuries in 2013. Consumer products used in and around the home remain an important cause of death and injury to children. The National Electronic Injury Surveillance System (NEISS), the Poison Control Center and other data sources are available to identify consumer products that result in injury. This session will explore four injuries involving products: cigarette lighters, swimming pools, microwave ovens, and liquid nicotine and will describe the injury profile of children related to these consumer products. Interventions to prevent such injuries will also be explored.

This session will enable participants to:

- 1) Describe the epidemiology of thermal burns from cigarette lighters, electrical burns from swimming pool lighting, scald burns associated with microwave ovens, and poisonings from liquid nicotine.
- 2) Discuss how surveillance systems were used to identify and define each of these pediatric injury problems.
- 3) Identify how education, engineering and enforcement strategies that could be used to prevent such injuries.

### Agenda, cont.

- 4) Describe the need to comprehensively monitor all consumer products in an effort to identify injury risks to children.
- 5) Recognize the need to comprehensively monitor all consumer products in an effort to identify injury risks to children.

Panel Discussion Moderator:	Eileen McDonald, MSPH (Baltimore) Associate Scientist & MSPH Program Director Director, Johns Hopkins Children's Safety Centers Johns Hopkins Bloomberg School of Public Health	
Presenters:		
Christine Campbell RN, BSN, MS, SANE-A, SANE-P: Flame time of cigarette lighter necessary to achieve		
temperature capable	of inflicting skin burn (Philadelphia)	
Lynn Model, MD: Swimming pool ele	ectrical injuries: steps toward prevention (Miami)	
Gina Lowell, MD, MPH: Not child's p young children (Chica	lay: national estimates of microwave-related burn injuries among ago)	
John Stack, MS4: Frequency of care	giver calls to the State Poison Control Center for liquid nicotine	
exposure (Indianapol	lis)	

11:45-1:15	Lunch
Atrium	
1:15-1:25	Introduction of Keynote Speaker: Art Cooper, MD
Salons A-D	
1:25-2:25	Keynote Speaker: David R. Fowler, MB, ChB, M. Med. Path (Forensic)
Salons A-D	"The Biomechanics of Injury"

The Biomechanics of Injury has much to offer in the field of Injury Prevention. This presentation will cover basic biomechanics of injury, with pertinent examples from everyday life that can be translated into injury prevention. During his presentation Dr. Fowler will present topics that challenge some of the conventional wisdom about how injuries occur, and why some of these issues may not be quite as simple as presented within the current literature. In the past animal models were used; currently they are often replaced with mechanical simulation. However one of the methods often ignored is the painstaking anecdotal information gathered by the forensic pathologist as part of the routine death investigation process. These data are often ignored as they are difficult to collect and evaluate as they are not scientifically controlled studies, but collections of medical records that take considerable time and effort for appropriate data extraction and analysis. However, these data are often the rich and informative sources of information for understanding about how human beings are injured, and how we can appropriately protect them as they go about their daily lives. This presentation will highlight examples from this source of data and how these data can also be potentially misinterpreted.

This session will enable participants to:

- 1) Describe the biomechanics which underlie how injuries occur.
- 2) Discuss the relationship between injury and energy.
- 3) Recognize how biomechanics informs injury prevention.
- 4) Discuss how biomechanics informs medical treatment
- 5) Discuss the use of advanced imaging in death investigation and injury documentation.

#### 2:25-2:40 Break

#### 2:40-4:00 Panel Discussion: Self-inflicted Injuries

Salons A-D

Suicide is the fourth leading cause of death among children and the third leading cause of death among youth 10 to 19 years of age in the United States with approximately 4,400 lives lost each year (CDC, 2011; Hamilton et al., 2007; Martin, et al., 2008). This session will examine trends in suicide, the correlation between the availability of firearms and suicide, and the unique opportunity physicians have to address potential suicide victims.

This session will enable participants to:

- 1) Recognize how circumstantial factors associated with suicide for youth not in mental health treatment can help adults in the lives of these youth recognize signs of potential crises and provide opportunities to connect these youth to mental health resources.
- 2) Discuss how pediatricians are in a unique and important position to screen patients at risk for suicide.

### Agenda, cont.

- 3) Recognize how there could be a correlation between gun laws, mortality rates and prolonged hospital stays in various states.
- 4) Discuss the trends in pediatric firearm injuries
- 5) Connect people at risk for suicide to mental health resources.

	Panel Discussion Moderator:	Henri Ford, MD, MPH Vice President and Chief of Surgery Children's Hospital Los Angeles Vice-Dean Medical Education
		Professor and Vice Chair for Clinical Affairs Department of Surgery, Keck School of Medicine of USC
	Presenters Suzanne McLone, MPH: Factors ass the	sociated with suicide among those adolescents and young adults not in mental health treatment at time of death (Chicago)
	Steven Rogers, MD: Confidence as Jun Tashiro, MD, MPH: Higher rates vs. strict gur	a factor in pediatrician screening and referral practices related to suicide (Hartford) of in-hospital mortality, self-inflicted injury, and prolonged hospitalization in states with lenient n control laws: a propensity score-matched analysis (Miami)
	Lawrence William Blass, MD: Higher analys	r incidence and associated mortality with self-inflicted injury between 1997 and 2012: a trend is of pediatric firearms injuries (Miami)
4:00-5:30 Salons A-D	PC Meeting	
4:00-5:30 Gulfstream A &	PI Meeting B	
6:00-7:30 Aqua Terra Ballroom	Welcome Reception (Dinner on your own)	
7:30	Board Meeting	
Saturday	November 14, 2015	
7:00-8:00 Atrium	Breakfast	
8:00-8:05 Salons A-D	Good Morning Michael Mello, MD, M	IPH
8:05-8:15 Salons A-D	Pioneer Award Presentation and Inter-	roduction of Keynote Speaker: Barbara Barlow, MD
8:15-9:00 Salons A-D	Keynote Speaker: Frederick R "Prevention of injuries to children and	ivara, MD, MPH d adolescents: where we've been and where we need to go."

Injury mortality has declined over the last 3 decades reflecting successes in injury prevention and treatment. However, injury remains the most important cause of acquired disability to children and adolescents, many old injury problems persist and new ones have joined them. Injury rates among adolescents have been the most difficult to change and will require new approaches and renewed efforts to result in long-term change. The injury control community should celebrate its success, but develop new strategies to make continued gains.

This session will enable participants to:

- 1) Discuss the changes in injury morbidity and mortality to children over last 30 years.
- 2) Describe the injury problems that persist today and new ones that have appeared.
- 3) Discuss approaches to address the aforementioned problems.
- 4) Identify the barriers to continued progress.
- 5) Recognize the importance of injuries in child global health.

9:00-9:15 Break

### Agenda, cont.

#### 9:15-10:35 Salons A-D

#### 5 Panel Discussion: Injury Free Travel for the Next 20 Years- Evaluation and Community Outreach

Years of work on child passenger safety and teen driving have led to nationwide success in reducing the burden of motor vehicle crash-related injuries and deaths. Despite this improvement, motor vehicle crashes (MVC) remain the leading cause of death for children above age 4 everywhere, and above age one in many states. The traditional car seat check relies on families to come to professionals, leaving room for additional methods of reaching out to families, and evaluation of different child passenger safety strategies has been limited. Initiatives led by national leadership of children's hospitals have highlighted the absence of child passenger safety planning and programs for children within hospital walls, and suggested a general national framework to move such planning forward. This session features exciting and innovative research that moves child passenger safety work to include a much-needed new level of evaluation, augments our efforts to take child passenger safety into the community in new ways to improve our reach to families, and provides helpful specifics to guide design and evaluation of much needed comprehensive in-hospital child passenger safety programs.

This session will enable participants to:

- 1) Discuss methods for and challenges to evaluation of parent CPS knowledge and CPS programs in the hospital, ED and community settings.
- 2) Identify opportunities and obstacles to implementation of a car seat needs assessment for children/families in the inpatient, ED and outpatient setting.
- Recognize how analysis of crash data is useful for detecting patterns of use and misuse of car seats and boosters in one type of sample.
- 4) Describe the limitations inherent in the use of any one type of data for child passenger safety program planning, and formulate a plan for the potential inclusion of other data sources.
- 5) Identify the behaviors of those who drive children in car seats and boosters, and recognize how behavior change for drivers is an important component of improving child passenger safety.

#### Panel Discussion Moderator: Susan Pollock, MD

Director, Pediatric and Adolescent Injury Prevention Program KY Injury Prevention and Research Center Coordinator, Kentucky State Safe Kids Coalition PI, Injury Free Coalition for Kids of Lexington at KCH Assistant Professor, University of Kentucky Department of Pediatrics, College of Medicine Department of Preventive Medicine, College of Public Health

#### **Presenters:**

Maria McMahon, RN, MSN, PNP-PC/AC, EMT: Evaluation of child passenger safety programs in the emergency department and inpatient units of a children's hospital (Boston) Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T: Determinants of usage of age-appropriate child safety seats in

Connecticut (New Haven)

Stanley Bray, MBA, CPS: Adapting child passenger safety presentations for various community situations (St. Louis) Kimberly L. Massey, MD: Evaluating distracted driving behaviors in parents of children in suburban and rural areas of Alabama (Birmingham)

10:35-10:50 Break

#### 10:50-12:10 Panel Discussion: Teen Driving

Salons A-D

Despite substantial improvements, motor vehicle crashes remain the leading cause of death for U.S. teens ages 14-19 years. This session features research that explores ongoing questions about how to reduce the burden of motor vehicle injury in this population. A wide range of studies including a review of behavioral factors influencing risks for teens in motor vehicles, improving methods to effectively convey prevention strategies to different populations, and clarifying how premorbid health factors influence risk for mortality will be presented.

The session will enable participants to:

- 1) Describe current teen adherence to recommendations about seat belt use, distracted driving, and impaired driving and potential strategies to improve safety.
- 2) Discuss how teen driver BMI influences risk of mortality in crashes.

### Agenda, cont.

- 3) Identify strategies to identify and deliver anticipatory guidance for teens that reflects topics with the highest risk and severity.
- 4) Identify and build on existing partnerships and community programs to increase youth exposure to teen driving safety information.
- 5) Discuss epidemiology of motor vehicle crashes for teenagers.

#### Panel Discussion Moderator: Mary Aitken, MD, MPH

Professor of Pediatrics, UAMS College of Medicine Medical Director, Injury Prevention Center at Arkansas Children's Hospital Injury Free Little Rock

#### **Presenters:**

Kathy Monroe, MD: Risky teen driving behaviors and factors influencing teens (Birmingham) Deena Liska, BA: Reaching the teen community through career and technical education (Milwaukee) Victoria Wurster Ovalle, MD: Severe unintentional injuries to Ohio children: what should we really be addressing at well-child visits? (Cincinnati) Priyanka Dhungana, MPH: The association of body mass index (BMI), mortality and restraint status for teen drivers involved in fatal motor vehicle crashes (New York)

12:10-1:30 Lunch

Atrium 1:30-2:40 Salons A-D

Panel Discussion: Injury Prevention Education for Trainees

Unintentional injuries continue to remain the leading cause of morbidity and death in children despite efforts to reduce the injury rate. The importance of injury prevention education as a means of decreasing this problem is beginning to gain momentum. This panel will address this issue by presenting some injury prevention educational methods. The first presentation will address the lack of residency training in Child Passenger Safety Training. The authors present a quick but effective means of improving pediatric intern knowledge and attitudes regarding CPS. The second presentation will discuss a program, which teaches pediatricians injury prevention principles, how to use tools in their office setting, and how to engage families to make changes in their behavior so their children are safer and injuries can be reduced. While performing this work, pediatricians can obtain maintenance of certification (MOC) credit. The next study evaluates educating medical students as a response to the 2005 AAMC report calling for improved focus on principles of injury prevention to ensure that medical professionals recognize their important role in this issue.

This session will enable participants to:

- 1) Discuss the need for increased educational tools or methods needed to improve injury prevention.
- 2) Describe a tool to increase knowledge and attitudes about child passenger safety.
- 3) Identify potential tools that can be utilized in an outpatient setting to educate families.
- 4) Discuss potential methods of engaging families in making changes in behavior to prevent injury.
- 5) Describe how to incorporate high fidelity simulation in the education of injury prevention.

#### Panel Discussion Moderator: David Juang, MD (KC)

Director, Trauma, Critical Care & Burns Children's Mercy Hospital Director, Surgical Critical Care Fellowship Program Assistant Professor of Pediatric Surgery University of Missouri-Kansas City School of Medicine

#### **Presenters:**

Dina Morrissey, MD, MPH: Child passenger safety (CPS) training for pediatric interns: Does it work? (Providence) Melissa Wervey Arnold: An educational program for physicians to teach the principles of injury anticipatory guidance and earn certification credits (Cincinnati)

S. Hope Mullins, MPH: Simulation education to promote injury prevention knowledge for medical students (Arkansas)

2:40-2:55 Break

### Agenda, cont.

#### 2:55-4:10 Panel Discussion: Identifying Gaps in Injury Prevention

Salons A-D

Injury is the leading cause of death in the United States. While momentum for injury prevention programs is on the rise, there are still many more questions than answers. This panel addresses four significant injury topics. The first will examine the difference in injury and trauma rates in urban and rural settings. The second presentation will discuss how children's hospitals provide support services to children evaluated in pediatric emergency departments for injuries from interpersonal violence. The third presentation describes an evaluation of safety environments for homeless shelters. The final presentation is the discussion of the validation of an injury prevention screening tool for families. All of these presentations attempt to reach some of the most difficult situations that keep injury prevention professionals awake at night! Please join us for a fascinating discussion.

This session will enable participants to:

- 1) Discuss the differences in injury patterns and severity in the urban and rural settings.
- 2) Examine how different children's hospitals handle victims of youth violence
- 3) Recognize homelessness as a risk factor for injury
- 4) Describe the environmental safety of family homeless shelters and discuss an intervention to improve homeless shelter safety.
- 5) Discuss how to develop and test reliability of an injury prevention screening tool.

#### Panel Discussion Moderator: Joe O'Neil, MD, MPH (Indianapolis)

Associate Professor of Clinical Pediatrics Developmental Pediatrics Riley Hospital for Children

Indiana University School of Medicine

#### **Presenters:**

Wendy J Pomerantz, MD, MS: Serious unintentional injuries to Ohio children: Is there urban/rural variation? (Cincinnati) Marlene Melzer-Lange, MD: Services to patients injured through interpersonal violence: A survey of children's hospitals (Milwaukee)

Rebekah Coelho, BS, EMT-B, CPST: Environmental safety assessments of family homeless shelters (Boston) Michael Gittelman, MD: Testing the reliability of an injury prevention screening tool between individuals within a household (Cincinnati)

5:30-6:30	Reception
Atrium	
6:30	Dinner
Salons A-D	

#### Sunday November 15, 2015

7:00-8:00	Breakfast
Atrium	
8:00-8:45	Business Meeting
Salons A-D	
3:45-9:00 Break	
0.00 0.10	Introduction of Keynote Speaker: Michael Mello, MD, MPH Roard President
Salons A-D	Introduction of Reynole Speaker. Michael Mello, MD, MI Triboard President
9:10-10:00	Keynote Speaker: Grant T. Baldwin, PhD, MPH: It Takes a "Safe" Village: CDC Perspective on Child Injury Prevention
Salons A-D	
	Dr. Baldwin will provide an overview of the CDC perspective on child injury prevention. This will include documenting the significant

Dr. Baldwin will provide an overview of the CDC perspective on child injury prevention. This will include documenting the significant causes of the burden in the United States and outlining the CDC National Action Plan for Child Injury Prevention. He will also showcase current CDC activities in the area and identify gaps in practice and research. Finally, Dr. Baldwin will discuss how greater implementation of known, effective intervention can further reduce child injury-related morbidity and mortality.

This session will enable participants to:

- 1) Describe the significant causes of the burden of childhood injuries in the United States.
- 2) Discuss several key elements of the CDC National Action Plan for Child Injury Prevention.

- 3) Describe two current CDC activities designed to reduce the burden of child injuries.
- 4) Identify one or more gaps in child injury prevention research and practice.
- 5) Discuss opportunities to improve implementation of known, effective interventions.

#### 10:00-10:15 Break

### 10:15-11:35 Panel Discussion: Research and Programs Improving the Safety of Children Conducted by the CDC Injury Control Salons A-D Research Centers

This panel will provide an opportunity for the participant to learn about the cutting edge research and programs being conducted by our national Injury Control Research Centers funded by the Centers for Disease Control. ICRC representatives will provide an overview of the research and programs being conducted at their center and provide a detailed presentation on select programs/research.

This session will enable participants to:

- 1) Describe the research being conducted at our national Injury Control Research Centers (ICRC) funded by the Centers for Disease Control.
- 2) Recognize the importance of contributions and leadership provided by ICRCs.
- 3) Discuss child traffic fatalities and how the safe routes to school program is improving the health and safety of children.
- 4) Identify the challenges of conducting anti-bullying measures in schools and the legal implications of school compliance.
- 5) Describe effective hospital based injury prevention efforts including prescription drug misuse, abuse and overdose.

#### Panel Discussion Moderator: Steve Rogers, MD (Hartford)

Attending Physician - Division of Emergency Medicine Coordinator - Emergency Mental Health Services Connecticut Childrens Medical Center Research Scientist Connecticut Childrens Injury Prevention Center Assistant Professor University of Connecticut School of Medicine

#### **Presenters:**

Guohua Li, MD, DrPH: Effectiveness of the safe routes to school program in reducing school-age pedestrian and bicyclist injury: A nationwide evaluation (New York)

Marizen Ramirez, MPH, PhD: Implementation evaluation of Iowa's anti-bullying law (Iowa City) Andrea Gielen, ScD, ScM: The Johns Hopkins Center for Injury Research and Policy: Prescription medication dangers for children (Baltimore)

#### 11:35-11:50 Break

#### 11:50-1:10 Panel Discussion: Injury Prevention Programs in our Communities: How Do They Succeed?

Salons A-D

Successful injury prevention programs rely on understanding communities' needs through data analysis, followed by careful implementation and longitudinal follow-up. Every community has different challenges, so the interventions reflect the local issues, but may be modified to fit other locales. The programs included in this panel represent four very different cities in this country, and how they made a significant impact on their communities.

