Emergency Medicine



Division Data Summary

Research and Training Details Number of Faculty 40 Number of Joint Appointment Faculty 2 Number of Research Fellows 3 Number of Support Personnel 45 Direct Annual Grant Support \$1,089,028 Peer Reviewed Publications 47 Clinical Activities and Training Number of Clinical Staff 32 Number of Clinical Fellows Number of Other Students 2 145123 **Outpatient Encounters**

Division Photo



Row 1: M Mahabee-Gittens, W Pomerantz, L Johnson, S Iyer Row 2: C Dixon, T Bryzkowski, L Babcock, C Holland, A Rinderknecht, R Ruddy Row 3: R Shapiro, J Luria, J Setlik, J Gonzalez-Del-Rey, M Mittiga

Significant Publications

Alessandrini EA, Knapp J. **Measuring Quality in Pediatric Emergency Care**. *Clinical Pediatric Emergency Medicine*. 12(2): p. 102-112. 2011.

Dr. Alessandrini worked with her colleagues in the PECARN network to assess the current availability of performance measures for pediatric emergency care. Her research found that although a wide range of performance measures relevant to pediatric emergency care exist, measures lack a systematic and comprehensive approach to evaluate the quality of care provided. These results have led to the development of a balanced report card for emergency departments caring for children.

Geis GL, et al. Simulation to assess the safety of new healthcare teams and new facilities. Simulation in Healthcare. 6(3): p. 125-33. 2011.

Through the use of simulation, video-assisted debriefing, and validated workload and teamwork scales, Dr. Geis assessed and refined team composition, roles and responsibilities, as well as room setup and equipment, for a freestanding emergency department prior to opening. This pilot project provides a template for evaluation of new teams and clinical settings before patient exposure.

lyer SB, et al. Use of quality-improvement methods to improve timeliness of analgesic delivery. *Pediatrics*. 127(1): p. e219-25. 2011.

This report describes the process of incorporating a bundle of interventions to improve the timeliness of analgesia in the ED setting for children with fractures. In this publication, lyer et al tell a compelling story about their experiences, from which they draw practical suggestions that can be adapted by other emergency

departments to improve the quality of timeliness of analgesia.

Mittiga MR, et al. Pediatric Emergency Medicine Residency Experience: Requirements Versus Reality. Journal of Graduate Medical Education. 2(4): p. 571-576. 2010.

The 4-month minimum time requirement for emergency and acute illness experience set forth by the ACGME Residency Review Committee for Pediatrics was evaluated to determine its sufficiency in achieving the expected clinical experience for categorical pediatric residents. Despite evaluating large numbers of patients overall, certain ACGME-required disorders were evaluated infrequently including shock, sepsis, diabetic ketoacidosis, coma/altered mental status, cardiopulmonary arrest, burns, and bowel obstruction, highlighting the need for focused and innovative educational experiences targeting areas of deficiency in clinical training. The results of this study have already had an impact with the ACGME reevaluating the requirements for EM training.

Rinderknecht AS, et al. Referral to the emergency department by a primary care provider predicts severity of illness. *Pediatrics*. 126(5): p. 917-24. 2010.

Factors used by staff within current ED triage systems are important to be efficient and to sort to help optimize delivery of safe, effective and efficient care. Debate exists, outside of physiological derangements and specific high-risk conditions what are other factors to be utilized. It is unclear if referral by a primary care provider (PCP) is a predictor of higher severity of illness. Dr. Rinderknecht and colleagues assessed whether referral to a pediatric emergency department (PED) by a PCP is associated with a higher severity of illness, as determined by clinical measures, including initial vital signs, and increased resource utilization. They found that referral by a PCP to a PED is significantly and independently associated with higher severity of illness and resource utilization. This has implications for children in that referral status should be considered in algorithms used to triage patients for evaluation in the ED.

Division Highlights

Evie Alessandrini, MD MSCE

Dr. Alessandrini's focus is on outcomes and performance measurement in pediatric emergency care. Using the infrastructure of the Pediatric Emergency Care Applied Research Network, she has just completed a 3-year HRSA funded project to create a balanced report card for EDs that care for children and this work has resulted in two publications this year. Dr. Alessandrini also served as a guest editor for the June issue of Clinical Pediatric Emergency Medicine that was focused on Improving Quality in Pediatric Emergency Care. In this issue, she co-authored manuscripts on Measuring Quality in Pediatric Emergency Care and The Acute Care Model: A New Framework for Improving Quality in Pediatric Emergency Care.

Lynn Babcock, MD

Dr. Babcock started her mentored career KL2 research project under the mentorship of Shari Wade PhD, PMR, which focuses on detecting axonal injury in children with mild traumatic brain injury through the use of advanced MRI imaging, functional outcomes and proteomics. She has developed an extensive collaborative network by becoming a member of the translational center (CCTST), the proteomics core, the neuroimaging consortium (PNRC), and the injury center (CCIC). Her key accomplishments include the 2011 Clinical and Translational Research Meeting Scholars Abstract Award for her work on post-concussion syndrome and her publication with PECARN on cervical spine injuries in children.

Terri Byczkowski, PhD

A validated measure of the quality of family-centered care in Pediatric Emergency Medicine does not

currently exist. Terri Byczkowski's research identifies and defines dimensions of family-centered care in terms of provider behaviors and system characteristics most important to them. Her research has shown that while there is overlap with existing measures of family-centered care in other venues, aspects of care unique to pediatric emergency medicine will need to be addressed.

Cinnamon Dixon, DO MPH

Dr. Dixon continued her dog bite prevention research with a study testing a video intervention in the CCHMC ED. Working with the division of Global Health and Dr. Mark Steinhoff, she also developed collaborations with a Brazilian academic institution and will initiate two projects focused on pediatric injury prevention and trauma surveillance. She had oral presentations at the World Safety Conference, Society of Academic Emergency Medicine, and Prevention of Brain Injury Among Ohio Youth Symposium; she submitted two NIH grants, and had her manuscript regarding dog bite education needs accepted for publication in Journal of Pediatrics.

Gary Geis MD, Mary Patterson, MD, MEd

Dr Geis and Patterson have continued their work in medical simulation and collaborated with several divisions on internally funded research / safety projects. In partnership with Dr. Derek Wheeler of Critical Care they were funded by AHRQ to study the development of expert skills in the recognition of sepsis which will help train more junior residents, fellows and faculty in the pediatric setting.

