

# *The Pediatric Examiner*



*Children's Health Services Research*

Department of Pediatrics, IU School of Medicine Summer 2005

## Dr. Toni Laskey: Advocating for better prevention and diagnosis of child abuse



By Toni Laskey, MD

I am a forensic pediatrician. People often ask how I do my job and what got me into this field in the first place. That is, if they even know what a forensic pediatrician is. According to Black's Law Dictionary, forensic medicine is "a branch of medicine that establishes or interprets evidence

bid and depressing to work with children who have been injured or killed at the hands of their caregivers, but it is very rewarding work.

Statistics indicate that three children die each day in the US as a result of child abuse or neglect. These are the cases we are aware of, but the sad fact is this

using scientific or technical facts." That might not clear it up, so a simpler description of my job is "a pediatrician who helps in the evaluation and management of the potentially abused child." It often sounds mor-

is the tip of the iceberg. Unfortunately, there are millions of children who are injured every year, which means there are patients for pediatricians like me across the US. Something I recognized early in my training was it is essential that I learn more about why and how abuse happens. Treating kids one at a time is a losing battle—we need to understand how doctors diagnose abuse and we need to know how we can prevent child abuse in the first place.

Originally from St. Louis, Missouri, I spent my "formative years" in Columbia, Missouri, where I got my undergraduate degree in Psychology at Mizzou (University of Missouri-Columbia) and went on to complete medical school and pediatric residency there. During medical school I met my mentor, Dr. Lori Frasier, who introduced me to the field of forensic pediatrics. Since my first patient under her mentorship, I knew what I

## Vreeman slated to become first health services research fellow

by Aaron Carroll, MD

The Indiana Children's Health Services Research Fellowship is pleased to announce Dr. Rachel Vreeman has accepted our offer to be our first fellow-in-training from 2006-2008.

Dr. Vreeman received her BA in English from Cornell University in 1998 before moving on to Michigan State University College of Medicine. After obtaining her MD in 2002, she spent the last three years as a Pediatrics resident here at Indiana University School of Medicine. Before joining our fellowship, Dr. Vreeman will spend the next year as a Chief Resident.

Dr. Vreeman comes to our fellowship with impeccable credentials and a long history of interest in health services research and advocacy. Over the last few years, she has been an active participant in the Dyson Program, and received the

Dyson Initiative-Indiana University Advocacy award in 2004. She has engaged in numerous research projects during her residency, and presented her results in national meetings - earning her a 2004 Ambulatory Pediatrics Association, Region V Resident Abstract Award and a 2004 Indiana University Pediatrics Research Day award.

Dr. Vreeman enters our program with a number of relevant interests, including continued work in Kenya with the Moi University Teaching and Referral Hospital and with the Julian Center, an Indianapolis agency which serves domestic abuse survivors. Dr. Vreeman is a bright, engaging, young physician with phenomenal potential as a health services researcher. We could not be more excited for her to inaugurate our fellowship program next year.

The CHSR fellowship is committed to training high-quality



Dr. Rachel Vreeman

clinical investigators committed to improving child health. We will begin recruiting for our 2007-2009 cohort soon. Completed application for entry in July, 2007, must be received by February 28, 2006 to allow time to arrange and complete interviews by April 1, 2006.

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### Laskey continued

wanted to do.

The child abuse detection and prevention community is small, but growing. I had the great fortune of meeting many of the big "players" in this field—and they showed me the importance of research training in this area. This sent me to Dr. Des Runyan, a forensic pediatrician at University of North Carolina at Chapel Hill and a

former Robert Wood Johnson Clinical Scholar. I left the Midwest and headed south for two years. While interviewing in North Carolina, I met Dr. Stephen Downs, Director of Children's Health Services Research (CHSR). Who would know he would interview me again a few years later and bring me back to the Midwest? In August of 2003, I moved my

family back to where the winters are cold and white and I joined the faculty of Indiana University as a member of CHSR and the Methodist, Riley and Wishard Child Protection Teams.

My clinical world is evaluating children who are suspected victims of sexual or physical abuse. This involves much more than seeing kids in

-see Laskey next page

- Laskey continued

clinic or the hospital. I also work closely with law enforcement, child protective services and prosecutors' offices. Additionally, I work with defense attorneys and testify in cases where the evidence isn't convincing regarding their client. My clinical responsibilities fuel my research passion—learning more about what we know and don't know about abuse.

