

Division Data Summary

Research and Training Details

Number of Faculty	43
Number of Joint Appointment Faculty	8
Number of Support Personnel	30
Direct Annual Grant Support	\$3,004,112
Peer Reviewed Publications	45

Clinical Activities and Training

Number of Clinical Staff	115
Number of Clinical Fellows	4
Number of Other Students	5
Inpatient Encounters	8,171
Outpatient Encounters	84,336

Division Photo



Row 1: R Kahn, S Callahan, J Simmons, T DeWitt, S Shah, M Mansour, M Klein, S Muething
Row 2: M Seehausen Kane, L Crosby, J Beischel, E Springer, Z Samaan, K Lewis, AM Fitz, W Chouteau, K Hicks, K Jerardi, N Goyal, M Parker, J Klein, J Motley
Row 3: A Hurm, J Cross, L Kelley, G Hartz, K Copeland, K Yolton, A Statile, D Elkeeb, L Solan, J Thomson, S Geraghty, J Hardie, C Brown, C McIntyre
Row 4: T Wendling, J Ragsdale, N DeBlasio, S Riddle, B Bolser, H Kalkwarf, A Diewert, N Unaka, C White, R Schaengold, G Szumlas, T Tiller, J Morehous
Row 5: A Poltrack, N Newman, D Fletcher, J Schaffzin, B Brinkman, T Sigrest, S Polonsky, P Brady, MB Pero, KJ Phelan, B Lewis

Significant Publications

Copeland KA, Sherman SN, Khoury JC, Foster KE, Saelens BE, Kalkwarf HJ. Wide variability in physical activity environments and weather-related outdoor play policies in child care centers within a single county of Ohio. *Arch Pediatr Adolesc Med.* 165(5): pg 435-442. 2011.

This was the first study to note the importance of weather-related policies for outdoor play in child care. Depending on the policies and indoor options for gross-motor play, child-care centers may not have any opportunity for active play on days with subfreezing temperatures and light rain. The study was also among the first detailed assessments of the indoor and outdoor playground offerings at child-care centers and to identify a correlation between lower quality physical activity facilities in centers in with a high percentage of children receiving tuition-assistance.

Kalkwarf HJ, Laor T, Bean JA. Fracture risk in children with a forearm injury is associated with volumetric bone density and cortical area (by peripheral QCT) and areal bone density (by DXA). *Osteoporos Int.* 22(2): pg 607-616. 2011.

This study examined the correlation between bone mineral density and risk of fracture in children with similar mechanisms of forearm injuries. It's finding that there is an increased risk of fracture with lower bone density suggests that interventions to increase bone density may reduce the incidence of forearm fracture. Such interventions may also prove to helpful in other extremity fractures.

White CM, Schoettker PJ, Conway PH, Geiser M, Olivea J, Pruettt R, Kotagal UR. Utilizing improvement science

methods to optimise medication reconciliation. *BMJ quality & safety.* 20(4): p. 372-380. 2011.

In 2005, The Joint Commission included medication reconciliation as a National Patient Safety Goal to reduce medication errors related to omissions, duplications and interactions. Hospitals continue to struggle to implement successful programs that meet these objectives. The authors used improvement methods and reliability principles to develop and implement a sustained process for medication reconciliation completion at admission at a large, pediatric medical center. Interventions focused on five main areas: leadership and support from senior physicians and nurses to sustain a culture of safety; simplification and standardization of the electronic medication reconciliation application; clarifying roles and responsibilities; creating a highly reliable and visible system.

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.* 127(1): pg 93-101. 2011.

This NIH-funded study is one of the very few randomized controlled trials to examine the efficacy of HEPA air cleaners in asthma treatment and control of symptoms. Although it did not reduce reported symptoms, there was a modest reduction in unscheduled asthma visits and particulate matter. It suggests that HEPA air cleaners may be a useful, passive adjunct to management of asthma in children.

Brady PW, Conway PH, Goudie A. **Length of intravenous antibiotic therapy and treatment failure in infants with urinary tract infections.** *Pediatrics.* 126(2): pg 196-203. 2010.

Two randomized trials had failed to show a difference in outcomes for treatment of urinary tract infections (UTIs) by intravenous (IV) versus oral antibiotic therapy, but concerns existed these may have been underpowered to detect a difference in infants <6 months. Our large, >12,000 patient retrospective cohort study found that treatment failure for infant UTI is uncommon (1.9%). When adjusted for propensity for infants to receive long course (>3 days) IV antibiotics there was no difference in treatment failure rates between infants who received and long and short course antibiotics. Treating more infants with short course IV therapy may decrease resource use without affecting readmission rates.

Division Highlights

Patrick Brady, MD, MSc

Dr. Brady's research interests involve defining predictors and early warning signs of clinical deterioration and then developing highly reliable interventions to identify and mitigate risk to eliminate patient harm. He is leading large scale improvement projects on patient safety using the concept of situation awareness to decrease patient harm and unsafe transfers. His goals are both to achieve measurably safer care among inpatients at CCHMC and to describe and disseminate generalizable interventions to improve situation awareness and patient safety more broadly.

William Brinkman, MD, MEd

Dr. Brinkman's work focuses on shared decision making between clinicians and patients/parents to deliver care that is evidence-based, family-centered, and of high value. Recent research has explored how physicians and families interact to make treatment decisions for children with ADHD. Dr. Brinkman is currently funded by the National Institute of Mental Health to study factors that influence parent decisions after their child is diagnosed with ADHD. In addition, he continues to study interventions to facilitate shared decision making in the care of children with ADHD.

Patrick Conway, MD, MS

Until May 2011, Dr. Conway was Director of the Section of Hospital Medicine which includes over 25 faculty and staff physicians who care for approximately a quarter of the Cincinnati Children's inpatients, teach residents and medical students, and conduct multi-million dollar research projects. Dr. Conway's specific research interests include comparative effectiveness research, implementation research, and the rapid adoption of comparative evidence into practice and decision-making. He was a faculty member in the Anderson Center for Health Systems Excellence, Director of Rapid Evidence Adoption for Child Health, and AVP for Outcomes Performance. He is now Chief Medical Officer for the Centers for Medicare & Medicaid Services (CMS) and Director of the Office of Clinical Standards and Quality at CMS.

Thomas DeWitt, MD

Dr. DeWitt is the Director of the Division of General and Community Pediatrics and the Designated Institutional Official. He is primarily interested in faculty and educator development, medical education and innovation linked to research and outcomes, and leadership development.