Michael Gittelman, MD and Wendy Pomerantz, MD MS

Dr. Gittelman has been collaborating with Wendy Pomerantz and Richard Falcone, Trauma Surgery, on developing a comprehensive injury center at CCHMC. Members from other Divisions help make up the CCIC steering committee, including: Shari Wade and Brad Kurowski in Physical Medicine and Rehabilitation, KJ Phelan in the Anderson Center for Health System Excellence and General Pediatrics, Charles Mehlman in Orthopedics and Earl Siegel of the Drug and Poison Information Center.

Jacqueline Grupp-Phelan, MD MPH

While many young patients at risk for suicide present to the ED following suicide attempts or in situations of extreme suicidal crises, other patients at risk for suicide go unrecognized, and therefore untreated, in the ED. Once discharged, 30% of suicidal adolescents return to the ED with another crisis within six months of the sentinel event. Currently, no evidence-based standards exist for appropriate screening and post-screening interventions in order to improve outcomes for patients presenting in EDs who are at elevated risk for suicidal behavior. Dr. Grupp-Phelan has finished a promising pilot study to engage youth at risk for suicide into services and is working with a multidisciplinary team to bring efficient suicide screening into the ED.

Carolyn Holland, MD MEd

Dr. Holland's focus is on adolescent health and sexually transmitted infections. She recently presented results demonstrating differences in STI testing rates among pediatric ED patients. Additionally, she is a Co-Investigator on the Outcomes Research Grant with Dr. Reed to improve results notification and partner notification and treatment among STI positive adolescents in the ED setting. She is collaborating with Dr. Michael Lyons of the University Of Cincinnati Department of Emergency Medicine on a retrospective review of missed opportunities for earlier HIV diagnosis among adolescent ED patients. Finally, she and Dr. Joyce Lippe recently received a grant to begin an expanded HIV testing program in the ED at CCHMC.

Srikant lyer, MD, MPH

Dr. Iyer has focused on process and systems improvement over the past year. On a local level, he has

worked to improve acute ED pain management resulting in a pain management report being published in the inaugural "Quality Reports" section in Pediatrics. This academic year he led and completed an improvement initiative in the ED fast track, On a national level, he has worked to improve outcomes of children with hypoplastic left heart syndrome, with several manuscripts published over this past year.

Benjamin Kerrey, MD

Dr. Kerrey and his team have completed an initial review of the process and outcomes of Rapid Sequence Intubation (RSI) in our ED, noting higher than reported adverse effects. They have refined a process of case identification, video review, and serial simulation to assess and improve systems of care in the trauma bay. The team is now planning to apply a version of that process to improve the performance of RSI in the ED.

Melinda Mahabee-Gittens, MD MS

Melinda Mahabee-Gittens' research centers on developing and evaluating the efficacy of PED-based youth tobacco prevention interventions and adult tobacco cessation interventions. Most recently, she has been completing work on an NIH-funded study that involves the complex analysis of a large secondary dataset to explore how race/ethnicity affects family factors that contribute to adolescent's smoking initiation and progression over time. She is also developing research strategies to seamlessly incorporate tobacco screening and cessation counseling into the pediatric healthcare system.

Jennifer Reed, MD

Over the past fiscal year, Dr. Reed received a BIRCWH (Building Interdisciplinary Research Careers in Women's Health) K12 grant as well as an institutional Place Outcomes Award grant to execute a quality improvement research project to improve results notification and partner notification and treatment among STI positive adolescents in the ED setting. This project is a collaborative effort with Adolescent Gynecology (Jill Huppert, MD), University Hospital Division of Emergency Medicine (Carolyn Holland, MD) and the Anderson Center for Health Systems Excellence (Evaline Alessandrini, MD, MSCE).

Richard Ruddy, MD

Dr. Ruddy has been the site PI in the Pediatric Emergency Care Applied Research Network (PECARN) for CCHMC since the network's beginning in 2001. This academic year several primary study papers have been published including work on cervical spine injury (Babcock, Reeves), Head Injury (Glass), Quality Measures (Alessandrini, Ruddy). Other studies in the initial completion phase include the Decision rule for Intra-Abdominal Injuries where presentations and papers are submitted (Kerrey). CCHMC is the leading site enrolling febrile infants in the Biosignature Study assessing RNA against type of infection. Dr. Ruddy remains an active investigator within the Quality Measures, Safety and the Respiratory / Asthma Work Groups. He is the new PI for a three-hospital node in the network funded with an EMSC Network Development Demonstration Project with Medical College of Wisconsin and Washington University School of Medicine (anticipated \$2.5 million over 4 years).

Daniel Schumacher, MD

Dr. Schumacher is just completing a project in which he conducted cognitive interviews with pediatric residents at CCHMC and Dayton Children's to determine how they understand, interpret, and respond to the Pediatrics Milestones. The Milestones are documents that are being developed through a collaborative effort of the ACGME and ABP and will take the next steps in GME outcomes assessment in pediatrics. Preliminary data from this study was presented as platform presentations at the Association of Pediatric Program

Directors (APPD) and Pediatric Academic Societies meetings and poster presentations at the APPD and ACGME meetings earlier this year.

Richard Strait, MD

Dr. Strait continues to research the immunology surrounding antibody mediated disease with focus on transfusion related acute lung injury, anaphylaxis and various immunoglobulin isotypes roles in prevention of disease. Recent publications (see below) have been in collaboration with various other investigators outside of Emergency Medicine.

Nathan Tlmm, MD

Dr. Timm had eight manuscripts accepted for publication with emphasis in three areas - clinical practice, ED utilization and disaster preparedness. Clinical practice studies included work with adolescent male STIs and pediatric pneumothorax. ED utilization projects included ED left without being seen population, pregnant teens, adult PED visits and ED crowding impact on clinical care in febrile neonates. Finally, his disaster preparedness work described our hospital emergency management model at CCHMC.

Division Collaboration

Center for Childhood Trust; » Cinnamon Dixon, DO, MPH; Barbara Boat, PhD

Assessment of the need for a continuum of care for dog bite victims

Center for Clinical and Translational Science and Training » Cinnamon Dixon, DO, MPH; Christopher Lindsell, PhD

Dog bite prevention education knowledge screening and desires

Center for Global Health » Cinnamon Dixon, DO, MPH; Mark Steinhoff, MD

International pediatric injury and trauma surveillance and prevention

Center for Global Health » Charles Schubert, MD; Mark Steinhoff, MD

Global child health program for the residency program

Center for Innovation in Chronic Disease » Terri Byczkowski, PhD, MBA; Maria Britto, MD, MPH Asthma Innovation Lab: Improving outcomes for adolescents with asthma

Center for Simulation and Research; Cardiac Intensive Care Unit » Terri Byczkowski, PhD, MBA; Bradley Marino, MD, MPP, MSCE; Catherine Dent Krawczeski, MD