Thirty percent or more of patients with abusive head trauma, sometimes referred to as shaken baby syndrome, will be missed on initial presentation to a health care professional. Why? We need to understand how doctors evaluate a potentially abused child to learn how we can make the number of missed diagnoses smaller. Nearly a third of patients who need a skeletal survey to evaluate for a clinically unsuspected fracture don't get the appropriate x-rays. A missed fracture can be the key to missing the diagnosis of physical abuse in a pre-verbal child.

My research is varied, but my true passion is in improving the recognition and evaluation of abusive head trauma. I want to develop tools that will help front line medical providers recognize subtle signs of abuse so that they will look for signs that the unthinkable has happened to a child. As chair of the Indiana State Child Fatality Review Team, I am leading a multi-disciplinary team in the

effort to improve child death investigation and documentation.

Anyone that knows me knows I love to talk. This fits well with my teaching—if someone will listen, I am

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happy to talk. I am a frequent lecturer to doctors of all specialties, medical students, teachers, social workers, nurses, lawyers, child protection workers and school counselors, to name a few. I lecture on the diagnosis and management of sexual abuse, physical abuse, domestic violence, abusive head trauma and the physician's role in the court room.

I am also very active in the national American Academy of Pediatrics (AAP). Since my time in the Section on Residents, where I started on the Executive Committee and moved on to become the Chair, I love to get residents and medical students excited about the opportunities the AAP has to offer. I now serve

on the Nominating Committee of the Section on Child Abuse and Neglect and am on the Executive Committee of the Section on Young Physicians. I am a member of the Task Force on Women in the Pediatric Workforce of the Federation of Pediatric Organizations (FOPO).

At home, I keep busy vying for talking time with my daughter Abby, who will be 5 in July and talks as much as I do, and my son Daniel who turned 2 in April. Fortunately, my husband Jim is a quiet, patient man who lets us all talk while he quietly listens. Top that off with a dog and two birds, and you can imagine the din at our house.

Although my field of practice often frightens and depresses people, I love my job. There are so many opportunities to make a difference in a child's life and I have been fortunate enough to find an academic home that will allow me to make a contribution to this effort.

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#### *Editor's note:*

Dr. Laskey, and her role as one of only two forensic child abuse specialists in the state of Indiana, was the front page feature story in the Sunday, September 18, 2005 edition of the Indianapolis Star.

## Children's Health Services Research faculty have strong

by Stephen Downs, MD

In May 2005, the *Pediatric Academic Societies* (PAS) held their annual meeting in Washington, DC. The Children's Health Services Research (CHSR) section had an especially good showing at this important national meeting. CHSR Faculty presented 19 papers and two workshops. Below is an overview of the research presented.

**Dr. Sarah Wiehe**, the newest member of the CHSR faculty presented work she began during her fellowship at the University of Washington in Seattle. A randomized controlled trial she instituted, *Health Promotion Media Campaign*, in two middle schools yielded three PAS posters: one reporting the effects on smoking outcomes based on an intensive 5 month in-school smoking prevention ad campaign; one reporting the effect of physical activity outcomes based on a similarly intensive physical activity promotion ad campaign; and one investigating the cross-sectional association between neighborhood characteristics (self-reported availability of places for physical activity and perceived neighborhood safety) and vigorous physical activity.

Although the American Academy of Pediatrics indicates that a series of skeletal x-rays is 'mandatory' in the evaluation of all children with suspected child abuse under the age of

two years, **Dr. Toni Laskey** and the other CHSR faculty found that many young children are not receiving the appropriate imaging studies. Moreover, black children, children 6-12 months of age, the uninsured and those with possible inflicted burns were disproportionately less likely to be evaluated correctly.

To look for evidence of a "healthy immigrant" effect, **Dr. Marc Rosenman** and colleagues used an electronic medical records system to study immunization and visit data for an inner city well-child clinic population—in this population, most of the Latino families are recent immigrants, with limited English proficiency, while few of the non-Latino families are immigrants. Ethnicity thus served as a rough proxy for extent of acculturation. We found that, compared with other children in this population, Latino children have higher immunization rates and lower missed-visit rates for appointments.