Sheela Geraghty, MD, MS

Dr. Geraghty is a general pediatrician and a lactation consultant. She is the medical director of the Cincinnati Children's Center for Breastfeeding Medicine, which consists of three outpatient referral-based breastfeeding medicine clinics, an inpatient consultative service, a milk bank depot, and an information line which receives over 2,000 phone calls annually. This past year, along with the Department of Human Resources, Dr. Geraghty helped develop the Cincinnati Children's Employee Lactation Support Program. Dr. Geraghty's research interests focus on the barriers to successful breastfeeding outcomes, including the prevalent practice of breast milk pumping and the potential impact on the mother-infant dyad.

Karen Jerardi, MD

Dr. Jerardi's interests include medical education of medical students and residents. She is the director of the Pediatric Hospital Medicine elective rotation for residents. Also, she has interests in clinical and quality research in common pediatric conditions.

Robert Kahn, MD, MPH

Dr. Kahn is focused on understanding and ameliorating social and racial disparities in child health. This past year, he has implemented a large NIH funded study of children admitted with asthma to better understand what predicts time to readmission and what causes disadvantaged children to be admitted much sooner. The study examines multiple factors ranging from neighborhood to family to genetics. He has also developed and helps guide several innovative programs to address key causal factors. These include novel clinical approaches driven by collaborations with the Legal Aid Society of Greater Cincinnati, the Freestore Foodbank, and the Cincinnati Health Department. Finally, Dr. Kahn is interested in bridging clinical care and public health. He leads the new Population Health initiative that will be addressing infant mortality, injury, obesity, and asthma in Hamilton County. In an effort to learn at a smaller geographic level using improvement science methods, Dr. Kahn is working closely with agencies in Price Hill to help transform early childhood systems.

Eric Kirkendall, MD

Dr. Kirkendall is a pediatric hospitalist at Cincinnati Children's Hospital Medical Center Medical. He also performs operational and research activities as the Director of Clinical Decision Support through Information Services and as a patient safety researcher through the James M. Anderson Center for Health Systems Excellence. Dr. Kirkendall is currently finishing a master's degree in medical informatics from Oregon Health & Science University. His specific research interests include leveraging information technology to improve patient

care and safety.

Melissa Klein, MD

Dr. Klein is a general pediatrician, medical educator, and researcher. She is mainly interested in medical education research, and primarily studies the impact of teaching social determinants of child health to pediatric residents.

Kadriye Lewis, EdD

Dr. Lewis is actively involved in the Online Master's Degree in Education and the Online Certificate in Medical Education Programs through her work as the associate director and as an online educator. She conducts educational research on issues arising in and related to online, asynchronous learning, especially in the context of the Online Master's Degree program. Dr. Lewis helps faculty and staff within CCHMC in teaching technology as needed and guiding them to reach the right technology resources.

Mona Mansour, MD, MS

Two primary areas of interest for Dr. Mansour include improving health outcomes of children with asthma, especially children from underserved backgrounds, and school health. Her asthma work has primarily focused on the use of quality improvement methodology in different care environments to improve health outcomes for children with asthma including primary care practices, school based health centers and within the community health care system.

Daniel McLinden, EdD

Dr. McLinden's has interest in structured planning for and the evaluation of the impact of human capital development decisions. He has applied structured planning processes such as concept mapping and economic forecasting to educational planning. He has studied the evolution of programs through social network methods and has applied economic models to evaluate educational outcomes. Additionally, Dr. McLinden has an interest in applications of Rasch measurement models to improve the measurement of outcomes.

Stephen Muething, MD

Dr. Muething's academic pursuit is focused on patient safety in pediatrics. As we make changes to reduce overall rates of harm locally and across organizations, Dr. Muething is partnering with other faculty to study these changes, systematically measure outcomes, and report on results.

Nicholas Newman, DO

Dr. Newman's interests and research center around Pediatric Environmental Health. He is interested in understanding how toxicants in the environment can effect children's health and in developing approaches that can be implemented to prevent or mitigate these effects. His recent research has examined the effect of traffic related air pollution exposure on neurobehavioral problems in children. He is currently developing Pediatric Environmental Health outreach and educational materials for primary care practitioners.

Jennifer O'Toole, MD

Dr. O'Toole's research interests include physician handoffs, curriculum development and innovation in residency education. She is currently the CCHMC site PI for the I-PASS study, a large multi-institution study that focuses on resident education on the topic of handoffs of care to improve patient safety.

Christopher Peltier, MD

Dr. Peltier's academic interest and pursuit is in the area of community-based teaching of pediatric residents and medical students. He also has an interest in faculty education and development.

Zeina Samaan, MD

Dr. Samaan is focused on primary care quality improvement which include improvement of childhood immunization rate, improvement of influenza vaccination rate in high risk pediatric patients, preventing medical errors in primary care setting, development screening and Autism initiatives. She also focuses on the use of electronic health record to deliver quality of care; implemented flu alert using EHR to improve the rate of flu vaccinations.

Joshua Schaffzin, MD, PhD

Dr. Schaffzin is a member of the Hospital Medicine Section, Surgical Hospital Medicine Service. His clinical responsibilities involve post-operative co-management with certain surgical services of medically complex children as well as pediatric consults to all surgical patients. Dr. Schaffzin's specific research interests include using molecular and quality improvement methods for surgical site infection prevention, infection control, patient safety, and healthcare epidemiology.

Jeffrey Simmons, MD, MS

As an investigator, Jeffrey M. Simmons, MD, MS, aims to integrate classical clinical research methods and quality improvement science to accelerate the integration of research and research findings into the general inpatient wards. His initial work has focused on better understanding the reasons for socioeconomic disparities such as financial strain and health beliefs among children hospitalized for asthma as well as redesigning the clinical care system to better address those disparities. Through collaborations with the Academic Improvement Collaborative/Beacon Communities Grant and the Inpatient Asthma Task Force, Dr. Simmons has piloted several interventions to address risk of poor asthma control and readmission.

Angela Statile, MD

Dr. Statile is an instructor of clinical pediatrics She is pursuing a master's in medical education degree through the University of Cincinnati and is actively involved in the development of division resident and medical student education. Her main research interests include resident education and quality improvement. Specifically, she is interested in the implementation of innovative hospital medicine curricula and improvement of the hospital discharge process.

Lisa Vaughn, PhD

Dr. Vaughn research interest include community-based participatory research with immigrant families especially Latinos, parental cultural health attributions about childhood health and illness, and culturally responsive/competent practice.

