2013 Research Annual Report

James M. Anderson Center for Health Systems Excellence

Cincinnati Children's

Division Details

Division Data Summary

RESEARCH AND TRAINING DETAILS	
Number of Faculty	12
Number of Joint Appointment Faculty	10
Direct Annual Grant Support	$7,916,074
Peer Reviewed Publications	59

Division Photo

Row 1: C Mara, S Iyer, E Alessandrini, U Kotagal, H Kaplan, M Britto, D White
Row 2: H Tubbs-Cooley, L Dynan, A Carle, K Phelan, C White, P Margolis, J Lail, E Morgan-DeWitt
Row 3: K Mandel, S Muething, R Kahn, P Brady

Significant Accomplishments

Health Services Research Supports Learning Health Systems

The Health Services Research Matrix at Cincinnati Children's links researchers, patients and clinicians to improve care and outcomes for children, families, and communities. An integral part of the HSR Matrix is to support learning health systems to help patients and providers work together to choose care based on evidence. One such learning health system is the Ohio Perinatal Quality Collaborative (OPQC), a statewide network dedicated to improving perinatal health and reducing reduce preterm births. Since 2008, the OPQC's focus on reducing elective scheduled deliveries before 39 weeks has prevented an estimated 950 NICU admissions; avoiding about $19 million in unnecessary costs. We also support the Pediatric Rheumatology Care and Outcomes Improvement Network (PR-COIN), a national group of experts who collaborate on improved management of juvenile idiopathic arthritis. PR-COIN has created a shared decision making tool for providers, patients, and parents.

Shared Decision Making Delivers Evidence-Based, Family-Centered Care

Shared decision making (SDM) has emerged as a best practice in situations where there are multiple medically reasonable options that differ in ways that matter to families. Clinicians share information about options and patients and parents share their goals, values and preferences. Together, a plan is developed to best fit the patient's needs. Decision aids are evidence-based tools that improve patient/family knowledge, decrease their uncertainty, and improve alignment between their preferences and the treatment plan. While decision aids have grown in use in adult settings, their application has been limited in pediatrics.

William Brinkman, MD, MEd, MSc, a member of our Evidence and Measures Team, is leading efforts to support SDM throughout Cincinnati Children's. Brinkman and colleagues recently published findings that show parents of children newly diagnosed with ADHD were better informed and more involved in decision making after receiving an SDM intervention. The intervention materials were developed in partnership with Professor Mike Zender and his graduate students at the University of Cincinnati College of Design, Architecture, Art, and Planning (DAAP). This study was funded by a CCHMC Place Outcomes Research Award.

Building on this success, Brinkman and colleagues have collaborated with investigators in more clinical settings. In Adolescent Medicine, Lea Widdice, MD, has employed a decision aid that has increased knowledge and support for receiving human papillomavirus vaccines. Meanwhile, Esi Morgan DeWitt, MD, MSCE, Ellen Lipstein, MD, MPH, and Carole Lannon, MD, MPH, collaborated to develop a successful decision aid for use in managing juvenile idiopathic arthritis. For more information about SDM tools, please visit: www.cincinnatichildrens.org/shareddecisions

Mentoring Program Supports Young Investigators

The HSR Matrix mentoring program promotes the career development of young investigators in health services research. Fifteen junior investigators from 13 pediatric, surgical and patient services divisions are currently in the program. Major outcomes measures for the program were developed in collaboration with mentors and mentees, the Office for Faculty Development and the Education and Learning group in Human Resources. Measures track on-time promotion, retention, success at meeting research goal, career satisfaction and feedback about the program. In FY 2013, the HSR Matrix hosted 12 speakers and two community learning events with national and international leaders addressing topics ranging from methodology to community building and innovative care strategies. Especially popular talks came from Bruce Marshall, MD, Vice President of Clinical Affairs at the Cystic Fibrosis Foundation and Mark Schuster, MD, PhD, Vice Chair for Health Policy at Boston Children's Hospital.