Iron deficiency is common and is associated with many health problems. Pediatricians routinely screen for iron deficiency anemia, but not everyone agrees on the best screening test. When anemia is identified, pediatricians may not act. **Dr. Paul Biondich** and the other investigators in CHSR reviewed a decade of anemia screening in young children recorded in the

Regenstrief Medical Records System. They found that the proportion of children who had anemia based on different testing criteria varied from 1.5%–14.5%. Moreover, among infants who screened positive by any criterion, only 25% had proper laboratory evaluation and only 11.6% had documented correction of their anemia.

Inborn errors of metabolism are a significant cause of morbidity and mortality in children. All states have newborn screening programs to detect inborn errors of metabolism, but have been inconsistent about which tests are done, in part, because of concerns about the cost of testing for these rare diseases. **Drs. Aaron Carroll** and **Stephen Downs** conducted a cost-effectiveness analysis of tests in a newborn screening program. They found that newborn screening seems to be one of the rare health care interventions beneficial to patients and, in many cases, cost saving. Over the long term, funding comprehensive newborn screening programs is likely to save money for society.

Apgar scores were developed to predict which newborns would need prompt medical attention. Some have attempted to use Apgar scores to predict sequelae beyond the newborn period. **Dr. Aaron**

## showing at Pediatric Academic Societies conference

**Carroll** and the faculty of CHSR have studied records from the Regenstrief Medical Record system of 6621 children with recorded Apgar scores at 5 minutes of age and at least 10 years of follow-up. They looked at rates of attention deficit disorder (ADHD), conduct disorder, depression and other behavioral problems. Apgar score was not a predictor of these disorders. The authors conclude that clinicians should make sure that parents, and the general public, understand that the Apgar score has little use outside of the neonatal period.

Children who wheeze before age 2 can go on to develop asthma later. Understanding the magnitude of this risk and which children are at highest risk is important to pediatricians who must counsel parents. **Dr. Stephen Downs** and the other faculty of the CHSR sought to quantify the risk of later asthma among children who wheeze in infancy and to determine what factors identify those at greatest risk. They studied records in the Regenstrief Medical Record System of 16,187 children born between 1989 and 1999. They found that wheezing before age 2 doubled the risk of asthma after age 5. Factors that increased the risk were being male or African American, or having more severe wheezing (requiring an emergency room visit or hospitalization). Use of asthma medi-

cines before age 2 was also associated with later asthma. Whether the medicines somehow increase the risk or whether it just indicates children with more severe wheezing will need further research.

Sometimes the only contact a victim of domestic violence (interpersonal violence, or IPV) has with the health care system is a visit to the pediatrician, but IPV is rarely detected in routine pediatric visits. **Drs. Jonathan Thackeray, Sarah Stelzner and Stephen Downs** sought to identify characteristics of the screener and screening environment which make a victim feel more comfortable disclosing a history of IPV. In a survey of 140 women in an Indianapolis domestic violence shelter, they found women preferred to be screened by a female, and someone of the same race. They preferred to be screened without anyone else present. Physicians should provide a safe, respectful, and culturally effective environment for each patient.

Persons with Down syndrome (DS) have an increased prevalence of celiac disease (CD), and CD in the general population is associated with intestinal lymphoma. For this reason, there has been a recent call for universal screening for CD among children with DS. However, treating CD involves difficult and expensive dietary restrictions and the risk of lym-

phoma among children with DS is unknown. **Drs. Nancy Swigonski and Stephen Downs** worked with **Drs. Marilyn Bull and Mark Corkins** and medical student, **Heather Kuhlenschmidt**, to develop a cost-effectiveness analysis of universal screening for CD among children with DS. They found the screening was not only expensive, but it lowered the quality of life sufficiently to offset any potential decreased risk of lymphoma. More data are needed before universal screening should be considered.

The American Academy of Pediatrics states that all children should receive primary care through Medical Home, a healthcare system that is accessible, family-centered, comprehensive, continuous, coordinated, compassionate and culturally competent. Because residents learn outpatient primary care in a continuity clinic, **Dr. Nancy Swigonski** and colleagues used standardized tools to obtain resident and faculty ratings of their continuity clinics and compared them to similar ratings of private practices. Residents rate continuity clinics about the same or lower than private practices, but residents rated continuity clinics higher than faculty.