Brian Volck, MD

Dr. Volck MD is a member of the Hospital Medicine Unit within the Division of General and Community Pediatrics and is an innovator in medical education. His specific research interests include cross-cultural medical communication and indigenous child health. He is a founding member of the Initiative on Poverty, Justice and Health and a faculty participant/advisor in the Global Child Health residency track, coordinating resident away experiences at Gallup Indian Medical Center in Gallup, New Mexico. He is a member of the AAP's Committee on Native American Child Health and US planning coordinator for the Fifth International

Meeting on Indigenous Child Health, scheduled for spring, 2012.

Michael Vossmeier, MD

Dr. Vossmeier continues to develop and implement high reliability system of care in the area of patient safety, the use of situation awareness to improve patient safety and patient flow through complex adaptive systems, and the relationship between prior learning experience and the application of situation awareness.

Christine White, MD, MAT

Dr. White's interest and research focus on quality improvement. She has led efforts to increase medication reconciliation completion and improve physician compliance with proper handwashing. She is currently leading institute-wide improvement projects on improving capacity management and the patient/family experience.

Kimberly Yolton, PhD

Kimberly Yolton, PhD is a developmental psychologist researching the effects of prenatal and postnatal exposures to environmental toxicants (e.g. tobacco smoke, pesticides, and industrial chemicals) on neurobehavioral outcomes during infancy and childhood. She is additionally involved in research on neurobehavioral outcomes of high risk infants. She has expertise in research methodologies for assessing neurobehavior from the newborn period through adulthood.

Division Collaboration

Adolescent Medicine » Maria Britto, MD, MPH

Interacts at research meetings for the Center for Innovation in Chronic Care Disease Care. Dr. Britto is a co-mentor on Dr. Brinkman's K23 project and collaborates on his Place Outcomes Research Award project

Adolescent Medicine » Lea Widdice, MD

Collaborating with Dr. Brinkman on Dr. Widdice's Place Outcomes Research Award project entitled, "HPV Vaccine Decision Aid Development

Adolescent Medicine » Corrine Lehamn, MD

Collaborating with Drs. Jerardi and Amy Fleming (Vanderbilt) on a project to improve medical student feedback and the hand-off of this feedback between faculty during the inpatient pediatric clerkship

Adolescent Medicine » Frank Biro, MD

Collaboration with Dr. Kalkwarf on studies that assess the relation between xenohormone exposure on fat distribution in early puberty and on the longitudinal trajectories of pubertal development and bone mineral density in healthy children

Adolescent Medicine » Lorah Dorn, PhD;

Collaboration with Dr. Kalkwarf on a longitudinal study of depression and bone mineral density adolescent girls

Allergy & Immunology » Neeru Hershey, MD, PhD; Melinda Butsch-Kovacic, MPH, PhD

Dr. Simmons is a co-investigator on a project investigating the change in RNA expression profiles overtime in patients admitted for asthma. He is responsible for the inpatient portion of the study. Dr. Simmons is collaborating with Dr. Butsch-Kovacic to improve recruitment for her exhaled breath condensate in children with asthma exacerbation study as well as in developing a new grant to study the impact of a discharge planning tool for families of low health-literacy.

Anderson Center; Adherence Psychology; Developmental & Behavioral Peds; General & Community Pediatrics » Carol Lannon, MD, MPH; Dennis Drotar, PhD; David Schonfeld, MD; Phil Lichtenstein, MD

Dr. Drotar is a co-mentor on Dr. Brinkman's K23. All others serve on his K23 Advisory Board.

Anderson Center; Biomedical Informatics » Uma Kotagal, MBBS, MSc; Carol Lannon, MD, MPH; Peter Margolis, MD, PhD; Michael Seid, PhD; Imre Solti, MD, PhD

Collaborates with Dr. Muething on developing safety research program, use of collaborative/networks to spread best practices and development of capability of quality improvement research and operations

Anderson Center » Linda Goldenhar, PhD

Collaborating with Dr. Brady on evaluating the effectiveness of improved situation awareness on UNSAFE transfers and safety events

Anderson Center » Evaline Alessandrini, MD, MSCE

Collaborating with Dr. Brinkman on Rapid Evidence Adoption for Child Health (REACH) within the James M. Anderson Center for Health Systems Excellence

Anderson Center » Carol Lannon, MD, MPH; Linda Goldenhar, PhD

Collaborating with Dr. Brady on evaluating the effectiveness of improved situation awareness on UNSAFE transfers and safety events

Asthma Center » Carolyn Kercsmar, MD; Neeru Hershey, MD, PhD

Drs. DeWitt, Mansour, and Simmons serve on the Asthma Center Advisory Board. In addition, Dr. Simmons and Dr. Mansour are active members of the Inpatient Asthma Quality Improvement Working Group. Finally, Drs. Kahn and Simmons are collaborating on the population health strategy for asthma which is co-lead by Drs. Kercsmar and Mansour.

Behavioral Medicine & Clinical Psychology » Dean Beebe, PhD; Kelly Byars, PsyD

Dr. Yolton collaborates with faculty in Behavioral Medicine who are interested in child sleep patterns and how they are impacted by development in general as well as exposures to environmental toxicants such as tobacco smoke. One manuscript has been published and one is currently in revision. Others are planned.

Behavioral Medicine and Clinical Psychology » Jeffrey Epstein, PhD

Collaborating on Place Outcomes Research Award application. In addition, Dr. Brinkman collaborates on Dr. Epstein's R01 entitled, "Evaluation of an Intervention for Improving Community-Based Pediatric ADHD Care." Dr. Brinkman directs the Center for ADHD Medication Consultation Clinic, which he founded in 2006.

Biomedical Informatics » Imre Solti, MD, PhD

Collaboration with Dr Kirkendall on a project involving the use of natural language processing (use of computerized processing techniques and algorithms) to mine clinical notes for problem list/diagnoses data

Biostatistics & Epidemiology » Jane Khoury, PhD; Heidi Sucharew, PhD; Mekibib Altaye, PhD

Dr. Yolton collaborates with faculty in Biostatistics and Epidemiology on several projects relating prenatal and postnatal exposures to environmental toxicants (tobacco smoke, pesticides, plastics) and neurobehavioral outcomes in infants and children.

