LETTER FROM THE DIRECTOR

Building on nationally recognized research programs in pediatric quality of care, lifespan research and biomedical informatics, during the past year, the Institute for Child Health Policy (ICHP) continued to carry out its mission to improve children’s health through innovative research and to serve as a transdisciplinary hub of child health research at UF and around the country.

As recognized leaders in child health research, ICHP faculty continue to garner grant support from top funding agencies, receive national recognitions and awards, present at national conferences, and help shape a national agenda for child health research.

Faculty collaborations on the UF campus and across the country have solidified ICHP as a child health research hub with ties to the national Patient-Centered Outcomes Research Institute (PCORI) and PEDSnet, the Agency for Healthcare Research and Quality’s Pediatric Quality Measurement Program (AHRQ-PQMP) and the statewide OneFlorida Clinical Research Consortium and many departments, centers and institutes at UF.

This report provides just a sampling of the types of pivotal research our faculty are engaged in. I invite you to peruse this report to learn more about how we strive to improve children's health via comparative effectiveness and population health research, implementation science and biomedical informatics.

As much as the Institute has grown and changed over the years, we remain steadfast in our commitment to rigorous science and resolute in fulfilling our mission to improve children’s health.

Sincerely,

Betsy Shenkman, Ph.D.
Director, Institute for Child Health Policy
**REPORT CONTENTS**

**MISSION & VISION**
- Making Strides ........................................... p5
- Strategies for Success ................................. p7
- National Leaders ........................................ p8

**IMPROVING HEALTH CARE DELIVERY**
- Speaking the Same Language ....................... p10
- Opening a Dialogue .................................. p10
- Measurable Differences .............................. p11
- Navigating the Diabetes Learning Curve ....... p12

**LEVERAGING BIG DATA**
- Quality CHeQ ............................................. p14
- Tracking Zika ............................................ p15
- Tweeting Health Perceptions into Policy ....... p15
- Measure for Measure ................................ p16

**ADVANCING HEALTH RESEARCH**
- Champions for a Cause ............................... p18
- Stepping up the Pace ................................ p18
- Better Beginnings .................................... p19

**HELPING THE MOST VULNERABLE**
- Preventing Drug Abuse ............................... p21
- Tobacco-free Teens .................................. p22
- Smart Prevention .................................... p22

**2017 PROGRESS REPORT**
- Institute Leadership ................................ p23
- By the Numbers ....................................... p24
- A Winning Combination ............................... p25
- Get Involved .......................................... p26

Throughout the progress report, researchers affiliated with the Institute for Child Health Policy will have their names bolded.
ICHP researchers are part of an international team at the National Institutes of Health that is developing a common terminology for clinicians and other stakeholders to use when describing and cataloging adverse events in children. Read more on page 10.

ICHP researchers are studying how to leverage big data to improve oral health care and promote quality of care for children in Florida. Read more on page 14.

ICHP researchers are developing health information technology (HIT) to (1) help screen teens for mental health concerns, tobacco use and other risky behaviors, (2) improve compliance with vaccine recommendations, and (3) educate newly diagnosed patients and their families about diabetes. Read more on pages 10 and 12.

ICHP researchers strive to improve children’s health with rigorous research and evidence-based recommendations. Here are some of the ways we’re advancing children’s health and pediatric health care for the better:

- An ICHP researcher is part of an international team at the National Institutes of Health that is developing a common terminology for clinicians and other stakeholders to use when describing and cataloging adverse events in children. Read more on page 10.
STRATEGIES FOR SUCCESS
Institute’s 5-year plan maps out a vision for the future

As ICHP’s research portfolio and faculty grew with unprecedented momentum during the past few years, Institute leaders worked closely with faculty, staff, collaborators and other stakeholders to map out a clear path for the future.

The strategic plan embraces four main goals and strategies:

1. Capitalize on continued and diverse funding for child health research, especially projects that utilize large and diverse data sets to build new infrastructure and garner broader opportunities.

2. Catalyze child health research across campus by increasing the Institute’s visibility, collaborations and funding opportunities at UF.

3. Foster the development of careers focused on child health care delivery and outcomes research by leveraging the Institute’s collaborative research environment and training opportunities to position ICHP as a competitive site for training and career-development grants.