This session will enable participants to:

- 1) Describe how injury prevention models are applied to pedestrian safety.
- 2) Evaluate barriers to implementation of injury prevention models and create new strategies to address these barriers.
- 3) Discuss the utility of Health Related Quality of Life as a marker for outcomes and describe how the intervention of Ujima Summer Camp improves participants' well-being.
- 4) Discuss the window fall prevention initiative in NYC as an example of a multipronged approach that can be used to address a variety of injury prevention initiatives.
- 5) Describe benefits of bedside consultation vs. post op follow up calls and explain the connection between individual bedside consult and community.

Panel Discussion Moderator: Vidya Chande, MD Medical Director Blank Children's Hospital Emergency Department Injury Free Des Moines, PI

#### **Presenters:**

Cheri Fidler, MEd: Creating safer routes to school; our 15 year journey in San Diego (San Diego) Maralene Melzer-Lange, MD: Improvement in quality of life for youth exposed to violence following summer camp intervention

(Milwaukee)

Joyce Pressley, PhD, MPH: The fifty year lifecycle of window falls and window fall prevention in New York City (New York) Alicia Hammonds-Reed, MPH: Limiting pediatric injury recurrence through bedside consult programs (Los Angeles)

1:30 Box Lunch Atrium (Shuttles to Beach)

#### Accreditation

#### CHES

Sponsored by Cincinnati Children's, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to 15.5 total Category 1 contact education contact hours. Maximum advanced-level continuing education contact hours available are 0.

#### **Continuing Medical Education**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Cincinnati Children's and the Injury Free Coalition for Kids at the Center for Injury Epidemiology and Prevention, Mailman School of Public Health, Columbia University. Cincinnati Children's is accredited by the ACCME to provide continuing medical education for physicians. Cincinnati Children's designates this live activity for a maximum of 16.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### Disclosure

Cincinnati Children's requires all clinical recommendations to be based on evidence that is accepted within the profession of medicine and all scientific research referred to, reported or used in support of or justification of patient care recommendations conform to the generally accepted standards of experimental design, data collection and analysis. All faculty will be required to complete a financial disclosure statement prior to the conference and to disclose to the audience any significant financial interest and/or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in his/her presentation and/or commercial contributor(s) of this activity. All planning committee members and/or faculty members were determined to have no conflicts of interest pertaining to this activity.

#### Acknowledgements & Disclosures

Mary Aitken, MD, MPH Grant T. Baldwin, PhD, MPH Lawrence William Blass, MD Stanley Bray, MBA, CPS Christine Campbell RN, BSN, MS, SANE-A, SANE-P Vidya Chande, MD Rebekah Coelho, BS, EMT-B, CPST Art Cooper, MD Carolyn Cumpsty-Fowler, PhD, MPH Priyanka Dhungana, MPH Cheri Fidler, MEd Henri Ford, MD David R. Fowler, MB, ChB, M. Med. Path (Forensic) Dawne Gardner, MPH Andrea Gielen, ScD, ScM Michael Gittelman, MD Alicia Hammonds-Reed, MPH David Juang, MD Guohua Li, MD, DrPH Deena Liska, BA Gina Lowell, MD, MPH Kimberly L. Massey, MD Eileen McDonald, MSPH Suzanne McLone, MPH Maria McMahon, RN, MSN, PNP-PC/AC, EMT Michael Mello, MD, MPH Marlene Melzer-Lange, MD Kathy Monroe, MD Dina Morrissey, MD, MPH S. Hope Mullins, MPH Joe O'Neil, MD, MPH Susan Pollock, MD Wendy J Pomerantz, MD, MS Joyce Pressley, PhD, MPH Marizen Ramirez, MPH, PhD Frederick Rivara, MD, MPH Steven Rogers, MD John Stack, MS4 Jun Tashiro, MD, MPH Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T Melissa Wervey- Arnold, BS Victoria Wurster-Ovalle, MD

### Celebrate, Collaborate, Continue the Journey...

### 20 Years of Forging New Frontiers in Childhood Injury Prevention

The 2015 Annual Conference of the Injury Free Coalition for Kids® November 13-15, 2015

#### ACKNOWLEDGEMENT

#### This conference is supported by

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#### DISCLOSURE

Cincinnati Children's requires all clinical recommendations to be based on evidence that is accepted within the profession of medicine and all scientific research referred to, reported or used in support of or justification of patient care recommendations conform to the generally accepted standards of experimental design, data collection and analysis. All faculty will be required to complete a financial disclosure statement prior to the conference and to disclose to the audience any significant financial interest and/or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in his/her presentation and/or commercial contributor(s) of this activity. All planning committee members and/or faculty members were determined to have no conflicts of interest pertaining to this activity.





Celebrate, Collaborate, Continue the Journey...

# 20 Years of

### Forging New Frontiers in Childhood Injury Prevention



# ABSTRACTS

REVENTION MESSAGE

# Flame time of cigarette lighter necessary to achieve temperature capable of inflicting skin burn

Maria McColgan, MD, Svetlana Harel, DO, Brooke Burkey, MD, Christine Campbell RN, BSN, MS

#### Background:

Up to 20% of burn injuries are non-accidental. Cigarette lighters are frequently used in non-accidental contact burns, leaving a characteristic burn pattern on the skin. A history of accidental burn is often offered. To differentiate accidental from inflicted burns, the time and temperature needed to cause thermal injury has been studied with water and irons. This study examines the time needed to heat a cigarette lighter to a temperature capable of inflicting a skin burn.

#### Methods:

We conducted a literature search to establish the time and temperature at which partial or full thickness skin burns are acquired, regardless of the vector used. We analyzed results from multiple studies on scald burns and electrical iron burns. Using a Raytech heat gun, a local fire department measured the time and temperature of the metal on a red ACE lighter and a green BIC lighter at ten second intervals while sustaining a flame at maximum and the cooling temperatures at 10 seconds intervals once the flame was extinguished.

#### **Results:**

Our literature search showed that the lowest temperature required to cause partial thickness burns in one second ranged from 55oC to 80oC (131oF to 176oF). The lowest temperature required to cause full thickness burns in one second was 60oC to 98oC (140oF to 208.4oF). The studies we reviewed included both scald burns and iron burns inflicted on both human and animal skin. Our field studies showed that from an initial temperature of the lighter prior to flame ignition of 24.6oC (76.3oF), it took approximately 60 seconds for the lighter temperature to reach 55oC (131oF) using a red ACE lighter and 50 seconds using a green BIC lighter. After reaching the maximum temperature of 80oC (176oF), at 130 seconds for the Green BIC lighter and 140 seconds for the red ACE lighter, the lighters were shut off. It then took less than 10 seconds for the green BIC lighter and approximately 10 seconds for the red ACE lighter to cool down to less than 55oC (131oF).

#### Conclusions:

Cigarette lighter contact burns are often blamed on accidental occurrences. Our study shows that it takes at least 60 seconds to heat a cigarette lighter to a temperature capable of inflicting a partial or full thickness skin burn. Furthermore, the lighter cools down quickly. This time is likely longer than the time required to light a cigarette. Therefore, for a cigarette lighter to inflict a contact burn injury, there needs to be intent and preparation, making accidental cigarette lighter burns unlikely.

#### Objectives:

Attendees will learn:

1. How to define the time needed to heat a lighter to inflict a burn wound pattern.

2. To recognize the lowest temperature required to inflict a burn wound pattern.

3. To describe of the significance of burn patterns in identifying non-accidental trauma.

### Swimming pool electrical injuries: steps toward prevention

Jun Tashiro, MD, MPH, Cathy Burnweit, MD

#### Background:

Recent events in South Florida highlight electrical injuries in swimming pools as an important pediatric public health concern. Faulty pool light wiring led to the cardiac arrest and death of a young boy in April 2014, followed closely by the non-fatal electrocution of multiple children at a condominium pool. While private and community pools often have high-voltage pool lights installed underwater, guidelines for routine inspection of wiring remain lax and largely unregulated. A PubMed query found no articles describing the magnitude of the problem or any potential interventions directed toward prevention. We sought to perform an analysis to improve our understanding of swimming pool electrical injury.

#### Methods:

The National Electronic Injury Surveillance System (NEISS) is a surveillance database sponsored by the U.S. Consumer Product Safety Commission (CPSC). We searched emergency department (ED) visits for electrical injury (injury code 67) associated with swimming pools (product codes 1284, 3221, 3251) occurring in children <18 years of age. We defined the study period as 1991-2013. Cases were weighted to project national estimates.

#### Results:

A total of 566 cases of pediatric swimming pool-related electrical injury were reported in the U.S., between 1991 and 2013. Mean ( $\pm$  standard deviation) age at time of injury was 9.2  $\pm$  4.1 years. Injury occurred more frequently in girls (59.9%). Patients were mostly treated and released from the ED (91.8%), while hospitalization occurred in 8.2%. When stated in the ED record (n=440), injuries occurred most frequently at

home pools (57.0%), followed by public pools (23.9%), and sports facilities (19.1%). The source of electrical injury varied; electrical outlets or receptacles (29.4%) were most commonly implicated, followed by electric wire or wiring systems (12.5%), thermostats (12.1%), hair dryers (3.4%), and radios (2.9%). Notably, over this period pediatric cases represented 48.4% of swimming pool-related electrical injuries reported to NEISS.

#### Conclusions:

Electrical injuries occurring in and around swimming pools remain an important and often overlooked source of morbidity and mortality in the United States. Children represent approximately half of all injuries and incidents principally occur at home pools. While most patients are treated and released from the ED, a significant number of children are hospitalized and require additional care. While fatal events are rare none were reported to the NEISS database during our study period - at least two pediatric electrocution deaths were reported in the mainstream media in 2014, our case in Miami and one in Houston. Interventions must be designed toward primary prevention. While CPSC monitors sentinel events, current efforts at preventing such cases are inadequate. The primary approach would be strengthening regulations regarding inspection of electrical equipment installed in pools, although increasing public awareness and parent and community education could also assist in decreasing this type of injury.

#### **Objectives:**

Attendees will learn:

1. To understand the incidence of swimming poolrelated electrical injuries.

2. To describe the mechanism and potential sources of electrical injuries, specifically related to swimming pools and associated activities.

3. To discuss potential methods of injury prevention to avoid pool-related electrical injuries.

# Not child's play: national estimates of microwave-related burn injuries among young children

Gina Lowell, MD, MPH, Kyran Quinlan, MD, MPH

#### Background:

Scald burns are the leading cause of burn-related visits to the emergency department and hospitalizations for children aged under 5 years. Previous studies have shown that children as young as 18-months-old can open a microwave and remove its contents. Though this mechanism may be uniquely preventable by an engineering fix, there has been no published report of the national estimate of this type of child burn injury. The objective of our study was to provide national estimates of emergency department-treated burns to young children sustained after opening microwave ovens themselves.

#### Methods:

We analyzed the Consumer Product Safety Commission's National Electronic Injury Surveillance System data on emergency department-treated microwave-related burn injuries from January 2002 through December 2012 in children aged 12-months to 4-years. Using the 2-line injury narrative, we classified burns as being 1) definitely, 2) probably, or 3) possibly caused by the child opening the microwave and burning themself. If the narrative explicitly described another mechanism of injury, the case was classified as 4) other. A case was defined as a burn with a mechanism of either definite or probable. National estimates of cases were calculated. Cases were characterized by age, sex, body part, and scalding substance.

#### Results:

Over the 11-years studied, an estimated 10,902 (95% CI (8,231-13,573)) microwave-related burns occurred in children aged 12-months to 4-years. Of these injuries, 7,274 (66.7%) (95% CI (5,135-9,413) were cases of children burned after accessing the contents of the microwave themselves. A total of 1,124 (15.5%) cases required hospitalization or transfer from the treating ED. Cases were evenly distributed by sex and age: 1,425 12-23-month-olds, 2,048 2-year-olds, 1,742 3-year-olds and 2,059 4-year-olds. The narrative for children as young as 12-months-old described the child being able to access microwave contents themselves. The most commonly burned body parts were the upper trunk (3,056 cases) and the face (1,039 cases). The most common scalding substances were water (2,863 cases), noodles (1,011 cases) and soup (931 cases).

#### Conclusions:

The majority of microwave related burns in young children occur as a result of the child accessing the microwave and removing the contents themselves. We estimate approximately 600 young children are treated in US EDs annually for such burns which not infrequently involve the face. Children as young as 12-months-old sustained burns due to this mechanism of injury. These burns could be prevented with a minor redesign of microwaves to thwart young children from being able to open the microwave oven door.

#### Objectives:

Attendees will learn:

1. About the recent epidemiology of child scald burns in the United States.

2. To recognize the specific pattern of scald burns that occur when young children are able to open the

microwave oven door and remove and spill the heated substance on themselves.

3. To understand the preventability of the majority of microwave-related scalds with an engineering design change that makes it harder for young children to open a microwave oven door.

### Frequency of caregiver calls to the state poison control center for liquid nicotine exposure

John Stack, MS4, Joseph O'Neil, MD, MPH

#### Background:

The use of electronic nicotine delivery systems has greatly increased in popularity. These nicotine delivery systems require the user to refill the device with liquid nicotine. The nicotine product is often candy or fruit flavored to appeal to a young age group. They are packaged in non-child proof containers of various concentrations. The combination of easy to access packaging and enticing flavors place young children at risk for unintentional poisonings. This study reviews poison control center data for an increase in calls regarding liquid nicotine exposure.

#### Methods:

Data was obtained from the State Poison Control Center (PCC) between 2011 and June 2014. Data set included frequency of caregiver calls to the control center for liquid nicotine exposure. Data collected included patient's age, date and time of call. The frequency of exposures were analyzed for children 5 years of age or younger for each year. Further data will be obtained for gender, relationship of caller to the child, time of exposure, circumstances surrounding exposure including location and description of the nicotine source, and whether or not the child was admitted to the emergency department or managed at home.

#### **Results:**

Between the years of 2011 and June 2014, the frequency of phone calls to the PCC for nicotine exposure to children five years and younger were 7 in 2011, 6 in 2012, 19 in 2013, and 37 in 2014. The majority of exposures were among toddlers 12 to 35 months of age. There was no variation by month of exposure. The percentage of children exposed to nicotine by nicotine containing liquid compared to leaf-tobacco products has increased from 6% in 2011 to 31% in 2014.

#### Conclusions:

Our study demonstrated that calls to PCCs for liquid nicotine exposure have increased greatly over the last three years. A large proportion of childhood exposures were among children 12-35 months of age. Electronic cigarettes are becoming increasingly popular, and nicotine exposures due to these has also increased. Ingestion in young children is potentially fatal or could cause significant side effects, including vomiting, tachycardia, lethargy, seizures, and respiratory distress. Lack of regulation in terms of concentration, packaging and distribution of liquid nicotine products may place young children at risk. Parents and caregivers who use these products need to be made aware of the risk of toxic exposure to liquid nicotine. Also legislation that mandates child proof packaging or changes to nicotine content or liquid viscosity may prevent unintentional exposures to nicotine products.

#### **Objectives:**

Attendees will learn:

1. To understand that electronic cigarettes are becoming increasingly popular among young people which may lead to unintentional exposure to nicotine by children.

2. To review the signs and symptoms of nicotine exposure and how to prevent unintentional nicotine ingestion.

3. To discuss possible methods to improve packaging, concentration, viscosity of liquid nicotine to minimize risk of harm to young children.

#### Factors associated with suicide among those adolescents and young adults not in mental health treatment at the time of death

Suzanne McLone, MPH, Maryann Mason PhD, Rebecca Levin, MPH and Karen Sheehan, MD

#### Background:

Suicide is the third-leading cause of death among Illinois youth aged 15 to 24 (WISQARS, CDC, 2013). The Illinois Violent Death Reporting System (IVDRS) was developed to help prevent these deaths by providing policy makers with timely, complete data, which includes the circumstances surrounding each suicide. Understanding circumstantial factors associated with suicide for youth not in mental health treatment can help adults in the lives of youth recognize signs of potential crises and provide opportunities to connect these youth to mental health resources.

#### Methods:

Data were collected from coroner/medical examiner and law enforcement reports for five Illinois counties— Cook, DuPage, Kane, McHenry and Peoria—from 2005 to 2010 using National Violent Death Reporting System software and protocols. All cases in which suicide was the manner of death and with victims between the ages of 15 to 24 were extracted for analysis. Frequency and descriptives procedures were used to analyze these data.

#### **Results:**

Data include a total of 153 cases for 15 to 19 year olds and 233 for 20 to 24 year olds who died by suicide between 2005-2010. Most 15 to 19 year-olds (67%) and 20 to 24 year-olds (78%) were NOT receiving mental health treatment at the time of their death from suicide. Twenty-two percent of these 15 to 19 year-old suicide victims had disclosed their intent to commit suicide to another while 13% of those aged 20 to 24 had disclosed their intent to commit suicide to another. Almost one third of these 15 to 19 year old and 20 to 24 year old suicide victims were identified as being depressed or in a depressed mood (not necessarily a clinical diagnosis) at the time of their deaths. Approximately one-guarter of these 15 to 19 year-old and 20 to 24 year-old suicide victims had experienced a crisis (current, acute precipitating event) within two weeks of their suicide.

#### **Conclusions:**

Most of the youth who died by suicide were not receiving mental health treatment at the time of their death. This suggests that youth are under served in terms of mental health treatment in Illinois. Depression, depressed mood and/or experiencing a crisis are signs that youth not in mental health treatment are at risk of suicide and should be taken seriously. However, in most cases of youth suicide, depression, depressed mood or experiencing a crisis were not present. Those close to youth should be aware of this and not limit concerns to those exhibiting these signs.

While most of the youth who died by suicide did not disclose intent to commit suicide to another person, a sub-group did. Helping those to whom suicidal intentions are disclosed, especially among those disclosed to by adolescents, understand what to do with the information shared is needed to better connect those at risk of suicide to needed services.

#### **Objectives:**

Attendees will learn:

1. To use of the National Violent Death Reporting System for investigating circumstances surrounding youth suicide deaths.

2. How most Illinois youth 15 to 24 years of age who die by suicide are not in mental

health treatment at the time of their death.