Cardiology; Neonatology & Pulmonary Biology; Pulmonary Medicine; Regional Center for Newborn

Intensive Care » Tim Knilans, MD; James Greenberg, MD; Paul Boesch, MD, MS; Vicki DeCastro, BSN, RNC

Collaboration with Dr. Muething on improving patient monitoring and reducing harm from delayed response to patient needs

Center for Professional Excellence; Anderson Center » Heater Tubbs Cooley, PhD, RN;

Collaborating with Dr. Brady on identifying predictors for pediatric readmissions

Chief Medical Information Officer; Critical Care Medicine; Anderson Center » Andy Spooner, MD; Derek Wheeler, MD; Linda Goldenhar, PhD

Collaboration with Dr. Kirkendall on enhancing the Pediatric Health Information System (PHIS) database with laboratory and microbiology data

Child Psychiatry » Michael Sorter, MD; Mike Lind, PhD

Collaboration with Dr. Muething on patient/staff safety and developing a system of managing by prediction to reduce patient and employee harm

Critical Care Medicine » Derek Wheeler, MD

Collaboration with Dr. Muething on development of a Situation Awareness System to reduce harm from delayed recognition of clinical deterioration

Colorectal Surgery; Surgery » Marc Levitt, MD; Richard Azizkhan, MD

Collaborating with Dr. McLinden evaluating of the impact of Colorectal surgical training conference - Education and Training Project

Critical Care Medicine » Derek Wheeler, MD

Working with Dr. Vossmeier to decrease codes outside of critical care units

Critical Care Medicine » Derek Wheeler, MD; Lem Tegtmeier, MD

Collaborating with Dr. Brady on developing interventions to identify patient deterioration and decrease safety events and UNSAFE transfers. Dr. Brady also collaborates with Regan Gallagher and Dawn Hall in Patient Services on this work

Education and Training » Daniel McLinden, EdD; Rebecca Phillips, PhD

Collaboration with Dr. Vaughn on: psychometric validation using Rasch analysis of the Pediatric Cultural Health Attributions Questionnaire; intercultural adjustment for cultural competency; Health disparities, social network analysis, concept mapping methodology

Education and Training » Nancy Burse

Collaborates with Dr. DeWitt to develop and evaluate fellowship online curriculum

Emergency Medicine » Michael Gittleman, MD; Chuck Schubert, MD

Collaborating with Dr. Melissa Klein on the Resident Advocacy rotation

Emergency Medicine » Dan Schumacher, MD; Javier Gonzalez del Rey, MD, MEd

Collaborates with Dr. DeWitt with regard to application of training competencies

Emergency Medicine » Jackie Grupp-Phelan MD, MPH

Collaboration with Dr. Vaughn on: participatory research methodologies for use with mental health engagement; cultural aspects of smoking prevention and cessation, prevention Focus Group: health engagement and interventions via the ED; qualitative analysis and methodology

Emergency Medicine » Chuck Schubert, MD; Lisa Vaughn, PhD

Collaborating with Dr. Volck on educational innovation in preparing residents for primary care in underserved sites, especially to children living in poverty

Emergency Medicine » Chuck Schubert, MD

Collaborating with Dr. Volck on global child health education

Emergency Medicine; Adolescent Medicine » Connie McAnaney, MD, MS; Corrine Lehmann, MD, MEd

Developing with Drs. Guiot, M. Klein, and Peltier a web portal for pediatric medical student education

Emergency Medicine » Holly Brodzinski, MD, MS

Collaborating with Dr. Brady on identifying patients at risk for rapid transfer to the intensive care unit after admission to hospital floor, particularly patients with asthma

Emergency Medicine » Rick Strait, MD

Dr. Strait is a co-investigator with Dr. Simmons on Dr. Hershey's RNA expression project responsible for the Emergency Department portion of the study.

Developmental & Behavioral Pediatrics » Tanya Froehlich, MD

Dr. Yolton collaborates with Dr. Kim Cecil on studies of brain imaging in relation to exposures to environmental toxicants and neurobehavioral outcomes.

Gastroenterology » James Heubi, MD

Collaborating with Dr. Kalkwarf on studies of bone disease in intestinal failure patients and reference values of bone density in infants 0-36 months of age

Gastroenterology; Surgery » Michael Farrell, MD; Frederick Ryckman, MD

Collaboration with Dr. Angela Statile on discharge execution improvement process as part of the hospital patient flow initiative

Global Child Health Center; International Patient Care and Education » Mark Steinhoff, MD; Adekunle Dawodu, MBBS, FRCPCH; Michelle Kohn

Collaborates with Dr. DeWitt to develop international medical education exchange experience

Infectious Disease » Beverly Connelly, MD

Collaborating with Drs. Statile and White to improve physicians compliance with hand hygiene

Infectious Diseases » Beverly Connelly, MD

Dr. Samaan is the Primary Care lead physician for improving influenza vaccination among high risk pediatric patients.

Neonatology and Pulmonary Biology » Ardythe Morrow, PhD

Dr. Geraghty is the Medical Director of the Center for Breastfeeding Medicine which is a collaborative effort among Cincinnati Children's Hospital divisions of general and community pediatrics, nutrition therapy, neonatology, biostatistics and epidemiology, pharmacology, and nursing services. Dr. Ardythe Morrow is Dr. Geraghty's mentor on her Mentored Patient-Oriented Research Career Development Award (K23).

Nephrology » Stuart Goldstein, MD

Collaboration with Drs Kirkendall and Schaffzin on the identification and reduction of acute kidney injury in inpatient non-critical care children

Nephrology » Stuart Goldstein, MD

Collaborates with Drs. Muething, Kirkendall, and Schaffzin on reduction of medical errors with chemotherapeutic agents

Nephrology; Anderson Center; Patient Services » Stuart Goldstein, MD; Anthony Goudie, PhD

Collaboration with Dr. Schaffzin on studies of nephrotoxin-induced acute kidney injury epidemiology and prevention

Neonatology/Pulmonary Biology » Beth Haberman, MD; Tanya Cahill, MDE; Kurt Schibler, MD; Jean Steichen, MD; Kathy Wedig, MD

Dr. Yolton, as the principal investigator of Follow-Up Research within the Cincinnati site of the Neonatal Research Network, collaborates with neonatology faculty on research and clinical projects focused on the health and neurobehavioral outcomes of high-risk infants. She has additionally guided neonatology fellows (Lisa Castro, MD -2003 ; Venkata Kuppala, MD - 2010) in their research projects, resulting in successful publications.

