

## Health Policy and Clinical Effectiveness

### Division Photo



Front Row: G. Fairbrother, C. Lannon, S. Muething, E. Morgan-Dewitt, E. Alessandrini, P. Margolis, U. Kotagal, L. Simpson, H. Kaplan, S. Iyer, K. Mandel.

Second Row: D. Buten, M. Britto, K.J. Phelan, A. Goudie, M. Seid, A. Carle

### Division Data Summary

#### Research and Training Details

Number of Faculty	11
Number of Joint Appointment Faculty	7
Number of Research Fellows	5
Number of Support Personnel	96
Direct Annual Grant Support	\$4,135,856
Peer Reviewed Publications	16

## Significant Publications

**Fairbrother G, Simpson, LA. It Is Time! Accelerating the use of child health information systems to improve child health. *Pediatrics* 2009; 123: S61-S63.**

We are highlighting this manuscript because it represents our increasing emphasis on health information technology. This is the lead article in a supplement to *Pediatrics* dealing with HIT, edited by Lisa Simpson, and will form the basis for a subsequent Policy Brief. With the sharply enhanced funding levels for health information technology in both the Child Health Insurance Program Reauthorization Act (CHIPRA) and the American Recovery and Reinvestment Act of 2009 (ARRA) this is important.

**Cassedy A, Newacheck PW, Fairbrother G. The impact of insurance instability on children's access, use and satisfaction with health care. *Ambulatory Pediatrics* 2008;8(5):321-8.**

We are highlighting this manuscript because it shows that there is a relationship between instability in insurance coverage and some aspects of quality of care.

**Britto MT, Byczkowski TL, Anneken AM, Hausfeld J, Schoettker PJ, Farrell MK, Kotagal UR. Improving access to pediatric subspecialty care: initial failures and lessons learned. *Qual Manag Health Care*. 2008 Oct-Dec;17(4):320-9**

This manuscript shows that the use of detailed data-based tools to guide choices of interventions, coupled with new and explicit institutional expectations for physician attendance at clinics, is a promising strategy for enhancing access to pediatric subspecialty care.

**Ryckman RC, Schoettker PJ, Hays KR, Connelly, BL, Blacklidge RL, Bedinghaus CA, Sorter ML, Friend LC, Kotagal UR. Reducing surgical site infections at a pediatric academic medical center. Jt Comm J Qual Patient Saf. 2009 Apr; 35(4):192-198**

The implementation of strategies to enhance the proportion of patients who receive timely antibiotic administration, a surgical site infection-prevention bundles, and procedure-specific pediatric surgical site infection-prevention bundles was associated with a 64% reduction in the rate of surgical site infections.

**Simpson LA, Cooper J. Paying for obesity: a changing landscape. Pediatrics. 2009 Jun; 123 Suppl 5:S301-S307**

There has been important forward movement in how public and private players are addressing paying for obesity-related services. Approaches include new benefits and incentives for parents and providers. Substantial investments in evaluation and research are needed to learn which approaches are most effective.

## **Division Highlights**

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### **Overall**

The key highlight in 2009 was the successful completion of an external scientific review. The Division of Health Policy and Clinical Effectiveness (HPCE) was reviewed by 3 distinguished external faculty as part of a formal Scientific Advisory Council (SAC). This review council presented their findings to the research committee of the Board of Trustees and several actions are underway to implement their finding. The SAC review was conducted by Dr. Donald Berwick, professor at Harvard University; Dr. Brian Mittman, Director of the VA Center for Implementation Practice and Research Support; and, Dr. Kaveh Shojania, Director of the Centre for Patient Safety at the University of Toronto.

The Division was given an outstanding rating. The reviewers acknowledged the leadership role of HPCE in the “remarkable transformation of CCHMC into a world class leader in Quality and Performance improvement” and agreed that “it was positioned to lead the institution to still higher levels of performance and national and international leadership”. As a result of the review and subsequent approval of the response to the recommendations by the board, the focus of HPCE leadership in the next 5 years will be on 4 key objectives: 1) Generate new knowledge on Health Systems (Health Services Research); 2) Harness this knowledge and apply it to dramatically improve Outcomes, Experience and Value at the Whole System level, (e.g., safety, flow, systems for chronic care); 3) Harness this knowledge and apply it to dramatically improve Disease Based Outcomes, Experience and Value at the divisional level; and, 4) Spread and sustain efforts to create impact at community and policy level. The 5-year plan to accomplish this is being finalized at the time of this report.

This year has been a year of tremendous growth for the division with external funding more than doubling from \$1.7 million in FY08 to \$3.7 million in FY09.

### **Child Policy Research Center (CPRC)**

Over the last year, the CPRC has been successful in securing over \$1,583,339 in extramural funding and is currently conducting a number of projects in partnership with the Center for Health Care Quality (CHCQ).

Using Research to Inform Child Health Policy: The CPRC has continued to conduct and publish policy relevant research to inform decisions at the local, state and national levels. Highlights of this work are presented here.

- Population Health: A multisite network of 26 sites in Ohio focused on reducing prematurity (36-38weeks gestation through use of obstetric interventions) and outcomes for premature infants (through reduction in central line infections) have been hugely successful with significant results

Locally, Center efforts, led by Dr. Donovan, have focused on perinatal health and infant mortality. Following the release of the infant mortality report published by CPRC and under the auspices of the Office of Maternal and Infant Health and Infant Mortality Reduction, as part of the city of Cincinnati and Hamilton County. Significant efforts are underway to address this very important issue.

The CPRC is involved in two other local/regional efforts; first, the Center is partnering with numerous local partners, including the Center for Closing the Health Gap and the YMCA, on various community initiatives to respond to the childhood obesity epidemic; second, CPRC has been working closely with Vision 2015 and the Northern Kentucky Health Department to comprehensively assess the health of children and youth in Northern Kentucky.

- At the state level, a body of policy research in the CPRC continues to focus on examining patterns of coverage and developing policies to improve coverage. A particular focus within the Center continues to be research on

the enrollment and retention of eligible children in publicly funded insurance programs (i.e. Medicaid), an issue emphasized by the recent reauthorization of the Child Health Insurance Program by Congress. This policy-oriented work has informed the public debate on solutions to the problems in Ohio, California and nationally.