Evaluating the impact of simulation training on technical and non-technical skills of personnel, clinical processes and team work within the Cardiac Intensive Care Unit (CICU)

Center for Simulation and Research; Division of Critical Care Medicine » Mary Patterson, MD, MEd; Gary Geis, MD; Derek Wheeler, MD

Implementation of in situ simulations: Mock codes on clinical units. Improvement in identification of sepsis

Center for Simulation and Research; Division of Hematology/Oncology, Bone Marrow Transplant Program » Mary Patterson, MD, MEd; Stella Davies, MBBS, PhD, MRCP

Meeting the Goal of Changing the Outcomes: Evaluating simulation training on technical and team work skills of BMT staff, care processes, and serious safety events on blood and marrow transplant patients

Center for Simulation and Research; Section of Neonatology, Perinatal and Pulmonary Biology » Gary Geis, MD; Beth Haberman, MD; Beth Ann Johnson, MD

Provide education in the simulation lab for CCHMC RCNIC staff in order to improve both clinical and

behavioral outcomes and subsequently improve the quality and safety of care that neonatal patients receive at CCHMC

Division of Adolescent Medicine; Behavioral Medicine; Clinical Psychology » Melinda Mahabee-Gittens, MD, MS; Robert Ammerman, PhD, APBB

Parental tobacco cessation and adolescent smoking prevention

Division of Adolescent Medicine; Anderson Center for Health Care Quality; Division of Surgery » Jennifer Reed, MD; Evaline Alessandrini, MD, MSCE; Terri Byczkowski, PhD, MBA; Carolyn Holland, MD, MEd; Jill Hupert, MD, MPH; Jessica Kahn, MD, MPH

Research on using text messaging for notification of STI results to adolescents and methods to improve partner notification

Division of Allergy and Immunology » Richard Strait, MD; Simon Hogan, PhD

Intestinal mast cell levels control severity of oral antigen-induced anaphylaxis in mice

Division of Allergy and Immunology » Richard Strait, MD; Yesim Kucuk, MD

Desensitization of IgE and IgG mediated anaphylaxis

Division of Allergy and Immunology » Laurie Johnson, MD; Gurjit Khurana Hershey, MD, PhD; Richard Ruddy, MD; Richard Strait, MD

Gene expression profiles of acute asthma and subphenotypes of treatment response

Division of Allergy and Immunology » Laurie Johnson, MD; Michelle Lierl, MD

Inter-rater reliability between physicians and respiratory therapists in pediatric asthmatic patients presenting to an Urban emergency department

Division of Anesthesiology » Berkeley Bennett, MD, MS; Jaqueline Morillo-Delerme, MD; Jennifer Setlik, MD Development of program for Emergency Medicine faculty to maintain intubation skills

Division of Biomedical Infomatics » Andrea Rinderknecht, MD; Jacqueline Grupp-Phelan, MD, MPH; Pawel Matykiewicz; John Pestian, PhD, MBA

Identifying research subjects from free text electronic documentation through natural language processing methods

Division of Biomedical Informatics » Hamilton Schwartz, MD; John Hutton, MD

Development of a transport team quality improvement tracking database

Division of Cardiology; Clinical Laboratory » Berkeley Bennett, MD, MS; Michael Chua, MD; Elena Duma, MD; Melinda Mahabee-Gittens, MD, MS; Russel Hirsch, MD; Paul Steele, MD

Prospective study of TroponinI to detect cardiac insult in non-accidental trauma

Division of Child Psychiatry; Division of Biomedical Informatics » Jacqueline Grupp-Phelan, MD, MPH;

Robert Kowatch, MD, PhD; John Pestian, PhD, MBA

Suicide risk assessment and prevention

Division of Child Psychiatry; Psychiatry Intake Response Team » Jacqueline Grupp-Phelan, MD, MPH;

Robert Kowatch, MD, PhD; Linda Richey, LISW

Predictors of mental health follow up among adolescents with suicidal ideation after emergency department discharge

Division of Critical Care Medicine; Center for Simulation and Research » Constance McAneney, MD, MS; Gary Geis, MD; Selena Hariharan, MD; Matthew Mittiga, MD; Mary Patterson, MD, MEd; Kenneth Tegtmeyer, MD; Hector Wong, MD

Boot camp for new fellows

Division of Endocrinology; General and Community Pediatrics » Michael Gittelman, MD; Christopher Balling,

MD; Amy Bernard, PhD; Mona Ho, MS; David Klein, MD, PhD; Wendy Pomerantz, MD

Screen and provide a program to reduce the obesity problem among youth in Avondale, providing after school curriculum

Division of GI » Richard Strait, MD; Lee Denson, MD

Exploring human IgG-mediated anaphylaxis

Division of Immunobiology » Richard Strait, MD; Joerg Kohl, PhD

Immunopathology of TRALI

Division of Immunobiology » Richard Strait, MD; Fred Finkelman, MD; Markat Khodoun, PhD

Role of IgG1 in arthritis, role of IgG1 in cryoglobulinemia induced glomerulonephritis, immunopathology of TRALI, rapid desensitization of IgE and IgG mediated anaphylaxis, exploring human IgG-mediated anaphylaxis

Division of Neonatology; Division of Critcal Care » Hamilton Schwartz, MD; Beth Haberman, MD; Becky Baute; Derek Wheeler, MD

Assessing utility of video television in the acute care setting

Division of Nephrology ; Division of Surgery » Richard Strait, MD; Michael Bennett, PhD; Jill Huppert, MD, MPH; Jennifer Reed, MD

Proteomics in appendicitis

Division of Neurosurgery » Lynn Babcock, MD; Todd Maugans, MD

Pediatric concussion: pilot study using advanced magnetic resonance imaging techniques

Division of Oncology » Evaline Alessandrini MD, MSCE; Denise Adams, MD; Rajaram Nagarajan, MD, MS; Nathan Timm, MD

Decreasing time to antibiotics in febrile, neutropenic patients

Division of Otolaryngology; Center for Simulation and Research; and Emergency Services » Benjamin

Kerrey, MD; Kaalan Johnson, MD; Jennifer Oehler, RN; Gary Geis, MD; Mary Dewald

Development of a novel system of care for critical airway obstruction in the Emergency Department, using insitu simulation to assess and revise existing system

Division of Pathology » Richard Strait, MD; Keith Stringer, MD

Immunopathology of TRALI, role of IGG1 in cryoglobulinemia induced glomerulonephritis

Division of Pathology » Richard Strait, MD; David Witte, MD

Immunopathology of TRALI, role of IGG1 in cryoglobulinemia induced glomerulonephritis

Division of Pediatric Physical Medicine and Rehabilitation » Lynn Babcock, MD; Bradley Kurowski, MD; Shari Wade, PhD