4. Foster public and stakeholder engagement in child health research throughout Florida and nationally by building public awareness of ICHP’s research and developing a reputation for disseminating evidence-based research with real-world impact.

MISSION & VISION

NATIONAL LEADERS
ICHP researchers are recognized nationwide for their expertise

Betsy Shenkman, Ph.D., serves as co-chair of the Patient-Centered Outcomes Research Institute’s Pediatric Collaborative Research Group, which is developing a national agenda for child health research. In 2017, Shenkman was named associate director for population sciences at the University of Florida Health Cancer Center, where she will oversee the center-wide effort to reduce cancer-related disparities and burden through research in clinical and community settings that addresses prevention, treatment and survivorship. Shenkman also directs the Agency for Healthcare Research and Quality-funded Pediatric Quality Measurement Program, which focuses on improving quality of care for children participating in Medicaid in the U.S.

Matthew Gurka, Ph.D., was elected to the Society for Pediatric Research (SPR) for his outstanding contributions to pediatric research. He joins two other ICHP faculty who are members of SPR. Gurka also began a three-year term on the editorial board of The Journal of Pediatrics.

Lindsay Thompson, M.D., M.S., received the American Academy of Pediatrics’ 2017 Local Hero Award, which recognizes recipients for their outstanding community action and advocacy for children in local communities. Thompson is one of only two pediatricians in the United States and Canada to receive the award this year.

William Hogan, M.D., M.S., was elected to membership in the American College of Medical Informatics, one of the highest honors in this field.

Ramzi Salloum, Ph.D., was selected to serve on the American Academy of Pediatrics (AAP) Tobacco Consortium, which is responsible for setting a national agenda for child and adolescent tobacco prevention and cessation for the AAP’s Julius B. Richmond Center of Excellence.

Michelle Cardel, Ph.D., gave a presentation on the social determinants of obesity in Hispanic adolescents at the National Academy of Medicine’s Obesity Interest Group.

Dominick Lemas, Ph.D., was named one of 10 Keystone Symposia fellows, a two-year fellowship program for minority junior faculty funded in part by the National Institutes of Health.
CHAPTER 1

IMPROVING HEALTH CARE DELIVERY

SPEAKING THE SAME LANGUAGE
Developing a common terminology to describe pediatric adverse events

ICHPP assistant professor Amanda Hicks, Ph.D., worked with an international team of child health researchers at the National Institute of Child Health and Human Development (NICHD) to create a common, readily accessible terminology to help policymakers, researchers, clinicians and other stakeholders describe and catalog adverse events in children, such as a drug overdose. Because adverse events can undermine a child’s health for many years, the group’s groundbreaking work, published in *Pediatrics* and available through the NICHD and other websites, provides an important tool to improve pediatric patient safety and quality of care.

**RESEARCHERS:** Gipson DS, Kirkendall ES, Gumbs-Petty B, Quinn T, Steen A, Hicks A, McMahon A, Nicholas S, Zhao-Wong A, Taylor-Zapata P, Turner M, Herreshoff E, Jones C, Davis JM, Haber M, Hirschfeld S

OPENING A DIALOGUE
New HIT-based tablet helps providers counsel teen patients on risky behaviors

A team led by Lindsay Thompson, M.D., M.S., has developed a health-information technology (HIT)-based tablet to facilitate a dialogue between providers and teen patients about mental health concerns and risky behaviors that could undermine health, such as alcohol and tobacco use. The HIT system, for use in pediatric and family practice health care clinics, covers such topics as nutrition, drugs, sexuality, suicide and depression, safety and cyberbullying. Restricted access ensures the safety and confidentiality of teens’ answers while enabling the provider to view the information in real time and discuss any concerns with their patients.

**RESEARCHERS:** Thompson LA, Wegman M, Muller K, Eddleton KZ, Muszynski M, Rathore M, De Leon J, Shenkman EA
ICHP scientists team with state and national research networks to improve child health research

ICHP researchers have partnered with the statewide OneFlorida Clinical Research Consortium and PCORI’s national PEDSnet clinical data research network to develop powerful resources for advancing child health research.