3. Recognize most Illinois youth 15 to 24 years of age who were not in mental health treatment at the time of their suicide did not disclose intent to commit suicide, or show signs of depression or depressed mood or crisis during the two months prior to their suicide.

### Confidence as a factor in pediatrician screening and referral practices related to suicide

Kevin Borrup, JD, MPA; Meghan Wilson, MPH; Garry Lapidus, PA-C, MPH, Steven Rogers, MD

#### Background:

Suicide is a significant public health concern among children and adolescents. Suicide is the fourth leading cause of death among children and the third leading cause of death among youth 10 to 19 years of age in the United States with approximately 4,400 lives lost each year (CDC, 2011; Hamilton et al., 2007; Martin, et al., 2008). Pediatricians are in a unique and important position to screen patients at risk for suicide. Up to 83% of children and/or adolescents who have attempted suicide have had contact with a primary care physician within a year of their death and 66% within a month (Andersen, Andersen, Rosholm, & Gram, 2000; Luoma, Martin, & Pearson, 2002).

#### Methods:

The primary objective of this study is to examine pediatrician attitudes, practices, and barriers with regard to intervening to reduce child and adolescent suicidal behavior. This study involves primary, crosssectional data collection with pediatricians across the state of Connecticut. Data was obtained from a paper survey sent to a sample of pediatricians who have an address registered with the Connecticut Chapter of the American Academy of Pediatrics.

Descriptive data was collected describing demographic characteristics of the population (e.g., age, gender, race, professional training, primary practice site), attitudes, knowledge, intervention practices, and barriers to working with children and youth reporting suicidal ideation. Primary outcomes consist of responses to questions assessing attitudes, practices, and barriers of pediatric practitioners. Responses were scored on a Likert-type rating scale. Secondary outcomes include identifying practice patterns for pediatricians when assessing children and youth at risk for suicide to better inform education and training programs.

#### Results:

59% (95/162) of pediatricians surveyed returned a completed survey. 77% agree that suicide is a problem among their patients. 60% agree that they are confident in their ability to assess risk factors for suicide. Less than half always screen for suicidal ideation. Nearly 36% always develop a safety plan with patient families (lock up or remove lethal means). Prior suicide attempt was identified as the most important suicide risk factor. Patients were referred to the Emergency Department more often than to Emergency Mobile Psychiatric

Services (EMPS is an in-home acute mental health crisis management provided by the state). Comparing pediatricians who reported being confident in their ability to assess for suicide risk factors and those reporting less confidence, the more confident group were more likely to: always screen (58% v. 26%); always refer to EMPS (26% v. 13%); and, always refer to the Emergency Department for immediate evaluation (32% v. 16%). Of pediatricians who always screen for suicidal ideation, 83% follow-up on mental health referrals compared to 64.7% of pediatricians who do not always screen for suicidal ideation.

#### Conclusions:

Significant gaps exist between screening/counseling guidelines and practice. Suicide prevention efforts should focus on building pediatrician confidence including subject matter competence and screening/ counseling capacity.

#### **Objectives:**

Attendees will learn:

1. To Identify attitudes and current practice trends among pediatricians in the state of Connecticut regarding the care of patients reporting suicidal ideation.

 To Understand practice barriers as reported by pediatricians in the state of Connecticut regarding the care of patients reporting suicidal ideation.
 To describe the relationship between perceived confidence and practice behaviors.

#### Higher rates of in-hospital mortality, selfinflicted injury, and prolonged hospitalization in states with lenient vs. strict gun control laws: a propensity score-matched analysis

Jun Tashiro MD, MPH, Eduardo Perez MD, Juan Sola, MD

#### Background:

Gun control laws vary greatly between states within the United States. Strict states such as California require licensing and a waiting period, while Florida has enacted a medical "gag" law to protect the second amendment. We hypothesized that states with strict gun laws have lower mortality and resource utilization rates resulting from pediatric firearm-related injury admissions.

#### Methods:

Kids' Inpatient Database (1997-2009) was searched for accidental (E922), self-inflicted (E955), and legal intervention-related (E970) firearm injuries. Patients were <20 years of age and admitted for their injuries. Propensity score (PS)-matched analyses were performed using 38 demographic, clinical, and comorbidity covariates to compare outcomes between states with strict or lenient gun control laws. States were defined as strict or lenient using the Brady Campaign grading method. Cases were weighted to project national estimates. Transfers to other hospitals were excluded to avoid duplicate data.

#### Results:

Overall, 11131 cases were identified, with an overall mortality of 9%. Median age was 15 (IQR: 1) years. Patients were most frequently male (86%), African American (44%), insured (75%), and presented to nonchildren's hospitals (95%). Firearm injuries were most commonly accidental (86%), followed by self-inflicted (11%), and legal intervention-related (3%). A small minority involved military-grade weapons (0.2%). Most cases occurred in lenient gun control states (62%), followed by strict (31%), and neutral (7%). On 1:1 PS-matched analysis, in-hospital mortality by case was significantly higher in lenient (11%) vs. strict (7%) states, p<0.001. Lenient states had a proportionally higher rate of self-inflicted injury (15%) vs. strict states (8%), p<0.001. Military-grade weapons were more common in lenient (0.5%) vs. strict (0.1%)states, p=0.014. Length of stay (days) per admission was longer in lenient  $(6.1\pm9.4)$  vs. strict  $(5.0\pm7.8)$ states, p<0.001. Cost (USD) per admission did not differ significantly.

#### **Conclusions:**

On a PS-matched analysis of firearms injuries across the US using a population-based database, cases occurring in states with lenient gun control laws differ on several endpoints when compared to strict states. These findings highlight the importance of legislative measures and their role in injury prevention, as firearm injuries are entirely avoidable mechanisms of injury. The higher rate of self-inflicted injury is directly suggestive of the need to reassess current measures that allow for a wide availability of firearms. In association, higher rates of mortality, prolonged hospitalizations, and military-grade weapons use reveal that lenient gun control not only contributes to worse outcomes per case, but also a more significant and detrimental impact on public health.

#### **Objectives:**

Attendees will learn:

1. To describe methods used to "grade" gun control laws, and understand how standards differ between states within the US.

2. To identify differences in outcome when states are stratified by leniency of gun control laws.

3. To discuss forces affecting differences in gun control laws between states.

#### Higher Incidence and associated mortality with self-inflicted injury between 1997 and 2012: a trend analysis of pediatric firearms injuries

Jun Tashiro, MD, MPH, Eduardo Perez, MD, Juan Sola, MD

#### Background:

Firearms are an important source of avoidable injury within the pediatric population. The legislature regulating firearms and consequently, the availability of firearms, have changed over time. We hypothesized that the patients affected by, and outcomes associated with, firearm injuries have changed in recent decades.

#### Methods:

Kids' Inpatient Database (1997-2012) was searched for accidental (E922), self-inflicted (E955), and legal intervention-related (E970) firearm injuries affecting children <20 years of age. All patients were admitted for their injuries; cases transferred to other hospitals were excluded to avoid duplicate data. Cases were weighted to project national estimates. Trends were compared using chi-square for linear trends or analysis of variance for categorical and continuous variables, as appropriate.

#### **Results:**

Overall, 11131 cases were identified with a 9% mortality rate. Case incidence followed a downward trend through the study period, from 1997 (2301 cases) to 2012 (1432 cases). Demographics changed in the same period, as female patients declined from 19% to 14%, and Hispanic patients increased from 14% to 18%, whereas Caucasians decreased from 38% to 33%, p<0.02. Uninsured cases declined from 19% to 15%, p=0.035. Meanwhile, length of stay and cost of admission did not differ significantly. In the study period, accidental injuries declined from 89% to 86%, whereas self-inflicted and legal intervention-related injuries increased proportionally, p<0.001. Cases involving handguns declined from 71% to 65% among accidental cases, p<0.001.

Overall mortality rates did not change significantly over the same period. Mortality associated with self-inflicted injury increased from 39% to 54%, p<0.001. Shotgun injury mortality rates increased from 1% to 2%, p=0.02.

#### **Conclusions:**

On an analysis of trends using a large, population-based database, the demographics of patients affected by firearm injuries have changed over time. Additionally, the types of firearms-related injuries have evolved, with self-injurious behavior becoming a more common intent within recent years. Simultaneously, selfinflicted injuries have become increasingly fatal. This finding is significant, as this type of injury is directly associated with gun availability. Thus, a combination of legislative measures directed toward more strict regulatory standards and home-based injury prevention interventions are likely to have the most significant impact on this growing public health concern.

#### **Objectives:**

Attendees will learn:

1. To describe specific differences in the trends of firearm-related injuries over time.

2. To organize concepts associated with self-injurious behavior and firearm availability.

3. To discuss potential public health intervention measures to improve injury prevention.

#### Evaluation of child passenger safety programs in the emergency department and inpatient units of a children's hospital

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#### Background:

The American Academy of Pediatrics recommends car seats and booster seats to be used for children < 8-12 years old and less than 57 inches when in a motor vehicle. In the state of Massachusetts the laws require children < 8 years old and less than 57 inches to be restrained in a car seat or booster seat. Hospital programs can be important sources of child passenger safety (CPS) information, and they can also provide child safety seats to those in need.

In 2010 we established a CPS program on the inpatient units, and in 2011 we established one in the emergency department (ED). In the inpatient unit, CPS screening is a voluntary computerized field completed during the initial nursing assessment and recorded in the medical record. In the ED it is a mandatory computerized field in the initial nursing assessment. Child safety seats are distributed if a need is identified. The objective of this program evaluation is to analyze compliance with the CPS nursing screening in the inpatient and ED setting and to describe patterns of car seat distribution over the time periods of the programs.

#### Methods:

This is a retrospective record review of children < 8 years old screened for CPS needs at a tertiary care children's hospital. Records for children in the inpatient units and those discharged from the ED were reviewed from August 1, 2011 through December 31, 2014. Frequencies of car seat screenings and child safety seat distribution by type of seat were calculated. We conducted Poisson regression to analyze CPS screening over time.

#### **Results:**

From 2011-2014, 27% (7,179/26,967) of children< 8 years old admitted to the inpatient unit had CPS nursing screening completed. Of those screened, 3.7% (265/7,179) needed a car seat for discharge home. Of children discharged from the ED, 77% (89,182/115,601) had CPS nursing screening completed, with 93% (31,112/33,537) screened in 2014. Among those screened, 2.0% (1,746/89,182) did not have a car seat for discharge home. Through the two CPS programs 116 seats were distributed in 2013 (4 infant, 25 convertible, 16 combination, 18 boosters, 29 Hippos, 7 car beds, and 17 vests) and 155 in 2014 (5 infant, 49 convertible, 12 combination, 26 boosters, 33 Hippos, 10 beds, 20 vests). Poisson regression revealed increased CPS screening in the ED (p < 0.0001), but not in the inpatient units over time.

#### Conclusions:

Inpatient and ED CPS programs with computerized nursing screening may be useful to assess patients < 8 years old for CPS needs. Increased compliance was observed in the ED with the mandatory computerized nursing assessment field. Various types of child safety seats can be provided as the need is determined, including specialty car seats for children.

#### **Objectives:**

Attendees will learn:

 To understand the importance of program evaluation for hospital based child passenger safety programs.
 To describe the types of child safety seats needed for patients served by hospital based child passenger safety programs.

3. To Illustrate differences in compliance by types of computerized screening for child passenger safety.

### Determinants of usage of age-appropriate child safety seats in Connecticut

Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T

#### Background:

Motor vehicle crashes(MVCs) remains one of the leading causes of unintentional injury death and disability for children ages 1-15 years. Despite local, state, and federal legislative and educational efforts, children continue to be restrained improperly and thus face harm. Identifying behaviors and barriers that place child occupants at risk is crucial for implementing focused, injury-prevention programs and policies. The purpose of this study was to evaluate the effectiveness of Connecticut's child passenger safety law that was strengthened in 2005.

#### Methods:

A descriptive, cross-sectional, retrospective, quantitative study was conducted utilizing the Connecticut Crash Data Repository (CTCDR). This study involved a multifactorial approach to predicting car seat use, guided by Roger's diffusion of innovations as the theoretical framework. The time period of January, 2000 to December, 2010 was studied to allow for adequate evaluation of the law five years preregulation and five years post-regulation. From 2002-2012 there were roughly 988,976 MVC that occurred on Connecticut roadways. Of these, 67,700 MVCs involved a child age 6 or less. A logistic regression analysis was conducted to determined if there was a difference in the prevalence of car seat use before as compared to after law implementation and identified variables that best predicted the use of car seats and premature transition to a seatbelt.

#### **Results:**

Car seat use was 1.3 times more likely post law (OR 0.75; 95% CI: 0.65-0.86) and that in particular, children ages 4, 5, and 6 (combined)were most positively affected by the law (OR 0.67; 95% CI 0.54-0.82). Driver sex, crash time of day, child age, and child seating position were all determined to be significant predictors of whether or not a child was in a child safety seat. Additionally, these variables were also determined to be predictors of early transition to use of a lap/shoulder belt (versus child seat). The social change implication of this study is that identifying predictors of car seat use and early transition helps to formulate and implement injury prevention measures that could in turn help to decrease medical costs, save lives, and prevent injuries.

#### Conclusions:

This study establishes significant predictors of CSRS use and early transition to a seat belt that could lead

to targeted interventions and a positive impact on the health and well-being of Connecticut's children. In addition, the study confirms that Connecticut legislation is effective, that is children under the age of 6 are being placed in CSRS at a great rate after the law went into effect; in particular, the 4, 5 and 6 year olds. Now that predictors of CSRS use have been identified, focused morbidity and mortality prevention efforts can be implemented that will ultimately decrease medical costs, save lives, and prevent injuries. Ensuring the proper use of an age and size appropriate CSRS has the potential to drastically reduce the number of children seriously injured or killed in MVCs, as well as decrease the associated healthcare and societal costs of these injuries and deaths.

#### Objectives:

Attendees will learn:

 To recognize car seats as an important safety tool to protect children transported in motor vehicles.
 To understand that there are several variables that best predict car seat use and early transition to a seat belt.

3. To see why Connecticut legislation is effective.

### Adapting child passenger safety presentations for various community situations

Stanley Bray, MBA, CPS, Catherine Rains, MPH, Kel Ward, BS

#### Background:

Motor vehicle crashes are still the number one killer of children between the ages of 1-19. In 2011, more than 650 children ages 12 years and younger died as occupants in motor vehicle crashes and more than 148,000 children in this age range were injured in car crashes. Car seat use reduces the risk for death to infants by 71%; and to toddlers (aged 1-4) by 54% in passenger vehicles. The lack of knowledge of how to choose, install and correctly use the components of a car seat can contribute to the increase of injury in accidents. Many pediatric hospitals (including St. Louis Children's Hospital) have implemented Safety Resource Center models to provide education and resources for child passenger safety. However, this relies largely on parents or caregivers having the ability to get themselves to the center and take time to go through the training. In an effort to facilitate the learning process, two Child Safety Seat presentations were created to inform and the other two train on car seat use. The advantage is that we have captive audiences who are interested in the information. We travel throughout the major metropolitan area, making it easier to talk to a group of people at one time.

How can we develop a program or intervention that will present the basic understanding of car seat safety? How can we measure the community's knowledge of car seat competency? How does this information frame the SLCH's activities in reference to car seat safety?

#### Methods:

SLCH's Safety Stop technicians created two presentations: parent presentation (one hour long, informative) and staff training (one and a half hour long, hands-on). Depending on the attendance, the presentations are held in a conference room or auditorium, equipped with laptop and screen. The participants receive a folder with basic car seat information to be used as a reference. The PowerPoint presentation covers: what is a car seat, the components of car seats, the different types of car seats and best practices. The presentation is facilitated by a Certified Passenger Safety Technician that matriculated through a rigorous three-day curriculum developed by National Highway Traffic Safety Administration and noted safety experts.

Before each presentation, each community participant is asked to complete a pre-test to measure their knowledge of car seat use and safety. After the presentation explains the basic concepts of car seat safety, the participants are given a posttest to measure their increase in knowledge and understanding.

#### **Results:**

Since program inception, ninety-one participants completed the pre-test and 92 participants completed the post-test. Independent t-test was conducted using SPSS 19.0. The percent of participants answering correctly increased for each question (<.001) and the average total score on the post-test was 35 percentage points higher than the pre-test (<.001).

#### Conclusions:

Results demonstrate that the Child Passenger Safety classes are providing and improving the understanding of best practices for car seat safety and processes. This presentation will discuss the key components of evaluating the effectiveness of child safety seat presentations and how to assess knowledge of child passenger safety for parents, caregivers, and staff that transport children. The presentation will also discuss best practices in implementation of an evaluation tool and challenges presented in assessing child safety seat knowledge.

#### Objectives:

Attendees will learn:

1. To recognize key components of child passenger safety presentations and best practices.

2. To discuss how age, weight and height affect which car restraint to use.

3. To discuss lessons learned in implementing a safety center evaluation tool.

# Evaluating distracted driving behaviors in parents of children in suburban and rural areas of Alabama

Kimberly Massey, MD, Shruti Kant, MD, William King, RPH, DrPH, Linda Roney, MSN, RN-BC, CPEN, Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T, Kathy Monroe, MD, William Justice MS4, Kristen McFalls, MS4

#### Background:

Distracted Driving is a dangerous epidemic. Cell phone use, such as talking and texting, is one of the most common driving distractions. Using the model of a previously published study from New Haven Connecticut, we sought to investigate the talking and texting behaviors of parents/caregivers with children less than 18 years of age, while transporting their children in a southern state. We also compared the frequency of these behaviors between parents from suburban areas and those from rural areas.

#### Methods:

A comparison study was conducted of 150 participants from suburban (N=86) and rural (N=64) clinics in Alabama. Participants were recruited to complete a survey regarding their cell phone usage while driving with children. The inclusion criteria were having children less than the age of 18; a valid driver's license; cell phone and English speaking. The survey consisted of 10 questions focusing on parental driving behaviors. Following the survey an educational intervention was provided. A z test proportions was used to compare the responses between the two areas.