Axonal injury

Division of Pediatric and Thoracic Surgery » Gary Geis, MD; Terri Byczkowski, PhD, MBA; Richard Falcone, Jr., MD, MPH

Evaluating the use of simulation training on technical and team work skills of personnel, care processes, and serious safety events on Extracorporeal Membrane Oxygenation

Division of Radiology » Lynn Babcock, MD; Daniel Podberesky, MD

CT Scan with Contrast Alone (CTIV): The role of intra-abdominal fat (IAF) on the sensitivity of CTIV to visualize the normal appendix

Radiology/Pediatric Neuroimaging Research Consortium » Lynn Babcock, MD; Blaise Jones, MD; James Leach, MD; Weihong Yuan, PhD

Axonal injury

Division of Rheumatology » Richard Strait, MD; Sherry Thornton, PhD

Role of IgG1 in collagen induced arthritis

Division of Sports Medicine » Lynn Babcock, MD; Jon Divine, MD

Axonal injury

Division of Surgery » Jennifer Reed, MD; Jill Huppert, MD, MPH; Richard Strait, MD

Research on use of biomarkers to evaluate for ovarian torsion versus other acute abdominal/pelvic conditions

Division of Surgery » Jennifer Reed, MD; Jill Huppert, MD, MPH; Carolyn Holland, MD, MEd

Research on improving notification of STI results to adolescents and feasibility of universal STI screening in the ED

DSIOP; Neurology; Mayerson Center; Radiology; Psychology; Truama » Wendy Pomerantz, MD; Todd Arthur, MD; Andrea Booth; John Bucuvalas, MD; Marquerite Care; Richard Falcone, MD, MPH; Michael Gittelman,

MD; Megan Greiner, CCLS; Abigail Johnson

Head injury clinic

Education and Learning Department » Lisa Vaughn, PhD; Daniel McLinden, EdD

Cultural health attributions, concept mapping methodology, social network analysis

Education and Training Department » Hamilton Schwartz, MD; Ken Crank, NEMT-P; Dan McLinden, EdD; Lynn Standen

Development of on-line pediatric education for EMTs and paramedics

Gen Peds; House Staff Office » Charles Schubert, MD; Michael Gittelman, MD; Javier Gonzalez del Rey, MD,

MEd; Wendy Pomerantz, MD; Melissa Klein, MD

Injury prevention and advocacy course

General and Community Pediatrics » Lisa Vaughn, PhD; Melissa Klein, MD

Social determinants of health, poverty

General and Community Pediatrics » Stephanie Kennebeck, MD; Michael Farrell, MD; S. Andrew Spooner, MD; Nathan Timm, MD

Examining methods to improve efficiency during implementation of electronic medical record systems

James M. Anderson Center for Health Systems Excellence » Terri Byczkowski, PhD, MBA; Evaline Alessandrini, MD, MSCE

The pediatric emergency department experience: measurable family-centered care

James M. Anderson Center for Health Systems Excellence » Srikant lyer, MD, MPH; Carole Lannon, MD, MPH

Improvement advisor for the Joint Commission on Congenital Heart Disease Improvement Collaborative

James M. Anderson Center for Health Systems Excellence » Lisa Vaughn, PhD; Peter Margolis, MD, PhD; Michael Seid. PhD

Transformative RO1 - Collaborative Chronic Care Network and Improve Care Now

James M. Anderson Center for Health Systems Excellence; Division of Surgery; BMI; Radiology » Holly Brodzinski, MD, MPH; Evaline Alessandrini, MD, MSCE; Andrew Spooner, MD, MS, FAAP; Alex Towbin, MD; Dan vonAllmen, MD

Risk stratification to efficiently diagnose appendicitis

James M. Anderson Center for Health Systems Excellence » Terri Byczkowski, PhD; Evaline Alessandrini, MD, MSCE

The pediatric emergency department experience: measurable family-centered care

Mayerson Center for Safe and Healthy Children » Berkeley Bennett, MD, MS; Michael Chua, MD; Kathi Makoroff, MD

Clinical decision rules to discriminate bruising caused by physical child abuse from bruising caused by accidental trauma

Psychiatry Intake Response Team » Jacqueline Grupp-Phelan, MD, MPH; Linda Richey, LISW

An assessment of voluntary adolescent mental health screening and referral in a children's hospital emergency department

Rehab; NS; Sports Medicine; Trauma; Radiology; General Pediatrics » Michael Gittelman, MD; Lynn Babcock, MD; Jon Divine, MD; Richard Falcon, MD, MPH; Blaise Jones, MD; Bradley Kurowski, MD; Wendy Pomerantz, MD; Shari Wade, PhD

Comprehensive Children's Injury Center (CCIC)

Trauma Services » Michael Gittelman, MD; Dawne Gardner-Davis; Deatra Greene, MS; Wendy Pomerantz, MD Injury Free Coalition for Kids of Cincinnati (Emergency Medicine and Safe Kids Coalition (Trauma) working together on multiple community outreach programs, including Walk Child to School

Trauma Services » Gary Geis, MD; Richard Falcone, MD, MPH; Matthew Mittiga, MD; Mary Patterson, MD; Andrea Rinderknect, MD

Crew resource management in trauma care through use of simulation

Faculty Members

Richard M. Ruddy, MD, Professor

Division Director

Site PI - Pediatric Emergency Care Applied Research Network, ACORN Node

Research Interests Pediatric Emergency Care Applied Research Network Multicenter Trials, Asthma and Quality Research

Javier Gonzalez del Rey, MD, MEd, Professor

Associate Director, Division Of Emergency Medicine

Director, Pediatric Residency Training Programs

Research Interests Medical Education and Training

Jacqueline Grupp-Phelan, MD, MPH, Associate Professor

The Richard Ruddy and Barbara Wriston-Ruddy Endowed Chair for Pediatric Research

Associate Director, Division of Emergency Medicine

Director of Research and Prevention Research Focus Team Leader

Research Interests Mental Health Services and Treatment Engagement; Health Services Research, Cost-Effectiveness, Clinical Effectiveness and Utilization

Joseph Luria, MD, Associate Professor

Associate Director, Division of Emergency Medicine

Medical Director, Emergency Department

Clinical Leadership Team

Research Interests Improvement Related to ED Quality; Patient Safety, and Flow

Constance McAneney, MD, MS, Professor

Associate Director, Division of Emergency Medicine

Director, Pediatric Emergency Medicine Fellowship

Director, Education for the Division of Emergency Medicine

Research Interests Medical Education

Lynn Babcock, MD, Associate Professor

Clinical Research Focus Team Leader

Research Interests Traumatic Brain Injury (translational research combining neuroimaging, biomarkers, and functional outcomes) and Injury Prevention

Berkeley L. Bennett, MD, MS, Assistant Professor

Medical Director of the Northern Kentucky Advocacy Center

Research Interests Cardiac Injury in Association with Non-Accidental Trauma, Child Abuse

Seema Bhatt, MD, Assistant Professor

Research Interests Education, Management of Dehydration

G. Randall Bond, MD, Professor

Medical Director, Drug Poison Information Center

Research Interests Improvement of Outcomes in Victims of Acute Poisoning

Holly Brodzinski, MD, MPH, Assistant Professor

Research Interests Sedation, Safety, Decision Support in Acute Appendicitis, Health Services, Global Health

Terri L. Byczkowski, PhD, MBA, Assistant Professor

Research Interests Family Centered Care in PEM, Transition to Adult Focused Care.