Policy Analyses in Ohio based on Ohio Family Health Survey and creation of a Chartbook. We have completed four important analyses using the 2008 Ohio Family Health Survey. The centerpiece project is the creation of an online "Chartbook" of the health of Ohio's children which was showcased at a conference in Columbus on June 1, 2009. Data in the Chartbook, which can be found at <http://www.ohiochartbook.childhealthdata.org/pages/Home.aspx> was drawn from the Ohio Family Health Survey as well as from other national databases and provides a report of the performance of the child health system in Ohio on key dimensions of child health and health care. Key findings include:

- Over one-third (35.6% or 413,097) of children ages 10-17 living in Ohio are overweight or obese.
- One in 10 (10.7% or 272,828) children ages 0-17 in Ohio has asthma.
- Over one in five children (20.9% or 570,913) ages 0-17 in Ohio have special health care needs.
- Nearly all children (90.9% or 2,261,484) ages 0-17 in Ohio have a personal doctor or nurse.
- While a federal mandate requires that all children under age 3 receiving Medicaid benefits be tested for lead, less than two-thirds of children (63.9% or 91,102) ages 0-2 in Ohio who have Medicaid or SCHIP were tested.
- Almost 8 in 10 children (78.9% or 679,870) ages 0-17 in Ohio ever had their vision tested.
- Almost 8 in 10 children and youth (78.3% or 1,990,239) ages 0-17 in Ohio had at least one preventive care visit in the past year.
- Over three-quarters of children and youth (76.4% or 1,849,625) ages 0-17 in Ohio had at least one preventive dental care visit in the past year.

MedTAPP policy work. In 2008, CPRC launched two State Medicaid funded projects, one in partnership with CHCQ (see later). The first is a project to produce information that the State can use for policy purposes. So far, we have produced a policy brief on children with special health care needs (CSHCN) and are working on a second report outlining ways in which enrollment and retention can be monitored and improved. Using the Ohio sample of the National Survey of CSHCN, we found that there are an estimated 445,200 children with special health care needs in Ohio or 16.2% of the total child population in 2005/06. Their needs include functional limitations, emotional, behavioral, development needs, excess service use or need for prescription medications. Almost 1 in 3 of Ohio's children with special health care needs also have emotional, behavioral or developmental needs. Ironically, despite their greater need, children with special health care needs are less likely than other children to have a medical home, the foundation for care of high quality.

National Policy Efforts. Our national policy activities have focused in three areas: enhancing quality of care through the reauthorization of the State Child Health Insurance Program (SCHIP), the role of health information technology (HIT) in improving child health care, and addressing the childhood obesity epidemic. In the area of HIT, our efforts have resulted in the publication in January 2009 of a supplement in Pediatrics focused on HIT including articles from several CCHMC faculty. We have continued to partner with the National Initiative for Children's Health Care Quality (NICHQ) on improving the health system's response to the childhood obesity epidemic and have completed two reports which were published in June 2009 as part of a supplement to Pediatrics devoted to childhood obesity.

Serious Safety Events. In 2008, we began an initiative looking at serious safety events in hospitals, using the pediatric quality measures developed by the Agency for Healthcare Research on Quality (AHRQ) and applied to national discharge data. To date, we have estimated the prevalence and costs of avoidable complications of hospitalized children, for whom Medicaid pays 40 percent of all inpatient visits. When these complications occur in Medicaid children, estimates of the excess costs of treatment, due to extended visits and more intensive care for the three most prevalent complications, are approximately \$160 to \$200 million annually. We are currently conducting research funded by the federal Maternal and Child Health Bureau to determine which characteristics of children, and the hospitals that serve them, are associated with serious safety events.

### **Center for Health Care Quality (CHCQ).**

The Center for Health Care Quality has continued its emphasis on the use of quality improvement methods to: 1) advance knowledge about the use of quality improvement methods in medicine; 2) create networks capable of integrating research and improvement; and, 3) develop innovations in care delivery.

1a. Multisite networks: Faculty from the Division are currently providing leadership to networks of pediatric critical care units working to reduce catheter associated blood stream infections, gastroenterology centers to improve the care of children with inflammatory bowel disease, and cardiology centers to reduce interstage mortality for children with single ventricles. Some of the accomplishments of these networks include:

NACHRI BSI: Steve Muething and Peter Margolis have led the design of this network which now involves over 60 pediatric ICU's. Rates of blood stream infections have decreased by more than 50% and results will be published in Pediatrics. PIBSnet: Peter Margolis, Co-Director: This group of 15 pediatric GI practices was formed in April 2007 and has developed and implemented a model guideline focused on nutritional and medication management. The network now has over 2,000 patients in it making it one of the largest registries for IBD in the country. Over the past 2 years, care processes have improved and the proportion of patients in remission has increased from 50% to 65%. The network has also developed and tested new measures for tracking outcomes of care, a nutritional management algorithm and studies of variation in care. Network based innovation and improvement is also being applied to primary care and community based settings. Improving Performance in Practice (IPIP) serves as a working prototype of such a network. It was designed by the Medical Boards' and Specialty Societies' to transform how physicians meet new maintenance of certification requirements by elevating the visibility, importance and ethos of collaborative learning and performance improvement. IPIP includes a measurement system for sharing real-time comparative performance data to drive improvement and the use of standardized national measures to provide transparent comparison at the practice, practice network, region and state levels. It has engaged practices in using health IT (i.e., EMRs and registries) to measure their performance monthly and manage population outcomes, and it provides support for effective participation in organized QI activities through enduring collaborative improvement networks of practices supported by practice coaches, clinical and QI experts, and supporting tools and materials. From a research perspective, the analysis focuses on addresses policy questions analyzing variation in outcomes across networks of practices, and providing insight into the type of system-level changes that support improvement at the practice level. IPIP is beginning to provide the ability to ask questions at multiple levels and at a scale needed to accelerate system level reform.