The American College of Graduate Medical Education (ACGME) requires that resi-

## Dyson Initiative Symposium a valuable experience for residents

by Jason Woodward

As a med-peds resident and someone with an adult sibling with Down Syndrome, I have taken an interest in the issue of transition care for children and youth with special health care needs (CYSHCN). I was pleased to have the opportunity to present my project, "Initiating a Conversation on Transitions," at the Community Pediatrics Training Initiative 4<sup>th</sup> Annual Symposium in Philadelphia, PA on March 4<sup>th</sup>-6<sup>th</sup>. The transitions project was one of six community-based resident projects chosen from the Dyson Initiative's ten national sites. Through a collaborative partnership between the Indiana Parent Information Network (IPIN) and the Indiana University School of Medicine, residents were inspired to initiate discussion with subspecialists regarding the transition of care for adults with chronic childhood health conditions.

This was my first experience as a resident presenting at a national meeting and I will admit I was somewhat apprehensive and intimidated. My fears were quickly eased after I met many of the other physicians and residents from around the country. Everyone was extremely warm and friendly (what would you expect from pediatricians), and everyone was genuinely inter-

ested in what we were doing in community pediatrics in Indiana. Thanks to the wonderful support from the rest of the Indiana contingency (Rachel Vreeman, John Kunzer, Alvaro Tori, Laura Dandeleit, Steve Downs, Nancy Swigonski, Doug Roepke, Cathy Luthman) I survived my presentation and I could then relax and really enjoy learning more about advocating for children. After my presentation, I was truly amazed and inspired by the number of people who came up to me to express their interest in transition care or to talk to me about similar projects they were doing at their institution.

**"I came away from these discussions with a new appreciation for the many resources we have available to us at Indiana University."**

Additionally, I was able to participate in small group workshops with other residents and pediatricians. This gave us the opportunity to learn about a variety of topics including dealing with the media, legislative advocacy and the Medical Home. I also attended a workshop with five other resident presenters during which we discussed strategies for initiating and carrying out resident community based projects. The

individual time and effort that some of the residents put into their project was impressive and the projects themselves are making a difference. I came away from these discussions with a new appreciation for the many resources we have available to us at Indiana University.

Reflecting on this experience, I think all of the residents who attended the conference came away with a better understanding of the background of the Dyson Initiative and an appreciation of the importance of community pediatrics. I wish more residents could have this opportunity. Seeing so many bright, energetic pediatricians dedicated to community pediatrics really motivated me to continue to try to improve children's health and renewed my belief that we can make a difference in our patients' lives.

Despite the busy schedule, we found time to have a little fun. We enjoyed a walk through the streets of Philadelphia and some of us visited the now closely guarded Liberty Bell. We enjoyed an excellent dinner at a local restaurant with the Dyson group from Hawaii, our partner on the Medical Home Initiative.

I would like to thank everyone who helped make this experience possible, including Dyson Initiative faculty and staff.

## Children's Health Services Research : In Brief

### IUSM/Riley Pediatric Pulmonologist/Allergist Chairs Indiana Strategic Plan for Addressing Asthma

The Indiana State Department of Health just released, "A Strategic Plan for Addressing Asthma in Indiana" prepared by the Indiana Joint Asthma Coalition (InJAC) in conjunction with the Indiana Department of Environmental Management. The InJAC was chaired by Dr. Frederick Leickly, Professor of Clinical Pediatrics in the Section of Pediatric Pulmonology, Allergy and Critical Care at Indiana University School of Medicine and the James Whitcomb Riley Hospital for Children. This 102 page document is the product of almost 20 months of planning. Contained within the Indiana Asthma Plan are numerous goals, objectives, and strategies developed by the InJAC work groups. Other IUSM, Riley, and Clarian physicians and staff who spent many hours contributing their expertise to this plan include Dr. Stephen Downs, Director of the Children's Health Services Research program at IUSM/Riley; Dr. Marc Rosenman, Assistant Professor of Pediatrics in the Children's

Health Services Research department at IUSM/Riley; Ann Marie Thomas, IU Medical Group, Marti Michael, RN, Methodist pediatric asthma nurse practitioner; Dr. Karen Amstutz, Medical Director of MDWise and Assistant Professor of Clinical Pediatrics; Greta Darlage, RN, Riley Hospital; Dr. Michael Tsangaris, Associate Professor of Clinical Pediatrics in the Section of Pediatric Pulmonology, Allergy and Critical Care, IUSM/Riley Hospital; and Dr. Gregory Wilson, Associate Professor of Clinical Pediatrics in the Section of Developmental Pediatrics and Commissioner of the Indiana State Department of Health. The plan can be accessed at [www.statehealth.in.gov](http://www.statehealth.in.gov), click on Public Health Program, then Asthma.