- **STATE-OF-THE-ART RESEARCH TOOLS:** Under the guidance of ICHP director Betsy Shenkman, Ph.D., and William Hogan, M.D., director of biomedical informatics at UF, the OneFlorida Clinical Research Consortium and its research database, the OneFlorida Data Trust, have coalesced into cutting-edge resources for child health investigators. The OneFlorida Data Trust contains health data representing more than 5 million children, including claims and encounter data for children enrolled in Medicaid in Florida and Texas, and robust patient-level electronic health record data, such as diagnoses, procedures, medications, patient demographics, and other data elements.

- **STATEWIDE STAKEHOLDER ENGAGEMENT FOR CHILD HEALTH RESEARCH:** The OneFlorida Child Health Alliance will coordinate statewide efforts in improving the health and wellness of Florida’s children by engaging families and caregivers in child health research and encouraging the use of evidence-based guidelines in pediatric care. Jennifer McCafferty, Ph.D., director of Miami Children’s Health System Research Institute, Matthew Gurka, Ph.D., associate director of ICHP, and Lindsay Thompson, M.D., M.S., assistant director of clinical research at ICHP, are leading the development of the alliance.

- **AUTOMATED PEDIATRIC SAFETY STANDARDS:** ICHP director Betsy Shenkman, Ph.D., a national leader in evaluating pediatric quality of care, is collaborating with researchers at PEDSnet, one of PCORnet’s 13 clinical data research networks, and the OneFlorida Clinical Research Consortium to automate quality and safety benchmarking in pediatric care. The research team will pull data directly from the electronic health record for more than 5 million children to implement and validate three well-established measures of pediatric health care quality — (1) transcranial Doppler screening for children with sickle cell disease; (2) appropriate antibiotics for ear infections; and (3) cholesterol and glucose testing for children on antipsychotic medications.

A diabetes diagnosis comes with a steep learning curve for children and families as they adopt new lifestyle habits and learn the essential skills needed to manage the condition. UF pediatric endocrinologist Angelina Bernier, M.D., and ICHP researcher François Modave, Ph.D., are investigating the feasibility of a mobile-based e-learning platform designed to equip children and their families with the knowledge and tools needed to survive. The platform, New-Onset Diabetes Educator (NODE), differs from traditional, text-heavy pamphlets and brochures in its use of interactive and graphical elements, better accommodating patients with low literacy or low English proficiency.
CHAPTER 2

LEVERAGING BIG DATA

QUALITY CHEQ

Ensuring that children enrolled in Medicaid and CHIP receive the highest quality of care

With $675,000 in initial funding from the federal Agency for Healthcare Research and Quality (AHRQ) and the Centers for Medicare and Medicaid Services, ICHP Director Betsy Shenkman, Ph.D., is leading a team of UF Health researchers and national collaborators to improve health care for children enrolled in Medicaid and Children’s Health Insurance Programs (CHIP) in Florida and Texas, the nation’s second and third most populous states. The Child Health Quality (CHEQ) Partnership Program will use big data analytics to evaluate two new quality measures developed by the AHRQ’s Pediatric Quality Measures Program (PQMP) Centers of Excellence:

- **PREVENTIVE ORAL HEALTH CARE:** The team will examine how frequently healthcare systems, clinics and providers conduct preventive dental services and oral health care during well-child exams to address dental decay, the most common childhood disease.

- **APPROPRIATE USE OF ANTIPSYCHOTIC MEDICATIONS:** The team will examine (1) the use of these drugs in children under 5, (2) the use of higher-than-recommended dosages, (3) the use of multiple, concurrent antipsychotics, (4) use of first line psychosocial care, (5) follow-up visits for children and adolescents on antipsychotics, (6) metabolic screening for children and adolescents on antipsychotics, and (7) metabolic monitoring for children and adolescents on antipsychotics.

UF is one of only six institutions nationwide to participate in the PQMP.