Oncology » Brian Weiss, MD; John Perentesis, MD

Collaboration with Dr. Muething on reduction of medical errors with chemotherapeutic agents

Oncology and Hematology » Denise Adams, MD

Collaborating with Dr. White on The Patient Family Experience

Orthopedic Surgery » Peter Sturm, MD

Collaboration with Dr. Schaffzin on studies of hyponatremia and SIADH following posterior spinal fusion surgery

Pulmonary Medicine; Patient Services; Pharmacy; Home Health Care » Carolyn Kercsmar, MD

Working with Dr. Mansour on the academic improvement collaborative focused on improving asthma care for Hamilton County medicaid children with asthma involves collaboration with multiple partners including other academic divisions, hospital departments, and community organizations. The primary division with which we are collaborating on this effort is the Pulmonary Division via the Asthma Center and Dr. Carolyn Kercsmar. The work has also involved collaboration with Patient Services, Pharmacy, Inpatient Unit Leadership, Home Health Care, as well as community organizations such Medicaid Managed Care and the Cincinnati Department of Health, School Health Division.

Pulmonary Medicine » Carolyn Kercsmar, MD

Both through the RNA expression grant, Gen Peds AIC asthma project, Beacon Communities grant, population health strategy for asthma, and inpatient asthma QI working group, Dr. Simmons is working with Dr. Kercsmar to both improve care for inpatient asthmatics and to better engineer our inpatient system as a clinical laboratory.

Radiology » Kim Cecil, PhD

Dr. Yolton collaborates with Dr. Kim Cecil on studies of brain imaging in relation to exposures to environmental toxicants and neurobehavioral outcomes.

Rheumatology; Adolescent Medicine » Esi Morgan DeWitt, MD, MSCE; Ellen Lipstein, MD, MPH

Collaborating on subproject within application for "Center for Education and Research on Therapeutics (CERTs) Research Center"

Faculty Members

Thomas DeWitt, MD, Professor

*Director, Division of General & Community Pediatrics
Associate Chair for Education
DIO & Chair, GME Committee*

Research Interests Community-based Research; Medical Education - Clinical Outcomes

Katherine Auger, MD, Instructor

Research Interests

Raymond Baker, MD, MEd, Professor Emeritus

Co-Director, Masters in Medical Education

Research Interests Resident education, educator development, and distance education

Paul Bellet, MD, Professor Emeritus

Research Interests

Omer Berger, MD, Professor Emeritus

Research Interests

William Brinkman, MD, MEd, Assistant Professor

Associate Director, NRSA Primary Care Research Fellowship in Child and Adolescent Health; Research Director, Cincinnati Pediatric Research Group (CPRG); Director, Center for ADHD Medication Consultati

Physician Lead, James M Anderson Center for Health Systems EBDM Team

Director, Center for ADHD Medication Consultation Clinic

Research Director, Cincinnati Pediatrics Research Group

Research Interests Family/self management of chronic conditions like attention-deficit/hyperactivity disorder (ADHD) and asthma, shared decision making, knowledge translation tools like patient/parent decision aids, pra

Patrick Conway, MD, MSc, Associate Professor

Director, Hospital Medicine

Research Interests Comparative effectiveness research, quality improvement and implementation research, safety, and clinical topics such as urinary tract infections

Kristen Copeland, MD, Assistant Professor

Director, Gen Peds Research Fellowship

Research Interests Obesity prevention in child-care

Emanuel Doyne, MD, Adjunct

Director, Section of Community Pediatrics

Research Interests Practice based research network

Dena Elkeeb, MD, Adjunct

Research Interests

Derek Fletcher, MD, Assistant Professor

Research Interests Children with Special Health Care Needs, Medical Home

Sheela Geraghty, MD, MS, Associate Professor

Director, Center for Breastfeeding Medicine

Research Interests Breastfeeding Medicine

Craig Gosdin, MD, MSHA, Assistant Professor

Director, GIS Liberty Campus

Research Interests

Amy Guiot, MD, Adjunct

Research Interests Medical student education and family centered care

David Hall, MD, Professor

Director, Diagnostic Clinic

Research Interests Epidemiology of medically complex chronic disease and the impact of the medical home on quality and cost of care for children with medically complex chronic disease

Robert Ingberg, MD, Professor Emeritus

Research Interests

Karen Jerardi, MD, Instructor

Research Interests Medical education

Robert Kahn, MD, MPH, Associate Professor

Director, Section of Research

Research Interests Gene-environment interaction, disparities, asthma, ADHD

Heidi Kalkwarf, PhD, Professor

Research Interests Fracture, bone density, exercise interventions

Eric Kirkendall, MD, Assistant Professor

Medical Director, Clinical Decision Support

Research Interests Using technology and the electronic health record to improve quality and safety in care delivery.

Melissa Klein, MD, Adjunct

Director, Section of Education

Director, Primary Care Residency Track

Associate Program Director of Pediatric Residency

Research Interests Medical education; serving the underserved

Bruce Lanphear, MD, MPH, Adjunct

Research Interests

Ronald Levin, MD, Associate Professor

Director, Special Needs Section

Research Interests

Kadriye Lewis, EdD, Associate Professor

Co-Director, Masters in Medical Education

Research Interests Web-based learning, technology in education, and medical education

Mona Mansour, MD, MS, Associate Professor

Director, Section of Primary Care Services

Research Interests School health, asthma, underserved populations, quality improvement

Christine McHenry, MD, MATS, Professor Emerita

Research Interests

Daniel McLinden, EdD, Assistant Professor

Assistant Vice President, Education and Learning Department

Research Interests Program evaluation, Economic Evaluation, Rasch analysis, Social Network Analysis, outcome measurement

Stephen Muething, MD, Associate Professor

Associate Director, Division of General & Community Pediatrics

Assistant Vice President, Patient Safety

Research Interests Patient Safety, Reliability, Adverse Events

Nicholas Newman, DO, MS, Assistant Professor

Medical Director, Environmental Health and Lead Clinic

Research Interests To improve child health through understanding the environmental determinants of disease and to develop interventions to mitigate or prevent illness due to environmental factors

Jennifer O'Toole, MD, Assistant Professor

Associate Director, Med/Peds

Research Interests Physician handoffs, curriculum development & innovation in residency education.