#### **Results:**

90% of the suburban parents (SPs) reported cell phone use while driving their children as compared to 86% of the rural parents (RPs). A significant difference was found between SPs and RPs for cell phone use in speaker mode (Z=3.35: P<0.001: 95%CI 13,45) reading and sending texts while driving (Z=4.1: P<0.001:95% CI 19,51), and surfing the internet (Z=4.9: P<0.001: 95% CI 25,57). There was no statistical significance noted for the following activities: use of Bluetooth device, talking on the cell phone at a red light or when parked, texting while parked or at a red light.

#### Conclusions:

Cell phone use among parents/caregivers while transporting children in motor vehicles is common in Alabama. Parents living in suburban areas use cell

phones in the speaker mode, read and send text messages, and surf the web more often as compared to parents in rural areas while children are in the car. Further research on how to best implement injury prevention interventions should be done to target highrisk areas with distracted driving behaviors.

#### Objectives:

Attendees will learn:

- 1. To discuss risks of distracted driving.
- 2. To discuss unsafe driving behaviors among parents.

3. To compare distracted driving behaviors of suburban and rural populations.

### Risky teen driving behaviors and factors influencing teens

Elizabeth Nichols, William Hardwick, BS, Victoria Lawson, William King RPH, DrPH, Michele Nichols, MD, Kathy Monroe, MD

#### Background:

Alabama remains in the top five states with the highest teen driving mortality1. Teen drivers participated in a questionnaire regarding high risk driving behaviors. Factors (parental / physician conversations, parental/ friend behaviors, driving contracts and driving education classes) were analyzed for their association with driving behaviors.

#### Methods:

Teens were recruited from a large county school system to participate in a voluntary anonymous survey. Questions were taken in part from the National Youth Risk Behavior Survey. Descriptive statistics and Odds Ratios with 95% Confidence Intervals were calculated using True Epistat®

#### **Results:**

A total of 1024 teen drivers participated (46% male; 47% African American, 39% Caucasian; 0.6% latino and 13% other). Seat belt use: (1014 respondents) : 526 students (52%) reported inconsistent seat belt use. Driver's education class students had a 70% higher odds of wearing seatbelts vs those who had not taken driver's education class (0.R. =1.7; CI (1.3, 2.2)). Caucasian students had 60% higher odds of wearing seat belts than other races (0.R.=1.6; CI (1.2, 2.2)). Students whose parents wore seatbelts had 3.2 times the odds of wearing seat belts vs those whose parents did not (0.R.=3.2; CI(2.4, 4.2)).

Common reasons for not wearing seat belts were "forgetting" (39.5%), "afraid of being trapped" (9.5%) and "don't think they work" (2.5%). Cell phone while driving: (726 respondents) : 372 (51%) admitted using cell phone while driving within the past 30 days. Students with friends who text and drive reported more cellphone use while driving (O.R.= 3.2, CI (2.2, 4.6)) as did students whose parent use cell phone while driving (O.R. 2.1; CI (1.5,2.9)). Other factors associated with cell phone use included: Caucasian students (O.R.=1.8; CI 1.3, 2.5)), and had been in car crash (O.R.=2.8; CI (1.8, 4.2)).

Cell phone use was not associated with driver's education class, driving contract or discussing cell phone with parent or MD. Driving after drinking: (1023 respondents): 104 (10%) admitted to drinking and driving within the past 30 days. 23% admitted to riding with a driver who had been drinking. . Students whose parents specifically discussed drinking and driving had lower odds of this behavior (O.R.= 0.7, CI (0.5, 0.9)) as did driver's education class students (O.R.= 0.6; CI (0.5, 0.9)). Having been involved in a car crash (O.R.= 1.8; CI(1.3, 2.6)) and having signed a driver's contract (O.R. =2.1; CI 1.4, 3.4)) were both associated with drinking and driving. No association was found for race or MD discussion. High rates of non- response to the driver's contract question (51%) precluded this factor's analysis.

#### Conclusions:

The majority of surveyed teens do not routinely wear seat belts despite Alabama's primary seat belt law. Many report cell phone use while driving despite the "no hand held device" GDL law. Parental discussion and behavior had a significant influence on teen driving behaviors. Teen Driving Educational efforts need to be targeted towards parents as well as the teens.

#### Objectives:

Attendees will learn:

1. To recognize the common high risk driving behaviors in which teens routinely engage.

2. To understand the reasons teens cite for non-seat belt use.

3. To describe what interventions are effective in decreasing high risk driving behaviors.

### Reaching the teen community through career and technical education

Deena Liska

#### Background:

Motor vehicle crashes are the leading cause of death for ages 15-20. In 2012, Wisconsin traffic crashes killed 57 teens ages 16-19 and injured many more. Children's Hospital of Wisconsin Community Health, the Wisconsin Department of Transportation (DOT) and State Farm are working to decrease teen driving related crashes, injuries, fatalities, and improve safe driving outcomes. Much of this work is accomplished through partnerships.

In 2014, we were introduced to the Wisconsin Career and Technical Student Organizations (WICTSO) by one of our student leaders. The WICTSO "integrate Career and Technical Education into programs and courses and extend teaching and learning through innovative programs, business and community partnerships and leadership experiences at the school, state and national levels." This introduction led to a partnership that resulted in our direct involvement with the members of the population we aim to serve. These student groups engage more than 41,000 middle and high school aged students in Wisconsin through six different sub-organizations.

#### Methods:

Together with the DOT and State Farm, we entered into a new partnership with WICTSO to offer an opportunity for teens to improve the status of teen traffic safety in Wisconsin, through student-directed awareness and education activities. Our overall goal is to improve teen traffic safety in Wisconsin through projects focusing on at least one of the areas that pose the greatest risk to new drivers: Distracted Driving, Seat Belt Use, Speeding, Impaired Driving, and Peer Passengers. We used a competitive application, submitted online.

Each proposal was scored by local health care, injury prevention, and Department of Transportation professionals based on how well it met the following criteria: •Topic area, goals, and objectives are clearly identified and evident in project elements •School needs are determined by current research or identified by the team •The student body has active or direct participation with the team in activities •Project integrates a graphic, slogan, or other unifying element into project components •Project creates change in student body behaviors, solves a problem, or meets a need •School collaborates with a variety of CTSO, law enforcement, and other community partners and agencies •Project challenges CTSO members to expand their skills Funding of up to \$500 was offered based on the strength of the proposal. Funding could be combined with funds from other sources such as community donations to enhance the project.

#### Results:

Three schools in our state conducted traffic safety programming, and used their work to compete in state competitions in their respective CTSO venues. One of the schools will advance to the National level with their project, and the remaining two have activities continuing through the completion of the school year.

#### Conclusions:

As a result of the success, we are expanding the project for the coming school year with increased funding and resources. We will also be examining evaluation methods to show the impact on Wisconsin's teen driving outcomes.

#### Objectives:

Attendees will learn:

1. To describe the CTSO and provide examples of their work.

2. To locate resources for CTSO contacts in their community.

3. To identify potential CTSO opportunities in their own community.

#### Severe unintentional injuries to Ohio children: what should we really be addressing at wellchild visits?

Victoria Wurster Ovalle MD, Wendy Pomerantz, MD, MS, Michael Gittelman, MD

#### Background:

Unintentional injuries are the leading cause of death among US children. Pediatricians provide injury anticipatory guidance (AG) to families in order to prevent future unintentional injuries. However, it is challenging to cover so many topics in a single wellchild visit. The purpose of this study was to elicit the most common types of severe injuries sustained by Ohio children in order to determine what injury prevention topics by age Ohio pediatricians should focus on during these visits.

#### Methods:

Data were gathered retrospectively from the Ohio Trauma Acute Care Registry, which includes all patients who are injured and die in an Ohio hospital, are transported between hospitals, or are hospitalized for > 48 hours. Specifically, we examined data from January 1, 2003 - December 31, 2012 for children ages 14 and under who suffered unintentional injuries as identified by E-codes (E800-E949 and E980-E989). Data extracted

included county of injury, zip code, injuries sustained, mechanism of injury, primary and secondary E-code, E-code location, injury severity score, age, sex, race, ethnicity, disposition, hospital length of stay, ICU length of stay, primary method of payment, outcome, and discharge disposition.

#### **Results:**

45,347 patients were included; 16,552 (36.5%) were admitted, 2,375 (5.2%) went to the OR, and 611 (1.3%) died. The mean age was 6.77 years (SD 4.50); 29,122 (64.2%) were male and 35,167 (77.6%) white. The majority of injuries were classified as fractures/ dislocations (46.6%) and most injuries occurred in the home (49.1%). Overall, the most common causes of severe injury and death were falls (42.1%), motorized vehicle collisions (MVCs) (19.6%), struck by/against (10.4%), burns/fire (6.8%), and bike crashes (6.4%). In children 2 years of age and younger, the leading causes of severe injury and death were falls and burns/fire; falls and MVCs predominated above this age. When looking at deaths alone, the three leading causes were MVCs (36.2%), drowning (20.5%), and suffocation (16.4%).

#### **Conclusions:**

Unintentional injuries cause significant morbidity and mortality to Ohio children. Falls and MVCs were the most common mechanisms of injury in almost every age group. Given limited office time to discuss injury AG, Ohio pediatricians should concentrate on the severe injuries that most commonly affect the children they serve.

#### **Objectives:**

Attendees will learn:

1. The most common mechanisms of unintentional injury across all age groups were falls and MVCs among Ohio children.

2. The majority of injuries occurred in the home in among Ohio Children.

3. The three leading causes of death were MVCs, drowning, and suffocation of Ohio

children.

#### The association of body mass index (BMI), mortality and restraint status for teen drivers involved in fatal motor vehicle crashes

Priyanka Dhungana, MPH, Joyce Pressley, PhD, MPH

#### Background:

Studies in all age populations have reported body mass index (BMI) to be associated with higher mortality in motor vehicle crashes. Although some studies have postulated that this is due to lower restraint use in obese individuals, there is a gap in the literature with regard to the teen driver and vehicle and crash characteristics. This issue is of increasing importance given CDC reports that during the timeframe of this study more than 30% of this age group was overweight or obese. This study aims to explore association of restraint status and teen driver mortality by BMI levels controlling for other risk factors for fatal crashes.

#### Methods:

NHTSA's Fatality Analysis Reporting System (FARS) data was used to identify 10,178 teen drivers aged 14 to 19 years involved in fatal crashes between the years 2010 to 2013. BMI was analyzed as 5 categories: underweight (<18.5), normal weight (18.5-24.9), slightly overweight (25.0-29.9), obese (30.0-34.9), severely obese (?35). Logistic regression models were used to examine factors associated with 1) teen seatbelt use and 2) teen driver mortality across levels of BMI controlling confounders and other driver, vehicle and crash characteristics, including vehicle model year, points of crash impact, rollover and ejection. Odds ratios (OR) are reported with 95% confidence intervals (CI).

#### **Results:**

Approximately 40.8% of teen drivers died, with belt status being a strong predictor of mortality in unbelted compared to belted drivers (70.1% vs. 27.6%, P<0.0001). Seatbelt use was fairly linear by BMI category: underweight (73.7%), normal (68.1%), slightly overweight (67.4%), obese (66.2%) and severely obese (63.1%) drivers. Approximately half (49.5%) of severely obese teens died compared to just under 42% for all other weight categories.

In multivariable analyses, only underweight teens were more likely than normal weight to be belted (OR, 1.29, CI, 1.03, 1.62) after controlling for BMI, age, gender, drug and alcohol use, time of the day, speeding, compared to normal weight teen drivers. Also in multivariable models, being female driver was associated with higher belt use (OR, 1.38 CI, 1.23, 1.26) and drug, alcohol use, excessive speed and night-time driving with lower belt use.

In multivariable models, BMI is not predictive of mortality after controlling for belt status, other driver, vehicle and crash characteristics. Seatbelt use (OR, 0.29 CI, 0.25, 0.33), newer vehicles, point of impact in the rear opposite driver side (OR, 0.62 CI, 0.44, 0.87) were protective. Increased mortality was seen in female drivers (OR, 1.28, CI, 1.13, 1.46), crashes involving rollovers (OR, 1.39 CI, 1.16, 1.66), total ejection (OR, 3.86 CI, 3.02, 4.05) and partial ejection (OR 18.2 CI, 9.67, 34.16).

#### **Conclusions:**

Mortality was increased significantly only in severely obese teens in univariable analyses. In contrast to adult studies, controlling for other factors, including belt use, BMI did not predict mortality in teen drivers. Belt use was highest in underweight teens and showed an inverse association with BMI.

#### **Objectives:**

Attendees will learn:

1. How to describe the relationship between seatbelt use and obesity in teen drivers involved in fatal collisions.

2. How to discuss the importance of obesity and mortality in teen drivers.

3. How to understand the predictors of mortality in road traffic injuries.

### Child passenger safety (CPS) training for pediatric interns: Does it work?

Dina Morrissey, MD, MPH, Alison Riese, MD, MPH, Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T, Garry Lapidus, PA-C, MPH, Michael Mello, MD, MPH

#### Background:

It is well established that correct use of a child safety seat (CSS) can reduce the risk of fatal injury by up to 71% in the event of a motor vehicle crash. Misuse rates for CSS have been shown to be as high as 70% and CSS use drops in older age groups and is estimated to be only 47% for children between the ages of 4 - 7 years. Pediatricians play a critical role in educating parents about CPS, however formal CPS training during residency is lacking.

#### Methods:

We conducted a guasi-experimental study looking at the effect of a 2-hour CPS training module on the reported CPS related knowledge, attitude and behaviors in the primary care setting among pediatric interns. Hasbro Children's Hospital (HCH) interns functioned as the intervention group. Interns at Yale-New Haven Children's Hospital (YNHCH) and Connecticut Children's Medical Center (CCMC) served as controls. All study subjects were surveyed between month 2 and 4 of their first year of pediatric residency. HCH interns attended a CPS training module which included viewing the American Academy of Pediatrics CPS Continuing Medical Education video, observing a car seat inspection appointment, and hands on practice installing car seats. Study interns completed a survey immediately after the training module and all subjects completed a follow up survey approximately 6 months post baseline.

#### **Results:**

All 16 HCH interns completed the initial survey, participated in the intervention and completed the immediate post questionnaire. Thirteen HCH interns (81%) completed the 6-month follow up. The baseline survey was completed by 27/40 (67%) of interns at the control sites; 28/40 (70%) submitted a follow up. Knowledge increased with the intervention and was maintained over the 6-month follow up period: compared to baseline 31% (95% CI 21.3-41.3%) more intervention interns correctly identified the recommended criteria for transition from a rear- to forward-facing car seat at 6 months, while the control group demonstrated a 3.6% (95% CI 2.6-4.6%) increase over the same time period.

We observed changes in attitudes in the intervention group. For example, the proportion of intervention interns who agreed that booster seat use is 'very important' increased by 29.5% (95% CI 19.5-39.5%) from baseline to 6-month follow up, compared to an increase of 1.6% (95% CI 0.9-2.3%) in the control group. Finally, the intervention influenced self-reported behaviors in that group: the proportion of interns that self-reported giving CPS guidance at all well child visits increased by 18.8% (95% CI 18.8%-26.8%) from baseline to 6 months after intervention, while the control group had no change in CPS anticipatory guidance.

#### Conclusions:

A 2-hour CPS training module increases pediatric interns' knowledge, improves attitudes, and selfreported behaviors regarding CPS-related anticipatory guidance during well child visits. The effects were sustained over 6-months and exceed general practice improvement related to training experiences at two control academic centers.

#### Objectives:

Attendees will learn:

 To recognize the baseline knowledge, attitude and self-reported behaviors regarding CPS-related guidance during well child visits among pediatric interns at 3 urban children's hospitals.
 How does a 2-hour CPS training module affect knowledge, attitude and self-reported behavior regarding CPS-related guidance during well child visits among our study population.

3. To describe whether there is any change in knowledge, attitude and self-reported behavior seen immediately post intervention sustained at 6 months.

#### An educational program for physicians to teach the principles of injury anticipatory guidance and earn certification credits

Michael Gittelman, MD, Sarah Denny, MD, Samantha Anzeljc, PhD, Melissa Wervey Arnold, BS

#### Background:

Injuries cause more deaths to the pediatric population than all diseases combined. This program teaches pediatricians injury prevention principles, how to use tools in their office setting, and how to engage families to make changes in their behavior so their children are safer and injuries can be reduced. While performing this work, pediatricians can obtain maintenance of certification (MOC) credit.

#### Methods:

Both MOC 2 and 4 program development over the past 3 years will be reviewed. The Ohio AAP became an American Board of Pediatric's (ABP) portfolio sponsor. As injuries cause significant morbidity, the Ohio Chapter worked to develop a screening tool to assess current family behaviors for children in the household < 1 year of age. Pediatric practices were recruited nationally to implement the tool into every WCC visit for appropriate aged children and providers were given talking points to discuss inappropriately answered topics.

Surveys are provided at multiple visits to assess behavior changes by families over time. All participating providers submit their data to a centralized database and behavior changes are assessed for all families. Frequencies for screening tool use and appropriate injury prevention discussions are calculated. Also, an MOC 2 program was developed by study staff and approved by the ABP. Discussions of how articles were chosen and questions developed will be discussed. Within only a 10-month period physicians earn 25 points of MOC 4 credit and 20 points of MOC 2 credit; enabling them to complete half of their ABP requirements.

#### **Results:**

Over 23 practices and 100 providers have participated over the past 3 years. Implementation of the screening tool is easily incorporated into an everyday pediatric practice in just 1-2 months. Pediatrician injury prevention discussion increased by 70% for all recommended injury prevention topics for children < 1 year of age. Family behavior change by age of child and mechanism of injury will be reviewed. Finally, the ease of obtaining MOC 2 credit by participating pediatricians while participating in the quality improvement program will be discussed.

#### Conclusions:

Participation in a MOC Part 2 and 4 QI program within pediatric offices can increase screening and discussion of injury prevention practices. As a result of these programs, pediatricians learned injury prevention principles, increased discussions with families, and instigated more reported behavior changes by families at later visits.