Research Highlights

The Anderson Center "Getting to Scale" Symposium

In March, 2013, the Anderson Center held its first ever external symposium, "Getting to Scale". We invited world-class thinkers from a variety of sectors to address the challenges of scaling; spreading our innovations and interventions to large populations to exponentially increase their impact. The program featured prominent experts on scale from both healthcare and non-healthcare industries presenting brief, "thought bomb" case-studies based upon their experiences as well as highly interactive sessions with leaders from across healthcare. The speakers included Nana Twum-Danso (Fives Alive), Bob Jesse (Veterans Health Administration), Claudia Kotchka (P&G), Louise Liang (Kaiser), and Bonny Simi (JetBlue). Joe McCannon (100,000 Lives Initiative) and Bob Sutton (an author and highly innovative thinker on the theories of scale at Stanford) moderated the event and shared their expertise on scale as well. Using OCHSPS as a case study, international thought leaders assessed the challenges and tradeoffs of going to scale. Participants walked away with practical applications of lessons learned across many industries that they could apply to their individual business situations.

Safety

Under the leadership of Dr. Steve Muething, we identified multi-factorial causes of the deterioration in safety

culture and process reliability, and are partnering with senior leadership to design and begin work on Operational Excellence so that Safety is not a separate initiative, but a focus of everyone as part of their jobs every day. We are also working to spread this high reliability culture to other Children's Hospitals nationwide. The Ohio Children's Hospital Solutions for Patient Safety (OCHSPS) has seen a 50% reduction in the Serious Safety Event rate and serious harm index in Ohio, beginning reductions in serious harm for 33 hospitals in Phase I and expansion to 76 hospitals with 43 hospitals joining in Phase II. OCHSPS has been nationally recognized as a leading hospital engagement network.

Chronic and Complex Disease

Chronic and complex disease represents a formidable challenge, but is arguably the most important work we do with the most significant and far-reaching impact not only on the health of children, but on the healthcare system as a whole. Under the leadership of Dr. Jennifer Lail, and in partnership with Patient Services, the Care Coordination and Outcomes Initiative has worked with innovative clinical areas to change the way we deliver chronic care to a more holistic and coordinated approach. Thirteen conditions developed registry and outcomes measures, deployed needs stratification and care support, as well as self-management and pre-visit planning. As a result, this collaboration achieved 20% improvement in outcomes for six conditions; double our projections for FY2013. We look forward to improving outcomes with additional condition-based teams as part of Wave 2 in FY2014.

Community Health

In partnership with various community agencies, Dr. Robert Kahn led initiatives to reduce unintentional injuries, infant mortality, asthma ED visits, and address childhood obesity. As a result of their diligence, there was a 70% reduction in unintentional injuries in the Norwood intervention homes, and improved QI capacity in the community with six school and health center teams participating in RCIC. Additionally, in partnership with PI and ECS, we were awarded $3.2M in grant funding from Bethesda, Inc. to drive breakthrough results in infant mortality for our region.

Productivity/Flow

Dr. Fred Ryckman accomplished significant results in Productivity and Flow this year, with the achievement of 80% discharged when Physically Ready, the validation of bed models, and the maintenance of system delay rates even with a record high census. His area also led early work on the development of GARDIANS (Global Automated Risk Detection Interface and Network System) for Operational Excellence. GARDIANS serves as a front-line tool that comprehensively and efficiently presents information to enable front-line leaders to identify and mitigate risk for flow failures, patient and family experience failures, and safety events. Most importantly, Peri-Op completed 940 days without a serious safety event.

Learning Networks

Under the leadership of Dr. Carole Lannon and Dr. Peter Margolis, significant accomplishments were realized in our learning networks, including the development of Learning Networks Core infrastructure which enabled the extension of support by the five existing networks to 170 sites in 41 states and two countries. Dr. Lannon has led the continued collaboration with ABP, including a national invitational meeting focused on promoting and sustaining the network model in June 2013, and a grant with ABP to highlight networks as part of the maintenance of certification program.

Significant improvements in outcomes among the national networks such as the Improve Care Now (ICN) and Chronic Care Collaborative (C3N) networks and the demonstration of a robust network infrastructure for

research, e.g. the ability to replicate important trials using data collected by these networks, has garnered national recognition by funding agencies interested in proliferating this success. As a result, Dr. Margolis has led the collaboration regarding C3N with the Patient Centered Outcomes Research Institute pertaining to PCORI funding strategies.