Patricia Chambers, MD, Assistant Professor

Research Interests Communication in Healthcare, Humanism in Medicine

Cinnamon Dixon, DO, Assistant Professor

Research Interests Global Health Injury Prevention

Elena Duma, MD, Assistant Professor

Clinical Staff Coordinator

Director, PED 4th Year Medical Student Clerkship

Research Interests Pediatric Emergency Medicine, Child Abuse

Mary Jo-Ellen Erickson, MD, Assistant Professor

Research Interests Use of Ultrasound in ED

Michael FitzGerald, PhD, Assistant Professor

Education Research Focus Team Leader

Research Interests Feedback in Medical Education, Assessment and Evaluation of Medical Learners

Gary L. Geis, MD, Associate Professor

Assistant Medical Director, The Cincinnati Children's Center for Simulation and Research

Research Interests Medical Simulation, Resuscitation

Michael Gittelman, MD, Associate Professor

Co-Director, Comprehensive Children's Injury Center

Co-Director, Injury Free Coalition for Kids

Director, Injury Prevention and Advocacy Resident Course

Research Interests Injury Control, Behavior Change Counseling, Community Prevention

Todd Glass, MD, MS, Associate Professor

Medical Director, Liberty Campus Emergency Department

Clinical Leadership Team

Research Interests Pediatric Trauma, Traumatic Brain Injury, Care Delivery Systems Design and Improvement

Selena Hariharan, MD, Assistant Professor

Clinical Leadership Team

Assistant Fellowship Director

Research Interests Prevention

Carolyn Holland, MD, MEd, Assistant Professor

Research Interests Adolescent ED Health Issues, Medical Education

Richard Hornung, DrPH, Professor

Research Interests Study Design, Exposure Assessment Modeling, Longitudinal Data Analysis,

Epidemiologic Methods, and Risk Estimation

Srikant Iyer, MD, MPH, Assistant Professor

Research Interests Systems and Process Improvement, Patient Flow, and Acute ED Pain Management

Laurie H. Johnson, MD, Assistant Professor

Research Interests Asthma and Resuscitation

Stephanie Kennebeck, MD, Assistant Professor

EPIC IT Leadership

Research Interests Quality Care, Overcrowding in ED

Benjamin Kerrey, MD, Assistant Professor

Research Interests Procedural Education for Pediatric Residents, Quality of the Intubation and Confirmatory Process in Emergent Pediatric Intubations, Need for Imaging in Pediatric Blunt Abdominal Trauma

Melinda Mahabee-Gittens, MD, MS, Associate Professor

Research Interests Adolescent Tobacco Prevention, Adult Tobacco Cessation, Intervention Development

Mia L. Mallory, MD, Associate Professor

Associate Director, Pediatric Residency Training Program

Research Interests Resident Education

Matthew Mittiga, MD, Assistant Professor

Coordinator, Emergency Department Resident Education

Research Interests Resuscitation Team Training and Communication, Critical Care in the Pediatric ED,

Pediatric Airway Management/Complications, Resident and Fellow PEM Education

Mary Patterson, MD, MEd, Associate Professor

Medical Director, The Cincinnati Children's Center for Simulation and Research

Research Interests Simulation in Healthcare, Patient Safety, Teamwork and Communication

Wendy Pomerantz, MD, MS, Associate Professor

Co-Director, Injury Free Coalition for Kids

Co-Director, Safety Resource Center

Research Interests Injury and Poison Prevention, Epidemiology, Geographic Information Systems,

Playground Related Injuries

Jennifer Reed, MD, Associate Professor

Research Interests Adolescent ED Health Issues, STI Testing & Treatment, Adolescent Research Consent Challenges, Quality Improvement

Scott Reeves, MD, Associate Professor

Quality Research Focus Team Leader

Research Interests Quality Care, Evidence-Based Care, Acute ED Pain Management

Andrea Rinderknecht, MD, Assistant Professor

Research Interests Critical Care in the Pediatric ED, Resuscitation Team Training & Communication, Pediatric Airway Management/Complications, Health Services ED Use Across Diseases/Referrals

Charles J. Schubert, MD, Professor

Associate Director, Pediatric Residency Training Program - Global Health

Research Interests Global Child Health and Vulnerable Populations

Hamilton P. Schwartz, MD, Assistant Professor

Medical Director, Transport Team

Medical Director, Statline

Pediatric Medical Director, Cincinnati Fire Department

Research Interests Pediatric EMS and Transport Medicine

Jennifer Setlik, MD, Assistant Professor

Research Interests Abuse of Prescription Medications, Injury Prevention

Robert Allan Shapiro, MD, Professor

Director, Mayerson Center for Safe and Healthy Children

Research Interests Sexually Transmitted Disease, Fractures Caused by Abuse

Richard Strait, MD, Associate Professor

Research Interests Early Immunologic Response to Infectious Disease, Immunologic Response to Anaphylaxis, Procedural Sedation

Nathan Timm, MD, Associate Professor

CCHMC Emergency Preparedness Officer

Research Interests Hospital Emergency Management, Quality Care, Overcrowding in ED

Shan Yin, MD, MPH, Assistant Professor

Assistant Medical Director, Drug and Poison Information Center

Research Interests Pediatric Toxicology

Joint Appointment Faculty Members

Evaline Alessandrini, MD, MSCE, Professor

James M. Anderson Center for Health Systems Excellence

Research Interests Outcomes and Risk-Adjustment in Pediatric Emergency Care, Quality Measurement

Lisa Vaughn, PhD, Associate Professor

General and Community Pediatrics

Research Interests Cross-Cultural Psychology Issues Especially with Latinos, Women and Children; Community-Based Participatory Research; International Global Studies; Social Psychology Related