Christopher Peltier, MD, Adjunct

Co-Director, Section of Community Pediatrics

Research Interests Medical student and resident education; community pediatrics

Rebecca Phillips, PhD, Associate Professor

Vice President of Education and Training

Research Interests Research libraries, adult learning, and faculty development

Sarah Riddle, MD, Adjunct

Research Interests

Zeina Samaan, MD, Adjunct

Director, PPC & Hopple Street Health Center

Research Interests Quality Improvement

Joshua Schaffzin, MD, PhD, Assistant Professor

Research Interests Using molecular and quality improvement methods for surgical site infection prevention, infection control, patient safety, and healthcare epidemiology

Rosemary Schmidt, MD, Professor Emerita

Research Interests

Ted Sigrest, MD, Assistant Professor

Director, Surgical Hospital Medicine

Research Interests Family-centered care and medical rounds: studies in efficiency and effectiveness

Jeffrey Simmons, MD, MS, Assistant Professor

Co-Director, Hospital Medicine for Research

Director, Pediatric Hospital Medicine Fellowship

Research Interests Asthma, Hospitalist, Quality Improvement, Health Services, Family-Centered

Angela Statile, MD, Instructor

Research Interests Resident education, quality improvement

Gregory Szumlas, MD, Assistant Professor

Research Interests Quality improvement, asthma, health literacy, early literacy

Lisa Vaughn, PhD, Associate Professor

Research Interests Cultural competency, Latinos, marginalized populations, community-based participatory research methodology

Brian Volck, MD, Adjunct

Research Interests Medical education and cross-cultural medicine. He is currently working on a book on the cultural, historical and medical aspects of increased expression of autosomal recessive conditions.

Michael Vossmeier, MD, Assistant Professor

Director, GIS

Research Interests High reliability, Situation Awareness, Patient Safety, Family & Patient Centered Rounding

Christine White, MD, MAT, Assistant Professor

Research Interests Quality improve physicians compliance with hand hygiene

Kimberly Yolton, PhD, Associate Professor

Research Interests Infant and child neurobehavior, including development and behavior; prenatal and postnatal exposures to environmental toxicants, prematurity

Joint Appointment Faculty Members

Michael Benedict, MD, Assistant Professor

Internal Medicine

Christine Burrows, MD, Assistant Professor

Internal Medicine

Tiffany Diers, MD, Assistant Professor

Internal Medicine

Mary Greiner, MD, Assistant Professor

Center for Safe and Health Children

Caroline Mueller, MD, Professor

Internal Medicine

Kieren Phelan, MD, MS, Associate Professor
Center for Health Policy & Clinical Effectiveness

Andrew Spooner, MD, MS, Associate Professor
Chief Medical Information Officer

Stephen Wilson, MD, Assistant Professor
Internal Medicine

Clinical Staff Members

- Kathleen Bain, MD
- Jeanne Beischel, MD
- Talia Belmont Monteverde, MD
- Benjamin Bolser, MD
- Patrick Brady, MD
- Scott Callahan, MD, Medical Director, Children's Health Center
- Nicole Cicchino, MD
- Dominick DeBlasio, MD
- Aimee Deiwert, MD
- Cynthia Delatt, MD
- Anne Marie Fitz, MD
- Jennifer Hardie, MD
- Gretchen Hartz, MD
- Karla Hicks, MD
- Elisabeth Kelley, MD
- Katie Kerrey, MD
- Jill Klein, MD
- Meredith Landorf, MD
- Brandi Lewis, MD
- Carrie McIntyre, MD
- John Morehous, MD
- Jenny Motley, MD
- Grant Mussman, MD
- Mary Beth Pero, MD
- Sheldon Polonsky, MD
- Andrew Poltrack, MD
- Robert Schaengold, MD
- Denise Somsak, MD
- Ellen Springer, MD
- Tracy Tiller, MD

Trainees

- Andrew Beck, MD, PGY 6, University of Pennsylvania
- Sarah Beal, PhD, PGY 1, University of Nebrasks-Lincoln
- Courtney Levinson, MD, PGY 7, Temple University

- Megan Ratliff, PhD, MPH, PGY 3, University of Georgia
- Abbigail Tissot, PhD, PGY 3, Kent State University

Significant Accomplishments

Social Discriminants of Healthcare Utilization in Children with Asthma

Investigators within the Division of General Pediatrics have been working to better understand the social determinants of asthma and ways to intervene to mitigate socioeconomic risks. Adapting ideas from social economists, Jeff Simmons, MD, and Robert Kahn, MD, PhD, have measured “financial strain” that is associated with a four-fold gradient of asthma readmission risk and is a more important predictor of readmission than race or insurance status. Financial strain is measured with seven simple questions such as whether a family had to borrow money or move in with others during the past year. Their fellow, Andrew Beck, MD, has found strong correlations between a family’s financial strain and neighborhood measures of socioeconomic risk based on census data and found a 20-fold gradient of asthma admission risk between different neighborhoods in Cincinnati.

These clinician-researchers have used these insights to contribute to institutional multidisciplinary asthma quality improvement work lead by Mona Mansour, MD, MS, and Carolyn Kercksmar, MD, MS (pulmonary). Many interventions have been implemented that have resulted in children with Medicaid having 30-day and 90-day readmission rates that have decreased by 45 percent and 25 percent, respectively. Analyses of this work, funded by a Cincinnati Beacon Communities grant, are ongoing.

Online Master’s and Certificate Programs in Medical Education

The Online Master’s Degree in Education for Healthcare Professionals Program was launched in 2002 and represented a collaboration between the division and the University of Cincinnati College of Education. A Certificate in Medical Education Program was added in 2004. The programs were developed to address the need for an educational conceptual knowledge and research base for physician and other healthcare professional educators. Developed and administered by Kadriye Lewis, EdD, and Raymond Baker, MD, MEd, these programs were the first totally on-line programs of their kind in the United States and have had over 240 students enrolled. To date, there have been 51 master’s graduates and 31 certificates issued to professionals from 34 states, Puerto Rico and four countries. Students come from an array of medical specialties, surgery, dentistry and nursing. Based on a survey of 12 master’s graduates, who collectively have 52 peer-reviewed papers, \$4.25 million in extramural funding (21 grants), 37 teaching awards and six promotions, the program has been highly successful in enhancing the development of academic medical education leaders. Graduates hold leadership positions including a dean, GME program directors and a departmental vice chair. As such, the program has developed a national and international reputation for excellence and plays an important role in training future leaders in medical education.

Division Publications

1. Adam MP, Mehta A, Knight L, Hall DE, Rossi MR. **A family with a 1.17 Mb deletion of 12q12: refining genotype-phenotype correlation.** *Am J Med Genet A.* 2010; 152A:2394-8.
2. Anderson JB, Beekman RH, 3rd, Eghtesady P, Kalkwarf HJ, Uzark K, Kehl JE, Marino BS. **Predictors of poor weight gain in infants with a single ventricle.** *J Pediatr.* 2010; 157:407-13, 413 e1.
3. Anderson JB, Kalkwarf HJ, Kehl JE, Eghtesady P, Marino BS. **Low weight-for-age z-score and infection risk after the Fontan procedure.** *The Annals of thoracic surgery.* 2011; 91:1460-6.