Health Services Research

This year, Dr. Peter Margolis led efforts to strengthen and integrate health services teaching and knowledge throughout the organization. In support of this, the Anderson Center hosted 12 speakers and two community learning events, as well as established a research mentoring program.

Evidence and Measurement

Under the leadership of Dr. Evie Alessandrini, significant strides were made in health care awards. Reporting to US News and World Report was improved, including closer links to improvement priorities with a concomitant 48% rate of gap closures, and resulting in a #3 overall ranking, and a #1 ranking in cancer care. The survey strategy and coordination with clinical areas resulted in a Parents' Magazine rank of #3 (#4 in 2009), with all six subspecialties ranked in top three (all 7-9 in 2009). Additionally, Cincinnati Children's was one of only two hospitals nationally to win the LeapFrog/URAC web transparency.

The Leadership Academy

The Leadership Academy also made significant strides in both internal and external capability and capacity building. The external I2S2 course was launched with nine external candidates in current classes, with a course of external participants only (19 confirmed) scheduled for October. We increased the overall project total and early testing of PDSA's in both I2S2 and RCIC resulting in improved project results, as well as increased the percentage of teams achieving improvement (five or above) in RCIC from 60 to 88%.

Division Publications

1. Ambroggio L, Thomson J, Murtagh Kurowski E, Courter J, Statile A, Graham C, Sheehan B, Iyer S, Shah SS, White CM. **Quality improvement methods increase appropriate antibiotic prescribing for childhood pneumonia**. *Pediatrics*. 2013; 131:e1623-31.
2. Anderson JB, Iyer SB, Schidlow DN, Williams R, Varadarajan K, Horsley M, Slicker J, Pratt J, King E, Lannon C, National Pediatric Cardiology Quality Improvement C. **Variation in growth of infants with a single ventricle**. *J Pediatr*. 2012; 161:16-21 e1; quiz 21 e2-3.
3. Bailit JL, Iams J, Silber A, Krew M, McKenna D, Marcotte M, Donovan E, Ohio Perinatal Quality C. **Changes in the indications for scheduled births to reduce nonmedically indicated deliveries occurring before 39 weeks of gestation**. *Obstet Gynecol*. 2012; 120:241-5.
4. Billett AL, Colletti RB, Mandel KE, Miller M, Muething SE, Sharek PJ, Lannon CM. **Exemplar pediatric collaborative improvement networks: achieving results**. *Pediatrics*. 2013; 131 Suppl 4:S196-203.
5. Bonafide CP, Brady PW, Keren R, Conway PH, Marsolo K, Daymont C. **Development of heart and respiratory rate percentile curves for hospitalized children**. *Pediatrics*. 2013; 131:e1150-7.
6. Brady PW, Muething S, Kotagal U, Ashby M, Gallagher R, Hall D, Goodfriend M, White C, Bracke TM, DeCastro V, Geiser M, Simon J, Tucker KM, Olivea J, Conway PH, Wheeler DS. **Improving situation awareness to reduce unrecognized clinical deterioration and serious safety events**. *Pediatrics*. 2013; 131:e298-308.
7. Burt RS, Meltzer DO, Seid M, Borgert A, Chung JW, Colletti RB, Dellal G, Kahn SA, Kaplan HC, Peterson

LE, Margolis P. **What's in a name generator? Choosing the right name generators for social network surveys in healthcare quality and safety research**. *BMJ Qual Saf*. 2012; 21:992-1000.