2a.Center for Education and Research in Therapeutics (CERT): Under the leadership of Dr. Carole Lannon, CERT continues to support the development of additional networks in cardiology, gastroenterology, rheumatology and emergency medicine. In cardiology, the emphasis is on developing and testing novel approaches to improving care and reducing mortality in the inter-stage between operative procedures for infants with hypoplastic left heart syndrome. The CERT is also assessing how to integrate the use of pharmacogenomics into clinical care. Led by Dr. Robert Kahn (Division of General and Community Pediatrics) the focus of the investigation is on the Pharmacogenetic Predictors of Stimulant Medication Response and Side Effects in Children with ADHD. Dr. David Hooper, a Quality Scholar (Division of Nephrology), is focused on Genotype as a Predictor of Mycophenolate Mofetil Related Complications in Pediatric Kidney Transplant Recipients. The CERT has continued to support the work of Dr. Muething and the safety team to synthesize the learnings from the trigger tool safety efforts. This has resulted in presentations at the national CERT Steering Committee meeting and CMS as well as the drafting of three manuscripts to describe the methods and results of specific improvement initiatives. The CERT is also working with the FDA to develop a compendium of pediatric registries, in particular those that include devices.

State Level Improvement efforts: The Center received two MEDTAPP awards through the Ohio Department of Job and Family Services to provide quality improvement, data and project management support for two efforts:

Measurably improve developmental screening and referral rates for young children in Ohio. An eight-month pilot project, in collaboration with the Ohio chapter of the American Academy of Pediatrics, demonstrated significant improvements in screening rates (from 15% at baseline to 70%) and in appropriate evaluation and referral. Plans are currently underway to spread these efforts to clinicians statewide.

Address the pediatric obesity epidemic (in partnership with Dr. Lisa Simpson and the ChildPolicyResearchCenter):

- A pilot project within the Greater Cincinnati community to support primary care practices in implementing practical strategies to promote healthy activity and diet for children; HEDIS measures will be used to monitor impact of the interventions.
- Analysis of various data sources specific to the epidemic in Ohio.

Both MEDTAPP projects will involve collaboration with all relevant stakeholders, including state agencies, health plans, provider organizations, and community groups to ensure that these efforts build on and complement other Ohio initiatives.

As part of the MEDTAPP activities, Dr. Lannon is part of a leadership team involving colleagues from the Ohio Department of Health, the Ohio Department of Job and Family Services, the Ohio chapter of the American Academy of Pediatrics and other key stakeholders to develop an Ohio Child Health Improvement Partnership.

Other: CHCQ's emphasis on advancing knowledge about how to apply quality improvement methods in medicine includes a study funded by the Robert Wood Johnson foundation under the leadership of Heather Kaplan, MD, MSc, focused on developing and testing a conceptual framework for assessing the role of contextual factors in determining

the effectiveness of QI teams.

The Center continues its collaborations with numerous academic divisions within CCHMC External collaborations involve professional boards and societies such as the American Board of Medical Specialties, the American Board of Pediatrics, and the American Academy of Pediatrics. Collaborations also involve colleagues at numerous Universities around the US.

## Quality and Transformation

Transformation of the delivery system at Cincinnati Children's, which began in 2002, continues actively in 2009. The transformation is led by faculty with primary and secondary appointments within the Division of Health Policy and Clinical Effectiveness. These faculty have extensive training in Health System Research including Quality Improvement and Quality Improvement Research, and oversee core system wide transformation design such as demand capacity management and flow, Safety, and chronic system redesign. In each area of focus, horizontal integration of research and improvement in delivery system redesign is actively pursued so as to accelerate the application of new knowledge to the bedside.

CCHMC is one of 10 Children's Hospitals, and the only one in Ohio, to be named to the US News "Honor Roll" for 2009. Gastroenterology has been ranked #1 overall by US News (9 of 10 subspecialties were ranked in the Top 10). CCHMC also received the highest possible score in each of the five Leapfrog Safety Categories for 2009. Only one other "Honor Roll" hospital (LA) received these rankings. No other Ohio Children's hospital or other regional competitor received this best possible Leapfrog ranking.

The strategic areas of focus for transformation include: 1) Access to Care; 2) tackling System Wide Flow; 3) Patient Safety; 4) Clinical Excellence; 5) Reduced Hassles for Providers; 6) Team well being; and, 7) Family Centered Care. Patient and Family members participate at all levels of the organization in this effort, including direct participation in redesign efforts. Thirty-one cross functional teams focus on system level changes working to achieve near perfect performance in clinical and operational areas. Over half of these teams focus on improving outcomes for children with chronic disease. A business unit reporting structure fosters accountability for performance in each of 15 areas focused on particular populations of patients and services.

Improvement teams are co-led by faculty from the Departments of Pediatrics, Surgery, Anesthesia and Radiology with nursing and other patient services leaders from each of the areas. Cincinnati Children's efforts on Quality and Transformation have resulted in dramatic and unparalleled improvement in Quality and Outcomes of care. Key factors contributing to ongoing transformation include senior leadership and board engagement; focus on perfection or near perfection goals, vertical alignment in measures, accountability, improvement capability, commitment to internal and external transparency, focus on measurement and constancy of purpose. A couple of examples:

**Disease-Based Improvement.** The chronic disease improvement teams met 75% of their improvement targets for this year. Examples include improvements in growth and lung function in cystic fibrosis; improving clinical control and reducing admissions for adolescents with asthma; and increasing remissions in patients with inflammatory bowel disease.

A major new initiative was improving use of effective behavior strategies for children and families with chronic conditions through self-management. Nine teams participated in an improvement collaborative to implement the CCHMC developed evidence based practice guideline for self-management support with good results.

In 2009, the focus of the chronic care systems under Dr. Maria Britto also included an emphasis on embedding the individual disease based outcome measures as well as evidence based process measures into the EPIC design enabling us to build the IT platform for transformation of disease based outcomes of care.