TRACKING ZIKA
Using big data analytics to counter an emerging health threat in the United States

Infants exposed to the mosquito-borne Zika virus in the womb face a greater risk of developing congenital Zika syndrome, a cluster of debilitating birth defects including microcephaly (small head circumference). Surveillance is a key to understanding and preventing this potential public health threat in the United States. However, existing surveillance methods are known to be deficient, and a body of evidence suggests that electronic health record and administrative data can substantially improve them. With a one-year, $400,000 grant from the Patient-Centered Outcomes Research Institute (PCORI), William Hogan, M.D., M.S., and his team are tapping de-identified electronic health records for 80 million patients nationwide to develop a faster and more cost-effective data-driven method of identifying and following affected babies than the labor-intensive manual processes used now.


TWEETING HEALTH PERCEPTIONS INTO POLICY
Studying public perceptions about HPV vaccines on social media may help inform public health policy and improve vaccine compliance

ICHP researcher Jiang Bian, Ph.D., teamed up with scientists at the National Cancer Institute to study more than 21,000 tweets about the human papilloma virus (HPV) vaccine in three states from February through June 2016 with the goal of examining public perceptions about the vaccine and identifying possible barriers to its use. By conducting qualitative analyses of Twitter data, the team found that it is possible to provide health researchers and policymakers with meaningful context for public health interventions. The team’s research poster also was selected as Best Conference Poster at the 2016 International Conference on Social Media & Society in London.

RESEARCHERS: Wheldon C, Bian J, Moser R

MEASURE FOR MEASURE
The University of Florida’s Family Data Center analyzes 38 maternal and child health indicators annually to improve the health of mothers and babies enrolled in Medicaid in Florida

Notable trends from the 2017 Florida Medicaid Maternal & Child Health Status Indicators Report covering the years 2011-2015:

- **MEDICAID DELIVERIES**: In 2015, 60.6 percent of all deliveries in Florida were to women enrolled in Medicaid, up from 58 percent in 2011.

- **INADEQUATE PRENATAL CARE**: The percentage of Medicaid women who did not receive adequate prenatal care in Florida increased from 15.4 percent in 2011 to 16.0 percent in 2015. A pregnant woman who receives fewer than half of the recommended number of prenatal care visits by the fifth month of pregnancy or later has an increased risk of premature birth or having a low birth-weight infant. The number of women not enrolled in Medicaid who received inadequate prenatal care in 2015 was 7.6 percent.

- **OBESE PRIOR TO PREGNANCY**: In 2015, 26 percent of women enrolled in Medicaid were obese prior to pregnancy, up from 23.8 percent in 2011, and eight percentage points higher than women not enrolled in Medicaid (17.4 percent). Being overweight or obese before pregnancy has been correlated with an increased risk of cesarean section, preterm delivery, preeclampsia, and macrosomia (infant birth weight of about 10 pounds or more).

- **TOBACCO USE DURING PREGNANCY**: Cigarette smoking decreased among pregnant women in Florida, dropping from 7.0 percent in 2014 to 6.0 percent in 2015. Smoking during pregnancy is correlated with poor birth outcomes, specifically, fetal growth restriction and extreme prematurity.

- **LOW BIRTH WEIGHT**: The number of women in Florida who delivered an infant weighing less than 5 pounds 8 ounces at birth remained consistent, declining only slightly from 8.7 percent in 2011 to 8.6 percent in 2015. Low birth weight is one of the leading risk factors associated with adverse birth, infant, and child development outcomes.

RESEARCHERS: Shenkman EA, Maldonado-Molina M, Estrella R, Delcher C
ADVANCING HEALTH RESEARCH

CHAMPIONS FOR A CAUSE
Leveraging multiple research sites around the country to recruit special populations of patients for studies

With funding from UF’s Clinical and Translational Science Institute (CTSI), Lindsay Thompson, M.D., M.S., has partnered with four other CTSIs to lead a national initiative aimed at accelerating research on screening for adverse childhood experiences (ACES) in the pediatric primary care setting. Stressful or traumatic childhood events, such as neglect or abuse, can lead to a wide range of health problems in childhood up through adulthood.

The ACES research is part of the Child Health-Research Acceleration through Multisite Planning (CHAMP) program, which supports child health and lifespan research that requires multisite involvement to recruit special populations.


STEPPING UP THE PACE
ICHP faculty complete training in how to conduct research aimed at accelerating the implementation of study findings into clinical practice

ICHP faculty Stephanie Staras, Ph.D., and Ramzi Salloum, Ph.D., are participating in a national program sponsored by the National Cancer Institute (NCI) that provides mentored training for scientists conducting dissemination and implementation (D&I) research. D&I research is designed to shorten the time it takes for research findings to be incorporated into clinical practice, a process that can take 10-20 years using traditional methods.