8. Carle AC. **Patient reported health related quality of life measures--what do the scores mean and how do they relate to patient outcomes and care?**. *J Urol*. 2012; 188:1662-3.
9. Carle AC, Weech-Maldonado R. **Does the Consumer Assessment of Healthcare Providers and Systems Cultural Competence Survey provide equivalent measurement across English and Spanish versions?**. *Med Care*. 2012; 50:S37-41.
10. Carle AC, Weech-Maldonado R. **Validly interpreting patients' reports: using bifactor and multidimensional models to determine whether surveys and scales measure one or more constructs**. *Med Care*. 2012; 50:S42-8.
11. Clancy CM, Margolis PA, Miller M. **Collaborative networks for both improvement and research**. *Pediatrics*. 2013; 131 Suppl 4:S210-4.
12. Cook BL, Doksum T, Chen CN, Carle A, Alegria M. **The role of provider supply and organization in reducing racial/ethnic disparities in mental health care in the U.S**. *Soc Sci Med*. 2013; 84:102-9.
13. Crane PK, Carle A, Gibbons LE, Insel P, Mackin RS, Gross A, Jones RN, Mukherjee S, Curtis SM, Harvey D, Weiner M, Mungas D, Alzheimer's Disease Neuroimaging I. **Development and assessment of a composite score for memory in the Alzheimer's Disease Neuroimaging Initiative (ADNI)**. *Brain Imaging Behav*. 2012; 6:502-16.
14. Dewitt EM, Li Y, Curtis JR, Glick HA, Greenberg JD, Anstrom KJ, Kremer JM, Reed G, Schulman KA, Reed SD. **Comparative effectiveness of nonbiologic versus biologic disease-modifying antirheumatic drugs for rheumatoid arthritis**. *J Rheumatol*. 2013; 40:127-36.
15. Donovan EF, Sparling K, Lake MR, Narendran V, Schibler K, Haberman B, Rose B, Meinzen-Derr J, Ohio Perinatal Quality C. **The investment case for preventing NICU-associated infections**. *Am J Perinatol*. 2013; 30:179-84.
16. Dynan L, Goudie A, Smith RB, Fairbrother G, Simpson LA. **Differences in quality of care among non-safety-net, safety-net, and children's hospitals**. *Pediatrics*. 2013; 131:304-11.
17. Fairbrother G, Donauer S, Staat MA, Broder K, Salisbury S, Morrow AL, Tabangin ME, Altaye M, Holloway M, Schwartz B. **Cincinnati pediatricians' measured and reported immunizing behavior for children during the national shortages of pneumococcal conjugate vaccine**. *Vaccine*. 2013; 31:2177-83.
18. Fieldston ES, Nadel FM, Alpern ER, Fiks AG, Shea JA, Alessandrini EA. **Effects of an education and training intervention on caregiver knowledge of nonurgent pediatric complaints and on child health services utilization**. *Pediatr Emerg Care*. 2013; 29:331-6.
19. Fiks AG, Mayne S, Localio AR, Feudtner C, Alessandrini EA, Guevara JP. **Shared decision making and behavioral impairment: a national study among children with special health care needs**. *BMC Pediatr*. 2012; 12:153.
20. Forrest CB, Fiks AG, Bailey LC, Localio R, Grundmeier RW, Richards T, Karavite DJ, Elden L, Alessandrini EA. **Improving adherence to otitis media guidelines with clinical decision support and physician feedback**. *Pediatrics*. 2013; 131:e1071-81.
21. Gillespie GL, Reed J, Holland CK, Munafo JK, Ekstrand R, Britto MT, Huppert J. **Pediatric emergency department provider perceptions of universal sexually transmitted infection screening**. *Adv Emerg Nurs J*. 2013; 35:76-86.
22. Grossoehme DH, Cotton S, Ragsdale J, Quittner AL, McPhail G, Seid M. **"I honestly believe god keeps me healthy so i can take care of my child": parental use of faith related to treatment adherence**. *J Health Care Chaplain*. 2013; 19:66-78.
23. Grossoehme DH, Ragsdale JR, Cotton S, Meyers MA, Clancy JP, Seid M, Joseph PM. **Using spirituality**

after an adult CF diagnosis: cognitive reframing and adherence motivation. *J Health Care Chaplain*. 2012; 18:110-20.