4. Benjamin Neelon SE, Copeland KA, Ball SC, Bradley L, Ward DS. **Comparison of menus to actual foods and beverages served in North Carolina child-care centers.** *J Am Diet Assoc.* 2010; 110:1890-5.
5. Berry J, Hall D, Kuo D, Cohen E, Agrawal R, Feudtner C, Hall M, Jueser J, Kaplan W, Neff J. **Hospital utilization and characteristics of patients experiencing recurrent readmissions within children's hospitals.** *JAMA.* 2011; 305:682-690.
6. Brady PW, Conway PH, Goudie A. **Length of intravenous antibiotic therapy and treatment failure in infants with urinary tract infections.** *Pediatrics.* 2010; 126:196-203.
7. Braun JM, Daniels JL, Poole C, Olshan AF, Hornung R, Bernert JT, Khoury J, Needham LL, Barr DB, Lanphear B. **Prenatal environmental tobacco smoke exposure and early childhood body mass index.** *Pediatric and Perinatal Epidemiology.* 2010; 24:524-534.
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. Braun JM, Kalkbrenner AE, Calafat AM, Bernert JT, Ye X, Silva MJ, Barr DB, Sathyanarayana S, Lanphear BP. **Variability and predictors of urinary bisphenol A concentrations during pregnancy.** *Environ Health Perspect.* 2011; 119:131-7.
10. Brinkman WB, Epstein JN. **Promoting productive interactions between parents and physicians in the treatment of children with attention-deficit/hyperactivity disorder.** *Expert Rev Neurother.* 2011; 11:579-88.
11. Brinkman WB, Epstein JN. **Treatment Planning for Children with ADHD.** *Patient Prefer Adherence.* 2011; 5:45-56.
12. Castillo J, Goldenhar L, Baker R, Kahn R, DeWitt T. **Reflective Practice and Competencies in Global Health Training: Lesson for Serving Diverse Patient Populations.** *Journal of Graduate Medical Education.* 2010; 2:449-455.
13. Conway P, Goodrich K, Machlin S, Sasse B, Cohen J. **Patient-Centered Care Categorization of U.S. Health Care Expenditures.** *Health Serv Res.* 2010; 46:479-90.
14. Conway PH. **How the Recovery Act's Federal Coordinating Council paved the way for the Patient-Centered Outcomes Research Institute.** *Health Aff (Millwood).* 2010; 29:2091-7.
15. Copeland KA, Sherman SN, Khoury JC, Foster KE, Saelens BE, Kalkwarf HJ. **Wide Variability in Physical Activity Environments and Weather-Related Outdoor Play Policies in Child Care Centers Within a Single County of Ohio.** *Arch Pediatr Adolesc Med.* 2011; 165:435-442.
16. Epstein JN, Brinkman WB, Froehlich T, Langberg JM, Narad ME, Antonini TN, Shiels K, Simon JO, Altaye M. **Effects of Stimulant Medication, Incentives, and Event Rate on Reaction Time Variability in Children With ADHD.** *Neuropsychopharmacology.* 2011; 36:1060-1072.
17. Foster BJ, Kalkwarf HJ, Shults J, Zemel BS, Wetzsteon RJ, Thayu M, Foerster DL, Leonard MB. **Association of chronic kidney disease with muscle deficits in children.** *J Am Soc Nephrol.* 2011; 22:377-86.
18. Geraghty SR, Heier JE, Rasmussen KM. **Got milk? Sharing human milk via the Internet.** *Public Health Rep.* 2011; 126:161-4.
19. Gilsanz V, Chalfant J, Kalkwarf H, Zemel B, Lappe J, Oberfield S, Shepherd J, Wren T, Winer K. **Age at onset of puberty predicts bone mass in young adulthood.** *J Pediatr.* 2011; 158:100-5, 105 e1-2.
20. Grossman DC, Moyer VA, Melnyk BM, Chou R, DeWitt TG. **The anatomy of a US Preventive Services Task Force Recommendation: lipid screening for children and adolescents.** *Arch Pediatr Adolesc Med.* 2011; 165:205-10.
21. Hall D. **The Care of Children with Medically Complex Chronic Disease.** *The Journal of Pediatrics.* 2011; 159:178-80.
22. Kalkwarf HJ, Laor T, Bean JA. **Fracture risk in children with a forearm injury is associated with volumetric bone density and cortical area (by peripheral QCT) and areal bone density (by DXA).**