**Demand Capacity Management.** A new unit for addressing demand capacity management was established in 2009. Led by Dr. Fred Ryckman from the department of surgery, this unit will focus on application of operations research methods and simulation to address broad areas such as outpatient flow. Given the current health care reform focus on cost, optimal utilization of fixed resources such as staff and space to optimize patient care and safety while reducing costs, has already provided a robust business model for ROI.

**Patient Safety.** In 2009, Patient safety continued to be a priority for the transformation team. Continued reductions in adverse drug events through use of the automated trigger tools and rapid deployment of improvement teams, additional 60% reduction in Serious safety events through redesign of Microsystems and all staff in situational awareness and key safety behaviors and continued and relentless focus on reliable application of evidence to reduce Hospital Acquired infections continues to make CCHMC demonstrably safer.

Innovation. Innovation units in Chronic Care and High Reliability have pioneered new approaches to delivery of care which have been spread locally, as well as, been extensively studied through additional local and national research networks. A third innovation unit focused on dramatically improving patient experience has been initiated.

Internal Training in Scientific Improvement Methods. Well over 100 people have graduated from the training with the expectation of coaching and leading teams in their Microsystems. Over a third of the graduates of the training program are faculty. Training in Advanced Improvement Methods including complex study designs to evaluate specific causal impact of interventions are provided to faculty and fellows as well as national faculty from other universities. The Quality Scholars program, started 2 years ago, has expanded under the new leadership of Dr. Evaline Alessandrini to build a new track of scientific inquiry. Joint appointment for fellows and faculty seeking careers in this area are provided and sought. Currently active collaboration exists with the majority of the Divisions in the Department of Pediatrics as well as the departments of Surgery, Anesthesia, Patient Services and Radiology.

Faculty in the Division work with faculty and Physician and other leaders from around the state and nationally to spread the successes, especially in the area of patient safety. These faculty serve as improvement advisors in several collaboratives within the state of Ohio as well as nationally in collaboration with other national Children's Hospitals (CHCA, NAACHRI, Ohio Children's Hospital Association). In many of these efforts, change packages tested and validated at Cincinnati have been applied to these multiple settings. Currently, use of improvement science is being extended to Community Based Improvements such as the reduction of Infant mortality. In addition, single State and Multi-State efforts are ongoing both in hospitals as well as primary and secondary practice and research networks.

In 2009, we also expanded public website transparency to include all system-level quality measures (except PICU standardized mortality rate and serious safety event rate) and Leapfrog safety measures. In addition, both at the national and at the state level, a set of system level measures were developed for public reporting at the state level and for comparison and learning at the national level.

## **Division Collaboration**

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### **Collaboration with Community and General Pediatrics**

**Collaborating Faculty:** [Thomas Dewitt](#); [Robert Kahn](#); [Mona Mansour](#); [Jeffrey Simmons](#)

Academic Improvement Collaborative focused on reducing ED/Urgent Care visits and admissions among the Medicaid population in Hamilton County.

### **Collaboration with Hematology/Oncology**

**Collaborating Faculty:** [John Perentesis](#)

Affiliate on reduction of medical errors with chemotherapeutic agents.

### **Collaboration with Rheumatology**

**Collaborating Faculty:** [Hermine Brunner](#); [Daniel Lovell](#)

NIH/NIAMS-funded RO1 entitled "Determinants of health-related quality of life in Juvenile Idiopathic Arthritis"

### **Collaboration with Adolescent Medicine; Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty:** [Maria Britto](#); [Dennis Drotar](#)

NIH/NHLBI-funded R21 entitled "Developing an in vivo adherence intervention for adolescents with asthma."

### **Collaboration with Gastroenterology**

**Collaborating Faculty:** [John Bucuvalas](#)

Disease Specific Innovations and Outcomes Program

### **Collaboration with General and Community Pediatrics**

**Collaborating Faculty:** [Stephen Muething](#)

Reducing Adverse Drug Events at CCHMC

### **Collaboration with Emergency Medicine; Pediatric and Thoracic Surgery**

**Collaborating Faculty:** [Michael Gittelman](#); [Richard Falcone](#)

### **Collaboration with Neonatology**

**Collaborating Faculty:** [James Greenberg](#); [Jeffrey Whitsett](#)

Advisory Committee for Prevention of Prematurity Initiative

### **Collaboration with Biostatistics and Epidemiology; Infectious Diseases**

**Collaborating Faculty:** [Ardythe Morrow](#); [Mary Staat](#)

**Collaboration with Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty: Monica Mitchell**

Vision 2015: A Comprehensive Assessment of Child Health in Northern Kentucky

**Collaboration with Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty: Jeffrey Epstein; Lori Stark**

Improvement and Transformation Efforts.

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: ADHD Care - Community

**Collaboration with Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty: Beverly Smolyansky; Lori Stark**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: ADHD Care (Behavioral Medicine Academic Collaborative)

**Collaboration with Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty: Rebecca Kniskern; Beverly Smolyansky; Lori Stark**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: OCD (Behavioral Medicine Academic Collaborative)

**Collaboration with Behavioral Medicine and Clinical Psychology**

**Collaborating Faculty: Anne Lynch-Jordan; Beverly Smolyansky; Lori Stark**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Pain Management (Behavioral Medicine Academic Collaborative)

**Collaboration with General and Community Pediatrics**

**Collaborating Faculty: Thomas Dewitt**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Asthma Care in Medicaid Populations - General Pediatrics Academic Collaborative

**Collaboration with Adolescent Medicine**

**Collaborating Faculty: Maria Britto**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Adolescents with Asthma - Chronic Care Innovation Lab

**Collaboration with General and Community Pediatrics**

**Collaborating Faculty: Mona Mansour**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Asthma Care in School Based Health Centers (SBHC)

**Collaboration with Developmental and Behavioral Pediatrics**

**Collaborating Faculty: Patty Manning; Donna Murray**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Autism

**Collaboration with Gastroenterology, Hepatology, and Nutrition; Pediatric and Thoracic Surgery**

**Collaborating Faculty: Stavra Xanthakos; Thomas Inge**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Bariatric Surgery (DSIOP)

**Collaboration with Gastroenterology, Hepatology, and Nutrition**

### **Collaborating Faculty: John Bucuvalas; Kathleen Campbell**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Biliary Atresia/Liver Transplant (DSIOP)