24. Grossoehme DH, Szczesniak R, McPhail GL, Seid M. **Is adolescents' religious coping with cystic fibrosis associated with the rate of decline in pulmonary function?-A preliminary study**. *J Health Care Chaplain*. 2013; 19:33-42.
25. Hooper DK, Kirby CL, Margolis PA, Goebel J. **Reliable individualized monitoring improves cholesterol control in kidney transplant recipients**. *Pediatrics*. 2013; 131:e1271-9.
26. Hooper DK, Williams JC, Carle AC, Amaral S, Chand DH, Ferris ME, Patel HP, Licht C, Barletta GM, Zitterman V, Mitsnefes M, Patel UD. **The quality of cardiovascular disease care for adolescents with kidney disease: a Midwest Pediatric Nephrology Consortium study**. *Pediatr Nephrol*. 2013; 28:939-49.
27. Huppert JS, Reed JL, Munafo JK, Ekstrand R, Gillespie G, Holland C, Britto MT. **Improving notification of sexually transmitted infections: a quality improvement project and planned experiment**. *Pediatrics*. 2012; 130:e415-22.
28. Jaacks LM, Oza-Frank R, D'Agostino R, Jr., Dolan LM, Dabelea D, Lawrence JM, Pihoker C, O'Connor MR, Linder B, Imperatore G, Seid M, Narayan KM, Mayer-Davis EJ. **Migration status in relation to clinical characteristics and barriers to care among youth with diabetes in the US**. *J Immigr Minor Health*. 2012; 14:949-58.
29. Jacobson CJ, Farrell JE, Kashikar-Zuck S, Seid M, Verkamp E, Dewitt EM. **Disclosure and self-report of emotional, social, and physical health in children and adolescents with chronic pain--a qualitative study of PROMIS pediatric measures**. *J Pediatr Psychol*. 2013; 38:82-93.
30. Kaminski GM, Britto MT, Schoettker PJ, Farber SL, Muething S, Kotagal UR. **Developing capable quality improvement leaders**. *BMJ Qual Saf*. 2012; 21:903-11.
31. Kirkendall ES, Kloppenborg E, Papp J, White D, Frese C, Hacker D, Schoettker PJ, Muething S, Kotagal U. **Measuring adverse events and levels of harm in pediatric inpatients with the Global Trigger Tool**. *Pediatrics*. 2012; 130:e1206-14.
32. Lannon CM, Miles PV. **Pediatric collaborative improvement networks: bridging quality gaps to improve health outcomes**. *Pediatrics*. 2013; 131 Suppl 4:S187-8.
33. Lannon CM, Miles PV, Stockman JA, 3rd. **The Path Forward: Collaborative Networks and the Future for Children's Health Care**. *Pediatrics*. 2013; 131 Suppl 4:S226-7.
34. Lannon CM, Peterson LE. **Pediatric collaborative improvement networks: background and overview**. *Pediatrics*. 2013; 131 Suppl 4:S189-95.
35. Lawrence JM, Yi-Frazier JP, Black MH, Anderson A, Hood K, Imperatore G, Klingensmith GJ, Naughton M, Mayer-Davis EJ, Seid M, Group SfDiYS. **Demographic and clinical correlates of diabetes-related quality of life among youth with type 1 diabetes**. *J Pediatr*. 2012; 161:201-7 e2.
36. Lin M, Sappenfield W, Hernandez L, Clark C, Liu J, Collins J, Carle AC. **Child- and state-level characteristics associated with preventive dental care access among U.S. children 5-17 years of age**. *Matern Child Health J*. 2012; 16 Suppl 2:320-9.
37. Lipstein EA, Lovell DJ, Denson LA, Moser DW, Saeed SA, Dodds CM, Britto MT. **Parents' information needs in tumor necrosis factor-alpha inhibitor treatment decisions**. *J Pediatr Gastroenterol Nutr*. 2013; 56:244-50.
38. Lotstein DS, Seid M, Klingensmith G, Case D, Lawrence JM, Pihoker C, Dabelea D, Mayer-Davis EJ, Gilliam LK, Corathers S, Imperatore G, Dolan L, Anderson A, Bell RA, Waitzfelder B, Group SfDiYS. **Transition from pediatric to adult care for youth diagnosed with type 1 diabetes in adolescence**. *Pediatrics*. 2013; 131:e1062-70.