Clinical Staff Members

- · Catherine Gouldin, MD, PEM Trained
- Lisa Lewis, MD, PEM Trained
- Margaret Orcutt-Tuddenham, DO, Clinical Leadership Team, PEM Trained; Medical Director, Urgent Cares; Clinical Leadership Team;
- · Kristen Paddon, MD, PEM Trained
- · Kirsten Ahrens, MD

- Arash Babaoff, MD
- · Kate Balkoweic, MD
- Eunice Blackmon, MD, 3rd Year Medical Student Ed Rotation
- Kamali Bouvay, MD
- · Caroline Castleforte, MD
- Hillary Chang, MD
- Michael Chua, MD
- Jenny Lynn DeBruer, MD
- · Kristen DeMarco, MD
- Emily Eagen, MD
- Michelle Eckerle, MD
- Kerry Gorman, MD
- Mark Griffiths, MD, ED Clinical Leadership Team
- Laura Howell, MD
- · Pamela Kingma, MD, PhD
- Joy Lippe, MD
- Gregory Middleton, MD, Clinical Leadership Team, ED Clinical Leadership Team
- Joanna Nacopoulos, MD
- Janice Roeder, MD
- Rima Rusnak, MD, Clinical Leadership Team, ED Clinical Leadership Team
- · Lori Schroeder, MD, PhD
- · Radhika Shah, MD
- Kristin Stackpole, MD
- Kathryn Stordahl, MD
- Karen Szczepanski, MD
- Elizabeth Templin, MD
- Sandra Wright, MD
- · Evan Yeung, MD
- Angela Brown, RN, CNP
- Rachael Ekstrand, RN, CNP
- Karen Ford, RN, CNP
- Jamie Gerdemann, RN, CNP
- Kristina Kaufmann, RN, CNP
- · Michelle Schrand, RN, CNP
- Molly Stenger, RN, CNP
- Anika Surratt, RN, CNP
- Michelle Widecan, RN, CNP Clinical Leadership Tm, ED Clinical Leadership Team;

Trainees

- Brad Sobolewski, MD, PL-VII, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- Brian Hang, MD, MS, PL-VII, New York University, New York, NY
- Eileen Murtagh-Kurowski, MD, PL-VII, University of Pittsburgh Medical Center, Pittsburgh, PA
- Daniel Schumacher, MD, PL-VI, University of Wisconsin Hospitals & Clinics, Madison, WI
- Cory Showalter, MD, PL-VI, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- Samuel Delaune, MD, PL-V, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

- Kurtis Dotson, MD, PL-V, Medical University of South Carolina, Charleston, SC
- Tara Rhine, MD, PL-IV, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- Corinne Bria, MD, PL-V, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- Jessica Kanis, MD, PL-V, Medical University of South Carolina, Charleston, SC
- Brian Wagers, MD, PL-V, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

Significant Accomplishments

Research

The Division of Emergency Medicine exceeded funding goals by submitting 23 grants as a primary site and seven as a subrecipient and obtaining four more via new faculty and industry. Cincinnati Children's became a principal investigator within the national Pediatric Emergency Care Research Network (PECARN) along with partners St. Louis Children's Hospital and Children's Hospital of Wisconsin. Research stakeholders led by Jacqueline Grupp-Phelan, MD, MPH, held a research retreat resulting in a mandate for an improved mentoring plan and restructuring of institutional investment.

In clinical research, Lynn Babcock, MD, MPH, and Scott Reeves, MD, were authors on the landmark PECARN study on cervical spine injury, "Factors Associated with Cervical Spine Injury in Children after Blunt Trauma" (*Annals of Emergency Medicine*, Oct. 2010). Benjamin Kerrey, MD, Matthew Mittiga, MD, and Andrea Rinderknecht, MD, presented innovative work on resuscitation procedures, while Babcock presented pioneering work on mild traumatic brain injury. Gary Geis, MD, Derek Wheeler, MD, and Mary Patterson, MD, MEd, were funded by the Agency for Healthcare Research and Quality to develop expertise in sepsis identification through use of simulation.

In prevention research, a team directed by Grupp-Phelan led the division with funded grants and continues to publish important work in mental health screening, smoking prevention, cultural issues across ethnic groups and injury control.

In quality research, a team led by Evaline Alessandrini, MD, MSCE, and Reeves, presented work at the Pediatric Academic Societies conference, published in the first issue of *Pediatrics* devoted to quality (Iyer et al: "Use of quality improvement methods to improve timeliness of analgesic delivery") and published two papers in the "Quality in Pediatric Emergency Medicine" issue of *Clinical Pediatric Emergency Medicine* (June 2011). Two division members (Holly Brodzinski, MD, and Jennifer Reed, MD) received Place Awards for institutional outcomes research. The first paper on quality measures in pediatric emergency medicine from Alessandrini's EMSC grant was published in the May issue of *Academic Emergency Medicine*.

In educational research, Javier Gonzalez del Rey, MD, MEd, received funding on two grants to expand the primary care residency and hand-offs by pediatric residents. Faculty contributed to several excellent papers and to Fleisher and Ludwig's 5-Minute Pediatric Emergency Medicine Consult.

Clinical Program

Joseph Luria, MD, led a newly assembled clinical leadership team of physicians and APNs through a year of leadership development along with Scott Steel from the Education and Learning Department. This resulted in restructuring of administrators on call, improvements in clinical scheduling and new improvement teams, including a multidisciplinary team for patient experience. Faculty trained in improvement science — Brodzinski and Alessandrini — completed projects in management of abscesses with sedation and timely administration of antibiotics to febrile neutropenic patients. A multidisciplinary team focused on the care of

acute pain significantly improved pain reassessment in acute fracture patients. Srikant Iyer MD, MPH, led a team that increased efficiency and productivity of our fast-track area. Our safety team has reduced the number of medication errors and there have been no serious safety events for 1,342 days through June 30, 2011. This was accomplished while treating more than 146,000 patients at two emergency departments and three urgent care sites.

Education and Faculty Development

Through the leadership of Javier Gonzalez del Rey, MD, MEd, the division held two half-day faculty development workshops that trained faculty on improvement science, budget development, clinical communication skills and conflict prevention and resolution.

Division Publications

- 1. Adeoye O, Hornung R, Khatri P, Ringer A, Kleindorfer D. The rate of hemicraniectomy for acute ischemic stroke is increasing in the United States. *J Stroke Cerebrovasc Dis.* 2011; 20:251-4.
- 2. Adeoye O, Ringer A, Hornung R, Khatri P, Zuccarello M, Kleindorfer D. **Trends in surgical management and mortality of intracerebral hemorrhage in the United States before and after the STICH trial**.