#### **Objectives:**

Attendees will learn:

1. To describe how MOC 2 and 4 programs are developed.

2. To demonstrate how to work with office staff to incorporate injury QI in the office to obtain MOC 4 credit.

3. To discuss how our team has evaluated the success and spread the program nationally.

### Simulation education to promote injury prevention knowledge for medical students

Samantha Mullins, MPH, Mary Aitken, MD, MPH, Beverly Miller, MEd, Grace Gephardt, MEd, Tonya Thompson, MD, MA

#### Background:

A 2005 AAMC report called for improved focus on principles of injury prevention to ensure that medical professionals recognize their important role. In response to this report, the medical curriculum at UAMS was modified to include injury prevention during M1 (overview lecture), M2 (social history workshop), and M3 (pediatric clerkship workshop). The. M3 workshop was modified in 2013 to include use of the Pediatric Understanding and Learning using Simulation Education (PULSE) Center at Arkansas Children's Hospital (ACH). Simulation education methods include the use of high fidelity manikins and clinic facilities under audio and visual surveillance. In addition, standardized patients (SPs) are trained to accurately portray a clinical situation or problem and consistently recreate the scenario in each encounter.

#### Methods:

A recorded overview lecture is provided online as preparatory material for the students rotating through the pediatric clerkship. Upon arrival at the PULSE Center, students complete a pre-test of injury prevention knowledge, attitudes, and self-efficacy using an audience response system. This is followed by a brief orientation by faculty and staff of the Injury Prevention Center (IPC). During a facilitated 15-minute primary care interaction, SPs present in the clinic with concerns and risk factors M3 students to interview and

provide recommendations. Standardized scripts have been written on leading injury mechanisms: motor vehicle crashes for children and teens, sports-related concussions, infant mortality (unsafe sleep and abusive head trauma), and suicide. Students rotate in 5-person groups through the simulated clinic scenarios. A trained facilitator is present in each room to keep the session on track. Sessions are monitored using closed-circuit video to address issues that arise and to assess clinical interactions. A debriefing session led by IPC staff reviews key messages for each scenario and provides feedback before an electronic post-test is conducted.

#### **Results:**

A total of 164 students have completed the PULSE Center workshop since initiation in December 2013. The workshop has been modified to fit the timeframes of the clinic sessions and now runs smoothly for the approximately 2.5 hour session. Survey data are available for 164 pre- and 179 post-workshop students. Overall, the workshop has been well-received with 73% of students indicating their medical education has provided exposure to injury prevention after the training. Students felt more confident in detecting injury risk factors after training (69% pre, 75% post). Knowledge also improved: correct on all injury mechanisms (62% pre, 77% post) as did overall selfefficacy (57% pre, 77% post) after training. Student knowledge about specific mechanisms demonstrated up to 56% improvement.

#### **Conclusions:**

A novel simulation workshop for M3 students covering important injury risk scenarios has been well-received by the students, who demonstrate improved shortterm knowledge and perceived self-efficacy after the session. Standard scripts for the cases and training materials for SPs are available and may be appropriate for adoption in other training programs to improve patient counselling on common pediatric injury risks.

#### **Objectives:**

Attendees will learn:

1. To understand and recognize sequential integration

of injury prevention in a medical curriculum. 2. To describe a process of problem-based learning using standardized patients.

3. To find materials that are available for replication.

# Testing the reliability of an injury prevention screening tool between individuals within a household

Michael Gittelman, MD, Madeline Kincaid, Sarah Denny, MD, Melissa Wervey Arnold, BS, Adam Carle, PhD

#### Background:

Utilizing a standardized injury prevention (IP)screening tool has been shown to identify families with injury risks and allow pediatricians to address these behaviors to instigate change. If this tool is used on subsequent visits, behavior changes can be assessed. However, the possibility exists that injury risk changes may reflect random measurement error (poor reliability of the tool) rather than true change. Under the same conditions, the screening tool used should be concordant between 2 or more people living within the same household (when measured at the same time). Little research has examined the reliability of questions offered in a safety screening tool. In this study, we sought to establish test-retest reliability of parent responses to IP questions on an established screening tool and to test the degree of correspondence between responses of two parents living in the same household.

#### Methods:

Investigators recruited parents of children 0-1 year of age during hospital admission. Patients were identified by the research assistant from the admission list. When both parents were present, the mother was chosen to be the "primary" respondent. Primary respondents completed the 31 question IP screening tool immediately following consent and were rescreened 4 hours later to test individual reliability. The screening tool, used in several past studies, consists of IP questions pertaining to risks for children 0-1 year of age. To reduce family-level respondent burden, the "second" parent, if present, only completed the tool once. After survey completion, all participants received a \$10 Target gift card. Cohen's Kappa was used to estimate test-retest reliability and inter-rater agreement. Standard test-retest criteria consider testretest of: 0.0-0.40 poor to fair, 0.41-0.60 moderate, 0.61 to 0.80 substantial, and 0.81-1.00 as almost perfect.

#### Results:

105 families participated in the study. 32 (30.5%) had a second parent complete the tool at the initial or follow-up screen with the primary respondent. 5 primary respondents were lost to follow-up (time 2, n=100). Primary respondents were generally mothers (77%) and Caucasian (75%). Test-retest of the primary respondents showed their responses to be almost perfect; average 0.82 (SD=0.13, range 0.49-1.00). 15 questions had almost perfect, 14 had substantial,

and 1 had moderate test-retest reliability (parent's self-reported likelihood of showing physical anger). However, inter-rater agreement between household members at a single point in time showed very little reliability between responses; inter-rater agreement averaged 0.26 (SD=0.30, range 0.15-1.00). Only 2 questions had almost perfect, 1 had substantial, 3 had moderate, and 12 questions had fair to poor inter-rater reliability.

#### **Conclusions:**

The injury prevention screening tool used in this study had excellent test-retest reliability when used by a single individual. However, in situations where the reporter changes from pre- to post-intervention, it is likely that pre-post differences reflect poor reliability rather than true change.

#### **Objectives:**

Attendees will learn:

1. Development and use of an IP screening tool in the clinical setting.

2. Assessing behavior change utilizing the tool.

3. How to test reliability of the IP tool amongst individual responses and between other members in the household.

#### Serious unintentional injuries to Ohio children: Is there urban/rural variation?

Wendy Pomerantz, MD, MS, Victoria Wurster-Ovalle, MD, Michael Gittelman, MD

#### Background:

Unintentional injuries are the leading cause of death in children > 1 year of age. These injuries can vary by age, race, gender and location. Literature regarding the location of injuries, urban versus rural, has not been clearly established in the US. The purposes of this study were to determine the rates of severe unintentional injuries in children aged 0-14 years in urban versus rural Ohio counties to see if significant differences exist and to examine urban/rural differences in types of injuries and injury severity.

#### Methods:

Demographic and injury data on children 0-14 years old who suffered unintentional injuries, from 1/1/2003-12/31/2012 were extracted retrospectively from the Ohio Trauma Acute Care Registry. We calculated injury rates using county of residence and US census data. We assigned each county to an urbanization level based on population density ("A" = most urban; "B" = less urban, "C" = more rural, "D" = most rural). Rates are per 100,000 children <14 years old per year. Frequencies, Chi-square analysis and ANOVA were used to characterize the populations and look for differences between groups.

#### **Results:**

45,347 patients were included from the 88 Ohio counties; the overall injury rate was 202.1. The mean age was 6.8 years (SD 4.5); 29,122 (64.2%) were male and 35,166 (75.5%) Caucasian. 611 (1.3%) died. Specific Ohio county of injury was not documented in 4,722 patients leaving 40,625 patients for analysis by urbanization level; overall injury rate for this cohort was 231.9. Injury rates by urbanization level were: A: 120.4, B: 196.8, C: 249.1 and D: 247.4 (p=0.04). Mean Injury Severity Score was highest for those from the most urban areas (A 6.4, B 5.2, C 5.4, D 5.7 (p<0.001). Mean LOS (days) was also highest for those from the most urban areas (A 3.4, B 2.4, C 2.7, D 2.5, p<0.001). Those in the most urban areas were more likely to suffer burns, gunshot wounds, drownings, and suffocations and less likely to suffer animal bites and motor vehicle collisions (p<0.001); they were also more likely to be Hispanic or African American (p<0.001). In addition, 45% (273) of deaths occurred in children living in the most urban areas.

#### Conclusions:

We found a significant association between unintentional injury rate and urbanization level in young Ohio children. Rural counties experienced more injuries than urban; however, those from the most urban areas had more severe injuries.

#### Objectives:

Attendees will learn:

 To understand there are significant differences injuries in children in rural compared to urban areas.
 To recognize children from urban areas have more severe injuries than those from rural areas.

3. To describe how children from urban and rural areas sustain different types of injuries.

# Services to patients injured through interpersonal violence: A survey of children's hospitals

Marlene Melzer-Lange, MD, Michael Levas, MD, Timothy Lee, MD

#### Background:

Youth injured through interpersonal violence are at increased risk for re-injury, post -traumatic stress, school failure, poor health outcomes and/or death. Health care systems, in particular in emergency departments, are poised to identify and support youth victims of violence at a key stage in a young person's

life. While hospital-based violence intervention services have been developed, it is unclear how prevalent these services are in pediatric hospitals. The Children's Hospital Association provides an opportunity to understand the scope of services provided in pediatric hospitals in the Unites States to these young victims of violence. The purpose of this study is to determine the scope of services and resources provided to young victims of violence and their families in pediatric hospitals who are members of the Children's Hospital Association.

#### Methods:

Members of the Children's Hospital Association Emergency Department Focus Group developed a survey that describes pediatric hospital intervention programs and services. The survey included patient scenarios and asked the nature of the hospital response. The survey was sent via the Children's Hospital Association Data Center to the medical directors, nursing managers, trauma coordinators, injury prevention specialists and those listed in the Children's Hospital Association Emergency Department Focus Group. Demographics related to annual ED census, location, existence of a Level 1 trauma program, and the number of hospital beds was obtained through the Children's Hospital Association database. Survey results were linked to each pediatric hospital demographics.

#### **Results:**

Surveys were completed by respondents from 21 children's hospitals. Six hospitals had greater than 50,000 ED visits annually, six were Level 1 trauma centers and three were Level II trauma centers, and 8 had 24-hour social work coverage. Six hospitals had provided trauma-informed care training to staff members. In the scenario of a 14 year old with assault injury from a school fight, 19 (91%) would have provided a social work consult, 4 (19%) would have referred to community resources, 10 (48%) would have contacted police, 6 (29%) would have referred for mental health counseling, 2 (9%) would have had child seen at the time of visit by a hospital-employed violence intervention specialist, and 1 (5%) by a community-based violence intervention specialist. Three hospitals indicated that followup services may continue after hospital discharge. Other scenarios had similar hospital responses, with increased resources identified for firearm victims. In some cases child protective services and spiritual resources were also identified for their hospital.

#### Conclusions:

While many hospital emergency departments provide social service resources to youth victims of violence at the time of the emergency department visit, comprehensive violence intervention services that continue after hospital discharge are an uncommon resource.

#### **Objectives:**

Attendees will learn:

 To understand the scope of intervention services for youth victims of violence in pediatric hospitals.
 How to use of a survey center at a national association for data collection.

3. To recognize how "trauma-informed care" is integrated into pediatric hospitals.

### Environmental safety assessments of family homeless shelters

Rebekah Coelho, BS, Lois Lee, MD, MPH, Caitlin Woo-Pierce, MD, Erin Taylor, MD, Misael Abreu, BS, Maria McMahon, MS, cPNP-AC, David Mooney, MD, MPH

#### Background:

The number of homeless families, including children, has been increasing over the last several decades in the United States. Homeless children are at increased risk for adverse health and developmental outcomes along with increased health services use. Little is known about the environmental safety of family homeless shelters. The objective of this study is to evaluate the environmental safety practices of family homeless shelters in an urban area.

#### Methods:

This is a prospective observational study of the safety practices and environment of homeless shelters for families with children in an urban area. A multidisciplinary group developed a family shelter safety needs assessment form to record the use of safety equipment and the observation of safety practices in the environments of these homeless shelters. Trained research assistants visited local shelters and recorded data about these safety behaviors onto a structured data collection form. Frequencies of safety behaviors and equipment use were calculated.

#### Results:

Safety practices from 6 homeless shelters for families were recorded, which included a total of 88 bedrooms, 29 communal rooms, and 17 kitchens for a total of 74 families. The majority of shelters were found to have non-child proofed and/or unalarmed emergency exits (67%), and less than half had working kitchen smoke and/or carbon monoxide detectors (48%). No shelters

had stair gates, and none had televisions safety secured in the living rooms. Cleaning supplies and sharps were not safely stored in the kitchen in 81% of the observations. In the bedroom unsafe environments included: unsafe cribs (24%), no window guards (21%), unsecured dressers (100%), and unsecured TVs (67%). Cribs were used for storage, not infant sleeping, in 39%. Medications were generally not stored safely, with 70% of families not using a medication lock box. Radiators were not safely covered in the bedrooms in 41% of the shelters.

#### **Conclusions:**

Homeless shelters for families infrequently are observed to use recommended safety equipment for their pediatric inhabitants. Future directions should consider programs to assess and provide needed safety equipment and education for these families at risk.

#### **Objectives:**

1. To understand that homelessness is a risk factor for adverse health outcomes.

2. To describe environmental safety risk factors in urban homeless shelters.

3. To consider interventions to improve the safety of homeless shelters for children.

# Testing the reliability of an injury prevention screening tool between individuals within a household

Michael Gittelman, MD, Madeline Kincaid, Sarah Denny, MD, Melissa Wervey Arnold, BS, Adam Carle, PhD

#### Background:

Utilizing a standardized injury prevention (IP) screening tool has been shown to identify families with injury risks and allow pediatricians to address these behaviors to instigate change. If this tool is used on subsequent visits, behavior changes can be assessed. However, the possibility exists that injury risk changes may reflect random measurement error (poor reliability of the tool) rather than true change. Under the same conditions, the screening tool used should be concordant between 2 or more people living within the same household (when measured at the same time). Little research has examined the reliability of questions offered in a safety screening tool. In this study, we sought to establish test-retest reliability of parent responses to IP questions on an established screening tool and to test the degree of correspondence between responses of two parents living in the same household.

#### Methods:

Investigators recruited parents of children 0-1 year of age during hospital admission. Patients were

identified by the research assistant from the admission list. When both parents were present, the mother was chosen to be the "primary" respondent. Primary respondents completed the 31 question IP screening tool immediately following consent and were rescreened 4 hours later to test individual reliability. The screening tool, used in several past studies, consists of IP questions pertaining to risks for children 0-1 year of age. To reduce family-level respondent burden, the "second" parent, if present, only completed the tool once. After survey completion, all participants received a \$10 Target gift card. Cohen's Kappa was used to estimate test-retest reliability and inter-rater agreement. Standard test-retest criteria consider testretest of: 0.0-0.40 poor to fair, 0.41-0.60 moderate, 0.61 to 0.80 substantial, and 0.81-1.00 as almost perfect.

#### **Results:**

105 families participated in the study. 32 (30.5%) had a second parent complete the tool at the initial or follow-up screen with the primary respondent. 5 primary respondents were lost to follow-up (time 2, n=100). Primary respondents were generally mothers (77%) and Caucasian (75%). Test-retest of the primary respondents showed their responses to be almost perfect; average 0.82 (SD=0.13, range 0.49-1.00). 15 questions had almost perfect, 14 had substantial, and 1 had moderate test-retest reliability (parent's self-reported likelihood of showing physical anger). However, inter-rater agreement between household members at a single point in time showed very little reliability between responses; inter-rater agreement averaged 0.26 (SD=0.30, range 0.15-1.00). Only 2 questions had almost perfect, 1 had substantial, 3 had moderate, and 12 questions had fair to poor inter-rater reliability.

#### Conclusions:

The injury prevention screening tool used in this study had excellent test-retest reliability when used by a single individual. However, in situations where the reporter changes from pre- to post-intervention, it is likely that pre-post differences reflect poor reliability rather than true change.

#### Objectives:

Attendees will learn:

1) To development and use of an IP screening tool in the clinical setting.

2) To assess behavior change utilizing the tool.

3) How to test reliability of the IP tool amongst individual responses and between other members in the household.

#### The Johns Hopkins Center for Injury Research and Policy: Prescription medication dangers for children

Andrea Gielen, ScD, ScM

#### Background:

The Johns Hopkins Center for Injury Research and Policy (JHCIRP) has long been committed to conducting research and supporting practice that helps to prevent injuries to children. In addition to providing an overview of our ongoing intervention trials and safety centers' work in child injury prevention, this presentation will describe three of our most recent efforts to reduce the harms associated with prescription medications, especially opioid pain relievers (OPRs).

#### Methods:

Overview of ongoing and completed research studies and practice activities related to childhood poisoning from prescription medications

#### **Results:**

First, we will present results from home observations with families of young children in low income, urban neighborhoods, which has documented high rates of prescription medications being stored unsafely. Second, we will present top-line findings from a national survey of households with OPRs, examining the storage, sharing, and disposal practices of families with young children and teenagers. Finally, we will share a new tamper-resistant, personalized pill dispenser that only a pharmacist and patient can access, which was designed by mechanical engineering students.

#### **Conclusions:**

Taken together, this work is intended to contribute to reduce the dangers of prescription medications to children and teens.

#### **Objectives:**

Attendees will learn:

1. To understand the contributions of injury control research centers to child injury prevention.

2. To explain how hospital based injury prevention services can offer model programs to reduce children's injury risks.

3. To identify opportunities to reduce children's risk of prescription drug misuse, abuse, and overdose

# Effectiveness of the safe routes to school program in reducing school-age pedestrian and bicyclist injury: A nationwide evaluation

Guohua Li, MD, DrPh and Charles J. DiMaggio, PhD, MPH, PA-C

#### Background:

Safe Routes to School (SRTS) is a federally funded transportation program for facilitating physically active commuting to and from school in children through improvements of the built environment, such as sidewalks, bicycle lanes, and safe crossings. Although it is well-documented that SRTS programs increase walking and bicycling in school-age children, their impact on pedestrian and bicyclist injury has not been adequately examined.

#### Methods:

We obtained and analyzed quarterly traffic injury data for 18 states between 1995 and 2010 using multilevel negative binomial models to examine the association between SRTS intervention and the risk of pedestrian and bicyclist injury in school-age children (aged 5-19 years) compared to adults aged 30-64 years.