### Pediatricians Receive Award

The Edna G. Henry Social Work Values Award is given annually to recognize those who have made positive contributions to Clarian, especially to patients and families and whose work embodies the spirit of social work. This year's award was given on March 24 to Dr. Robin Hibbard (Professor of Pediatrics at IUSM and Director of the Clarian Social Work Department. The award was given for their

collaborative work with social workers in the area of child abuse. They consistently serve as advocates for patients who are treated at Riley Hospital for Children and Methodist Hospital. These physicians utilize a multidisciplinary team approach to patient care and are crucial in protecting the children of this state from abuse and neglect. We are fortunate to have these professionals as part of the medical team; they strongly value the role of social work in cases of child abuse and neglect.

### Upcoming CHSR WIP Schedule

Nov 1 - Sarah Stelzner

Nov 8 - Kara Schmidt

Nov 15 - Aaron Carroll

Nov 22 - No WIP

Nov 29 - Journal Club

Dec 6 - Sarah Wiehe

Dec 13 - Stephen Downs

Dec 20 - Marc Rosenman

Dec 27 - Journal Club

-PAS continued

dents develop competency in practice-based improvement activities using a systematic methodology. Methods for teaching this competency are still under development. **Drs. Alex Djurich, Mary Ciccarrelli, and Nancy Swigonski** presented an evaluation of a curriculum developed through CHSR's Dyson Initiative. These investigators demonstrated that residents developed knowledge and skills in CQI methodology within a three-hour curriculum during a one-month ambulatory block rotation.

The American Association of Medical Colleges (AAMC) has recently called for evaluating competencies such as communication skills and professionalism. **Drs. Gilbert Liu and Mitchell Harris** began exploring input from parents of pediatric patients as a data source for evaluating these competencies in medical students. They collected 947 parent evaluations for 496 students. They found that spontaneous contributions of narrative comments from parents are a rich source of evaluative material, providing insight into medical students' communication, altruism, and professionalism.

Children in the US are becoming overweight at an alarming rate. To better understand this trend, **Dr. Gilbert Liu** and his colleagues, **Drs. Hannon, Wang, Marrero and Qi**, studied the heights and weights of tens of thousands of children in In-

dianapolis over more than a decade. They examined the association between age, sex and race and the emergence of the obesity epidemic. They found the number of very young children who were overweight was greater in the Latino population than in other racial or ethnic groups. It is not clear if this early appearance of overweight children is genetic or cultural, but it points to the importance of tailoring culturally sensitive interventions.

In a related study, **Dr. Liu** and his colleagues, **Drs. Wilson, Bell, Nakata, and Ottensman**, mapped the addresses of tens of thousands of children with known height and weight measurements. They merged these data with satellite measurements of "greenness" (e.g., trees and grass) in their neighborhoods. Their research shows that children living in areas with plenty of green are less likely to be overweight.

In another study of how neighborhoods impact health, **Drs. Gil Liu, Sarah Wiehe and Paul Biondich** and research assistant, **Lee Anne McKelvey** surveyed inner city Indianapolis youth attending summer camps across the city. They assessed the "walkability" (sidewalks, crosswalks, etc.) of the children's neighborhoods and the children's own reported physical activity. Children's perception of neighborhood walkability and safety were strong predictors of how active they were.

## Staff Spotlight: Rachel O'Connell

By Monnica Lewis

For several months, Indianapolis native, Rachel Sandy-O'Connell assisted **Drs. Aaron Carroll and Gilbert Liu** with ongoing research in pediatric diabetes and obesity. Though she has now relocated to Chicago with her husband, Sam, who is pursuing a master's degree, she reflects fondly on her time as a member of the CHSR team.