### **Collaboration with Pulmonary Medicine - Clinical**

#### **Collaborating Faculty: James Acton; Raouf Amin**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Cystic Fibrosis (Pulmonary Academic Collaborative, DSIOP)

### **Collaboration with Gastroenterology, Hepatology, & Nutrition**

#### **Collaborating Faculty: Gitit Tomer; Ted Denson**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Inflammatory Bowel Disease (IBD)

### **Collaboration with Endocrinology**

#### **Collaborating Faculty: Lawrence Dolan; David Repaske**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Diabetes

### **Collaboration with Rheumatology**

#### **Collaborating Faculty: Tracy V. Ting**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Juvenile Idiopathic Arthritis (JIA)

### **Collaboration with Neonatology & Pulmonary Biology**

#### **Collaborating Faculty: Kurth Schibler; Laura Ward**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Necrotizing Enterocolitis (NEC)

### **Collaboration with Pulmonary Medicine**

#### **Collaborating Faculty: Raouf Amin; Narong Simakajornboon**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Obstructive Sleep Apnea (OSA)

### **Collaboration with Cardiology Clinic**

#### **Collaborating Faculty: Timothy Knilans**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Safe Practices

### **Collaboration with Gastroenterology, Hepatology and Nutrition; Pediatric and Thoracic Surgery**

#### **Collaborating Faculty: Michael Farrell; Frederick Ryckman**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Improvement

Team: Improve Patient Flow Across the System

### **Collaboration with Anesthesia; Pediatric and Thoracic Surgery; Pediatric Neurosurgery**

#### **Collaborating Faculty: Elena Adler; Kerry Crone; Frederick Ryckman; James Spaeth**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Clinical System

Improvement Team: Perioperative Flow

### **Collaboration with Pediatric and Thoracic Surgery**

### **Collaborating Faculty: Frederick Ryckman**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Clinical System

Improvement Team: Perioperative Safety

### **Collaboration with Critical Care Medicine**

#### **Collaborating Faculty: Derek Wheeler**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: CVC Infections

### **Collaboration with Critical Care Medicine**

#### **Collaborating Faculty: Derek Wheeler**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: Ventilator Acquired Pneumonia (VAP)

### **Collaboration with Critical Care Medicine**

#### **Collaborating Faculty: Derek Wheeler**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: Codes Outside the ICU

### **Collaboration with Gastroenterology, Hepatology and Nutrition; General and Community Pediatrics**

#### **Collaborating Faculty: Michael Farrell; Stephen Muething**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: Reduce Serious Safety Events

### **Collaboration with Cardiology Clinic; Infectious Diseases**

#### **Collaborating Faculty: Timothy Knilans; Beverly Connelly**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: Safe Practices

### **Collaboration with General and Community Pediatrics**

#### **Collaborating Faculty: Michael Vossmeier**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Inpatient Clinical

System Improvement Team: High Reliability Unit

### **Collaboration with Behavioral Medicine and Clinical Psychology**

#### **Collaborating Faculty: Lori Stark**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Outpatient Clinical

System Improvement Team: Timely Consult/Feedback Letter Process to Community Physicians

### **Collaboration with Behavioral Medicine and Clinical Psychology**

#### **Collaborating Faculty: Lori Stark**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Outpatient Clinical

System Improvement Team: Improving Patient/Family Parking and Wayfinding Experiences

### **Collaboration with Infectious Diseases**

#### **Collaborating Faculty: Beverly Connelly**

### **Collaboration with Adolescent Medicine**

#### **Collaborating Faculty: Maria Britto**

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Outpatient Clinical

System Improvement Team: Self-Management Support

### Collaboration with Emergency Medicine

#### Collaborating Faculty: Joseph Luria

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. ED Clinical System Improvement Team: ED Flow

### Collaboration with Emergency Medicine

#### Collaborating Faculty: Scott Reeves

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. ED Clinical System Improvement Team: ED Pain Management and Evidence-Based Care

### Collaboration with Emergency Medicine

#### Collaborating Faculty: Rima Rusnak

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. ED Clinical System Improvement Team: Patient Safety

### Collaboration with Allergy and Immunology; Endocrinology; Gastroenterology; Hepatology and Nutrition; Neurology; Neurosurgery; Ophthalmology; Orthopedics; Pediatric Cardiology; Pediatric Primary Care and Hopple Street; Pediatric Rehabilitation; Plastic Surgery; Pulmonary Medicine; Rheumatology; Teen Health Center; Urology

#### Collaborating Faculty: Raouf Amin; Amal Assa'Ad; David Billmire; Frank Biro; Robert Beekman; Mitchell Cohen; Kerry Crone; Ton Degrauw; Thomas Dewitt; Stuart Handwerker; Daniel Lovell; Linda Michaud; Curt Sheldon; Eric Wall; Constance West

Improvement and Transformation Efforts

Collaboration with Division and Faculty occur through the auspices of Quality and Transformation. Outpatient Clinical System Improvement Team: Access

### Collaboration with General and Community Pediatrics; Neurology; Psychiatry; Pulmonary Medicine

#### Collaborating Faculty: Tracy Glauser; Robert Kahn; Stephen Muething; Shannon Saldana; Michael Seid

Center for Education and Research in Therapeutics

### Collaboration with General and Community Pediatrics

#### Collaborating Faculty: Christopher Bolling

MEDTAPP obesity project

### Collaboration with Cardiology

#### Collaborating Faculty: Robert Beekman

Joint Council on Congenital Heart Disease National Collaborative for Improvement in Pediatric Heart Disease

## Faculty Members

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**Uma Kotagal, MBBS, MSc**, Professor Clinical ; *Director, Health Policy and Clinical Effectiveness; Senior Vice President, Quality and Transformation*

**Research Interests:** Using research methods and analysis to understand, diagnose and implement sustainable changes in care practices so as to meet all Dimensions of the patients and families. Understanding the role of le

**Evaline Alessandrini, MD, MSCE**, Professor ; *Director, Quality Scholars Program in Health Care Transformation*

**Research Interests:** Outcomes and risk-adjustment in pediatric emergency care. Quality of ambulatory services for vulnerable children. Health system interventions for improvement.