 Neurocrit Care. 2010; 13:82-6.
- 3. Alessandrini E, Varadarajan K, Alpern ER, Gorelick MH, Shaw K, Ruddy RM, Chamberlain JM. **Emergency department quality: an analysis of existing pediatric measures**. *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine*. 2011; 18:519-26.
- 4. Alessandrini EA, Knapp J. **Measuring Quality in Pediatric Emergency Care**. *Clinical Pediatric Emergency Medicine*. 2011; 12:102-112.
- 5. Bennett BL, Pierce MC. **Bone Health and Development**. *Child abuse and neglect : diagnosis, treatment, and evidence*. St. Louis, Mo.: Saunders/Elsevier; 2010: 260-274.
- 6. Bodmer M, Monte AA, Kokko J, Yin S. **Safety of non-therapeutic levetiracetam ingestions--a poison center based study**. *Pharmacoepidemiol Drug Saf*. 2011; 20:366-9.
- 7. Braun JM, Daniels JL, Poole C, Olshan AF, Hornung R, Bernert JT, Khoury J, Needham LL, Barr DB, Lanphear BP. Prenatal environmental tobacco smoke exposure and early childhood body mass index. *Paediatr Perinat Epidemiol.* 2010; 24:524-34.
- 8. Braun JM, Daniels JL, Poole C, Olshan AF, Hornung R, Bernert JT, Xia Y, Bearer C, Barr DB, Lanphear BP. A prospective cohort study of biomarkers of prenatal tobacco smoke exposure: the correlation between serum and meconium and their association with infant birth weight. *Environ Health*. 2010; 9:53.
- 9. Britto MT, Byczkowski TL, Hesse EA, Munafo JK, Vockell AL, Yi MS. Overestimation of impairment-related asthma control by adolescents. *J Pediatr*. 2011; 158:1028-1030 e1.
- 10. Byczkowski TL, Kollar LM, Britto MT. Family experiences with outpatient care: do adolescents and parents have the same perceptions?. *J Adolesc Health*. 2010; 47:92-8.
- 11. Byczkowski TL, Munafo JK, Britto MT. Variation in use of Internet-based patient portals by parents of children with chronic disease. *Arch Pediatr Adolesc Med.* 2011; 165:405-11.
- Chan C, Hughes TS, Muldoon S, Aldrich T, Rice C, Hornung R, Brion G, Tollerud DJ. Mortality patterns among Paducah Gaseous Diffusion Plant workers. J Occup Environ Med. 2010; 52:725-32.
- 13. Chapman K, Creton S, Kupferschmidt H, Bond GR, Wilks MF, Robinson S. The value of acute toxicity studies to support the clinical management of overdose and poisoning: a cross-discipline consensus. *Regul Toxicol Pharmacol*. 2010; 58:354-9.
- 14. Erickson MJ, Gittelman MA, Dowd D. Risk factors for dating violence among adolescent females

- presenting to the pediatric emergency department. J Trauma. 2010; 69:S227-32.
- 15. Fiks AG, Localio AR, Alessandrini EA, Asch DA, Guevara JP. **Shared decision-making in pediatrics: a** national perspective. *Pediatrics*. 2010; 126:306-14.
- 16. Fitzgerald M, Lehmann C. Development and Field Pretest of the Feedback Quality Index: A Tool for Assessing Feedback Frequency and Quality in a Clinical Setting. The Open Medical Education Journal. 2010; 4:1-11.
- 17. Foltin GL, Dayan P, Tunik M, Marr M, Leonard J, Brown K, Hoyle J, Jr., Lerner EB. **Priorities for pediatric prehospital research**. *Pediatr Emerg Care*. 2010; 26:773-7.
- 18. Geis GL, Pio B, Pendergrass TL, Moyer MR, Patterson MD. Simulation to assess the safety of new healthcare teams and new facilities. Simul Healthc. 2011; 6:125-33.
- 19. Gittelman MA, Pomerantz WJ. The Use of Focus Groups to Mobilize a High-Risk Community in an Effort to Prevent Injuries. *Journal of Prevention & Intervention in the Community*. 2011; 39:209-222.
- 20. Gittelman MA, Pomerantz WJ, Schubert CJ. Implementing and evaluating an injury prevention curriculum within a pediatric residency program. *J Trauma*. 2010; 69:S239-44.
- 21. Gordon JS, Mahabee-Gittens EM. Development of a Web-based tobacco cessation educational program for pediatric nurses and respiratory therapists. *J Contin Educ Nurs*. 2011; 42:136-44.
- 22. Govindarajan P, Larkin GL, Rhodes KV, Piazza G, Byczkowski TL, Edwards M, Baren JM. Patient-centered integrated networks of emergency care: consensus-based recommendations and future research priorities. *Acad Emerg Med*. 2010; 17:1322-9.
- 23. Iyer S, Reeves S, Varadarajan K, Alessandrini E. **The Acute Care Model: A New Framework for Quality Care in Emergency Medicine**. *Pediatric Emergency Medicine*. 2011; 12:91-101.
- 24. Iyer SB, Schubert CJ, Schoettker PJ, Reeves SD. **Use of quality-improvement methods to improve timeliness of analgesic delivery**. *Pediatrics*. 2011; 127:e219-25.
- 25. Kalkbrenner AE, Hornung RW, Bernert JT, Hammond SK, Braun JM, Lanphear BP. **Determinants of serum cotinine and hair cotinine as biomarkers of childhood secondhand smoke exposure**. *J Expo Sci Environ Epidemiol*. 2010; 20:615-24.
- 26. Klein M, Vaughn LM. Teaching social determinants of child health in a pediatric advocacy rotation: small intervention, big impact. *Med Teach*. 2010; 32:754-9.
- 27. Lanphear BP, Hornung RW, Khoury J, Yolton K, Lierl M, Kalkbrenner A. Effects of HEPA air cleaners on unscheduled asthma visits and asthma symptoms for children exposed to secondhand tobacco smoke. *Pediatrics*. 2011; 127:93-101.
- 28. Luria J, Buncher MJ, Ruddy RM. **Workforce and its Impact on Quality**. *Clinical Pediatric Emergency Medicine*. 2011; 12:151-160.
- Mahabee-Gittens E, Vaughn L, Gordon J. Youth and Their Parents' Views on the Acceptability and Design of a Video-Based Tobacco Prevention Intervention. J Child Adolesc Subst Abuse. 2010; 19:391-405.
- 30. Miller MK, Plantz DM, Denise Dowd M, Mollen CJ, Reed J, Vaughn L, Gold MA. Pediatric emergency health care providers' knowledge, attitudes, and experiences regarding emergency contraception. *Acad Emerg Med.* 2011; 18:605-12.
- 31. Mittiga MR, Schwartz HP, Iyer SB, Gonzalez del Rey JA. **Pediatric Emergency Medicine Residency Experience: Requirements Versus Reality**. *Journal of Graduate Medical Education*. 2010; 2:571-576.
- 32. Pomerantz WJ. (2011) **Septic Shock: Initial Evaluation and Management in Children**. UpToDate. Waltham, MA, UpToDate.
- 33. Pomerantz WJ, Roback MG. (2011) **Hypovolemic Shock in Children: Inital Evaluation and Management**. UpToDate. Waltham, MA, UpToDate.
- 34. Pomerantz WJ, Roback MG. (2010) Physiology and classification of shock in children. UpToDate.