39. Margolis PA, Peterson LE, Seid M. **Collaborative Chronic Care Networks (C3Ns) to Transform Chronic Illness Care**. *Pediatrics*. 2013; 131 Suppl 4:S219-23.
40. Muething SE, Goudie A, Schoettker PJ, Donnelly LF, Goodfriend MA, Bracke TM, Brady PW, Wheeler DS, Anderson JM, Kotagal UR. **Quality improvement initiative to reduce serious safety events and improve patient safety culture**. *Pediatrics*. 2012; 130:e423-31.
41. Mussman GM, Parker MW, Statile A, Sucharew H, Brady PW. **Suctioning and length of stay in infants hospitalized with bronchiolitis**. *JAMA Pediatr*. 2013; 167:414-21.
42. Niedner MF, Muething SE, Sutcliffe KM. **The high-reliability pediatric intensive care unit**. *Pediatr Clin North Am*. 2013; 60:563-80.
43. Parker MW, Schaffzin JK, Lo Vecchio A, Yau C, Vonderhaar K, Guiot A, Brinkman WB, White CM, Simmons JM, Gerhardt WE, Kotagal UR, Conway PH. **Rapid adoption of Lactobacillus rhamnosus GG for acute gastroenteritis**. *Pediatrics*. 2013; 131 Suppl 1:S96-102.
44. Riley BB, Carle AC. **Comparison of two Bayesian methods to detect mode effects between paper-based and computerized adaptive assessments: a preliminary Monte Carlo study**. *BMC Med Res Methodol*. 2012; 12:124.
45. Riley C, Basu RK, Kissoon N, Wheeler DS. **Pediatric sepsis: preparing for the future against a global scourge**. *Curr Infect Dis Rep*. 2012; 14:503-11.
46. Riley C, Poss WB, Wheeler DS. **The evolving model of pediatric critical care delivery in North America**. *Pediatr Clin North Am*. 2013; 60:545-62.
47. Samson CM, Morgan P, Williams E, Beck L, Addie-Carson R, McIntire S, Booth A, Mendez E, Luzader C, Tomer G, Saeed S, Donovan E, Bucuvalas J, Denson LA. **Improved outcomes with quality improvement interventions in pediatric inflammatory bowel disease**. *J Pediatr Gastroenterol Nutr*. 2012; 55:679-88.
48. Shah TA, Meinzen-Derr J, Gratton T, Steichen J, Donovan EF, Yolton K, Alexander B, Narendran V, Schibler KR. **Hospital and neurodevelopmental outcomes of extremely low-birth-weight infants with necrotizing enterocolitis and spontaneous intestinal perforation**. *J Perinatol*. 2012; 32:552-8.
49. Shankaran S, Barnes PD, Hintz SR, Laptook AR, Zaterka-Baxter KM, McDonald SA, Ehrenkranz RA, Walsh MC, Tyson JE, Donovan EF, Goldberg RN, Bara R, Das A, Finer NN, Sanchez PJ, Poindexter BB, Van Meurs KP, Carlo WA, Stoll BJ, Duara S, Guillet R, Higgins RD, Eunice Kennedy Shriver National Institute of Child H, Human Development Neonatal Research N. **Brain injury following trial of hypothermia for neonatal hypoxic-ischaemic encephalopathy**. *Arch Dis Child Fetal Neonatal Ed*. 2012; 97:F398-404.
50. Smith RB, Dynan L, Fairbrother G, Chabi G, Simpson L. **Medicaid, hospital financial stress, and the incidence of adverse medical events for children**. *Health Serv Res*. 2012; 47:1621-41.
51. Stern RJ, Fernandez A, Jacobs EA, Neilands TB, Weech-Maldonado R, Quan J, Carle A, Seligman HK. **Advances in measuring culturally competent care: a confirmatory factor analysis of CAHPS-CC in a safety-net population**. *Med Care*. 2012; 50:S49-55.
52. Towbin AJ, Iyer SB, Brown J, Varadarajan K, Perry LA, Larson DB. **Practice policy and quality initiatives: decreasing variability in turnaround time for radiographic studies from the emergency department**. *Radiographics*. 2013; 33:361-71.
53. Tubbs-Cooley HL, Munro CL, Pickler RH. **Issues in research integrity: deciding what is mine, yours, and ours**. *J Pediatr Health Care*. 2012; 26:370-3.
54. Vandyke RD, McPhail GL, Huang B, Fenchel MC, Amin RS, Carle AC, Chini BA, Seid M. **Inhaled tobramycin effectively reduces FEV1 decline in cystic fibrosis. An instrumental variables analysis**. *Ann Am Thorac Soc*. 2013; 10:205-12.