**Patrick Conway, MD, MSc**, Assistant Professor

**Research Interests:** Quality Improvement, Patient Safety, Interventions enabled by health information technology, the intersection of health services research and health policy

**Edward F. Donovan, MD**, Professor ; *Medical Director, Evidence Based Decision Making; Co-implementation leader, CCHMC Community Strategy*

**Research Interests:** Perinatal epidemiology, Viable processes for improving population health

**Gerry Fairbrother, PhD**, Professor ; *Member, Review Panel for Outcome Research Awards*

**Research Interests:** Determining the effectiveness of and assessing ways to improve quality of Medicaid and the State Children's Health Insurance Program. Gaps and patterns of enrollment in child health insurance, barrier

**Anthony Goudie, PhD,** Assistant Professor ; *Member, Child Policy Research Center*

**Research Interests:** Identifying barriers (systems and policy) to effectively treating vulnerable pediatric populations. Studying mediating factors associated with treating chronic conditions when obesity is a comorbid co

**Carole Lannon, MD, MPH,** Professor ; *Co-Director, Center for Health Care Quality*

**Research Interests:** To learn what and how improvement science methods achieve best results in improving healthcare and outcomes. To understand what improvement science methods can help target specific practice segments t

**Keith E. Mandel, MD,** Assistant Professor Clinical ; *Vice President of Medical Affairs, Tri State Child Health Services Inc.; Leader, Physician-Hospital Organization (PHO); Leader, PHO Asthma Initiative; Co-leader, PHO Children with Special Healthcare Needs Initiative; Co-leader, CCHMC External Quality Consulting; Co-leader, Ratings and Rankings Committee; Co-Leader, Business Case for Quality Committee*

**Research Interests:** Aligning pay-for-performance programs/financial incentives with large-scale quality improvement initiatives, assessing the financial impact of quality improvement initiatives, spreading large-scale qu

**Peter Margolis, MD, PhD,** Professor ; *Co-Director, Center for Health Care Quality; Co-Director, Health Services Research Matrix; Acting Director, Quality Scholars Fellowship in Transforming Health Care*

**Research Interests:** Integrating public health and quality improvement methods to design, develop and test interventions to improve the outcomes of care for populations of children and adults. Use of advanced experimental

**Kieran J. Phelan, MD, MSc,** Associate Professor Clinical ; *Evidence-Based Clinical Practice Guidelines*

**Research Interests:** Effects of home visitation and housing on pediatric injury epidemiology and control, chronic disease management, and the psychology of parental supervision and health care decision making. Evidence-ba

**Lisa Simpson, MB, BCh, MPH, FAAP,** Professor ; *Director, Child Policy Research Center; Member, Scientific Advisory Committee, Every Child Succeeds; Member, CCHMC Faculty Evaluation Workgroup; Member, Review Panel for CCHMC Outcome Research Awards; Co-Director, Health Services Research Matrix*

**Research Interests:** Childhood obesity, pediatric patient safety and the factors in contributing or hindering improvements, role of health information technology policy in supporting quality improvement.

## Joint Appointment Faculty Members

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**Maria Britto, MD, MPH,** Professor

Adolescent Medicine

Health care quality, especially for adolescents with chronic illness

**Craig Froehle, PhD,** Associate Professor

UC College of Business

Operational technologies, services management, healthcare (or health care) operations, process improvement

**Srikant Iyer, MD, MPH,** Assistant Professor

Emergency Medicine

Organizing systems and processes in emergency medicine to deliver ideal care and improve patient outcomes.

**Heather Kaplan, MD, MSCE,** Assistant Professor

Neonatology

Identifying and examining strategies for improving the implementation of evidence into practice and studying quality improvement as a mechanism of promoting the uptake of research findings and improving patient outcomes.

**Monica Mitchell, PhD,** Associate Professor

Behavioral Med & Clin Psychology

Community based participatory research, health disparity research, nutrition and health research, translational research, sickle cell disease research

**Stephen Muething, MD,** Professor

General and Community Pediatrics

Patient Safety, Reliability, Adverse Events

**Michael Seid, PhD,** Professor

Pulmonary Medicine

Measuring and improving pediatric health care quality and health-related quality of life for chronically ill children and understanding the interactions between vulnerable chronically ill children and the health care system, the barriers to care faced by these populations, and policies and programs to overcome these barriers to care.

## Significant Accomplishments

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### Reducing Rates of Prematurity and Outcomes for Premature Infants Through Statewide Efforts

In 2007, the Ohio Perinatal Quality Collaborative (OPQC) was launched. Led by Dr. Edward Donovan, funded by the Center for Medicare and Medicaid Services, OPQC involves 25 sites across Ohio. Forty-five teams participate in this collaborative focused on application of evidence in perinatal care. OPQC represents a unique partnership with the Ohio Department of Job and Family Services, Ohio Department of Health and 25 sites that deliver care for premature children. OPQC has been held up nationally as a unique effort that goes across the continuum of perinatal care to improve quality, reduce costs. The obstetric component focuses on reduction in the number of scheduled elective deliveries performed in women without appropriate indication of 36.1 to 38.6 weeks gestation. The neonatal component focuses on improving outcomes through reduction in NICU-associated bacterial infections in premature infants 22-29 weeks gestation through reliable application of insertion and maintenance bundles of care. OPQC frames its objectives using the IHI Triple Aim concepts of simultaneously improving population based outcomes, experience and value. The collaborative has achieved a 30% reduction in births in the targeted gestational age from 12% to 8% at the population level as measured by birth certificate data. A 75% reduction of NICU-associated bacterial infections from 20% to 5% has been achieved. A cost effectiveness study is part of the research effort.

Efforts such as OPQC highlight CCHMC and HPCE's focus on statewide transformation for children in active partnerships with state, business and provider communities throughout Ohio. Additional areas of focus include reduction of Adverse Drug events and Surgical Site Infections at 8 Ohio children's hospitals, a statewide Asthma improvement effort in partnership, measurably improving developmental screening and referral rates for young children, and efforts to address the pediatric obesity epidemic.