Staras’ NCI-funded research focuses on increasing the percentage of teens that receive the recommended doses of the human papillomavirus (HPV) vaccine, which prevents seven different types of cancer. Salloum’s research project focuses on advancing evidence-based tobacco prevention practices in pediatric primary care.

RESEARCHERS: Salloum R, Staras S
The first five years of a child’s life are critical for their emotional, social and physical development. To help parents, children, educators, policy-makers, researchers, practitioners and others make the most of this crucial stage of development, more than 100 stakeholders from around the country gathered at the University of Florida’s inaugural Early Childhood National Summit in March. ICHP Associate Director Matthew Gurka, Ph.D., helped organize the summit, convened by UF’s Anita Zucker Center for Excellence in Early Childhood Studies and other colleges, centers and institutes across the UF campus, with the goal of working together across academic disciplines to create actionable ideas and steps to further early childhood development and learning.

PREVENTING DRUG ABUSE
Protecting mothers, babies and children with improved monitoring and effective regulations

ICHP researcher Chris Delcher, Ph.D., is working to protect mothers, babies and children from drug abuse and misuse:

• Federal regulation of a chemical used in the illegal manufacture of cocaine appears to have helped lower cocaine-related hospital stays for new mothers and babies in the United States. After federal regulation of sodium permanganate took effect in late 2006, cocaine-related maternal and infant hospital stays fell almost immediately, dropping by 221 for mothers and 128 for babies.

Monthly Counts of Cocaine-related Maternal and Neonatal Inpatient Hospital Stays

TOBACCO-FREE TEENS
ICHP researcher helps pediatric clinics to screen and counsel teens about tobacco use

Although the statewide Tobacco-Free Florida education campaign has been credited with a significant decline in smoking rates for teens in Florida, cigarette smoking remains the nation’s leading cause of preventable disease and death, and the tobacco industry is constantly seeking new ways to market its products to teens. To help keep teens tobacco-free, ICHP researcher Ramzi Salloum, Ph.D., is working with the OneFlorida Clinical Research Consortium’s Cancer Control Alliance to scale up evidence-based tobacco prevention strategies aimed at adolescents in pediatric clinics in Florida. The project involves improving the capacity of clinics to screen and counsel their adolescent patients on tobacco use with the help of electronic screening, electronic health records and clinic patient portals, and with the use of clinical practice facilitators to train providers and office staff on the implementation of best practices.

SMART PREVENTION
ICHP researcher evaluates a school-based immunization program targeting older teens and young adults

ICHP researcher Stephanie Staras, Ph.D., and Robert Lawrence, M.D., in the UF department of pediatrics are collaborating to develop and test the effectiveness of a community education and school-based immunization program for meningitis Group B aimed at older teenagers and young adults. The researchers received a two-year $293,615 grant from Pfizer to work with the county health department, area public schools and the University of Florida to increase public awareness of the vaccine, educate parents, students and peers about the immunization program, and empower students to get the vaccine.


LEADERSHIP

Betsy A. Shenkman, Ph.D.
Director

Since 2003, Shenkman has led the Institute for Child Health Policy, which brings together a multidisciplinary faculty from across the University of Florida to conduct innovative, rigorous research that promotes the health of children, adolescents and young adults. Shenkman, who is working with the Patient-Centered Outcomes Research Institute in Washington, D.C., to set the national agenda for child health research and to lead the OneFlorida Clinical Research Consortium, has positioned the Institute for increased collaboration and growth across the UF campus and at the state and national level. As chair of the Department of Health Outcomes & Policy in the UF College of Medicine, Shenkman has a varied research portfolio, which focuses on reducing health disparities for adults and children through the implementation of evidence-based best practices. Shenkman also serves as co-director of UF’s NIH-funded Clinical and Translational Science Institute (CTSI). In this role, she collaborates with faculty and staff to promote the development of implementation science and patient-centered outcomes studies across the lifespan. This year, she was appointed associate director for population sciences at the UF Health Cancer Center.