55. Ward L, Auer C, Smith C, Schoettker PJ, Pruett R, Shah NY, Kotagal UR. **The human milk project: a quality improvement initiative to increase human milk consumption in very low birth weight infants**. *Breastfeed Med*. 2012; 7:234-40.
56. Weech-Maldonado R, Carle A, Weidmer B, Hurtado M, Ngo-Metzger Q, Hays RD. **The Consumer Assessment of Healthcare Providers and Systems (CAHPS) cultural competence (CC) item set**. *Med Care*. 2012; 50:S22-31.
57. Wheeler DS. **An after action report of drotrecogin α (activated) and lessons for the future***. *Pediatr Crit Care Med*. 2012; 13:692-4.
58. Wheeler DS, Geis G, Mack EH, Lemaster T, Patterson MD. **High-reliability emergency response teams in the hospital: improving quality and safety using in situ simulation training**. *BMJ Qual Saf*. 2013; 22:507-14.
59. Zuckerman B, Margolis PA, Mate KS. **Health services innovation: the time is now**. *JAMA*. 2013; 309:1113-4.

Faculty, Staff, and Trainees

Faculty Members

Uma Kotagal, MBBS, MSc, Professor

Leadership 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.

Evaline Alessandrini, MD, MSCE, Professor

Leadership 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.

Adam Carle, MA, PhD, Assistant Professor

Research Interests Utilizing statistical methods to improve health outcomes measurement, focus on children with special health care needs

Nancy Daraiseh, PhD, Assistant Professor

Research Interests CPE Nursing Operations, environmental safety in healthcare and industrial engineering

Linda Dynan, PhD, Adjunct

Research Interests Racial disparities in health outcomes, hospital efficiency, and inpatient quality and safety

Jennifer Lail, MD, Associate Professor

Research Interests Chronic and complex care; coordination of care

Carole Lannon, MD, MPH, Professor

Leadership 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.

Keith E. Mandel, MD, Assistant Professor

Leadership 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

Peter Margolis, MD, PhD, Professor

Leadership 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.

Steve Muething, MD, Associate Professor

Leadership Co-leader for the Ohio Children's Hospital Solutions for Patient Safety

Research Interests Patient Safety, Reliability, Adverse Events

Kieran J. Phelan, MD, MSc, Associate Professor

Leadership 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.

Denise White, PhD, Assistant Professor

Research Interests Space utilization, capacity, and flow

Joint Appointment Faculty Members

Anne Boat, MD, Associate Professor (Anesthesia)

Research Interests Patient and Family Experience

Patrick Brady, MD, Assistant Professor (General Pediatrics)

Research Interests Safety; risk prediction and mitigation

Maria Britto, MD, MPH, Professor (Adolescent Medicine)

Research Interests Health care quality, especially for adolescents with chronic illness

Dennis Drotar, MD, Professor (Behavioral Medicine and Clinical Psychology)

Research Interests Care coordination and self-management

Craig Froehle, PhD, Associate Professor (UC College of Business)

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

Srikant Iyer, MD, MPH, Assistant Professor (Emergency Medicine)

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

Robert Kahn, MD, Associate Professor (General Pediatrics)

Research Interests Population health; infant mortality, asthma, obesity, injury prevention

Heather Kaplan, MD, MSCE, Assistant Professor (Neonatology)

Research Interests 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.

Esi Morgan Dewitt, MD, MSCE, Assistant Professor (Rheumatology)

Research Interests Improving measurement of child health status using patient-reported outcomes, comparative effectiveness of therapeutics, application of quality improvement science

Michael Seid, PhD, Professor (Pulmonary Medicine)

Research Interests 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.