#### **Results:**

SRTS intervention was associated with a 23% reduction [incidence rate ratio (IRR) = 0.77, 95% confidence interval (CI) 0.65-0.92] in pedestrian/bicyclist injury risk and a 20% reduction in pedestrian/bicyclist fatality risk (IRR = 0.80, 95% CI 0.68, 0.94) in schoolage children compared to adults aged 30-64 years. Multilevel modeling based on data restricted to schooltravel hours (Monday-Friday, 7 AM to 9 AM and 2 PM to 4PM) also revealed a significant reduction (IDR=0.84, 95% CI 0.82, 0.87) in the risk of school-age pedestrian/ bicyclist injury following SRTS intervention.

#### Conclusions:

Implementation of the SRTS program appears to have contributed significantly to reducing pedestrian and bicyclist injuries and fatalities among school-age children in the United States.

#### **Objectives:**

Attendees will lean:

1. To describe recent trends in child traffic injuries.

2. To explain the health and safety implications of a national transportation program - the safe routes to school program.

3. To discuss the methods and findings of an evaluation research project.

#### Implementation evaluation of Iowa's antibullying law

Marizen Ramirez, MPH, PhD, Laura Schwab-Reese, MS, Erica Spies, PhD, Corinne Peek-Asa, MPH, PhD Angela Onwuachi-Willig, JD

#### Background:

Many states have adopted anti-bullying legislation in an effort to reduce bullying in schools. However, little is known about how schools translate legislation into antibullying policies and interventions. The purpose of this study is to evaluate implementation of anti-bullying legislation in a Iowa.

#### Methods:

A mixed method study was conducted with middle school and school district administrators in Iowa. A stratified random sample of schools were selected by rural/urban location and region of the state. Forty-five administrators (principals and districtlevel administrators in charge of bullying prevention) completed qualitative interviews. In addition, all 505 middle school principals were invited to participate in a survey. A total of 190 (38%) completed quantitative surveys.

#### **Results:**

Nearly all schools (99%) have an anti-bullying policy. On a scale of 1(Not Successful) to 10 (Very Successful), administrators reported being rather successful in developing anti-bullying policies at their schools (mean=8.9, SD=1.3). Policy implementation was more challenging. Administrators reported difficulty with identifying effective remedial plans for bullying perpetrators (score:6.5, SD:1.9). In our qualitative interviews, administrators stated that the legal definition of bullying was difficult to interpret, which led to challenges in identifying when certain behaviors constituted bullying and thus in deciding when punishment or intervention was warranted. Nearly all schools disseminated their policies to staff and students (99%), often multiple times and with training. Nevertheless, qualitative findings indicate that staff and students also struggle to understand the definition of bullying. Administrators further reported that it was difficult to obtain resources to support anti-bullying efforts (mean: 5.2, SD:2.1).

#### **Conclusions:**

Although schools successfully developed anti-bullying policies, implementation of policies is difficult because of the challenges in identifying when incidents meet the definition of bullying. Clearer legal definitions and examples, additional financial resources, and information about effective intervention strategies would help schools in their efforts to reduce bullying.

#### **Objectives:**

Attendees will learn:

 To describe the extent to which schools complied with legal requirements for anti-bullying efforts.
 To analyze the challenges and barriers of school administrators to successfully implement the law.
 To assess the effectiveness of anti-bullying laws on preventing bullying

### Creating safer routes to school; our 15 year journey in San Diego

Cheri Fidler, MEd Mary Beth Moran, PT, MS MEd

#### Background:

In 1963 47% of school aged children walked to school, in 2003, only 14% walk to school. During this same time obesity rates reached record highs in the US. These national trends have impacted our community and are compounded by high pedestrian injury rates in school aged children in San Diego County. In 2000 Rady Children's Hospital secured state funding to create a pedestrian safety coalition and implement programming to address these alarming trends in the most impacted community in the county, City Heights. Since that time 3 million dollars in grant funding has been awarded to our program and we have expanded to neighboring communities. This presentation will outline our strategy, outcomes, limitations and next steps to creating a safer community for everyone to enjoy the benefits of active transportation.

#### Methods:

The Injury Prevention Model of the 5 "E's was employed to address the myriad factors that create a safer route to school. This includes Evaluation: Pre and Post surveys to assess attitudes, current practice and perceived barriers. Engineering: Conducting audits of walking conditions around schools to determine physical barriers to safe walking, and providing documentation for infrastructure improvements. Education: Providing educational presentations and activities to parents, students and drivers about best practice in pedestrian safety. Encouragement: Implementing technology such as Active4me, tracking mileage and translating into other factors that can be used in educational efforts and motivational campaigns.

Hosting celebratory events such as Walk to School Day Enforcement: Recruiting adult volunteer patrols to reinforce safe pedestrian and traffic behavior to monitor common routes and escort walking school buses . All of these aspects of the injury prevention model employ an underlying theory of health promotion: reducing barriers and improving efficacy to change a behavior and walk instead of drive to school.

The program is implemented over the course of 1 year. An advisory board is formed at the outset and the program sustained upon the completion of grant funds through this group.

#### **Results:**

Initial parent surveys yielded that crime, lack of supervision and traffic infractions were the most common barrier to walking to school. Walking tallies at schools at the outset of our first program were as low as 5%. At the conclusion of our first 3 year grant we appreciated a 33% increase in walking , 10% decrease in crime and up to 20% reduction in traffic infractions. As a result of our work we have leveraged nearly \$3,000,000 in SRTS funding and supported the successful application of 6 infrastructure grants (\$3,00,000.00) that have been awarded to improve road conditions and crosswalks in and around schools we have served.

#### **Conclusions:**

Changing the culture of transportation choices and social norms can take a generation. Our program is working to change the attitude and lifestyle choices of young children so that they can adopt lifelong habits, and positively influence their family and friends. We continue to expand our program to more communities and collaborate with regional organizations to support our community wide campaigns to reduce injury and promote active transportation choices.

#### **Objectives:**

Attendees will learn:

1. To describe how injury prevention models are applied to pedestrian safety.

2. To apply a health behavior model to a Safe Routes to School Project.

3. To evaluate barriers to implementation and create new strategies to address these barriers.

### Improvement in quality of life for youth exposed to violence following summer camp intervention

Marlene Melzer-Lange, MD, Michael Levas, MD, MSCT, Brooke Mortag, BS,

#### Background:

A medical event such as violent injury can be a very traumatic experience for a child. Youth directly exposed to violence are at risk for experiencing elevated rates of emotional and behavioral problems, re-victimization, and becoming future perpetrators of violence. Project Ujima, the longest standing hospital based violence prevention program in the country, was created in Milwaukee, WI to alleviate some of this burden. To date, outcomes have been positive but largely qualitative. The aim for this study was to use objective patient-reported quantitative measures to assess the health related quality of life (HRQOL) of youth aged 8-18 who have been violently injured and attended Project Ujima Summer Camp. Specifically, this study sought to evaluate whether participant HRQOL improved following programming. This is the first study to evaluate such measures in youth victims of violence during an intervention.

#### Methods:

8-18 year old youth who attended Project Ujima Summer Camp in Milwaukee, WI participated in a HRQOL survey at baseline and at the end of programming (6 weeks). Consented youth used an electronic tablet platform to answer validated HRQOL measures. General domains of HRQOL included overall, physical, psychosocial, emotional, social, and school functioning. Specific domains of HRQOL included fatigue, anxiety, depressive symptoms, pain interference, peer relationships, and anger. Mean differences in scores from baseline to 6 weeks were calculated and reported.

#### **Results:**

A total of 58 youth were recruited and consented to the study. Average change in scores improved in all general domains of HRQOL with the largest change in scores seen in psychosocial functioning (mean dif: +5.33) and emotional functioning (mean dif: +8.33). Average changes in scores for specific domains were mostly positive with the largest effect seen in patient anxiety (mean diff: +4.98) Only participant anger scored more poorly following the intervention (mean diff: -2.01).

#### Conclusions:

A community-based summer program hosting violentlyinjured youths resulted in overall improved HRQOL. This was especially significant in the psychosocial/ emotional domains. Future evaluation into the effectiveness of youth program should measure HRQOL to identify at risk participants and to measure effectiveness.

#### **Objectives:**

Attendees will learn:

1. How to use the utility of Health Related Quality of Life as a marker for outcomes.

2. How the intervention of Ujima Summer Camp improves participants well-being.

3. To understand future implications of measuring Health Related Quality of Life in Youth Victims of Violence.

### The fifty year lifecycle of window falls and window fall prevention in New York City

Joyce Pressley, PhD, MPH

#### Background:

Although injuries due to falls from buildings and other structures represent a small proportion of injuries to children, many of the associated injuries are severe and preventable through simple environmental modifications. Falls from height, originally documented as a problem in the northeastern U.S., particularly New York City, are now recognized as a cause of serious pediatric trauma on several continents. Falls from buildings, the majority of which involve a fall out of a window, may result in death, serious lifetime cognitive impairment, physical disability and societal economic burden.

#### Methods:

All available news reports and select historical legal cases were reviewed from newspaper reports and Lexis Nexus for the years 1965-2015. We used this data to categorize the window fall injury issue into 8 major eras spanning approximately 50 years: 1) frequent news reports, no interventions; 2) initiation of surveillance with failed regulation; 3) demonstration program with education and free product distribution/installation; 4) legal challenge of passed regulation; 5) regulation with minimal enforcement; 6) regulation with intensified enforcement; 7) expanded responsibility/criminal liability of building boards of directors; and 8) program maintenance/static equilibrium. Collection of annual data on window falls began in 1973 for gross falls and gross fatalities and mandatory reporting of any window fall to ages 0-10 years began in 1977 for gross and preventable falls and fatalities. The evolution of and amendments to the 1976 window guard law were reviewed. Statistical analyses included Chi Sq Test for Trends in Proportions and ANOVA.

#### **Results:**

With over 1.1 million NYC children aged 0 to 10 years currently covered by the NYC window guard regulation, children experiencing preventable falls from windows in NYC have been reduced to approximately 3-6 annually and with 0-2 fatalities per. Compared to the first year (1977) for which preventable data is available, current annual preventable falls were reduced from (151 to 6 children) and preventable fatalities were reduced (25 to <1). There is a significant drop in preventable falls, preventable fatalities and the case fatality rate across programmatic eras. For preventable window falls, each successive era beginning with regulation passage was associated with additional improvement in preventable window falls (mean +SD) beginning from the baseline legal challenge of passed regulation (129+30.4); regulation with minimal enforcement (59.6+16.8); regulation with intensified enforcement (30.1+8.6); expanded responsibility/liability (9.8+7.1); and program maintenance/static equilibrium (5.1 +1.5). Preventable mortality in the latest era was reduced from an average of 19.5+7.8 to 0.25+0.7. The preventable fall case fatality rate for the last decade was reduced from a high of 16.2 observed at the program's beginning to 3.8.

#### Conclusions:

This best practices initiative for window fall prevention, with its eras of heightened awareness but no intervention, surveillance, regulation, enforcement and static equilibrium contains similar characteristics as other untamed injury mechanisms and provides valuable lessons for injury prevention initiatives across other domains.

#### **Objectives:**

Attendees will learn:

1. To discuss the window fall prevention initiative in NYC as an example of a multipronged approach that can be used to address a variety of injury prevention initiatives.

 To explain the incremental improvements in window fall injury and mortality attained with legislation alone and in combination with varying types of enforcement.
 To apply this best practices example to other injury mechanisms.

### Limiting pediatric injury recurrence through bedside consult programs

Alicia Hammonds-Reed, MPH

#### Background:

In 2014, Children's Hospital Los Angeles admitted 234,057 children and adolescents. 1,068 were Trauma patients. This is reflective of the over 9 million children across the nation that annually fall victim to unintentional injury. Under the umbrella of Children's Hospital Los Angeles' Trauma Department, the Injury Prevention Program serves to not only provide prevention education through our Bedside Consult Program, but also as a resource to prevent future reoccurrence. The Program provides bedside education and consults to the in-patient population ages 0-18 years old to address a variety of topics including fall prevention, pedestrian injuries, child passenger safety, sports related injuries, gun safety, and choking prevention.

Educational materials and information are provided to Children's Hospital Los Angeles' trauma patients, tailored to their specific mechanism of injury in an

effort to prevent further similar injuries. The objective of the Bedside Consult Program is to reduce not only the reoccurrence of unintentional injury for patients, but also the incidence of similar cases in the greater Los Angeles area.

#### Methods:

The Bedside Consult Program relies on the collaboration of multiple departments including not only Trauma/Injury Prevention but additionally Pediatric Nursing to relay the intake of viable trauma cases and information to clinical health educators. Nurses on patient floors identify then select cases of acute trauma that involve unintentional injury. They then either digitally or verbally contact the Injury Prevention health educator on call, providing them with details as to the specific mechanism of injury.

Health educators then gather appropriate educational resources and visit patients' bedside, collecting information directly from the patient's parent or legal guardian. Data collected is both quantitative and qualitative in form, to both identify patients individually and within gender, ethnicity, and age along with categorization by mechanism of injury, description of events, and geographic location. After a bedside consult is provided, patient data is digitally inputted and standardized for annual analysis and review. Data is collected on an ongoing basis and patients are offered follow up services such as home safety audits, loaner car seats and/or invited to relevant injury prevention events if the mechanism of injury is so fitting.

#### **Results:**

Since the Bedside Consult Program's commencement in 2010, over 600 patients and families have been reached, 55 consults of which were effectively delivered this past year alone. Aligned with national statistics and annual cases, falls and motor vehicle related accidents continue to be the leading cause of injury at Children's Hospital Los Angeles and central mechanism of injury recorded during bedside consults. Data also indicates that there's a significant reduction in recurring injury based on previous visits and provided information and educational resources.

#### Conclusions:

The Bedside Consult Program has allowed for not only further research into the leading mechanisms of injury for children in Los Angeles County and surrounding communities, but additionally the dissemination of relevant and critical injury prevention education to affected children and families to reduce the number of pediatric injuries. As we live in a social and global community, our patients however are not isolated entities and this information pervades throughout communities which helps reduce the incidence of presented injuries by those that come in contact either directly or through social dissemination with affected children. Pediatric injury recurrence is then positively affected with educated children and families taking the first step in patient care through preventative methods to ensure safe home, family, and community practices.

#### **Objectives:**

Attendees will learn:

 To identify a minimum of 3 mechanisms of injury and potential resources to provide for each (3) for dissemination to a parent and/or guardian.
 To effectively describe benefits of bedside consultation vs. post op follow up calls.
 To explain the connection between individual bedside consult and community





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## **20 Years of** Forging New Frontiers

in Childhood Injury Prevention



### **FACULTY LIST**

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### Forging New Frontiers in Childhood Injury Prevention



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REVENTION

#### Mary Aitken, MD, MPH

#### Injury Free Arkansas - PI University of Arkansas for Medical Sciences Injury Prevention Center at Arkansas Children's Hospital

Mary Aitken, MD, MPH, is a professor of pediatrics who joined the University of Arkansas for Medical Sciences in 1996. She is a general pediatrician with clinical activities based at Arkansas Children's Hospital (ACH), where she is active in medical student and resident training. In 2006, she was appointed Director of the Department of Pediatrics' Center for Applied Research and Evaluation (CARE) which seeks to improve child health through research into child health services, pediatric injury prevention, child development and nutrition. As director of the Injury Prevention Center at Arkansas Children's Hospital, she has advocated for stronger injury-prevention policies at the state level, including Arkansas' graduated driver license law, restrictions on cell phone use by teen drivers, car seats, and bicycle helmets. She has also testified before state and federal committees and the Consumer Product Safety Commission on the issue of all-terrain vehicle safety. Programs based at the Injury Prevention Center provide injury prevention education and services across the state for children and their families.

Dr. Aitken has received funding from the National Institutes of Health, Centers for Disease Control, the Emergency Medical Services for Children Program of Maternal and Child Health Bureau, and other agencies to support her research in injury prevention. Recent studies include interventions to improve motor vehicle and all-terrain vehicle safety in community settings as well as those promoting safe sleep in high risk populations. Her work has been recognized with a number of awards, including the Siebert Award for team building from Arkansas Children's Hospital, the Joan Cranmer Mentor of the Year award from the UAMS Department of Pediatrics, and the Gil Buchanan Award for Excellence in Child Advocacy and Community Service from the Arkansas Chapter of the American Academy of Pediatrics. Dr. Aitken is co-director of the KL2 Mentored Research Career Development Scholar Award Program within the UAMS Translational Research Institute (CTSA), furthering her long-term interest in mentorship of junior faculty.

Dr. Aitken earned her medical degree from the University of North Carolina School of Medicine and completed a pediatrics residency at Johns Hopkins Hospital in Baltimore Maryland. She also received a Masters in Public Health with a concentration in epidemiology during a General Academic Pediatrics fellowship at the University of Washington.

#### Barbara Barlow, MD Injury Free Coalition for Kids Founder & Executive Director

Dr. Barbara Barlow is Professor Emerita of Surgery in Epidemiology at Columbia University Mailman School of Public Health in New York. She is also the Founder and Executive Director of the Injury Free Coalition for Kids, a National Program developed with funding from of the Robert Wood Johnson Foundation of Princeton, New Jersey. Injury Free is a coalition of Injury Prevention Programs in Pediatric Trauma Centers located in major cities in the United States. The Injury Free Program reduces injury through education, construction of safe play areas, and the development and support of safe supervised activities with strong adult mentors.

Major injury admissions of community children in Harlem have decreased by more than 60% since the program started in 1988. The Program and Dr. Barlow have received awards from the American Hospital Association, the American Academy of Pediatrics, the U.S. Department of Transportation, the National Highway Traffic Safety Association, the National Safety Council, the American Trauma Society, the National Association of Public Hospitals, Society of Public Health Educators of the American Public Health Association, Johnson and Johnson Foundation, Allstate Foundation, the Hospital Association of New York, the American Association of Medical Colleges' David E. Rogers Award, the Renaissance Woman Award from the Foundation for Women in Medicine, the Distinguished Career Award from the American Public Health Association Section on Injury Control and Emergency Health Services, and the Sloan Public Service Award from the Fund for the City of New York.