Matthew Gurka, Ph.D.
Associate Director

As the associate director of the Institute for Child Health Policy, Gurka is involved with strategic planning to expand the institute’s presence and address barriers to child health research on campus. In addition, he is leading initiatives to encourage collaboration by refining and expanding the institute’s affiliate faculty program. His research focus includes a wide range of applications of biostatistics to medical research, from the design and analysis of observational studies to the coordination and analysis of multi-center longitudinal studies. He also has extensive collaborative and independent research experience in pediatrics. With funding from the National Institute of Child Health and Human Development, he studied the impact of chronic illnesses such as asthma on development and behavior in children and adolescents. Recently he has focused on obesity and the metabolic syndrome, both in children and adults. He has obtained NIH funding to develop and validate tools to measure the severity of the metabolic syndrome that take into account gender and racial/ethnic differences.

Lindsay A. Thompson, M.D., M.S.
Assistant Director of Clinical Research

As a practicing clinician at UF Health, a health services researcher and an associate professor of pediatrics and health outcomes and policy at the University of Florida, Thompson provides an important interdisciplinary bridge between the Institute for Child Health Policy’s established research portfolio in community-based research and its growing interest in clinical care. Thompson is helping to lead ICHP’s strategic planning efforts and serves as a co-investigator on two research grants that run through the Institute for Child Health Policy. One study uses health information technology to improve adolescent vaccination rates, and the other aims to create quality measures for oral health in pediatric settings. As assistant director, Thompson is helping to build more research collaborations between institute and pediatric faculty, secure clinical settings as research venues and provide clinical insight for the institute’s studies.

THE INSTITUTE FOR CHILD HEALTH POLICY

BY THE NUMBERS

$33,466,047
IN TOTAL RESEARCH FUNDING

Figures reflect extramural funding received by faculty in the Institute for Child Health Policy and Department of Health Outcomes & Policy.

ICHP AFFILIATE PROGRAM

Become a member of the Institute for Child Health Policy (ICHP) and help us in our mission to improve the health of children, adolescents and young adults through rigorous scientific research and powerful research partnerships. Networking and collaborating with other child health researchers are keys to securing major grant funding, strengthening your research and broadening its impact. To learn more about our membership program, visit ichp.ufl.edu/membership-program.
A WINNING COMBINATION
Highlighting children’s health research across campus

ICHP’s annual Research Day promotes education within ICHP and facilitates collaboration and mentoring with researchers throughout UF. The 2017 student award winners for best presentation reflect the rich diversity of research topics and the breadth of campus collaborations represented at ICHP:

- Alexandra Lee, a Ph.D. candidate in UF’s Department of Health Outcomes & Policy, presented “Taq1a Genetic Variation is Associated with Obesity Outcomes in a Multi-racial Cohort of Children.” Lee’s faculty advisers were ICHP researchers Dominick Lemas, Ph.D., and Michelle Cardel, Ph.D.


- Jeffrey Ferrell, a medical student in the Department of Pediatrics, presented “Evaluating the Role of Family Support in the Care of Transgender Youth.” His faculty advisers included Janet Silverstein, M.D., chief of endocrinology in the Department of Pediatrics and ICHP researchers Amanda Hicks, Ph.D., and Lindsay Thompson, M.D., M.S.

SAVE THE DATE!
Join child health researchers from around UF for ICHP’s 2018 Research Day

2018 Research Day
April 5, 2018
3:30 - 6:30 p.m. in the Clinical and Translational Research Building Lobby

Featuring a Keynote Presentation from

Peter Margolis, M.D., Ph.D.
Co-director of the James M. Anderson Center for Health Systems Excellence at the Cincinnati Children’s Hospital Medical Center

Peter Margolis, M.D., Ph.D., chairs the PCORnet Steering Committee for the Patient Centered Outcomes Research Institute (PCORI) in Washington, D.C., and serves as co-principal investigator of PEDSnet, one of 13 national clinical data research networks (CDRNs) in PCORnet. PEDSnet is a community of patients, families, clinicians, scientists, and health system leaders who are building a national pediatric learning health system dedicated to discovering and implementing new ways of providing the best care and ensuring the best outcomes for children.