She gathered socioeconomic data used by **Dr. Liu** to assess health risks and factors contributing to childhood obesity, and conducted focus groups for adolescents with diabetes for an ongoing study. "What I like most about this job are the people I work with on a daily basis. Everyone here is so enthusiastic about their work," said O'Connell.

A North Central grad, she completed a bachelor's degree in psychology at Washington University in St. Louis. She describes herself as a "theater buff." In fact, while pursuing her degree, she indulged her passion for the arts and landed several character roles, both with her college theater group and in summer stock. It was during production of one of these

## Community pediatrics training benefits residents, patients and families



By John Kunzer, MD

I always knew I wanted to be a General Pediatrician. I saw my future role in children's healthcare, much like a Norman Rockwell painting, taking place in the office with the physical exam. As an Intern on busy ward rotations, I received ample opportunities to practice the physical exam. I learned the value of observing, listening, and palpating. I learned the work-up, differential diagnosis, and treatment for abnormalities discovered on exam. In the hospital, I started feeling comfort-

able about what to do with a heart murmur or an enlarged liver.

This comfort did not transfer to my continuity clinic though. When I was seeing my own patients in a local community health center, I saw that even with nor-

mal physical exams many of my patients' families had multiple problems like poverty, low-literacy, transportation, and language barriers. Even worse, when I did identify a medical problem, I didn't know where to turn when feeling overwhelmed with the realization that the medical problems were being exacerbated by so many confounding factors that were seemingly out of my control. The Community I rotation taught me that there was help available by exposing me to multiple community-based organiza-

tions that were working with families to overcome barriers to their children's healthcare. I became more comfortable in clinic as I was able to refer to First Steps, the school system, or parent support groups.

Community I also taught me to look beyond the clinic and into the community when trying to solve a problem. In clinic, I would often ask "Where are all the dads?" At well-child visits I was only seeing young, low-income moms bringing in their children. My solution was to have classes just for fathers

**"...I saw that even with normal physical exams many of my patients' families had multiple problems like poverty, low-literacy, transportation, and language barriers."**

on child health information. No one showed up for the first class and the second class was attended by one mother. Remembering the lessons from Community I, I decided to try a new solution. I contacted a representative from a local fatherhood group called the Fathers

- Kunzer continued

and Families Resource/Research Center. It is a community based organization that provides comprehensive services young, low-income, predominantly minority fathers. I partnered with their program and have taught over twelve classes with approximately 15 fathers per class. Also, we did two city-wide education programs for fathers. Teaching these classes helped me more fully understand the fathers of the children I was servicing, and what information these fathers needed and how they wanted it presented. As my relationship with FFRC grew, so did the number of fathers bringing their children to my clinic.

During my Community II time, I further researched and explored the motivators and barriers to fathers' involvement in their child's healthcare. This work turned into my Senior Project and led to a CATCH grant and a presentation at a national conference. Because of my relationship with FFRC, I was being called on to share my experiences and the lessons learned with other healthcare professionals and local community groups. During my nearly three year relationship with FFRC, many fathers have been provided with important information on their children's healthcare, healthcare providers have been given tools to engage fathers, and I have learned a re-

producible roadmap to address problems facing the community.

My experiences on the Community Rotations have taught me many valuable lessons. Most importantly, if a physician wants to improve the health of the children seen in his office, the physician must first step out of the office and into the community. The experiences I have had in partnering with community-based organizations have changed my vision for my role in children's healthcare. I still see a Norman Rockwell painting, but now it just has many more colors that help bring it to life. As course director for community II, I look forward to working with residents to help them find their own experiences and to see their own paintings.

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-O'Connell continued

plays, "City of Angels", in which she was cast as a secretary and he, as a gangster, that she met her husband.

The couple relocated to Indianapolis last fall and were married, but their stay was to be a short one. O'Connell continues to assist Dr. Carroll, from her new home in Chicago on a part-time basis.

*The Pediatric Examiner* is a publication of Children's Health Services Research, Department of Pediatrics, Indiana University School of Medicine.

**Mission:** We strive to improve the health and healthcare of children by developing and applying best scientific evidence and methods in health services research and informatics.

**Values:** We are guided by compassion for children, partnerships with others, and scientific rigor.

**Vision:** We seek to become the nation's preeminent center for children's health services research and informatics. We strive for excellence in research, education and service to children, their families, their communities and the professionals who serve them.

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