Dr. Barlow's research has focused on traumatic injury to children and on injury prevention for the past twenty-five years. She is a former member of the American College of Surgeons Committee on Trauma and the American Academy of Pediatrics Committee on Pediatric Emergency Medicine. Dr. Barlow received a B.A. from Vassar College, an M.A. in Psychology from Columbia University and an MD from Albert Einstein College of Medicine where she was elected to Alpha Omega Alpha. Her general surgical training was completed at Bronx Municipal Hospital followed by a Fellowship in Pediatric Surgery at Babies Hospital, Columbia Presbyterian Medical Center.

#### Lawrence William Blass, MD

#### University of Miami Jackson Memorial Hospital

Lawrence Blass, Administrative Chief in General Surgery at University of Miami/Jackson Memorial Hospital. Dr. Blass attended Undergraduate and Medical School at the University of Miami. Current interests include trauma surgery as well as childhood injury prevention. He will be joining a group next year that covers general surgery as well as trauma and pediatrics from age five up.

#### **Stanley Bray**

Injury Free St. Louis - PC St. Louis Children's Hospital

Stanley Bray serves as coordinator, communications and marketing, Child Health Advocacy and Outreach with St. Louis Children's Hospital in St. Louis, Missouri. He is responsible for the planning, development, implementation, and measurement of marketing and communications initiatives. He collaborates with administration, management, and other clinical and administrative departments to contribute to the assessment of community relations opportunities as they align with the marketing plan.

Stanley's public relations and outreach experience has been utilized with organizations, such as St. Louis Public Schools, St. Louis Area Foodbank, Kidsmart -Tools For Learning and SSM Heath. His community outreach includes presenting Child Passenger Safety classes to community organizations, as well as attending meetings with ethnically diverse groups to build relationships.

Stanley attended St. Louis University where he obtained his Bachelor of Arts in Communication and his Master of Arts in Organizational Communication. In 2012, he received his Master of Business Administration with a Project Management Specialization from Ashford University in Clinton, IA.

#### Christine Campbell, RN, BSN, MS, SANE-A/SANE-P Injury Free Philadelphia St. Christopher's Children's Hospital

Christine Campbell, RN, BSN, MS, SANE-A/SANE-P was approved to serve on the PTSF Board of Directors from 2015-2017 as a representative of the Pennsylvania State Nurses Association (PSNA). She is Trauma Program Manager at St. Christopher's Hospital for Children, a Level I Pediatric Trauma Program. Christine has served in this capacity since 2010. Prior to this position, she served as Trauma Performance Improvement Coordinator at Temple University Hospital. She completed her Baccalaureate Degree in Nursing at Thomas Jefferson University School of Health Professionals in 1998 and completed her Master in Forensic Medicine at Philadelphia College of Osteopathic Medicine in 2007. In addition, since 2011 she has worked with the Crozer-Keystone Health System as Sexual Assault Nurse Examiner (SANE) Coordinator to provide seamless care to victims of abuse throughout the Health System. Christine serves on PTSF Standards, Registry and Research Committees. In addition, she serves on the Pediatric Committee for Trauma Center Association of America, Archdiocese Review Board, Delaware County Child Advocacy Center Review Team and the Philadelphia Sexual Response Committee. She is a member of the American Trauma Society, Society of Trauma Nurses, Trauma Center Association of American, Pennsylvania State Nurses Association, American Nurse Association and International Association of Forensic Nurses.

#### Rebekah Coelho, BS, EMT-B, CPST

#### Injury Free Boston Boston Children's Hospital

Rebekah Coelho is an Injury Prevention Specialist at Boston Children's Hospital, where she coordinates various interventions that are implemented both in the clinical and community settings. She graduated Magna Cum Laude from Northeastern University, majoring in Biology and Social Entrepreneurship. Additionally, she is trained as both an Emergency Medical Technician and a Child Passenger Safety Technician. In her current role, she coordinates the Buckle Up for Life Program, which provides car passenger safety education and training to parents through Hispanic and African-American faith-based organizations. She is passionate about public health and enjoys working in the community to educate and equip members on all things safety.

#### Vidya Chande, MD, MS

Injury Free Des Moines - PI Blank Children's Hospital

Vidya Chande, MD, MS is medical director of the Pediatric Emergency Department at Blank Children's Hospital in Des Moines, Iowa, and Adjunct Clinical Professor of Pediatrics at University of Iowa, Carver College of Medicine. She received her medical degree from University of Iowa, and completed residency training in Pediatrics and fellowship training in Pediatric Emergency Medicine at Children's Hospital of Pittsburgh, University of Pittsburgh. She recently completed an MS in Health Care Management from University of Texas- Dallas. Dr. Chande is a board-certified pediatric emergency physician, with a strong interest in access to emergency care, injury prevention and patient safety.

#### Art Cooper, MD

#### Injury Free New York at Harlem Hospital - PI Harlem Hospital

Doctor Art Cooper obtained his baccalaureate at Harvard College and his doctorate at the University of Pennsylvania School of Medicine. He was trained in general surgery at the Hospital of the University of Pennsylvania and in pediatric surgery and surgical critical care at the Children's Hospital of Philadelphia. Doctor Cooper is Professor Emeritus and Special Lecturer in Surgery at the Columbia University College of Physicians & Surgeons and Director of Trauma & Pediatric Surgical Services at Harlem Hospital Center in New York, New York. Board certified in Surgery, Pediatric Surgery, Surgical Critical Care, Disaster Medicine, and Emergency Medical Services, he has been actively involved in emergency medical services for children and pediatric injury prevention for more the thirty years. He continues to serve as Medical Director of the Harlem Hospital Injury Prevention Program and currently serves as a member of the Program Committee for the Injury Free Coalition for Kids. He is a member of numerous professional and academic societies, has edited six books and written more than three hundred fifty scientific articles, textbook chapters, and policy statements, serves on a variety of national and regional expert and advisory committees, and is a recognized authority in the fields of pediatric surgical nutrition, critical care, trauma, and emergency medical services for children – particularly pre-hospital emergency care and trauma systems development – as well as physical child abuse, and the surgical care of children with human immunodeficiency virus infection.

#### Dawne Gardner, MBA

#### Injury Free Cincinnati- PI Cincinnati Children's Hospital Medical Center

As the daughter of a special education school teacher and an Assistant Chief for the Cincinnati Fire Department, Dawne Gardner has been exposed to the concept of helping others for as long as she can remember. Since 2008 Dawne has been an Injury Prevention Coordinator at Cincinnati Children's Hospital Medical Center taking pride in coordinating Injury Free Cincinnati. With a passion for keeping children "injury free", she is always on the job and devoted to meeting the challenge of effectively educating and providing the necessary resources needed to keep children safe in the places they live and play.

Receiving her MBA in 2013 from Thomas More College, she has used her education and knowledge of community engagement to help develop and implement community outreach that has measurably decreased the frequency of pediatric home injuries treated in our local emergency rooms. In addition to her home safety programming she has organized and successfully built six Injury Free playgrounds in various Cincinnati neighborhoods and lead multiple bike, pedestrian, playground, poison and child passenger safety initiatives both in the community and in the hospital.

As Coordinator of Injury Free Cincinnati, the coalition has received several awards for exemplary collaborative efforts including the Presidential Partnership award from the Cincinnati Recreation Commission, the CyberStars Partnership Award, the Corporate Community Partnership Award from the City of Cincinnati and most recently, the Ohio Injury Prevention Partnership (OIPP) Promising Practice Award which recognizes outstanding community-based interventions aimed at reducing the incidence of injury and violence in Ohio. For her focused work on helping to eliminate disparities in childhood injuries, Dawne received the Injury Free Coalition for Kids 2014 National Injury Prevention Coordinator of the Year.

Dawne enjoys spending time with family, coaching cheerleading, teaching vacation bible school at her church and is currently putting her injury prevention knowledge and Ohio Certified Child Passenger Safety Technician certificate to personal use with her one year old grandson.

#### Andrea Gielen, ScD, ScM

#### Injury Free Baltimore - PI Injury Control Research Center Johns Hopkins Bloomberg School of Public Health

Andrea Carlson Gielen, ScD, ScM is Professor and Director of the Johns Hopkins Center for Injury Research and Policy at the Johns Hopkins Bloomberg School of Public Health, where she received her ScM (1979) and ScD (1989). The Center is home to a large, multi-disciplinary faculty committed to reducing the burden of injury and violence through research and its translation to practice, and through professional training and service. Funded by the CDC for more than 25 years, it is one of ten centers for excellence in injury research in the US. Dr. Gielen's own research focuses on developing evidence-based interventions to reduce prescription drug overdose, home injuries, pedestrian injuries, and domestic violence. Dr. Gielen applies behavior change theory and strategies to creating, evaluating, and disseminating health promotion programs in clinical and community settings. She is currently leading an m-health intervention trial to reduce opioid pain reliever prescribing in emergency departments. Other related projects include a national survey of opioid storage and disposal in homes with young children, and studies of prescribing behavior of primary care and emergency department clinicians. Dr. Gielen received the American Public Health Association's Award for Excellence, and the American Academy of Health Behavior's Research Laureate Award.

#### Mike Gittelman, MD Injury Free Cincinnati - PI Cincinnati Children's Hospital Medical Center

Mike Gittelman, MD, is a pediatric emergency room physician at Cincinnati Children's Hospital and he is a Professor of Clinical Pediatrics at the University Of Cincinnati School Of Medicine. His area of expertise is within the field of injury control. Prior to their formation of a Council, he served as the Chairperson for the American Academy of Pediatrics' Section on Injury and Poison Prevention. He is a Board Member of the AAP's Ohio Chapter, and he is a Co-Director of the Comprehensive Children's Injury Center at Cincinnati Children's Hospital. He is involved in resident education on injury prevention and he works with high-risk communities in an effort to reduce pediatric injuries. One of his research interests has been to study the impact of an ER encounter on promoting a behavior change to prevent injuries. More recently he has worked with the Ohio Chapter to develop a state-wide bicycle helmet intervention and to develop an injury QI program for pediatricians.

#### Alicia Hammonds-Reed, MPH, CPSTI

#### Children's Hospital Los Angeles

Alicia Hammonds-Reed, MPH, CPSTI is a Health Education Associate for the Injury Prevention Program at Children's Hospital Los Angeles. She earned her BA in Sociology from UCLA and a Masters in Public Health from Loma Linda University with a focus in Health Education and Promotion. Alicia's academic training and work experience have included both domestic and international perspectives having worked in Central America delivering health education centered on clean water initiatives as well as strategies promoting healthy eating and exercise in rural communities. Her specific interests include strategically addressing and eliminating health disparities and increasing health care access in underserved communities.

#### David Juang, MD

Injury Free Kansas City - PI Children's Mercy Hospital

David Juang received his MD from Wright State University School of Medicine in 2003. He completed a general surgery residency at the University of Pittsburgh Medical Center and a Pediatric Surgical Critical Care Fellowship at Children's Hospital of Pittsburgh, Pennsylvania. He went on to complete a two-year Pediatric Surgery Fellowship at the Children's Mercy Hospital in Kansas City. He is certified by the American Board of Surgery in Surgery, Pediatric Surgery and Surgical Critical Care.

Dr. Juang joined the staff at Children's Mercy Hospital in 2011, and was appointed Assistant Professor of Surgery, University of Missouri-Kansas City. He was appointed as the Medical Director of Critical Care, Burn and Trauma Services in 2011 and the Program Director of the Surgical Critical Care Fellowship Training Program in 2012. Dr. Juang's research interests are focused on improving the care of children and infants particularly in the topics of trauma, burns, critical care and minimally invasive surgery. He has participated as the primary investigator or co-investigator in prospective randomized controlled trials in infants and children at Children's Mercy. He has published two book chapters, over 30 peer reviewed manuscripts, and serves as a manuscript reviewer for the Journal of Pediatric Surgery, Journal of Laparoendoscopic and Advanced Surgical Techniques, as well as Pediatrics. He serves on numerous hospital committees, as well as national pediatric surgical committees and on the GME Council of the University of Missouri-Kansas City School of Medicine.

#### Lois Lee, MD, MPH Injury Free Boston - PI Boston Children's Hospital

Dr. Lee is a board certified pediatric emergency medicine specialist with a clinical and research focus on pediatric trauma care and injury prevention. She graduated magna cum laude from Emory University, where she majored in chemistry and music, and she received her MD from the Perelman School of Medicine at the University of Pennsylvania. She then completed her internship and residency in pediatrics at the Children's Hospital of Philadelphia. It was there that she first developed an interest in pediatric injury prevention after working on a research project about childhood injuries and deaths related to the use of air bags in cars. She has completed a Masters of Public Health (MPH) from the Harvard School of Public Health. She is currently a staff physician in the Emergency Department at Boston Children's Hospital, and continues to pursue her interest in pediatric trauma care and injury prevention with her teaching, research, and advocacy. In these roles she promotes child passenger safety, home safety, and is advocating for legislation for the primary seat belt bill in Massachusetts.

#### Guohua Li, MD, DrPH

#### Injury Control Research Center Columbia University of New York

Guohua Li, MD, DrPH, is the M. Finster Professor of Anesthesiology and Epidemiology at Columbia University. His expertise is in the areas of injury epidemiology and clinical epidemiology. His research encompasses innovative research methodology, development of surveillance data systems, and application of novel designs and analytical techniques in studies of the causes and prevention of injuries and adverse outcomes in perioperative care, critical care, and emergency care. Dr. Li is the founding Director of the Center for Injury Epidemiology and Prevention and the Center for Health Policy and Outcomes Research in Anesthesia and Critical Care, and the founding Editor-in-Chief of Injury Epidemiology. He teaches two accredited courses at the Mailman School of Public Health, Injury Epidemiology (P8448) and Clinical Epidemiology (P8450). Dr. Li is a recipient of the Kenneth Rothman Prize (1999), the Guggenheim Fellowship (2005), the John Paul Stapp Award (2009) from the Aerospace Medical Association, and the Excellence in Science Award (2015) from the American Public Health Association's Injury Control and Emergency Health Service Section.

#### Deena Liska

#### Children's Hospital of Wisconsin

Deena Liska is the Motor Vehicle Safety Coordinator for Children's Hospital of Wisconsin Community Education and Outreach. Deena has a BA in Professional Communication from Alverno College, and is pursuing a master's degree in Education. She entered the field of injury prevention through emergency services where she was a Firefighter and Emergency Medical Technician for more than 15 years, and retired at the rank of Captain.

Deena has coordinated teen traffic safety programs for Children's Hospital for the past eight years, through partnerships with the Wisconsin DOT, State Farm, and Ford. In addition, she has been a certified Child Passenger Safety Technician/Instructor for more than ten years, and manages the Children's Hospital of Wisconsin car seat clinic.

#### Gina Lowell, MD, MPH

#### **Rush University Medical Center**

Gina Lowell graduated from Rush Medical College in 2002 and completed my pediatric residency training at the University of Chicago Comer Childrens Hospital in 2005, where she developed her interest in injury prevention research. Lowell completed a fellowship in General Academic Pediatrics at the University of Illinois at Chicago, where she received her MPH with a concentration in Epidemiology and Biostatistics. She returned to Rush University Medical Center to join the department of General Pediatrics, where she practices general pediatrics in the outpatient and inpatient setting, as well as serves on the Child Protective Services team. Lowell also teaches Evidence Based Medicine skills to medical students, residents and faculty.

#### Kimberly Massey, MD

#### Children's Hospital of Alabama

Kimberly Massey, MD completed her pediatric residency at the University of Mississippi Blair E Batson Children Hospital in Jackson, MS. Throughout her training, she participated in the Drivers Impact program which is trauma based educational program focusing on distracted driving in teenagers. She also participated in the Batson Safety and Community Outreach Program on safe sleep and safety education for new mothers. She is currently a pediatric emergency medicine fellow at Children's of Alabama in Birmingham, Al. She continues her interest in distracted driving in teenagers and parents to promote overall safety in children. After fellowship she plans to organize a community outreach program to promote safety and injury prevention for children in medically underserved areas.

#### Suzanne McLone, MPH

#### Epidemiologist, Injury Prevention and Research Center Ann & Robert H. Lurie Children's Hospital of Chicago

Suzanne McLone, MPH, is an epidemiologist for the Illinois Violent Death Reporting System (IVDRS), which is a project of the Injury Prevention and Research Center at the Ann & Robert H. Lurie Children's Hospital of Chicago. Ms. McLone has fifteen years of experience conducting epidemiological analyses of factors which affect the health and well-being of children and adolescents in Chicago and Illinois (e.g., risk behaviors, special health care needs, mental and behavioral conditions); evaluating interventions to improve children's health and well-being; and providing analytic and statistical support to clinical faculty working in community health and persons working in child and adolescent advocacy and public policy working on risk factors and protective factors associated with child and adolescent health. Her areas of expertise include adolescent pregnancy and violence and injury prevention.

#### Eileen McDonald, MSPH

#### Injury Free Baltimore - PI Johns Hopkins Bloomberg School of Public Health

Eileen McDonald is an associate scientist in the Department of Health, Behavior and Society at the Johns Hopkins Bloomberg School of Public Health, where she directs the Masters program in health education and health communication. She is also core faculty of the Johns Hopkins Center for Injury Research and Policy. Her research focuses on the application of innovative health education methods, health communication technology, and other hospital- and community-based interventions aimed at reducing pediatric injuries. Among her currently active research projects is an m-health application to promote booster seats among parents of young children being seen in the emergency department, a demonstration project testing a partnership between nurse home visitors and fire personnel in Phoenix AZ to improve smoke alarm and fire safety among low-income families, and a randomized controlled trial of a safe sleep intervention in a pediatric well-child clinic.

Ms. McDonald was a co-creator of the Johns Hopkins Children's Safety Center, a first-of-its-kind, hospital-based safety resource center, that provides free injury prevention education and promotes the use of safety products to reduce injuries among children and families. As director, Ms. McDonald now oversees three Johns Hopkins safety centers, including the CARES Safety Center, a mobile safety center implemented in partnership with the Baltimore City Fire Department. Ms. McDonald has authored a nationally distributed guidebook for child safety and numerous research articles on injury prevention and health education topics. Ms. McDonald holds a bachelor's degree in health education and a master's degree in health administration. Ms. McDonald is the director of Injury Free Coalition for Kids–Baltimore.