### Innovation In Health System Redesign: Laboratories to Transform Health Care

The focus on transforming care delivery for children worldwide, requires that HPCE focus on innovation in health care design. Supported by the clinical innovations fund 2 innovation labs were established. A chronic care innovation lab directed by Dr. Maria Britto in Adolescent Medicine focused on adolescents with asthma and an acute care unit focused on high reliability under the leadership of Dr. Michael Vossmeier and Ms. Karen Tucker. These delivery sites served as laboratories to test and refine ideas about models of care. Successful pilots are spread.

High reliability Unit (HRU): Tested use of a pediatric early warning system (PEWS) linking abnormal vital signs to an action algorithm based on a numeric score. A reduction of over 90% in codes was achieved and spread throughout Ohio and nationally with similar results.

Using cell phones to improve adherence in adolescents with chronic disease: Tested first in the chronic care innovation laboratory this successful intervention is now studied in a NIH funded randomized trial by Drs. Seid and Britto and internally in diabetes.

Improving outcomes for children with chronic disease (TRO1): Create a patient-provider collaborative clinical care network into improve clinical practice, patient self-management, and disease outcomes of pediatric inflammatory bowel disease (IBD). Such a shared patient-provider network will reduce transactional costs, use collaborative innovation, planned experimentation and collective collaboration to optimize participation, engagement, and social networking. Harnessing the nascent power of social networking technology to join patients and providers shared can transform clinical practice and the way new clinical knowledge is generated.

## Division Publications

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1. Lian L, Wang Y, Flick M, Choi J, Scott EW, Degen J, Lemmon MA, Abrams CS. [Loss of pleckstrin defines a novel pathway for PKC-mediated exocytosis](#) . *Blood*. 2009; 113: 3577-84.
2. Harris-Love MO, Shrader JA, Koziol D, Pahlajani N, Jain M, Smith M, Cintas HL, McGarvey CL, James-Newton L, Pokrovnichka A, Moini B, Cabalar I, Lovell DJ, Wesley R, Plotz PH, Miller FW, Hicks JE, Rider LG. [Distribution and severity of weakness among patients with polymyositis, dermatomyositis and juvenile dermatomyositis](#) . *Rheumatology (Oxford)*. 2009; 48: 134-9.
3. Brunner HI. [More may not be better--but is less enough?](#) . *J Rheumatol*. 2009; 36: 7-8.
4. Foeldvari I, Szer IS, Zemel LS, Lovell DJ, Giannini EH, Robbins JL, West CR, Steidle G, Krishnaswami S, Bloom BJ. [A prospective study comparing celecoxib with naproxen in children with juvenile rheumatoid arthritis](#) . *J Rheumatol*. 2009; 36: 174-82.
5. Hinks A, Ke X, Barton A, Eyre S, Bowes J, Worthington J, Thompson SD, Langefeld CD, Glass DN, Thomson W. [Association of the IL2RA/CD25 gene with juvenile idiopathic arthritis](#) . *Arthritis Rheum*. 2009; 60: 251-7.
6. Mullins ES, Kombrinck KW, Talmage KE, Shaw MA, Witte DP, Ullman JM, Degen SJ, Sun W, Flick MJ, Degen JL.

[Genetic elimination of prothrombin in adult mice is not compatible with survival and results in spontaneous hemorrhagic events in both heart and brain](#) . *Blood*. 2009; 113: 696-704.

7. Brunner HI, Klein-Gitelman MS, Ying J, Tucker LB, Silverman ED. [Corticosteroid use in childhood-onset systemic lupus erythematosus-practice patterns at four pediatric rheumatology centers](#) . *Clin Exp Rheumatol*. 2009; 27: 155-62.
8. Seid M, Opipari L, Huang B, Brunner HI, Lovell DJ. [Disease control and health-related quality of life in juvenile idiopathic arthritis](#) . *Arthritis Rheum*. 2009; 61: 393-9.
9. Schanberg LE, Sandborg C, Barnhart HX, Ardoin SP, Yow E, Evans GW, Mieszkalski KL, Ilowite NT, Eberhard A, Levy DM, Kimura Y, von Scheven E, Silverman E, Bowyer SL, Punaro L, Singer NG, Sherry DD, McCurdy D, Klein-Gitelman M, Wallace C, Silver R, Wagner-Weiner L, Higgins GC, Brunner HI, Jung L, Soep JB, Reed A. [Premature atherosclerosis in pediatric systemic lupus erythematosus: risk factors for increased carotid intima-media thickness in the atherosclerosis prevention in pediatric lupus erythematosus cohort](#) . *Arthritis Rheum*. 2009; 60: 1496-507.
10. Koneru S, Kocharla L, Higgins GC, Ware A, Passo MH, Farhey YD, Mongey AB, Graham TB, Houk JL, Brunner HI. [Adherence to medications in systemic lupus erythematosus](#) . *J Clin Rheumatol*. 2008; 14: 195-201.
11. Ruperto N, Lovell DJ, Quartier P, Paz E, Rubio-Perez N, Silva CA, Abud-Mendoza C, Burgos-Vargas R, Gerloni V, Melo-Gomes JA, Saad-Magalhaes C, Sztajn bok F, Goldenstein-Schainberg C, Scheinberg M, Penades IC, Fischbach M, Orozco J, Hashkes PJ, Hom C, Jung L, Lepore L, Oliveira S, Wallace CA, Sigal LH, Block AJ, Covucci A, Martini A, Giannini EH. [Abatacept in children with juvenile idiopathic arthritis: a randomised, double-blind, placebo-controlled withdrawal trial](#) . *Lancet*. 2008; 372: 383-91.
12. Lovell DJ, Ruperto N, Goodman S, Reiff A, Jung L, Jarosova K, Nemcova D, Mouy R, Sandborg C, Bohnsack J, Elewaut D, Foeldvari I, Gerloni V, Rovensky J, Minden K, Vehe RK, Weiner LW, Horneff G, Huppertz HI, Olson NY, Medich JR, Carcereri-De-Prati R, McIlraith MJ, Giannini EH, Martini A. [Adalimumab with or without methotrexate in juvenile rheumatoid arthritis](#) . *N Engl J Med*. 2008; 359: 810-20.
13. Carrasco R, Lovell DJ, Giannini EH, Henderson CJ, Huang B, Kramer S, Ranz J, Heubi J, Glass D. [Biochemical markers of bone turnover associated with calcium supplementation in children with juvenile rheumatoid arthritis: results of a double-blind, placebo-controlled intervention trial](#) . *Arthritis Rheum*. 2008; 58: 3932-40.
14. Prahalad S, Bohnsack JF, Whiting A, Clifford B, Jorde LB, Guthery SL, Thompson SD, Glass DN, Bamshad MJ. [Lack of association of functional CTLA4 polymorphisms with juvenile idiopathic arthritis](#) . *Arthritis Rheum*. 2008; 58: 2147-52.
15. Ting TV, Lovell DJ. [Does early sulfasalazine treatment provide long-term benefits to patients with juvenile idiopathic arthritis?](#) . *Nat Clin Pract Rheumatol*. 2008; 4: 344-5.
16. Zhang K, Biroshak J, Glass DN, Thompson SD, Finkel T, Passo MH, Binstadt BA, Filipovich A, Grom AA. [Macrophage activation syndrome in patients with systemic juvenile idiopathic arthritis is associated with MUNC13-4 polymorphisms](#) . *Arthritis Rheum*. 2008; 58: 2892-6.