- Waltham, MA, UpToDate.
- 35. Pruden C, Kerrey BT, Mittiga MR, Gonzalez del Rey JA. **Procedural Readiness of Pediatric Interns**. *Journal of Graduate Medical Education*. 2010; 2:513-517.
- 36. Rinderknecht AS, Ho M, Matykiewicz P, Grupp-Phelan JM. Referral to the emergency department by a primary care provider predicts severity of illness. *Pediatrics*. 2010; 126:917-24.
- 37. Stanley R, Lillis KA, Zuspan SJ, Lichenstein R, Ruddy RM, Gerardi MJ, Dean JM. Development and implementation of a performance measure tool in an academic pediatric research network. *Contemp Clin Trials*. 2010; 31:429-37.
- 38. Strait RT, Mahler A, Hogan S, Khodoun M, Shibuya A, Finkelman FD. Ingested allergens must be absorbed systemically to induce systemic anaphylaxis. *J Allergy Clin Immunol*. 2011; 127:982-9 e1.
- 39. Sun GH, Harmych BM, Dickson JM, Gonzalez del Rey JA, Myer CM, 3rd, Greinwald JH, Jr.. Characteristics of children diagnosed as having coagulopathies following posttonsillectomy bleeding. *Arch Otolaryngol Head Neck Surg.* 2011; 137:65-8.
- 40. Vaughn LM, Hensley B, Baker RC, Dearman L. Learning Styles and Their Relationship to Stress and Coping in College Women. *Journal on Excellence in College Teaching Journal on Excellence in College Teaching*. 2010: 21:97-111.
- 41. Vaughn LM, Ireton C, Geraghty SR, Diers T, Nino V, Falciglia GA, Valenzuela J, Mosbaugh C. Sociocultural influences on the determinants of breast-feeding by Latina mothers in the Cincinnati area. Fam Community Health. 2010; 33:318-28.
- 42. Vaughn LM, Jacquez F, Zhao J, Lang M. Partnering with students to explore the health needs of an ethnically diverse, low-resource school: an innovative large group assessment approach. Fam Community Health. 2011; 34:72-84.
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- 44. Yin S. One Pill Can Kill. Emergency Medicine Secrets. St. Louis: Elsevier Mosby; 2010.
- 45. Yin S. Malicious use of pharmaceuticals in children. J Pediatr. 2010; 157:832-6 e1.
- 46. Yin S, Kokko J, Lavonas E, Mlynarchek S, Bogdan G, Schaeffer T. Factors associated with difficulty achieving initial control with crotalidae polyvalent immune fab antivenom in snakebite patients. *Acad Emerg Med*. 2011; 18:46-52.
- 47. Yin S, Powell EC, Trainor JL. Serious bacterial infections in febrile outpatient pediatric kidney transplant recipients. *Pediatr Infect Dis J.* 2011; 30:136-40.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct / Project Period Direct

ALESSANDRINI, E

Implementation of the PECARN Traumatic Brain Injury Prediction Rules for Children Using Computerized Clinical Decision Support: An Interrupted Time Series Trial

Health Resources and Services Administration(Columbia University)

\$02 MC 19289 9/10/10-8/31/13 \$25,845

BABCOCK CIMPELLO, L

Axonal Injury mTBI

National Institutes of Health(University of Cincinnati)

KL2 RR 026315 04/01/10-03/31/12 \$47,889

R01 HD 060997	en's Memorial Hospital) 05/30/2011-03/31/2016	045 500
R01 HD 060997	05/30/2011-03/31/2016	\$45,508
BOND, R		
Pilot Survey to Ascertain the Sou Children Less than 2 years of ago (Denver Health and Hospital Author		inations When Dosing
	04/01/2011-07/01/2011	\$17,442
BYCZKOWSKI, T		
The Pediatric Emergency Departi	ment Experience	
Agency for Healthcare Research a	nd Quality	
R03 HS 019037	07/01/10-06/30/12	\$57,022
GEIS, G		
	ation as a Tool to Improve the Recognition of Sepsis	
Agency for Healthcare Research a		
R18 HS 020455	04/01/11-03/31/14	\$228,597
GRUPP-PHELAN, J		
Cincinnati Center for Clinical and	I Translational Sciences and Training (K30 Training P	rogram)
National Institutes of Health(Univer	<u> </u>	,
LII 4 DD 000044		
UL1 RR 026314	04/03/2009-03/31/2014	\$28,982
	04/03/2009-03/31/2014	\$28,982
HANG, B		\$28,982
HANG, B Predicting Recovery from Concu	ssions with ImPACT in the ED	\$28,982
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REED, J

Improving STI Results Notification and Partner Services

National Institutes of Health(University of Cincinnati)

K12 HD 051953 11/01/10-10/31/12 \$100,000

RUDDY, R

EMSC Network Development Demonstration Project

Health Resources & Services Administration(University of California - Davis)

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	Current Ye	ar Direct	\$1,089,028
National Institutes of Health P30 AR 047363	09/01/2006-06/30/2011		\$50,000
	ore Center (Pilot and Feasibility Study)		
R01 AI 072040	08/01/2009-07/31/2012		\$57,456
National Institutes of Health(University			
IgG Isotope Regulation of Antibo	dv Mediated Disorders		
STRAIT, R			
U01 NS 056975	01/01/2009-07/31/2012		\$9,401
Rapid Anticonvulsant Medication National Institutes of Health(University)			
SCHWARTZ, H			
	07/01/10-06/30/11		\$4,200
University of Cincinnati			
Learner-Centered Roadmaps for of the Pediatrics Milestones	Learning and Assessment: Use of Cognitive Interview	ing in the De	evelopment
SCHUMACHER, D			
	3 110 112 333 12 3 12 3 12 3 1		Ψ00,100
City of Cincinnati	01/01/2000-12/31/2011		\$66,750
City of Cincinnati Immunization F	Program		
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Wayne State University R01 HD 062477	01/01/2011-05/31/2013		\$11,939
	ency Evalulation of Febrile Infants		
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