Grants, Contracts, and Industry Agreements

Grant and Contract Awards		Annual Direct
CARLE, A		
Healthcare Capital Investment Plan - Evaluation of Leadership		
Department of Veteran Affairs (University of Cincinnati)		
VA250-P-0604	10/01/12-03/31/13	$8,545
Consulting Services for Human Capital Investment Plan		
Department of Veteran Affairs (University of Cincinnati)		
	06/02/13-03/31/14	$17,829
GREENBERG, J		
Best Babies Zone		
The W.K. Kellogg Foundation (The Regents of the University of California)		
	09/01/12-02/28/15	$45,000
KAPLAN, H		
Vermont Oxford Network - MUSIQ		
Vermont Oxford Network, Inc.		
	01/01/13-10/31/13	$27,000
LANNON, C		
Pursuing Perfection in Pediatric Therapeutics		
Agency for Healthcare Research and Quality		
U19 HS 021114	09/30/11-08/31/16	$555,555
Help Me Grow Home Visiting System		
Ohio Department of Health		
	07/23/12-02/09/13	$143,885
MEDTAPP Statewide Quality Improvement Manager		
Ohio Department of Health (Ohio State University)		
FAM-32320-01b	07/06/12-06/30/15	$78,636

MEDTAPP Statewide Quality Improvement Manager

Ohio Department of Job and Family Services (Centers for Medicaid and Medicare Services)(Ohio State University)

G-1213-07-0343 07/06/12-06/30/15 $148,637

MEDTAPP- Perinatal Quality Project

Ohio Department of Job and Family Services (Centers for Medicaid and Medicare Services)(Ohio State University)

G-1213-07-0343 07/01/12-06/30/13 $384,052

MEDTAPP- Perinatal Quality Project

Ohio Department of Health(Ohio State University)

FAM-32320-02a 07/01/12-06/30/13 $168,939

OHA Perinatal Hospital Engagement Network Content Expert

Department of Health and Human Services(Ohio Hospital Association)

HHSM 500-2012-00021C 10/01/12-12/31/13 $85,000

State-Based Prenatal Quality Collaborator

Centers for Disease Control and Prevention(Ohio Department of Health)

U38 DP 003787 12/01/11-06/30/13 $130,739

MANDEL, K

Accelerating Improved Care for Children with Asthma

American Academy of Pediatrics

03/01/11-04/01/13 $43,529

North Carolina IMPACT: Advancing and Spreading Primary Care Transformation

Department of Health and Human Services(University of North Carolina)

U18 HS 020940 09/30/12-09/29/13 $4,706

AF4Q - NPO Consulting

Robert Wood Johnson Foundation(George Washington University)

07/24/2012-08/31/2013 $81,150

MARGOLIS, P

Aligning Forces for Quality

The American Board of Medical Specialties Research & Education Foundation(George Washington University)

09/01/10-08/31/13 $385,917

Open Source Science: Transforming Chronic Illness Care

National Institutes of Health

R01 DK 085719 09/30/09-08/31/14 $976,303

ImproveCareNow Improvement Collaborative

ImproveCareNow, Inc.

07/01/11-06/30/13 $510,000

MUETHING, S

Ohio Children's Hospital Solutions for Patient Safety Learning Network

Ohio Children's Hospital Association Foundation

07/01/10-12/31/13 $3,329,110

Ohio Children's Hospital Solutions for Patient Safety Learning Network

Ohio Children's Hospitals Solutions for Patient Safety

	01/01/12-12/31/17	$160,827

PHELAN, K

InInjury Prevention in a Home Visitation Population

National Institutes of Health

R01 HD 066115	09/28/10-07/31/15	$381,087

Injury Prevention in a Home Visitation Population

National Institutes of Health

R01 HD 066115	09/25/12-07/31/15	$183,007

SEBASTIAN, R

School Based Health Center Improvement Project

State of Colorado

	10/20/11-02/21/14	$66,621

Current Year Direct	**$7,916,074**
Total	**$7,916,074**