## Grants, Contracts, and Industry Agreements

### Grant and Contract Awards

### Annual Direct / Project Period Direct

#### DONOVAN, E

##### CMS Neonatal Outcomes Grant

Ohio Department of Job and Family Services (University of Cincinnati)

U0CMS030227

07/18/08 - 07/17/09

\$839,225 / \$839,225

#### FAIRBROTHER, G

##### Assessing the Impact of the Semi-Annual Reporting

The California Endowment

20081714

12/01/08 - 05/31/10

\$149,959 / \$225,069

##### Potential Eligible Medicaid Population Without Coverage

The Ohio State University Research Fund

10/01/08 - 06/30/09

\$31,818 / \$31,818

##### Research to Evaluate the Ohio Medicaid Expansion

Ohio Department of Job and Family Services (University of Cincinnati)

08/16/08 - 06/30/11

\$230,919 / \$584,436

#### LANNON, C

**Pursuing Perfection in Pediatric Therapeutics**

Agency for Healthcare Research and Quality

U18 HS 016957	09/01/07 - 08/31/11	\$681,902 / \$2,717,142
Lannon, C	Core	303,383
Seid, M	Pharmacogenetics	143,623
Muething, S	Safety & Reliability	92,977
Margolis, P	PIBDNet	58,343
Lannon, C	AAP	83,876

**MEDTAPP Center of Excellence for Improving Child Health Outcomes**

Ohio Department of Job and Family Services (University of Cincinnati)

A-89-07-0357	01/12/09 - 06/30/11	\$405,041 / \$405,041
Lannon, C	Structured Developmental Assessment, Appropriate Referral and Treatment	97,833
Lannon, C	Developmental Screening Implementation Project	307,208

**AAP Autism and Development Screening Project**

Ohio Department of Health (American Academy of Pediatrics)

01/01/08 - 06/30/09	\$34,737 / \$104,545
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**Pediatric Compendium of National Pediatric Registries**

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

HHSF223200710014C	6/1/09 - 09/27/09	\$101,393 / \$101,393
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**MANDEL, K****Ohio Family Health Survey**

The Ohio State University Research Fund

10/01/08 - 06/30/09	\$31,818 / \$31,818
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**MARGOLIS, P****IPIP Phase 2**

The American Board of Medical Specialties Research and Education Foundation

02/01/06 - 02/28/10	\$504,839 / \$1,265,676
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**Early Development Services Intervention Initiative**

First 5 of LA (University of California Los Angeles)

12/1/05 - 11/30/09	\$282,426 / \$883,621
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**PIBDNet Trailblazer Collaborative**

The Pediatric IBD Network for Research and Improvement

10/01/06 - 06/30/09	\$124,742 / \$290,204
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**PICU-BSI Collaborative Phase III**

Nat'l Assoc of Children's Hosp &amp; Related

09/01/07 - 9/30/09	\$40,000 / \$80,000
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**Chapter Quality Network Asthma Project**

American Academy of Pediatrics

08/01/08 - 07/31/10	\$104,898 / \$208,493
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**Center for Healthier Children, Families and Communities**

UCLA School of Public Health

1638GMA008	4/1/09 - 3/30/12	\$124,221 / \$389,894
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**PHELAN, K****Childhood Residential Injury and Caregiver Supervision**

National Institutes of Health

K23 HD 045770	04/01/05 - 03/31/10	\$116,500 / \$652,433
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**SIMPSON, L****Serious Safety Events for Medicaid Children**

Health Resources and Services Administration

R40 MC 011279

02/01/09 - 01/31/10

\$66,667 / \$66,667

**Community Child Health and Well Being Assessment**

VISION 2015

08/01/08 - 01/31/10

\$56,287 / \$75,000

**Quality of Healthcare for Florida's Children**

The Blue Foundation for a Healthy Florida, Inc (University of South Florida)

6405-1034-00-A

12/11/08 - 12/10/09

\$51,506 / \$51,506

**Best Pharmaceuticals for Children Act 2007**

National Institutes of Health (The Lewin Group, Inc.)

HHSP233200800002T

1/6/09 - 09/29/10

\$99,996 / \$205,462

**Support Implementation of CHIPRA**

The Commonwealth Fund

200904949

03/16/09 - 08/31/09

\$25,144 / \$25,144

**Ohio Family Health Survey**

The Ohio State University Research Fund

10/01/08 - 06/30/09

\$31,818 / \$31,818

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**Current Year Direct****\$ 4,135,856**

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**Total \$4,135,856**

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