#### Michael Mello, MD, MPH

#### Injury Free Providence - PI, Coalition Board President Rhode Island Hospital/Hasbro Children's Hospital

Michael Mello, MD, MPH is Director of the Injury Prevention Center at Rhode Island Hospital/Hasbro Children's Hospital and a practicing board certified emergency medicine physician with over 25 years of clinical experience. He is a Professor of Emergency Medicine, Professor of Health Services, Policy and Practice and Professor of Medical Science at Brown University. He is current President of the Board of Directors for Injury Free Coalition for Kids. His research has focused on prevention of unintentional injury and behavioral modifications to reduce injury occurrence. Dr. Mello's research has been supported by CDC, NIH, and several foundations. As Director of the Injury Prevention Center at Rhode Island Hospital, he has been active in creating partnerships with state health departments, community groups, and other health providers to increase their attention to injury and violence prevention and has established several injury prevention community programs in the region. As an educator, Dr. Mello teaches "Injury as Public Health Problem" at Brown University's School of Public Health and is Director of the Master of Science in Population Medicine program at Alpert Medical School of Brown University.

#### Marlene Melzer-Lange, MD

#### Injury Free Wisconsin - PI Children's Hospital of Wisconsin

Marlene Melzer-Lange, MD is Professor of Pediatrics at Medical College of Wisconsin, a pediatric emergency medicine specialist at Children's Hospital of Wisconsin, and has expertise in injury prevention, risk-taking behaviors of adolescents, and the medical and psychosocial care of youth, trauma victims and adolescent parents. She serves as medical director for Project Ujima, a youth violence prevention and intervention program. Dr. Melzer-Lange is active in community coalitions including the State of Wisconsin Emergency Medical Services for Children Injury Prevention section, Injury Free Coalition for Kids-Milwaukee, the Milwaukee Homicide Review Commission and the American Academy of Pediatrics Council on Violence, Injury and Poisoning Prevention. She has published research articles on emergency care of children, adolescent utilization of emergency services, coalition building, and adolescent violent injury. She is a graduate of Marquette University and received her medical degree from the Medical College of Wisconsin. She completed her pediatric residency at Children's Hospital of Wisconsin. She is board certified in Pediatrics and Pediatric Emergency Medicine. She is a native of Milwaukee, is married and has two children and three grandchildren.

#### Lynn Model, MD

#### Nicklaus Children's Hospital of Miami

Lynn Model, MD went to medical school at Tulane University School of Medicine in New Orleans. She then completed a General Surgery Residency at Yale New Haven Hospital in New Haven, CT, where she also completed a Master's Degree in Health Science having undertaken basic science vascular surgical research. She completed a Pediatric Surgical Critical Care Fellowship at Northwestern University/Lurie Children's Hospital in Chicago, IL after residency and began her Pediatric Surgery Fellowship at Nicklaus Children's Hospital July 2015.

#### Kathy Monroe, MD

#### Injury Free Birmingham - PI University of Alabama/Children's Hospital of Alabama

Kathy Monroe is Professor of Pediatrics at the University of Alabama in Birmingham. She is the Medical Director of the Pediatric Emergency Medicine Department in the Childrens' Hospital of Alabama and is the Co-Director of the Injury Free Coalition for Kids of Birmingham Alabama. She serves as the Alabama AAP chair of the Injury Prevention committee and has been recently elected as an executive committee member of the AAP Council on Injury, violence and Poison Prevention. She is actively involved in the education of pediatric residents specifically in the injury prevention areas and is the Co-Residency Research Support Committee Chair. For the past three years, she has been a member of the Alabama Child Death Review Team. She has been a research mentor for NIH summer medical student research program and is co-sponsor for the medical school pediatric interest group.

#### Dina Morrissey, MPH, MD, CPSTI

Injury Free Providence - PC Brown University

Dina Morrissey, MD, MPH, CPSTI is a research associate and an assistant professor of emergency medicine (research) at The Warren Alpert Medical School of Brown University. She is principal investigator on the Rhode Island Foundation supported Seat Checks in Pediatric Practice project. She also coordinates community outreach activities at the Injury Prevention Center, including the Injury Free Coalition for Kids in Providence program, the Safe Kids RI program and the Kohl's Cares - Kids on the Go Program. Morrissey earned her medical degree at the University of Massachusetts Medical School and completed a residency in pediatrics at Yale-New Haven Hospital. Morrissey has practiced as a primary care pediatrician and earned a master of public health degree from the University of Massachusetts Medical School. She enjoys working at the Injury Prevention Center to help keep kids safe throughout Rhode Island.

#### S. Hope Mullins, MPH

#### Arkansas Children's Hospital Injury Prevention Center

Hope Mullins, MPH is the Program Manager for Research and Evaluation at the Injury Prevention Center at Arkansas Children's Hospital. She has worked in the injury prevention field for 15 years and helps to develop research protocols, design evaluation plans, conducts research and analyzes data. Some of her specialties include survey development, focus group moderation, and research compliance. Hope is a Certified Research Specialist and a child passenger safety technician.

#### Joseph O'Neil, MD, MPH

#### Injury Free Indianapolis - Pl Indiana University

Joseph O'Neil, MD, MPH is a Clinical Associate Professor of Pediatrics at Riley Hospital for Children, Indiana University Health and is board-certified in Pediatrics, and Neurodevelopmental Disabilities. He completed his undergraduate and post-graduate master's in engineering at University of Notre Dame and received his medical and master of public health degrees from Indiana University. He completed his residency in pediatrics at Indiana University. Dr. O'Neil currently serves as chairperson of the Committee on Injury and Poison Prevention of the Indiana Chapter of the American Academy of Pediatrics and is a member of the council of Injury and Poison Prevention for the AAP. He is currently the director of the spina bifida program and principle investigator and co-medical director of the Automotive Safety Program at Riley Hospital Dr. O'Neil serves as co-principal investigator for Injury Free Coalition for Kids of Indianapolis.

#### Victoria Ovalle

#### Cincinnati Children's Hospital Medical Center

Victoria Ovalle is a third year resident in pediatrics at Cincinnati Children's Hospital Medical Center. She received her undergraduate degree from the College of William and Mary in Williamsburg, Virginia and her medical degree from Vanderbilt University in Nashville, Tennessee. During her time in Cincinnati she has become involved in injury prevention research and has also developed a strong interest in undergraduate medical education. After residency she plans to continue her career in the field of pediatric emergency medicine.

#### Susan Pollack, MD

#### Injury Free Lexington - Pl University of Kentucky Health Care

Susan Pollack MD is an Assistant Professor in the Departments of Pediatrics and Preventive Medicine at the University of Kentucky (UK) and directs the Pediatric and Adolescent Injury Prevention Program at the Kentucky Injury Prevention and Research Center (KIPRC), a joint effort of UK and the KY State Department for Public Health. She graduated from Smith College and Eastern Virginia Medical School, completed a Pediatric Residency at West Virginia University in Morgantown and Preventive Medicine/Occupational Medicine training at Mt. Sinai in New York City, where her research focused on occupational injuries among working teens.

Dr. Pollack is a general pediatrician with an interest in all aspects of injury prevention for children and teens whose past clinical work has included care for children in newborn nursery, migrant health, juvenile detention and foster care. She participates in education of public health and medical students and residents. Her major work is support for the injury prevention and child fatality review efforts of local health departments across KY, shared with and funded by the state Department for Public Health. She spends a lot of time trying to build local capacity and maintain a rural CPS work force, while serving as the state Healthy Child Care America pediatric representative.

Working with fire chiefs in rural Estill County, Dr. Pollack has been honored and pleased to be PI for one of the 5 Shout Out FEMA/Injury Free fire grant sites last year. She has previously received grant support from EMSC, CDC and NIOSH. In 2015 she was the recipient of the Fayette County Public Health Hero Award and the Spirit of Lexington Award, and was recognized for her pediatric injury prevention work by the Kentucky State House of Representatives.

#### Wendy J. Pomerantz, MD, MS

#### Injury Free Cincinnati - CoPI Cincinnati Children's Hospital Medical Center

Wendy received her undergraduate degree from the University of Texas at Austin and her medical school degree from the University of Texas Southwestern Medical School in Dallas, Texas. She completed a Pediatrics Residency at Children's Medical Center of Dallas, a Pediatric Emergency Medicine Fellowship at Children's Hospital Medical Center in Cincinnati, and a Master's of Science in Epidemiology at the University of Cincinnati. Currently, she has a faculty appointment as a Professor of Clinical Pediatrics at the University of Cincinnati School of Medicine and Children's Hospital Medical Center in Cincinnati, Ohio. She has been a pediatric emergency medicine physician for the past 18 years. She has published many peer-reviewed articles in the fields of injury and poison prevention. Her interests include poison prevention, concussions, program evaluation, education, and geographic information systems.

#### Joyce C. Pressley, PhD, MPH

#### Injury Free Director of Injury Free Health Policy and Population Studies Columbia University Injury Control Research Center

Joyce Pressley, PhD, MPH, is an Associate Professor of Epidemiology and Health Policy and Management at Columbia University Medical Center and Co-director of the Outreach core for the Columbia University CDC Injury Control Research Center. She is a member of the Committee on Occupant Protection of the Transportation Research Board of the National Academies, Co-Chair of the Scientific Program Committee for APHA's Injury Control and Emergency Health Services section and Director of the Columbia University Department of Epidemiology's master's level internship and thesis programs.

Dr. Pressley's experience in research and community-based injury prevention programs crosses the disciplinary boundaries of health policy, epidemiology, emergency medicine, critical care, economics, health planning and management. She has experience in strategic planning at the local city, county and regional levels gained through her role as a former Director of Emergency Medical Services for an 11 county EMS planning and implementation program whose goals included improving access, communication and public education at the community level and identifying deficiencies and planning for the certification of regional critical care units for trauma, burn and poisoning.

Her current research interests include evaluating the impact of legislative regulatory policies and laws on unintentional injury, motor vehicle safety, technological advances for motor vehicle occupant protection, injury-related health disparities and injury in vulnerable populations. She has published in the areas of motor vehicle safety, home safety including window falls, the impact of injury-related laws, injury disparities, and injury in vulnerable populations. She previously served as the principal investigator of a NYS trauma center training grant, Principal Investigator of an NIH-funded, injury-related health disparities research core, Director of Injury Free Health Policy and Population Studies and chaired the Injury Control and Emergency Health Services Section of the American Public Health Association.

#### Priyanka Dhungana, MBBS, MPH

#### Columbia University of New York

Priyanka Dhungana, MBBS, MPH, completed her MPH in Epidemiology from Columbia University where she did both her internship and thesis in injury prevention working with Dr. Joyce Pressley. Dr. Dhungana was born and grew up in Kathmandu, Nepal. Her practicum and thesis work centered on examining factors associated with obesity and motor vehicle mortality across the age span. Her work on the relationship of obesity and adult driver mortality is scheduled for presentation at the American Public Health Association in October 2015.

Prior to coming to the U.S., she worked with array of mental health patients and their families where she participated in various community welfare and health awareness activities. She also provided medical officer support in health camps and community works organized by the Rotary club. She has an MBBS from Kathmandu Medical College and Teaching Hospital, Kathmandu, Nepal. She worked as a medical officer for the Department of Psychiatry providing inpatient care, outpatient care and served as on call medical officer using specific guidelines and protocols.

#### Marizen Ramirez, MPH, PhD

#### University of Iowa University of Iowa Injury Prevention Research Center

Marizen Ramirez is an Associate Professor in Departments of Occupational and Environmental Health, and Epidemiology at the University of Iowa (UI) College of Public Health. She serves as the Associate Director for Research at the UI Injury Prevention Research Center. Marizen received her MPH and PhD in Epidemiology from the University of California at Los Angeles School of Public Health. For over 20 years now, Marizen has engaged primarily in pediatric injury research on a number of topics including injuries to children with disabilities, disaster planning for schools and pediatric homes, posttraumatic stress, and bullying prevention in schools. She has numerous studies funded by the Centers for Disease Control and Prevention, the Patient Centered Outcomes Research Institute, Robert Wood Johnson Foundation, and the National Institute of Justice.

#### Steven Rogers, MD

#### Connecticut Children's Medical Center Injury Prevention Research Center

Steven Rogers, MD is a Pediatric Emergency Medicine physician and Injury Prevention research scientist at Connecticut Children's Medical Center and Injury Prevention Center. These positions allow him to have a unique perspective on preventing as well as treating sick and injured children. His academic and research activities in injury prevention have been focused on the most common causes of death in 1-18 year olds including such areas as motor vehicle/pedestrian safety, drowning, suicide and violence screening/prevention. He is enrolled in a Master's of Science in Clinical and Translational Research program at the University of Connecticut. His current focus is on improving the care of high risk behavioral health and psychiatric patients in the emergency department. He is also developing new technology that will enhance injury prevention education as well as improve clinicians' ability to identify and prevent injury/violence in high risk patient populations.

#### John Stack, MS4

#### Indiana University School of Medicine

John Stack is a fourth year medical student at Indiana University School of Medicine. In 2011, he received a Bachelor of Arts degree in Chemistry with minors in biochemistry, biology, and physics from Franklin College in Franklin, Indiana. After completing medical school, he plans on pursuing a career in pediatrics.

#### Jun Tashiro, MD, MPH

#### Jackson Memorial Hospital Miami Miller School of Medicine

Jun Tashiro is a general surgery resident at Jackson Memorial Hospital, in affiliation with the University of Miami Miller School of Medicine. Jun completed his undergraduate studies at New York University, then attended the University of Medicine and Dentistry of New Jersey - New Jersey Medical School. During medical school, he was enrolled in a dual-degree MD MPH program in which he focused on epidemiology and injury prevention. During residency, he has performed research in surgical outcomes, primarily based on pediatric surgery and trauma.

#### Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T

Injury Free New Haven Co-PI Yale-New Haven Children's Hospital

Pina Violano is the Manager for the Injury Prevention, Community Outreach & Research Center at Yale-New Haven Hospital & Yale-New Haven Children's Hospital. Inspired by the injured children she once cared for in her past role as a Critical Care & Emergency Department registered nurse, Pina now extends her reach by developing & implementing injury prevention strategies on a local, state and national level. Her collaboration with the city of New Haven on the Street Smarts Pedestrian Safety Initiative was instrumental in Yale-New Haven Children's Hospital receiving the designation of Injury Free Coalition for Kids of New Haven of which she is the Co-Director and Co-Principal Investigator. Pina received her ASD & BSN degrees from Quinnipiac College, a Master's of Science in Public Health from Southern Connecticut State University and her Doctorate of Philosophy with a concentration in Public Health from Walden University.

Her prevention and research efforts have focused on Child Passenger Safety, Pedestrian Safety, Teen Safe Driving, Driving Under the Influence, Distracted Driving, Bike Safety, Child Abuse and Neglect, Women's Role in Violent Crimes, Using a Disaster Preparedness Approach to Mitigating the Effects of Persistent Gun Violence, Safe Gun Storage and Removing Unwanted Guns from the Community. She is the course director for the American Trauma Society's Injury Prevention Coordinators Curriculum Course. Pina has received numerous awards including: Community Champion- Greater Valley Substance Abuse Action Council; Karen O'Neil Professionalism Award-Emergency Nurses Association; Community Service Award-Emergency Nurses Association; Healthcare Heroes Award (Prevention Category)-Hartford Business Times; Dorothy Sexton Mentor Award-Sigma Theta Tau International- Delta Mu Chapter; Child Passenger Safety Technician of the Year Award (selected from over 34,000 technicians & was the 1st ever recipient of this award)-National Child Safety Board, Marie Hippensteel Award for Excellence in Nursing Practice, a Founders Award- Sigma Theta Tau International National Honor Society for Nurses, as well as the nurse of the year award from Yale-New Haven Hospital.

#### Melissa Wervey Arnold, CEO

#### American Academy of Pediatrics Ohio Chapter

Melissa Wervey Arnold has over 16 years experience in the association management, event planning and development field. In her current role as the CEO of the Ohio Chapter, American Academy of Pediatrics, she provides leadership to the Chapter and its membership, as well as serves as Executive Director of Ohio AAP Foundation and Ohio Pediatricians PAC. During her tenure, the Ohio AAP has received numerous awards and recognitions, including the Chapter of the Year Award from the American Academy of Pediatrics every year eligible in 2006, 2010 and 2014, has increased its operating revenue by over 800%, and has been established a successful lobbying program that has secured better reimbursement for physicians, as well as advocated for the passage of various child health legislation. Ms. Arnold also serves as the Chair for the Executive Director Steering Committee for National AAP, which is the executive board for all executive directors. In addition, she holds a place on numerous state government councils.

She serves on the emeritus Board of two Columbus non-profit organizations, serves as a member of the Dean's Advisory Council of the Scripps College of Communication at Ohio University, just finished a tenure on the Board of Directors for the Ohio University Alumni Association and is a sustainer member for the Junior League of Columbus. In 2006, she was recognized as one of the Forty Under 40 honorees from Business First in Columbus for her outstanding professional accomplishments, awards in her professional field, and commitment to community service. She has also received numerous awards from the association management community.

# EVALUATION & CME CERTIFICATION









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Forging New Frontiers in Childhood Injury Prevention

Injury Free coalition for Kids® Celebrate, Collaborate, Continue the Journey...



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### ACCREDITATION

#### Accreditation

#### CHES

Sponsored by Cincinnati Children's, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to 15.5 total Category 1 contact education contact hours. Maximum advanced-level continuing education contact hours available are 0.

#### **Continuing Medical Education**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Cincinnati Children's and the Injury Free Coalition for Kids at the Center for Injury Epidemiology and Prevention, Mailman School of Public Health, Columbia University. Cincinnati Children's is accredited by the ACCME to provide continuing medical education for physicians. Cincinnati Children's designates this live activity for a maximum of 16.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### Disclosure

Cincinnati Children's requires all clinical recommendations to be based on evidence that is accepted within the profession of medicine and all scientific research referred to, reported or used in support of or justification of patient care recommendations conform to the generally accepted standards of experimental design, data collection and analysis. All faculty will be required to complete a financial disclosure statement prior to the conference and to disclose to the audience any significant financial interest and/or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in his/her presentation and/or commercial contributor(s) of this activity. All planning committee members and/or faculty members were determined to have no conflicts of interest pertaining to this activity.