- Osteoporos Int.* 2011; 22:607-16.
23. Kaplan HC, Brady PW, Dritz MC, Hooper DK, Linam WM, Froehle CM, Margolis P. **The Influence of Context on Quality Improvement Success in Health Care: A Systematic Review of the Literature.** *Milbank Q.* 2010; 88::500-59.
 24. Kaulfers AM, Bean JA, Inge TH, Dolan LM, Kalkwarf HJ. **Bone loss in adolescents after bariatric surgery.** *Pediatrics.* 2011; 127:e956-61.
 25. 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.
 26. Langberg JM, Vaughn AJ, Brinkman WB, Froehlich T, Epstein JN. **Clinical utility of the Vanderbilt ADHD Rating Scale for ruling out comorbid learning disorders.** *Pediatrics.* 2010; 126:e1033-8.
 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. Larson K, Russ SA, Kahn RS, Halfon N. **Patterns of Comorbidity, Functioning, and Service Use for US Children With ADHD, 2007.** *Pediatrics.* 2011; 127:462-470.
 29. Leonard SA, Labiner-Wolfe J, Geraghty SR, Rasmussen KM. **Associations between high prepregnancy body mass index, breast-milk expression, and breast-milk production and feeding.** *The American journal of clinical nutrition.* 2011; 93:556-63.
 30. Lewis KO, Baker RC, Britigan DH. **Current Practices and Needs Assessment of Instructors in an Online Masters Degree in Education for Healthcare Professionals: A First Step to the Development of Quality Standards..** *Journal of Interactive Online Learning .* 2011; 10:49-63.
 31. Mahabee-Gittens M, Vaughn L, Gordon J. **Youth and Their Parents Views on the Acceptability and Design of a Video-Based Tobacco Prevention Intervention.** *Journal of Child & Adolescent Substance Abuse.* 2010; 19:391-405.
 32. McLinden D, Phillips RR, Hamlin S, Helbig A. **Evaluating the Future Value of Educational Interventions in a Healthcare Setting.** *Performance Improvement Quarterly.* 2010; 22:121-130.
 33. Muething SE, Conway PH, Kloppenborg E, Lesko A, Schoettker PJ, Seid M, Kotagal U. **Identifying causes of adverse events detected by an automated trigger tool through in-depth analysis.** *Qual Saf Health Care.* 2010; 19:435-9.
 34. Navathe A, Conway PH. **Optimizing the Role of Health Information Technology in Enabling Comparative Effectiveness Research.** *Am J Manag Care.* 2010; 16:SP44-7.
 35. Rauch D, Lye PS, Carlson D, Daru JA, Srivastava R, Conway PH. **Pediatric Hospital Medicine: A Strategic Planning Roundtable to Chart the Future.** *J Hosp Med.* 2011; 5:110-114.
 36. Shah SS, Hall M, Newland JG, Brogan TV, Farris RW, Williams DJ, Larsen G, Fine BR, Levin JE, Wagener JS, Conway PH, Myers AL. **Comparative effectiveness of pleural drainage procedures for the treatment of complicated pneumonia in childhood.** *J Hosp Med.* 2011; 6:256-263.
 37. Tuchman S, Kalkwarf HJ, Zemel BS, Shults J, Wetzsteon RJ, Foerster D, Strife CF, Leonard MB. **Vitamin D deficiency and parathyroid hormone levels following renal transplantation in children.** *Pediatr Nephrol.* 2010; 25:2509-16.
 38. Vanlare JM, Conway PH, Rowe JW. **Building Academic Health Centers' Capacity to Shape and Respond to Comparative Effectiveness Research Policy.** *Acad Med.* 2011; 86:689-694.
 39. 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.
 40. 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.
41. White CM, Schoettker PJ, Conway PH, Geiser M, Olivea J, Pruett R, Kotagal UR. **Utilising improvement science methods to optimise medication reconciliation.** *BMJ quality & safety.* 2011; 20:372-80.
 42. Wilson SE, Baker ER, Leonard AC, Eckman MH, Lanphear BP. **Understanding preferences for disclosure of individual biomarker results among participants in a longitudinal birth cohort.** *J Med Ethics.* 2010; 36:736-40.
 43. Wilson SE, Talaska G, Kahn RS, Schumann B, Khoury J, Leonard AC, Lanphear BP. **White blood cell DNA adducts in a cohort of asthmatic children exposed to environmental tobacco smoke.** *Int Arch Occup Environ Health.* 2011; 84:19-27.
 44. Wosje KS, Khoury PR, Claytor RP, Copeland KA, Hornung RW, Daniels SR, Kalkwarf HJ. **Dietary patterns associated with fat and bone mass in young children.** *Am J Clin Nutr.* 2010; 92:294-303.
 45. Xu Y, Yolton K, Khoury J. **Earliest appropriate time for administering neurobehavioral assessment in newborn infants.** *Pediatrics.* 2011; 127:e69-75.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards	Annual Direct / Project Period Direct
BRINKMAN, W	
Medication Continuity in Children Treated for ADHD	
National Institutes of Health K23 MH 083027	01/01/10-11/30/14 \$163,874
COPELAND, K	
Obesity Prevention & Physical Activity in Child Care Centers	
Robert Wood Johnson Foundation	07/01/08-06/30/11 \$111,388
The Influence of Child Care Center Environment on Children's Physical Activity	
National Institutes of Health K23 HL 088053	04/01/08-03/31/13 \$124,063
NRSA Research Fellowship Training	
Health Resources & Services Administration T32 HP 10027	07/01/2010-06/30/2016 \$368,677
GERAGHTY, S	
Role of Environmental Chemicals on Lactations Outcomes	
National Institutes of Health K23 ES 014691	06/01/2010-05/31/2011 \$151,125
KAHN, R	
Explaining Racial Disparities in Child Asthma Morbidity	
National Institutes of Health R01 A1 088116	05/01/2010-04/30/2014 \$423,211
KALKWARF, H	
Genome Wide Association Study of Bone Mineral Accretion	
National Institutes of Health(Children's Hospital of Philadelphia) R01 HD 058886	02/01/10-01/31/14 \$107,148
Bone Mineral Density in Childhood Study (BMDCS)	
National Institutes of Health(Clinical Trials & Surveys Corp.) N01-HD-1-3328	12/01/2010-03/31/2011 \$4,944

International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT)

National Institutes of Health(Social & Scientific Systems, Inc.)

U01 AI 068632

03/01/2010-05/31/2013

\$8,500

KLEIN, M**Expansion of a Pediatric Primary Care Resident Training**

Health Resources & Services Administration

T89 HP 20766

09/30/10-09/29/15

\$346,672

LANPHEAR, B**Pooled Analysis of (OP) Metabolites & DDe with Birth Outcomes and Neurodevelopment**

National Institutes of Health(University of California-Berkeley)

P01 ES 009605

09/24/09-07/31/11

\$63,297

A Community- Based Trial to Prevent Lead Poisoning and Injuries

National Institutes of Health

R01 ES 014575

07/13/2007-04/30/2012

\$413,107

O'TOOLE, J**Bundling Effective Resident Handoff Practices to Improve Patient Safety**

Department of Health and Human Services(Children's Hospital Boston)

R18 AE 000029

09/21/10-06/30/13

\$65,978

YOLTON, K**BPA Go Grant**

National Institutes of Health(University of Rochester)

RC2 ES 018736

10/01/09-07/31/11

\$7,470

Mechanisms of Pesticide-Induced Neurobehavioral Deficits

National Institutes of Health(University of Medicine & Dentistry of NJ)

R01 ES 015991

09/21/10-06/30/12

\$75,000

Neurobehavioral Effects of Insecticides

National Institutes of Health

R01 ES 015517

09/19/2009-06/30/2011

\$505,870

Low Level Prenatal Tobacco Exposure and Infant Wheeze

Flight Attendant Medical Research Institute(Pennsylvania State University)

07/01/2010-06/30/2011

\$42,383

Prenatal Low Level Tobacco & Phthalate Exposure & Childhood Respiratory Health

National Institutes of Health(Pennsylvania State University)

K23 ES 016304

07/01/2010-06/30/2011

\$21,405

Current Year Direct**\$3,004,112****Total****\$3,004,112**